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LYNCHFORD

TASMANIA

Progress Report for Year

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1. SUMMARY

- I The original soil sampling programme (Noonan, 1989) was extended to cover the entire Specimen Creek grid.
- II Soil geochemical samples from the areas of anomalous Ba and As were subsequently analysed for Au. A coincident low order Au anomaly was identified over basalts and volcanoclastics within the northeast of the grid.
- III Zones of anomalous soil geochemistry were costeamed. The programme did not adequately expose the bedrock due to the deep weathering profile developed over much of the study area. Marked elevations in Pb and Ba towards the northern limits of the alteration zone were noted.
- IV A number of adits were identified within the bounds of the Specimen Creek grid. Those considered safe for entry were mapped and sampled.
- V Mapping and sampling of newly created exposure within the King River Power Tunnel continued. Areas with anomalous Au and base metal geochemistry were channel sampled. Access to date has been restricted to the surge tunnel and to the head race tunnel, between 6025 mW and 6860 mW.
- VI A regional mapping programme has commenced with the aim of identifying prospective base metal host horizons within the Central Volcanic Complex (CVC) volcanics.
- VIII Baryte and pyritic samples from the Specimen Creek grid were submitted for S^{34} analysis.
- IX The Pb isotope study identified a distinct Cambrian signature for the Specimen Creek alteration zone.

2. INTRODUCTION

The Lynchford EL 47/83 formerly covered an area of 30.7 sq. km. and is located south of Queenstown (plate Lyn 24).

The EL has been held by CRA Exploration Pty. Ltd. since 10 March, 1985 and is subject to the terms of the Mount Read Volcanics Joint Venture.

This report outlines the work undertaken over the last year on the 15.3 sq km area retained by Aberfoyle Resources Limited since the 50 percent reduction on 10 March, 1990. Work undertaken on the relinquished part of the original licence is described in Noonan, 1990. An area of 0.75 sq km covered by ML 27/82 is excluded from the licence.

3. EXPLORATION ACTIVITY

Previous exploration comprises turn of the century prospecting and modern systematic exploration conducted over most of the licence since 1966. A detailed summary of exploration activity on Lynchford EL 47/83 is included in Aberfoyle Resources Limited, Progress Report for the year ended 30 April, 1989 (Noonan, 1989).

4. EXPLORATION ACTIVITY LYNCHFORD EL 47/83 1989/90

4.1 Regional Programme

4.1.1 Introduction

The object of the regional programme has been to assess the potential for VMS style base metal mineralisation within the licence. This has been achieved through stream sediment sampling, regional mapping and rock chip sampling.

The regional geology is summarised on plate Lyn 38 compiled from mapping by Aberfoyle and the Division of Mines and Mineral Resources (DMMR) (1:50,000 Mount Lyell sheet, 1987 and 1:25,000 Queenstown sheet, 1989).

4.1.2 Geology

Cambrian

Western Sequence

The oldest rocks exposed are those of the Western Sequence, outcropping over a substantial part of the licence area north of the King River (plates LYN 9A, 9B, 23 and 38).

The Western Sequence consists of a basal sequence of basaltic lava, lava breccia? and ash and breccia sized volcanoclastic (Cmrb) of tholeiitic composition. The basalt is exposed within the core of the Miners Ridge anticline. A sequence of fine grained micaceous sandstones/quartzites (Cmrs) flank the tholeiitic basalt and form a topographic high (Miners Ridge) along the north eastern margin of the licence.

Overlying the Miners Ridge sandstone to the west is a sequence of black shales interbedded with fine grained impure feldspathic sandstones or greywackes, shaly grits (Cwm) and interbedded lapilli volcanoclastics (Cwlv).

Unconformably? overlying the main body of Western Sequence sediments is a unit of quartz, feldspar phyric, lithic, rhyolitic to dacitic lapilli volcanoclastic (Cwql).

Central Volcanic Complex

The Miners Ridge sandstone is flanked to the east and south by the Central Volcanic Complex.

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This sequence is dominated by quartz feldspar porphyry (Ccvp), dacitic lapilli volcanoclastics, dacitic to rhyolitic lavas (Ccvl) and includes minor andesitic lava (Ccva). Interbedded with the volcanoclastics are horizons of black shale with interbedded siltstones and sandstones (Ccvm).

Que-Hellyer Volcanic Equivalents?

The calc-alkaline volcanics (the Lynch Creek Basalts of Corbett, 1979) which subcrop in the central north of the licence have been described as time and chemical equivalents of the Que-Hellyer Volcanics (Crawford, 1987; Corbett pers. comm.). Recent mapping by Aberfoyle over the Specimen Creek grid (plate Lyn 10, 9A, 9B) has further subdivided this area into a number of mappable units. These units are described in detail in the Progress Report for 1989, (Noonan, 1989).

Tyndall Group

Unconformably overlying the Western Sequence sediments and possibly unconformable? upon the main mafic body is a sequence of lapilli volcanoclastics. The lapilli volcanoclastic was previously described as a Comstock Tuff equivalent (Corbett, 1979).

Conformable upon the lapilli volcanoclastic is a narrow horizon of white highly weathered and leached mudstone (Ctm). This is overlain by feldspar quartz phyrlic sheared lapilli volcanoclastic (Ctfl).

Ordovician

Unconformably overlying the volcanics in the south east of the area retained (plate Lyn 38), is a sequence of undifferentiated conglomerate (Ocg, Owen?). Unconformably flanking the volcanics to the west of the retained area is sandstone and grits (Oss, in places chromite bearing) which are correlates of the Pioneer beds (Corbett, 1979). These are succeeded conformably by the Gordon Limestone (Olst).

Silurian

A small area of silurian sediments composed predominantly of mudstone with minor interbedded siltstone and sandstone (Smst) outcrops in the north west of the retained area.

Quaternary

Lying unconformably on the palaeozoic basement are a range of Quaternary sediments. Pockets of Pleistocene? glacial till and outwash gravels (Qg) occur as high level deposits predominantly along the Queen River Valley. Flanking the lower western slopes of Mount Jukes there is a colluvial scree (Qc) dominated by Owen Conglomerate clasts.

Recent alluvial deposits (Qa) occur along the Queen River and form alluvial flats in several of the more major creeks

4.1.3 Regional Rock Chip Geochemistry

At the time of reporting, three rock chip samples had been taken from the northeast corner of the licence. Results and sample locations are detailed in Appendix III and on plates Lyn 20 and 21.

No anomalous base metal values were reported.

4.1.4 Regional Pb Isotope Study

The sample of gossanous float 482124 (plates LYN 20 and 21) was submitted for Pb isotope characterisation. Results indicated a Cambrian VMS signature similar to those at Prince Lyell and the Specimen Creek alteration zone (Carr & Dean, 1989b).

4.2 Specimen Creek Grid

4.2.1 Introduction

During 1989/90 the Specimen Creek soil sampling programme was extended to cover the entire grid. Ground magnetics were also completed. An extensive costeaning programme was conducted over areas of anomalous Ba and As soil geochemistry and over the Specimen Creek alteration zone. A number of rock chip and soil geochemical samples from the gridded area were submitted for Pb and S isotope analysis. A review of the 1:2500 scale geology was completed.

4.2.2 Geology

A geological review was undertaken following the completion of the soil sampling, costeaning and magnetics programmes. The assimilation of the extra data provided by these surveys lead to slight changes in the 1:2500 scale interpretative geology plates 9A, 9B.

The geological characteristics of the various units mapped are discussed in detail in Noonan, 1989.

Petrology

Sample P482135 from the northeast of Specimen Creek grid is described as a meta-dacite or acid andesite (Appendix VIII). The identification of a more acid lava associated with the main mass of basaltic lava, supports the soil geochemical survey which highlighted an unusual Zr rich mass fringing the eastern margin of the basaltic lava.

Structure

The ground magnetic survey (section 5.1) and image processed soil geochemical data (section 4.2.3) and geological mapping, support the interpretation that an east-west trending fault structure is developed along the Specimen Creek geomorphic depression. The fault truncates the northerly striking sediments and volcanoclastics against the main mafic body. Reverse fault displacement is evident. The extent of any vertical displacement and the resultant potential for burial at depth of any volcanic hosted massive sulphide body, is unclear.

The main northwest-southeast trending fault structure appears to have induced substantial sympathetic fracturing and quartz, baryte vein development.

4.2.3 Geochemistry

4.2.3.1 Soil Geochemistry

An infill soil sampling programme was completed over the southwest corner of the Specimen Creek grid to establish the extent of the basaltic lava identified on line 1600N and to locate any base metal anomalism. Sampling was conducted at 25m spacings using a power auger to ensure that a consistent C horizon sample was obtained. An additional 149 soil samples were taken and submitted for Cu, Pb, Zn, Ag, As, Ba, Cr, Zr and Ti analyses (results and sample locations are included in Appendix II).

No anomalous zones were located but the survey was a useful enhancement to the geological mapping. The survey clearly indicated the zone of basaltic lava (characterised by elevated base metal values, notably Cu 110-185 ppm) trending northeast-southwest from 1600N towards the HEC Lynchford camp. The survey also outlined the extent of the Tyndall Group lapilli volcanoclastic (Comstock Tuff, Corbett, 1979) characterised by its elevation in Ti (5000-10,000 ppm).

A number of sample pulps (128) from the 1989 survey were selected for Au analysis. The samples were selected from areas of anomalous As, Ba (northeastern corner of the grid) and Pb, Ba, As (Specimen Creek alteration zone) soil geochemistry. Detailed results and location sheets are included as Appendix II and displayed on plate LYN 35A.

The samples submitted for Au analysis indicated a low order Au anomaly within the northeast of the grid, coincident with the zone of anomalous As and Ba. No elevation in Au was observed over the Specimen Creek alteration zone along line 2600N.

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The low order Au anomaly (max.0.375 ppm) was investigated by costeaining. The results are discussed in section 4.2.4. The elevated value of 6.1 ppm Au was shown by follow up auger sampling to be alluvially derived.

Image Processing

Images were produced of each of the assayed elements along with ratios of several of the more compatible and least compatible elements of the correlation matrix (the correlation matrix is included as part of Appendix II). The resultant images were useful in enhancing various lithological and structural trends.

The images that more clearly distinguished various lithologies include those produced for Cu, Ba, Cr, Ti, Ti/Zr and to lesser extent Pb, Zn, As and Zr.

The Cu (Plate Lyn 42A) and to a lesser extent Pb and Zn images (Plates 42 B, C), clearly outline the extent of the various mafic units. The Cr (Plate 42C) image highlighted the more basic areas (basaltic lava?) within the mafic bodies. The Ti and Ti/Zr (Plate 42H) plots clearly defined the Comstock Tuff. The Ba and Pb images outlined the Specimen Creek alteration zone. The Ba, As (Plate 42F), Au images (Plate 42E) highlighted the anomalous zone associated with veining within the basaltic lavas and lapilli volcanoclastics in the northeast of the grid.

The Zr and Ti/Zr images highlighted the central dacitic lava located immediately to the north of the Specimen Creek Fault. An elevation in Zr (100-400 ppm) was noted, associated with the area of anomalous As and Ba possibly suggesting that a compositionally distinct lava may be present.

Image processing also proved to be a useful tool in the enhancement of structural features. Notable was the delineation of the Specimen Creek Fault. The survey also outlined the northwest-southeast trending fault crossing the northeast of the grid.

An additional feature highlighted was the trend of the As, Ba and (Au) anomaly to subparallel the local northwest-southeast structural trend, rather than paralleling the north-south trend of the host lithologies. This along with additional evidence from field mapping and isotopic studies supports the interpretation that the anomaly results from structurally controlled (fault/vein related) mineralisation.

Principal Component Analysis

A nine element (Cu, Pb, Zn, As, Ba, Cr, Zr, Ti, Ti/Zr) principal component analysis was undertaken, with Au excluded because of the limited extent of the sampled population. The principal component analysis proved to be a useful interpretive aid. A number of distinct lithological and structural components were clearly highlighted through the application of a variable set of clip limits.

Lithological and structural characteristics highlighted by the principal component analysis included:

- i) The limits of the various mafic bodies.
- ii) The extent of basaltic versus andesitic lavas within the mafic bodies?
- iii) The extent of the Tyndall Group lapilli volcanoclastic.
- iv) The extent of the dacitic lava identified to the north of the Specimen Creek Fault.
- v) The extent of felsic volcanoclastic fringing the Tyndall Group.
- vi) The limit of the Specimen Creek alteration zone.
- vii) The presence of a distinct volcanoclastic body crossing the southern margin of the grid.
- viii) The possibility that subcropping basaltic lava or a polymict basaltic unit trends northwest from the southeastern corner of the grid.
- ix) The extent of alluvial sediments covering the mafic bodies.
- x) The trend and limits of the Specimen Creek Fault.
- xi) The trend of northeastern anomalous zone to parallel the main northwest-southeast fault zone.

4.2.3.2 Rock Chip Geochemistry

Eight rock chip samples were submitted for analysis during 1989/90. The detailed results and sample locations are included as part of Appendix III and outlined on plates Lyn 11A, B and 12A, B.

Three rock chip samples (482135-482137) were taken from the northeast of the grid to aid in the definition of the northern limit of the fault dislocated block of basaltic lava (Clab). Sample P482135 exhibited a marked elevation in Ba (0.68%), Pb (825 ppm) and weak elevation in As (20 ppm). The elevation in Zr (520 ppm) together with the Ti/Zr ratio suggests that P482135 may represent an unusual Zr rich lava of dacitic affinity.

An additional five rock chip samples (482592-482596) were taken during the Specimen Creek alteration zone costeaning programme. The most encouraging results were obtained from samples of pyritic pods within the intensely altered and weathered andesitic lava?. Sample 482596 returned anomalous Ag (75 ppm) and elevated As (210 ppm) and Au (0.087 ppm) values. The other rock chip samples of variously altered and weathered andesitic lava?, though less encouraging contained detectable levels of Ag (1.5-11 ppm) and elevated As (46-220 ppm) values.

4.2.4 Costeans

A costeaning programme was conducted over the Specimen Creek alteration zone (9 costeans), and the zone of anomolous Ba, As and Au soil geochemistry towards the northeast of the grid (6 costeans). A smaller programme was conducted over the zone of silicified pervasively haematite altered breccia volcanoclastics flanking the western margin of the main mafic body at 3400N, 1450E (2 costeans). A further three costeans were excavated to examine subcropping baryte located within the northeast of the grid. The costean locations are summarised on plate LYN 34A and sampling results are included as Appendix IX.

Baryte Mineralisation

The costeaning programme intended to examine the nature of the baryte mineralisation and any associated alteration.

The costeans (plates Lyn 36J and 36O) exposed baryte veining, developed subparallel to the local northwest-southeast structural trend. No alteration was observed associated with the vein development.

The channel sampling programme failed to highlight any anomalous base metal or precious metal values, with only the expected elevation in Ba reported.

The conclusion drawn was that the baryte vein development was related to movement on the northwest-southeast fault structure.

Silicified haematitic breccia volcanoclastic (Clbv)

A small costeaning programme was undertaken across the contact between the silicified and pervasively haematite altered breccia volcanoclastic (Clbv) and the main mafic body (Clab) at 3420N, 1420E and 3390N and 1458E.

The costean at 3390N, 1458E failed to penetrate the weathered soil profile and work was subsequently abandoned. The costean at 3420N, 1478E (plate Lyn 36I) exposed the contact between the andesitic lava and breccia volcanoclastic.

The channel sampling of the costean base failed to indicate any anomalous base metal or precious metal mineralisation.

Specimen Creek As, Ba, Au Anomaly

Six costeans were dug over the zone of anomalous Ba, As, Au soil geochemistry in the northeast of the grid. Five costeans were excavated along line 3800N with an additional short costean excavated to the south at 3644N, 2340E.

The results of the channel sampling and geological mapping are summarised on plates Lyn 36, K, L, M, N, P and costean locations are highlighted on plate Lyn 34A.

The programme exposed a number of zones of intense white quartz vein development with minor associated pyrite veinlets and goethite staining developed after pyrite. The quartz veined zones are generally developed sub-parallel to the regional structural trend.

The costeans were all channel sampled but no marked elevations in base metal or precious metal values were observed. Slight elevations in Au, As and Ba were noted in association with the more intensely quartz veined areas. The generally lower assay values obtained during the costean channel sampling programme suggests that there may have been a degree of Au, As remobilisation and concentration within the soil profile.

Specimen Creek Alteration Zone Costeans

A costeaning programme was carried out over the Specimen Creek alteration zone. The results are summarised on plates Lyn 36 A-H.

The deep weathering profile developed in this area limited the costeaning effectiveness. The alteration was best exposed within the costeans at 2600N, 1250E and 2630N, 1232E (plates Lyn 36F and 36H).

The costean at 2600N 1250E exposed pervasively sericite altered basaltic lava? in places spotted with fuchsite and pyrite. The alteration was generally patchy with zones of less altered weathered basaltic lava recognisable. The channel sampling programme highlighted elevations in Pb (1450-1795 ppm) and to a lesser extent Zn (50-355 ppm).

The costean at 2630N 1232E exposed weak to intensely sericite, fuchsite, pyrite altered andesitic lava?. The channel sampling programme identified elevations in Pb (max. 9775 ppm) and weakly anomalous Zn values (max. 360 ppm) and As (max. 230 ppm) and marked elevations in Ba (max. 36,000 ppm).

Costeaning, whilst not providing any major advances in the understanding of the Specimen Creek alteration zone, did help to accurately define the zones northern limit. The costeaning programme proved to be invaluable in explaining the nature of the baryte mineralisation and an extremely useful aid to understanding the anomalous As, Ba and Au soil geochemistry.

4.2.5 Historical Workings

Specimen Creek Mine

Examination of the Specimen Creek adits, located approximately 300-400m to the south of the King River gold mine revealed similar drives developed within highly weathered andesitic lavas. In places the Specimen Creek adits showed evidence of extensive caving and subsequently no further work was undertaken. The mine is located on plate Lyn 38.

No reports of production from the Specimen Creek mine could be found in the literature. Montgomery, 1894 briefly described the work undertaken at the King River gold mine.

Guilfoyle Creek Mine

Two short drives and a cross cut were located in the ridge to the north of line 3800N, 2150E. These are presumably the Guilfoyle Creek adits described by Twelvetrees, 1900, as no other evidence of mine development was located along the grids eastern side.

Geology

The geology is summarised in detail on plate Lyn 25A. The main adit (3860N, 2175E) was driven upon a sequence of variably weathered and altered dacitic ash to lapilli volcanoclastic. An intensely white quartz veined zone was intersected from 27.1-33.6m and presumably represents the auriferous vein sought by the former miners. No effort was made to drive north or south upon the quartz veined zone. West of the quartz veined zone there is a series of highly sheared shales.

Further to the north there is a minor development (3871N, 2153E). The adit is developed within a sequence of interbedded volcanoclastics and mudstone. Some effort was apparently made to drive northwards upon an intensely quartz veined dacitic lapilli volcanoclastic.

Geochemistry

The results and locations of the adit channel sampling programme are shown in detail on plate Lyn 25B and included within Appendix IX.

The assay results were low order and explain why work was abandoned. Channel sampling of the northern wall of the main adit returned a minor elevation in Au (max. 0.211 ppm) over the zone of intense white quartz veining. The results of channel sampling in the smaller adit to the north (3871N, 2153E) revealed minor elevations in Au (max. 0.054 ppm) associated with the zone of intense white quartz vein development.

Elevations in Ba and As were noted throughout the channel sampling programme. Generally the greatest elevations mirrored the increases in Au values associated with the more intense quartz veining. No anomalous base metal values were observed in either adit.

4.2.6 Pb Isotopes

A number of rock chip samples and a soil sample (482555, 482559, 482568, 482582 and 514452) from the Specimen Creek alteration zone were submitted for Pb isotope analysis. The aim of the study was to establish whether the alteration represented a Cambrian alteration system. A sample (P482135) from the northeast of the grid was also submitted for analysis.

The results of the Pb isotope study over the Specimen Creek alteration zone were not absolute and appear to define a separate homogeneous population which is similar to Prince Lyell and could be considered to be the Cambrian signature for the Lynchford area (Carr & Dean, 1989b).

Sample 482135 clearly plots outside the known fields suggesting that it represents a separate hydrothermal or magmatic event. This somewhat spurious result may reflect a Devonian vein mineralising event. The possibility also exists that the primary Pb content of the sample may have been altered by insitu decay of U^{238} .

The Pb isotope study appears to define a distinct Cambrian signature for Pb mineralisation in the Lynchford area. Though the alteration appears to have developed in response to Cambrian hydrothermal activity, the possibility exists as discussed in section 4.2.7 that the alteration may represent a barren VMS system. Alternatively the alteration may be a response to primary magmatic processes, such as an influx of magmatic fluids along the Specimen Creek fault. The available evidence suggests that the latter view is unlikely.

The results of the Pb isotope studies by Carr and Dean are attached as part of Appendix V.

4.2.7 δS^{34} Isotope Analyses

Three baryte samples were collected from outcrops within the northeast of the Specimen Creek grid. An additional two pyrite samples were collected from the zone of intense alteration. Sample locations, descriptions and results are tabulated in Appendix VI.

The δS^{34} isotopic study on the three baryte samples from the north eastern corner of the grid returned values of 25.8 - 26.1 per mil. These values are similar to δS^{34} values reported at Mount Lyell (Solomon et al., 1969). The limited spread in the sample population suggest that the baryte mineralisation formed from a highly oxidised and homogeneous fluid. The relatively heavy δS^{34} signature of 26 per mil is also characteristic of interpreted Devonian seawater values. It is possible that the baryte mineralisation was developed during Devonian deformation.

The two pyritic samples 482036 and 482114 were submitted for S isotope study. Both samples were rockchips from the zone of intense sericite, pyrite, carbonate, fuchsite alteration observed on line 2400N.

The pyrite study returned a δS^{34} isotopic signature of 1.4 - 1.8 per mil, a result indicative of a high rock sulphur contribution. A study of δS^{34} isotopes at Hellyer (Jack, 1989) returned light S isotope values from within the intensely altered hangingwall basaltic core lava, not unlike those of the Lynchford study. Isotope studies of barren VMS systems such as Boco massive pyrite (Green, 1986) and Chester massive pyrite (Solomon et al., 1988) also returned light isotope values. Isotopic studies of pyrite from the Mt. Lyell ore bodies have also revealed a characteristically low S isotope signature (Solomon et al., 1988).

The results of S isotope studies of the Specimen Creek alteration zone were inconclusive. Importantly the possibility that the alteration represents a Cambrian VMS system has not been disproved.

4.3 King River Power Tunnel

4.3.1 Introduction

HEC development on the King River Power Tunnel continued throughout 1989/90. The 7 km. headrace tunnel was completed during 1989 and work is presently underway to secure the tunnel walls and the backs. Work on the construction of steel sets to support the main headrace pipe into the power station is well underway.

A programme of follow up channel sampling was undertaken by Aberfoyle during 1989. Access was restricted to the area previously examined, as concreting work in the main headrace tunnel to the east of 6025 mW had not been completed.

Access was recently granted to the entire tunnel section held within boundaries of the EL. Mapping of the tunnel section and an accompanying grab sampling programme has commenced.

4.3.2 Geology

The reconnaissance mapping to date has identified a broad sequence of variably altered rhyolitic lavas and lesser volcanoclastics. A narrow horizon or lens of intensely white quartz veined black shale was also intersected during the tunnel development. A full geological compilation awaits the results of mapping and sampling to the east of the surge tunnel entrance.

Petrology

A petrographic study was conducted on nine samples collected from the headrace tunnel between 6025 and 6800 mW and on a sample from the surge tunnel and one from the access tunnel. The sample locations are outlined on plate Lyn 17 and the petrographic descriptions are included as Appendix VIII.

Alteration

All the petrographic samples examined displayed weak to moderate levels of sericite, chlorite, calcite alteration.

The presence of alteration throughout the examined sequence is encouraging, particularly the strong calcite, pyrite alteration and albitisation developed at 6100 and 6450 mW.

4.3.3 Geochemistry

A follow up channel sampling programme was undertaken to ascertain the extent of the precious metal anomalism. Results of the programme are displayed on plates Lyn 39 and 41 and included as Appendix IV.

The sampling failed to locate the source or to repeat the Au values obtained in sample 482350. Sampling over the zone of elevated Au (1.97 ppm) at 6840 mW failed to repeat this result. The source of the anomalous Au is probably a white quartz vein that cross cuts the rhyolite at 6840 mW.

The channel sampling programme did not enhance the weak zinc anomaly between 6690-6840 mW.

4.3.4 Pb Isotope Study

A sample of galena associated with white quartz veining in black shales at 6215 mW was collected for Pb isotope characterisation. The results are discussed in detail in Carr and Dean, 1989a (Appendix V) and conclude that the Pb had a distinct Devonian vein style signature.

4.3.5 S Isotope Study

Two samples (482349, 482350) were selected for δS^{34} isotope analysis. The pyrite study returned δS^{34} values of 6.9 per mil and 11.4-11.6 per mil respectively. Results and sample locations are tabulated in Appendix VI.

The results of the isotope study were inconclusive. This is primarily a function of the limited sample population and lack of clear understanding of the alteration observed and the paragenetic sequence.

5. GEOPHYSICS

5.1 Magnetics

A ground magnetic survey was conducted over the Specimen Creek grid during July, 1989. The magnetic profiles are included as Appendix VII and the contoured magnetic data is displayed on plate Lyn 28. The magnetic data proved to be an extremely useful aid to geological mapping.

The contoured magnetic data delineated the various mafic bodies and outlined the extent of the Tyndall Group lapilli volcanoclastic (Comstock Tuff). The contoured magnetic plan clearly defined the trend and location of the Specimen Creek fault and the major northwest-southeast fault and the associated dislocation of the eastern basaltic body.

6. CONCLUSIONS AND RECOMMENDATIONS

The licence should be retained to allow a full assessment of the potential for VMS style base metal mineralisation within the Central Volcanic Complex felsic volcanics.

Exploration to date within the EL has been concentrated at three levels:

- i) To assess the potential of the mafic-intermediate volcanics covered by the Specimen Creek grid.
- ii) To examine the prospectivity of the CVC volcanics, concentrating on the area immediately south of the King River.
- iii) To complete a regional programme aimed at highlighting other prospective areas within the E.L.

Specimen Creek Grid

Follow up work during 1989/90 did not enhance the potential of the mafic-intermediate volcanic suite to 200m below surface.

The As, Ba, Au anomaly within the northeast of the grid was shown to be related to intense white quartz and baryte veining developed sub-parallel to the local northwest-southeast structural trend.

Pb isotope studies on the Specimen Creek alteration zone suggest that a distinct Cambrian Pb isotope signature exists at Lynchford. The δS^{34} isotope studies were inconclusive suggesting that the pyritic alteration may represent hangingwall alteration or a barren VMS system.

The anomalous Ba (to 3.6%) and Pb (to 9775 ppm) exposed in the north of the alteration zone costean at 2630N, 1232E (plate Lyn 36H) is considered encouraging.

No work is recommended pending the outcome of a 50% reduction in EL 11/85 (Cyprus/Pasminco) required by 1990. This EL covers the northern part of the Lynch Creek basalts with the possible antiformal closure.

Potential remains for VMS mineralisation at depth, within the Lynch Creek Basalts.

King River Power Tunnel

The results of work within the King River power tunnel have been encouraging. Sporadically distributed zones of mild to strong calcite-sericite-pyrite alteration and lesser chlorite-sericite-calcite alteration have been identified. Sulphur isotope studies suggest that hydrothermal processes may have been active in the vicinity of the power tunnel.

As yet no zones of anomalous rock chip geochemistry have been identified.

Limited work is recommended within the King River power tunnel:

- i) Priority should be given to mapping and sampling the headrace tunnel to the east of the surge tunnel entrance.
- ii) Samples of the alteration should be analysed for CaO, Na₂O, K₂O and MgO and an alteration index study should be undertaken.
- iii) HEC drill core from the King River project area should be examined.

Regional Programme

The regional programme to date has involved the compilation of a 1:10,000 scale map sheet for the E.L.. The aim of the mapping has been to highlight areas considered prospective for hosting VMS base metal deposits of the Rosebery style.

Examination of creeks in the vicinity of the interpreted altered andesitic lava (482124) revealed small scale faulting and fault breccia development along the contact between the andesite and laminated siltstones. The source of the gossanous float (482123) was not located.

Further regional exploration is recommended:

- i) The mapping and rock chip sampling of the regional lines, creeks and roads within the E.L. should be finalised.
- ii) Mapping of the creeks and the HEC lines over the CVC volcanics should be completed.

The regional mapping and the examination of the King River power tunnel exposure should highlight prospective areas considered worthy of UTEM and soil sampling programmes during the summer field season.

003

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467026

APPENDIX I

GEOLOGICAL ABBREVIATIONS

Abundant	abn	Dacite	D	Massive	mas	Siderite	Sid
Adularia	Adl	Dark	dk	Matrix	mtx	Silica	Si
Agglomerate	agg	Dense	dns	Matrix dominated	md	Siliceous	sil
Albite	Ab	Devitrification	dv	Medium	med	Siltstone	Slt
Alkali feldspar	Afd	Diorite	Di	Medium grained	mg	Slickenside	slk
Altered	alt	Disseminated	dis	Metamorphosed	meta	Sphalerite	Sp
Amphibolitic	amb	Dolerite	Dol	Mica	Mic	Spotted	spt
Amphibole	Amb	Dolomite	Dm	Micaceous	mic	Spotty	spt
Amygdaloidal	amg	Dyke	dy	Mineralised	min	Stockwork	stw
Andalusite	An	Elongated	el	Minor	mnr	Stratabound	stb
Andesite	A	Emphasised	emp	Mixed	mx	Strong	str
Angular	ang	Epiclastic (adj.)	e	Mottled	mtl	Structure controlled	stc
Ankerite	An	Epiclastic (noun)	E	Mudstone	Mst	Syngenetic	syn
Aplite	Ap	Epidote	Ep	Nodule	nd	Talc	Tc
Approximate	apx	Euhedral	euh	Off white	ow	Tertiary	T
Arcuate	ar	Eutaxitic	eux	Olivine	Ol	Tourmaline	Tm
Arenaceous	arn	Fabric	fab	Oolitic	oo	Trace	tr
Argillaceous	arg	Fault	F	Orange	or	Trachyte	Tr
Argillite	Arg	Fault zone	FZ	Ordovician	O	Tuff	Tf
Arkose	Ak	Feldspar	Fd	Oxidised	ox	Tuffaceous	tf
Arkosic	ak	Feldspar phyric	fp	Pale	pl	Variable	var
Arsenopyrite	ap	Felspathic	fel	Patchy	pat	Variolitic	vr
Ash volcanoclastic	av	Ferfuginous	fer	Peperitic	pep	Vein	vn
Autobrecciated	aub	Fibrous	fb	Perlitic	prl	Vein concordant to bedd	cv
Average	ave	Fine	f	Pervasive	per	Vein discordant to bedd	dv
Banded	bnd	Fine grained	fg	Phenocrysts	phn	Very	v
Barite	Ba	Fissile	fis	Phyllite	phyl	Vesicular	ves
Basalt	B	Flowbanded	fbn	Phyric	p	Vitric	vtr
Bedded	bd	Fluorite	Fl	Picrite	Pic	Volcanic	vlc
Biotite	Bio	Foliated	fo	Pillow lava	pl	Volcanoclastic	vlcl
Black	bk	Fragments	fr	Pink	pk	Weak	wk
Black shale	Bsh	Fuchsita	Fu	Polymict	Y	Weathered	wth
Blue	bl	Galena	Gn	Porphyritic	por	White	wh
Boulder	bl	Glass	Gl	Predominantly	pred	Yellow	yw
Breccia	b	Glassy	gl	Pumice	Pu		
Breccia volcanoclastic	bv	Gossan	Gos	Pumiceous	pu		
Bright	brt	Granular	glr	Purple	pp		
Brown	br	Graphite	Gt	Pyrite	Py		
Calcareous	cc	Graphitic	gt	Pyritic	py		
Calcite	Cc	Green	gn	Pyroxene	Px		
Carbonaceous	carb	Grey	gy	Pyrrhotite	Po		
Carbonate	Co	Greywacke	Gw	Quartz	Q		
Cassiterite	Cass	Groundmass	gm	Quartzite	Qtz		
Cavernous	cav	Raematite	Hmt	Quellite	Qll		
Cemented	cem	Hornblende	Hb	Questionable	?		
Chalcopyrite	Cp	Ignimbrite	Ig	Recrystallised	rx		
Chert	Ch	Illite	Ill	Red	rd		
Chlorite	Cl	Interbedded	ibd	Rehealed	rhd		
Chromite	Cr	Intercalated	icl	Reworked	rw		
Chromitiferous	cr	Intrusive	int	Rhyodacite	RD		
Clay	cy	Jurassic	Ju	Rhyolite	R		
Coarse	c	K-Feldspar	Kfd	Ripple marks	rmk		
Coarse grained	cg	Khaki	kh	Round	rnd		
Colloform	coll	Laminated	lm	Rubble	rbb		
Colour	col	Lapilli volcanoclastic	lv	Sandstone	Ss		
Common	com	Lava	l	Schist	Sch		
Conglomerate	Cg	Lava breccia	lb	Schistose	sch		
Conglomeratic	cg	Leached	lch	Sediment	sed		
Crimson	cm	Limonitic	Lim	Selected fragments	sfr		
Crystal	x	Light	lgt	Sericite	Se		
Crystal volcanoclastic	xv	Limestone	Lst	Serpentine	Srp		
		Lithic	lh	Shale	Sh		
		Magnetite	Mt	Sheared	shd		
		Manganese	Mn	Sheeted	sht		

467027

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APPENDIX II

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

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ANALYTICAL REPORT No. 23.3.08.06166

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		514007/31, 514033/35	SD	Prep: 01							Eu, Pb, Zn, Ag/101, As/114		
		514007/31, 514033/35	SD								Ba, Cr, Zr, Ti/401		

RESULTS TO

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REMARKS

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STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AA
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SP
rock Ro	aqua regia A4	colorimetry CO
soil SO	nitric-perchloric A5	chromatography CH
pulp PU	HF mixture A6	titration TT
water WA	HF under pressure A7	other chemical means CH
tissue TI	fusion A8	miscellaneous MIS
stream sediment SS		fluorescence FLU
heavy mineral HM		inductively coupled plasma ICP

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25/05/89

7534

1 OF 2

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2	514008	110	25	55	<0.5	10	340	410	200	35
3	514009	85	20	50	<0.5	10	360	410	210	62
4	514010	75	20	45	0.5	10	340	400	220	61
5	514011	130	25	55	<0.5	6	320	1100	170	59
6	514012	180	30	70	<0.5	13	440	430	210	52
7	514013	150	40	65	<0.5	20	570	360	220	54
8	514014	40	30	35	<0.5	12	1050	70	270	36
9	514015	20	<5	30	<0.5	10	1650	30	290	31
10	514016	10	20	20	<0.5	12	680	50	330	34
11	514017	15	<5	30	<0.5	9	680	10	250	24
12	514018	25	10	25	<0.5	45	720	50	300	24
13	514019	15	10	15	<0.5	11	460	15	210	17
14	514020	10	5	20	<0.5	12	460	15	350	24
15	514021	15	5	35	<0.5	12	1300	8	470	24
16	514022	55	10	35	<0.5	26	970	75	430	31
17	514023	25	15	20	0.5	21	420	30	210	22
18	514024	20	10	20	<0.5	10	680	65	280	25
19	514025	10	10	25	<0.5	5	510	7	340	21
20	514026	20	15	40	<0.5	3	730	20	330	22
21	514027	15	20	50	<0.5	8	510	20	320	16
22	514028	10	15	25	<0.5	6	530	10	420	17
23	514029	10	10	25	0.5	3	400	20	360	21
24	514030	10	10	35	<0.5	4	680	<5	400	20
25	514031	5	10	35	<0.5	1	820	10	340	17

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 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
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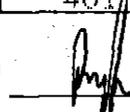
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TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Ba	Cr	Zr	Ti	
1	514033	5	<5	15	<0.5	1	640	15	140	12	
2	514034	10	10	10	1.0	1	190	55	290	15	
3	514035	15	5	10	<0.5	2	540	30	230	16	
4											
5											
6											
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19											
20											
21											
22											
23	DETECTION	5	5	5	0.5	1	10	5	5		
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	P	
25	METHOD	101	101	101	101	114	401	401	401	4	

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	Various		SO	Prep: 005,016								Cu, Pb, Zn, Ag/101		
	Various		SO									Ba, As, Cr, Zr, Ti/401		

RESULTS

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STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemical means CHEM
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUC
heavy mineral HM		inductively coupled plasma ICP

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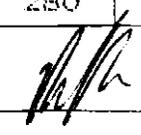
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TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Ba	As	Cr	Zr	Ti	
1	514079	35	55	145	0.5	620	35	110	190	355	
2	514080	15	30	45	0.5	230	<2	60	260	320	
3	514081	70	40	75	<0.5	230	20	220	230	515	
4	514082	80	40	80	0.5	250	7	160	240	600	
5	514083	85	51	100	1.0	270	10	150	230	610	
6	514084 STD	25	195	155	0.5	640	70	25	240	380	
7	514085	75	35	70	<0.5	260	4	130	200	555	
8	514086	40	45	70	<0.5	780	<2	40	260	265	
9	514087	160	50	145	<0.5	630	<2	570	130	440	
10	514088	185	40	85	0.5	200	<2	410	170	605	
11	514089	190	40	100	<0.5	180	2	380	180	650	
12	514090	140	40	70	<0.5	110	<2	330	240	740	
13	514091	135	60	65	<0.5	410	5	290	250	695	
14	514092	150	50	65	0.5	210	10	330	250	635	
15	514093	185	75	60	<0.5	330	15	1850	510	685	
16	514094	120	70	50	0.5	180	30	330	340	735	
17	514095	50	60	40	<0.5	290	20	95	270	475	
18	514096	20	50	40	<0.5	750	2	15	380	265	
19	514097	20	40	40	<0.5	910	4	15	250	225	
20	514098	10	25	30	<0.5	450	<2	9	260	350	
21	514099	10	20	25	<0.5	450	<2	7	210	285	
22	514100	15	30	40	<0.5	540	3	15	240	290	
23	514101	20	35	35	<0.5	1000	9	20	340	355	
24	514102	15	15	25	<0.5	730	<2	10	400	245	
25	514103	15	15	25	<0.5	670	<2	8	280	225	

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 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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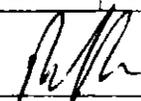
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TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Ba	As	Cr	Zr	Ti	
1	514104	50	45	35	1.0	650	50	20	310	325	
2	514148	15	30	25	<0.5	740	<2	15	320	350	
3	514149	10	10	35	0.5	340	<2	<5	200	235	
4	514150	10	10	15	<0.5	150	<2	20	200	250	
5	514151	10	65	50	<0.5	1000	10	6	180	195	
6	514152	15	25	40	<0.5	510	3	90	170	195	
7	514153	10	15	30	<0.5	420	<2	6	130	130	
8	514154	25	40	30	<0.5	470	6	85	150	180	
9	514155	50	40	90	<0.5	120	6	330	200	460	
10	514156	70	15	35	<0.5	700	15	60	190	270	
11	514157	40	25	35	<0.5	760	10	45	180	160	
12	514158	30	25	30	<0.5	780	4	35	240	180	
13	514159	35	25	40	0.5	680	7	170	280	385	
14	514160	34	15	35	0.5	220	3	260	250	630	
15	514161	40	15	60	0.5	130	6	320	240	600	
16	514162	50	20	30	<0.5	150	<2	240	220	615	
17	514163	50	20	20	0.5	420	6	240	270	635	
18	514164	20	10	40	<0.5	170	3	75	190	430	
19	514165	30	20	20	<0.5	310	2	180	290	700	
20	514166	25	30	20	<0.5	340	<2	150	230	560	
21	514167	20	15	25	<0.5	240	4	200	210	585	
22	514168	10	5	20	0.5	220	<2	170	230	580	
23	514169	20	<5	30	<0.5	230	<2	130	230	600	
24	514170	30	10	45	1.0	220	<2	140	230	640	
25	514171	40	<5	35	0.5	210	<2	120	270	605	

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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23.3.08.06661

05/12/89

7381

3 OF 5

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Ba	As	Cr	Zr	Ti
1	514172	20	5	25	1.0	450	<2	50	240	290
2	514173	10	<5	20	0.5	55	<2	55	55	130
3	514216	25	5	70	<0.5	390	<2	110	270	950
4	514217	25	5	60	<0.5	<10	<2	50	270	1020
5	514218	20	<5	50	<0.5	15	<2	55	200	980
6	514219	20	<5	45	<0.5	<10	<2	45	230	795
7	514220	15	<5	50	<0.5	130	<2	60	180	710
8	514221	15	<5	40	<0.5	230	<2	40	270	575
9	514222	10	<5	50	<0.5	260	<2	40	190	470
10	514223	20	<5	90	<0.5	170	4	45	200	785
11	514224	15	<5	110	<0.5	190	2	55	180	690
12	514225	20	5	75	<0.5	520	<2	75	200	600
13	514226	20	<5	60	<0.5	410	<2	60	220	650
14	514227	20	<5	25	<0.5	450	<2	<5	180	180
15	514228	10	<5	20	<0.5	440	<2	40	130	110
16	514229	5	<5	15	<0.5	490	<2	<5	130	110
17	514230	5	20	20	<0.5	460	<2	15	130	105
18	514231	10	<5	40	<0.5	210	3	300	170	335
19	514232	10	5	35	<0.5	660	<2	50	180	240
20	514233	20	<5	40	<0.5	800	7	80	190	320
21	514234	15	15	15	<0.5	260	<2	75	190	240
22	514235	20	5	25	1.0	360	15	60	140	245
23	514236	50	5	60	<0.5	440	15	230	200	500
24	514237	10	<5	20	0.5	1150	9	45	150	240
25	514238	30	10	45	<0.5	140	3	270	260	595

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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A Division of Incharge Inspection and Testing Services Australia Pty Ltd.

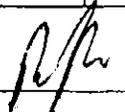
ANALYTICAL DATA

SAMPLE PREFIX REPORT NUMBER REPORT DATE CLIENT ORDER No. PAGE

		23.3.08.06661				05/12/89		7381		4 OF 5	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Ba	As	Cr	Zr	Ti	
1	514239	10	<5	20	1.0	60	<2	100	230	5700	
2	514240	85	<5	40	0.5	180	10	280	190	6050	
3	514241	5	<5	10	<0.5	<10	<2	90	110	1750	
4	514242	20	<5	15	<0.5	65	<2	75	150	3700	
5	514243	5	<5	10	<0.5	10	<2	120	130	2750	
6	514285	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	
7	514286	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	
8	514287	25	5	50	<0.5	90	<2	75	210	7750	
9	514288	30	<5	55	<0.5	100	<2	45	240	6300	
10	514289	20	5	50	<0.5	<10	<2	70	210	9350	
11	514290	20	<5	45	<0.5	<10	<2	55	210	9200	
12	514291	20	<5	45	<0.5	<10	<2	60	200	9400	
13	514292	30	<5	55	<0.5	<10	<2	75	200	8200	
14	514293	20	<5	50	<0.5	<10	<2	60	220	9650	
15	514294	30	10	50	<0.5	<10	3	45	190	7800	
16	514295	20	5	35	<0.5	120	2	45	210	6300	
17	514296	20	<5	35	<0.5	95	<2	40	210	5600	
18	514297	40	5	115	<0.5	430	2	45	210	4350	
19	514298	10	<5	25	<0.5	580	<2	<5	230	2500	
20	514299	10	<5	20	0.5	630	<2	100	150	1400	
21	514300	10	<5	20	<0.5	750	<2	<5	140	1200	
22	514301	10	<5	20	0.5	1450	<2	25	140	1350	
23	514302	10	5	20	<0.5	1150	<2	15	120	1300	
24	514303	20	5	45	0.5	960	5	50	170	2300	
25	514304	5	<5	30	<0.5	770	2	6	260	1650	

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 -- = element not determined

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467042

A Division of Incharge Inspection and Testing Services Australia Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

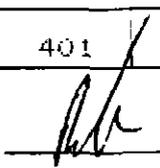
PAGE

		23.3.08.06661				05/12/89		7381		5 OF 5	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Ba	As	Cr	Zr	Ti	
1	514305	40	25	45	<0.5	740	25	55	210	24	
2	514306	30	70	40	<0.5	750	10	120	190	35	
3	514307	40	10	75	<0.5	95	3	390	240	62	
4	514308	85	30	70	0.5	65	15	370	200	52	
5	514309	60	<5	90	0.5	220	8	220	170	45	
6	514310	55	<5	30	<0.5	230	10	190	230	55	
7	514311	15	<5	15	0.5	25	<2	120	220	60	
8	514312	45	5	35	0.5	230	10	200	220	55	
9	514313	90	20	115	<0.5	320	10	210	200	50	

23	DETECTION	5	5	5	0.5	10	2	5	5	
24	UNITS	ppm								
25	METHOD	101	101	101	101	401	401	401	401	401

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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LICENCE:
PROJECT:

Lynchford

2600N

467043

1/2.

SAMPLED BY:

COORD	NUMBER	DEPTH	COLOUR
2600N			
" 750E	514432	90	Br/Bk
" 75	" 433	80	Or
800	514434	80	Br/or
" 25	" 435	90	Or/Br
" 50	" 436	90	Br/or
" 75	" 437	80	Br/or
900	514438	100	Or/Br
" 25	" 439	90	Or/Br
" 50	" 440	80	Or/Br
" 75	" 441	90	Or/Br
1000	514442	90	Br/or
" 25	" 443	90	Br/or
" 50	" 444	90	Or/Br
" 75	" 445	80	Or/Br
1100	514446	80	Or/Br
" 25	" 447	90	Br/or
" 50	" 448	80	Br/or
" 75	" 449	90	Br/or
1200	514450	90	Br
" 25	" 451	90	Or/Br
" 50	" 452	90	Or/Br
" 75	" 453	30	Br/or
1300	514454	85	Br/or
" 25	" 455	90	Or/Br
" 50	" 456	70	Or/Br
" 75	" 457	80	Br/or
1400	514458	80	Br
" 25	" 459	90	Pu/Rd

COORD	NUMBER	DEPTH	COLOUR
" 50	" 460	90	Rd/or
" 75	" 461	80	Br/or
1500	514462	90	Br
" 25	" 463	80	Br
" 50	" 464	90	Br
" 75	" 465	80	Br/or
1600	514466	80	Br
" 25	" 467	90	Br/or
" 50	" 468	70	Br/or
" 75	" 469	90	Or/Br
1700	514470	100	Or
" 25	" 471	90	Bi/or
" 50	" 472	100	Br/or
" 75	" 473	80	Br/or
1800	514474	70	Br/or
" 25	" 475	70	Br
" 50	" 476	80	Br
" 75	" 477	90	Or/Br
1900	514478	90	Rd/or
" 25	" 479	80	Or
" 50	" 480	100	Or/Br
" 75	" 481	70	Br/or
2000	514482	90	Br
" 25	" 483	90	Or/Br
" 50	" 484	80	Or
" 75	" 485	100	Or
2100	514486	100	Br/or
" 25	" 487	100	Br/or
" 50	514488	90	Or

LICENCE:
PROJECT:

044
049
Ly chford

3400N

467045

1/2

SAMPLED BY:

COORD	NUMBER	DEPTH	COLOUR
3400N			
900E	514740	NO sample	
" 25	514741	90	
" 50	742	100	
" 75	743	70	
1000	744	100	
" 25	745	100	
" 50	746	100	
" 75	747	100	
1100	748	100	
25	749	90	
50	750	90	
75	751	100	
1200	752	50	
25	753	100	
50	754	90	
75	755	100	
1300	756	100	
25	757	80	
50	758	100	
75	759	100	
1400	760	100	
25	761	100	
50	762	100	
75	763	90	
1500	764	90	
25	765	90	
50	766	100	
75	767	90	

COORD	NUMBER	DEPTH	COLOUR
1600	768	100	
25	769	100	
50	770	100	
75	771	90	
1700	772	100	
25	773	90	
50	774	100	
75	775	100	
1800	776	100	
25	777	90	
50	778	100	
75	779	90	
1900	780	80	
25	781	90	
50	782	100	
75	783	NO sample.	* Soil STD.
2000	784	70	
25	785	100	
50	786	100	
75	787	100	
2100	788	90	
25	789	80	
50	790	100	
75	791	90	
2200	792	90	
25	793	80	
50	794	100	
75	795	40	
2300	796	100	

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

FAX: 004 31 8890

0487

ANALYTICAL REPORT No. 23.3.08.06188

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ORDER No.

PROJECT

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

7562

DATE RECEIVED

RESULTS REQUIRED

10/05/89

ASAP

No. OF PAGES OF RESULTS

DATE REPORTED

No. OF COPIES

TOTAL No. OF SAMPLES

2

16/05/89

1

34

STATE OF SAMPLES	REFER BELOW	PRE-TREATMENT								ANALYSIS		
		SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	
	various		SO	Prep: 016							Au, AuChk/309	

RESULTS

TO

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

RESULTS

TO

REMARKS

LYNCH.
SOILS
FOR
Au analysis
5900

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whale core WC	perchloric acid A1	atomic absorption AA
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPE
rock Ro	aqua regia A4	colorimetry CO
soil SO	nitric-perchloric A5	chromatography CH
pulp PU	HF mixture A6	titration TT
water WA	HF under pressure A7	other chemical means CHE
tissue TI	fusion A8	miscellaneous MIS
stream sediment SS		fluorescence FLU
heavy mineral HM		inductively coupled plasma ICP

AUTHORISED OFFICER

467049

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

467050

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

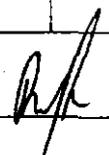
CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Al							
			23.3.08.06188	16/05/89	7562	1 OF 2			
1	514731	<0.008							
2	514732	<0.008							
3	514734	<0.008							
4	514735	<0.008							
5	514796	<0.008							
6	514797	0.014							
7	514798	0.011							
8	514799	0.047							
9	514800	0.026							
10	514801	<0.008							
11	514802	<0.008							
12	514803	<0.008							
13	514841	4.230							
14	514842	<0.008							
15	514843	0.044							
16	514844	<0.008							
17	514845	0.015							
18	514846	0.030							
19	514847	0.037							
20	514848	0.075							
21	514849	<0.008							
22	514850	<0.008							
23	514864	0.015							
24	514865	0.029							
25	514866	0.509							

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 -- = element not determined

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050

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

467051

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.06188

16/05/89

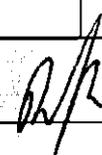
7562

2 OF 2

TUBE No.	SAMPLE No.	AU							
1	514867	<0.008							
2	514868	0.017							
3	514869	0.032							
4	514870	0.111							
5	514871	0.027							
6	514872	0.047							
7	514873	0.040							
8	514874	0.073							
9	514875	<0.008							
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	0.008							
24	UNITS	PPM							
25	METHOD	309							

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
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467052

ANALYTICAL DATA

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REPORT NUMBER

REPORT DATE

CLIENT ORDER No

PAGE

23.3.08.06675

06/12/89

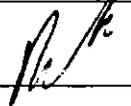
7404

1 OF 2

TUBE No	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	As	Cr
1	482140	15	25	50	<0.5	0.008	-	600	2	15
2	482141	35	20	145	0.5	0.008	0.008	1250	<2	290
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.5	0.008	0.008	10	2	5
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	101	101	101	101	309	309	401	401	401

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
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467053

073

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.06675

06/12/89

7404

2 OF 2

TUBE No.	SAMPLE No.	Zr	Ti	Y					
1	482140	320	1800	25					
2	482141	120	3900	25					
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	5	50	5					
24	UNITS	ppm	ppm	ppm					
25	METHOD	401	401	401					

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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467054

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No

PAGE

23.3.08.06675

06/12/89

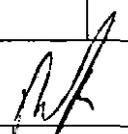
7404

1 OF 1

TUBE No	SAMPLE No.	K ₂ O	MgO	CaO	Na ₂ O				
1	482140	4.55	0.46	0.06	2.37				
2	482141	2.74	6.32	0.62	2.60				
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	0.01	0.01	0.01	0.01				
24	UNITS	%	%	%	%				
25	METHOD	104	104	104	104				

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 -- = element not determined

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Telex AA92560

ANALYTICAL REPORT No. 23.3.08.06391

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Aberfoyle Resources Exp. Division
 P.O. Box 952
 Burnie
 Tasmania 7320

ORDER No.	PROJECT
8260	
DATE RECEIVED	RESULTS REQUIRED
02/08/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	22/08/89	1	37

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS				
			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHC	
		482563/596,482114	RD	Prep: 01b							Cu,Pb,Zn,Ag/101,As/114		
		482563/596,482114	RD								Ba,Cr,Zr,Ti/401		
		482563/596,482114	RD								Au,AuChk/309		
		Various	RD								Ca,Na,/104		
		482123	RD								Cu,Pb,Zn/104		

RESULTS TO
 Aberfoyle Resources Exp. Division
 P.O. Box 952
 Burnie
 Tasmania 7320

RESULTS TO

REMARKS
 LYNCHFORD

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHEM
flssue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUOR
heavy mineral HM		inductively coupled plasma ICP

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A Division of Macdonald Hamilton & Co Pty Ltd.

467056

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.06.06391

22/08/89

8260

2 OF 4

TUBE No.	SAMPLE No.	Cu	Cu	Pb	Pb	Zn	Zn	Ag	Ag	Au
1	482585	160	-	135	-	155	-	0.5	-	0.01
2	482586	140	-	130	-	140	-	0.5	-	0.01
3	482587	185	-	235	-	165	-	2.0	-	0.02
4	482588	220	-	210	-	165	-	1.0	-	<0.005
5	482589	150	-	70	-	60	-	1.5	-	<0.005
6	482590	140	-	55	-	60	-	1.5	-	0.01
7	482591	180	-	40	-	75	-	1.5	-	<0.005
8	482592	80	-	165	-	35	-	2.0	-	0.07
9	482593	80	-	275	-	40	-	-	11	0.02
10	482594	175	-	445	-	75	-	1.5	-	0.01
11	482595	190	-	30	-	70	-	2.0	-	<0.005
12	482596	250	-	160	-	30	-	-	75	0.08
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	25	5	25	5	25	0.5	2	0.005
24	UNITS	PPM								
25	METHOD	101	104	101	104	101	104	101	104	101

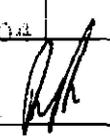
Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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467057

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

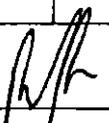
CLIENT ORDER No.

PAGE

		23.3.08.06391				22/08/89		8260		4 OF 4	
TUBE No.	SAMPLE No.	AuChk	Ba	Ba	As	Cr	Zr	Ti			
1	482585	-	1050	-	46	1250	150	3250			
2	482586	-	530	-	53	1550	160	3700			
3	482587	-	320	-	36	2200	190	5150			
4	482588	-	710	-	46	2200	220	6150			
5	482589	-	840	-	25	150	180	4450			
6	482590	-	1000	-	18	120	170	4300			
7	482591	-	770	-	12	120	150	<50			
8	482592	0.066	220	-	85	970	140	2550			
9	482593	-	2300	-	220	1550	170	2850			
10	482594	-	2450	-	59	530	160	3400			
11	482595	-	940	-	46	180	950	1950			
12	482596	0.078	1950	-	210	110	140	2450			
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23	DETECTION	0.008	10	0.01	1	5	5	50			
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM			
25	METHOD	309	401	403	114	401	401	401			

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.06241

21/06/89

7826

2 OF 2

TUBE No.	SAMPLE No.	Zr	Ti	Y						
1	482135	520	5200	50						
2	482136	160	4350	30						
3	482137	210	6900	40						
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	50	5						
24	UNITS	PPM	PPM	PPM						
25	METHOD	401	401	401						

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER



ANALABS

A Division of MacDonal Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

ANALYTICAL REPORT No. 23.3.08.06585

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Aberfoyle Resources Limited
 Exploration Division
 P.O. Box 952
 Burnie Tasmania 7320

ORDER No.	PROJECT
7314	
DATE RECEIVED	RESULTS REQUIRED
10/10/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
1	20/10/89	1	1

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						OTHER SEE REMARKS	NONE	ANALYSIS		
			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	REFER TO ANALYSIS SECTION			PREPARATION	METH	
		482135	PU	Prep: 01							K2O, MgO, CaO, Na2O/104		

RESULTS

TO

R. de Bomford
 Aberfoyle Resources Limited
 Exploration Division
 P.O. Box 952
 Burnie Tasmania 7320

RESULTS

TO

REMARKS

Lyn

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	calorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHEM
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUC
heavy mineral HM		inductively coupled plasma ICP

AUTHORISED OFFICER

[Signature]

ANALABS

A Division of Inchcape Inspection and Testing Services Australia Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX REPORT NUMBER REPORT DATE CLIENT ORDER No. PAGE

23.3.08.06585 20/10/89 7314 1 OF 1

TUBE No.	SAMPLE No.	K2O	MgO	CaO	Na2O					
1	482135	5.22	4.95	1.07	1.85					
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	0.01	0.01	0.01	0.01					
24	UNITS	%	%	%	%					
25	METHOD	104	104	104	104					

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER 

068

ANALABS

A Division of Incharge Inspection and Testing Services Australia Pty Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.08857

22/11/89

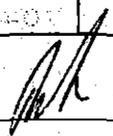
7379

1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Bs	As	Cr
1	482138	25	25	170	0.5	0.008	0.008	670	<2	40
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24	DETECTION									
25										

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined.

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069

ANALABS

467063

A Division of Inchoape Inspection and Testing Services Australia Pty Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23. 3. 05. 06657

22/11/59

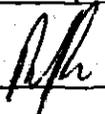
7579

2 OF 2

TUBE No.	SAMPLE No.	Zr	Ti	Y					
1	462135	50	3650	20					
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	5	50	5					
24	UNITS	ppm	ppm	ppm					
25	METHOD	401	401	401					

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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467064

070

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23. J. 06. 06657

22/11/89

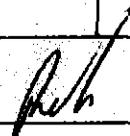
7377

1 OF 1

TUBE No.	SAMPLE No.	K ₂ O	MgO	CaO	Na ₂ O					
1	452133	2.80	8.32	3.75	1.53					
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	0.01	0.01	0.01	0.01					
24	UNITS	%	%	%	%					
25	METHOD	104	104	104	104					

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER



ANALABS

467065

Phone (09) 458 7999

A division of MacDonald Hamilton & Co. Pty. Ltd.
52 Murray Road, Welshpool, W.A. 6106
FAX: 004 31 8890

Telex AA92560

ANALYTICAL REPORT No. 23.3.08.06675

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ORDER No.

PROJECT

Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
Burnie Tasmania 7320

7404	
DATE RECEIVED	RESULTS REQUIRED
20/11/89	ASAP

No. OF PAGES OF RESULTS

DATE REPORTED

No. OF COPIES

TOTAL No. OF SAMPLES

1	06/12/89	1	2
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STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS					
			DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD		
		482140, 482141	RC	Prep: 006, 010, 011, 012, 013, 016								Cu, Pb, Zn, Ag/101		
		482140, 482141	RC									Au, AuChk/309		
		482140, 482141	RC									Ba, As, Cr, Zr, Ti, Y/401		
		482140, 482141	RC									K2O, MgO, CaO, Na2O/104		

RESULTS TO

R. de Bamford
Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
Burnie Tasmania 7320

REMARKS

LYN.
REGIONAL
Rock CHIPS.

RESULTS TO

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHEM
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUOR
heavy mineral HM		inductively coupled plasma ICP

AUTHORISED OFFICER

052

467066

5900

LYNCHFORD SOILS (Au).

2600N

1000E - 1600E

514 442 - 514 466 (24)

~~(514 447 - 514 450 STD)~~

3200N

482 372 - 482 375 (3) 2500 - 2600 E
 514 733 - 514 738 (5) 2375 - 2500 E
 514 722 - 514 730 (8) 2100 - 2325 E

~~514 731 - 514 732~~
~~514 734 - 514 735 STD~~

3400 N

514 783 - 514 795 (12) 2000 - 2300 E
 514 804 (1) 2500 E
 (514 783 * STD)

3600 N

514 851, 514 852 (2) 2475 - 2500 E
 514 828 - 514 842 (14) 1900 - 2250 E
 (514 849 STD*)
 (514 840 STD*)

3800 N

514 854 - 514 866 (12) 1850 - 2100 E
 514 875 - 514 881 (6) 2375 - 2500 E
 (514 881 STD*)

467067

ANALABS

Phone (09) 458 7999

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52 Murray Road, Welshpool, W.A. 6106
FAX: 004 31 8890

Telex AA92560

ANALYTICAL REPORT No. 23.3.08.06221

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

ORDER No.	PROJECT
7805	
DATE RECEIVED	RESULTS REQUIRED
23/05/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
4	30/05/89	1	94

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT							ANALYSIS				
			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	ME		
		various	CG	Prep: 016								Au, AuChk/309		

RESULTS

TO

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

RESULTS

TO

REMARKS

*L.V. SOILS.
FOR Au*

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AA
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPE
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TIT
water WA	HF under pressure A7	other chemicals means CHE
tissue TI	fusion A8	miscellaneous MIS
stream sediment SS		fluorescence FLU
heavy mineral HM		Inductively coupled plasma ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

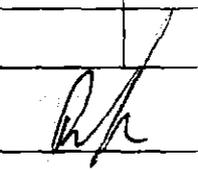
ANALYTICAL DATA

SAMPLE PREFIX REPORT NUMBER REPORT DATE CLIENT ORDER No. PAGE

			23.3.08.06221		30/05/89		7805		1 OF 4	
TUBE No.	SAMPLE No.	Au	AuChk							
1	482372	0.011	-							
2	482373	<0.008	-							
3	482375	<0.008	-							
4	514442	<0.008	-							
5	514443	<0.008	-							
6	514444	<0.008	-							
7	514445	<0.008	-							
8	514446	<0.008	-							
9	514447	<0.008	-							
10	514448	<0.008	-							
11	514449	0.042	-							
12	514450	<0.008	-							
13	514451	0.013	-							
14	514452	<0.008	-							
15	514453	<0.008	-							
16	514454	<0.008	-							
17	514455	<0.008	-							
18	514456	0.008	-							
19	514457	<0.008	-							
20	514458	<0.008	-							
21	514459	<0.008	-							
22	514460	<0.008	-							
23	514461	<0.008	-							
24	514462	<0.008	-							
25	514463	<0.008	-							

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.06221

30/05/89

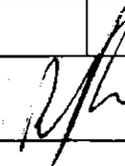
7805

2 OF 4

TUBE No.	SAMPLE No.	Au	AuChk						
1	514464	<0.008	-						
2	514465	<0.008	-						
3	514466	<0.008	-						
4	514722	<0.008	-						
5	514723	0.014	-						
6	514724	<0.008	-						
7	514725	<0.008	-						
8	514726	<0.008	-						
9	514727	<0.008	-						
10	514728	<0.008	-						
11	514729	<0.008	-						
12	514730	<0.008	-						
13	514734	<0.008	-						
14	514735	<0.008	-						
15	514736	<0.008	-						
16	514737	<0.008	-						
17	514738	<0.008	-						
18	514783	<0.008	STD -						
19	514784	<0.008	-						
20	514785	<0.008	-						
21	514786	<0.008	-						
22	514787	<0.008	-						
23	514788	<0.008	-						
24	514789	<0.008	-						
25	514790	<0.008	-						

Results in ppm unless otherwise specified
T = element present: but concentration too low to measure
X = element concentration is below detection limit
- = element not determined

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.06221

30/05/89

7805

3 OF 4

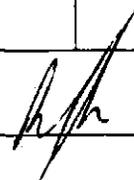
TUBE No.	SAMPLE No.	Au	AuChk						
1	514791	<0.008	-						
2	514792	<0.008	-						
3	514793	<0.008	-						
4	514794	<0.008	-						
5	514795	<0.008	-						
6	514804	<0.008	-						
7	514828	<0.008	-						
8	514829	<0.008	-						
9	514830	<0.008	-						
10	514831	<0.008	-						
11	514832	<0.008	-						
12	514833	0.011	-						
13	514834	<0.008	-						
14	514835	<0.008	-						
15	514836	<0.008	-						
16	514837	<0.008	-						
17	514838	<0.008	-						
18	514839	<0.008	-						
19	514840	<0.008	-						
20	514841	5.100	5.080						
21	514842	<0.008	-						
22	514849	0.013	-						
23	514851	<0.008	-						
24	514852	<0.008	-						
25	514854	0.009	-						

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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OFFICER


ANALABS

A Division of Macdonald Hamilton & Co. Pty Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

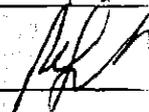
CLIENT ORDER No.

PAGE

			23.3.08.06221		30/05/89		7805		4 OF 4	
TUBE No.	SAMPLE No.	Au	AuChk							
1	514855	<0.008	-							
2	514856	<0.008	-							
3	514857	<0.008	-							
4	514858	<0.008	-							
5	514859	<0.008	-							
6	514860	<0.008	-							
7	514861	<0.008	-							
8	514862	0.010	-							
9	514863	<0.008	-							
10	514864	<0.008	-							
11	514865	0.017	-							
12	514866	0.375	-							
13	514875	<0.008	-							
14	514876	<0.008	-							
15	514877	<0.008	-							
16	514878	<0.008	-							
17	514879	<0.008	-							
18	514880	<0.008	-							
19	514881	0.012	-							
20										
21										
22										
23	DETECTION	0.008	0.008							
24	UNITS	PPM	PPM							
25	METHOD	309	309							

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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CLASS NUMBER: 1 OF STATISTICS FILE: //zeus/aberfoyle/jobs/lyn/images/lyn.STAT
ALL 02-05-90

IMAGE FILE : //zeus/aberfoyle/jobs/lyn/images/lyn
FL, LL, FP, LP = 1 133 1 111

VARIABLE	CHANNEL	MEAN	MIN	MAX	ST. DEV.
1	<i>Cu</i> 1	76.3336	2.4423	356.1924	60.9040
2	<i>Pb</i> 2	18.6780	1.5168	924.9938	12.6615
3	<i>Zn</i> 3	52.9977	2.4179	255.0000	24.0618
4	<i>Au</i> 4	0.0259	0.0033	6.9108	0.2826
5	<i>Ba</i> 5	424.3222	28.5535	2389.5960	297.3323
6	<i>As</i> 6	32.7206	0.5000	809.9998	56.8282
7	<i>Cr</i> 7	228.2568	22.5880	2994.2520	233.3914
8	<i>Zr</i> 8	245.5589	52.5191	639.9997	104.1904
9	<i>Ti</i> 9	5075.4160	706.0829	10521.4500	1870.9600
10	<i>Ti</i> 10	21.6465	7.0000	44.9486	5.6564

COVARIANCE MATRIX

	1	2	3	4	5	6	7	8	9	10
1	3.709E+03									
2	3.607E+02	1.603E+02								
3	1.246E+03	1.024E+02	5.790E+02							
4	-3.744E-01	4.380E-01	-3.374E-01	7.986E-02						
5	7.178E+03	1.482E+03	3.106E+03	1.016E+01	8.841E+04					
6	1.961E+03	1.899E+02	7.755E+02	6.175E-02	9.681E+03	3.229E+03				
7	9.681E+03	1.400E+03	2.842E+03	-2.367E+00	6.562E+03	4.927E+03	5.447E+04			
8	4.257E+03	4.379E+02	1.452E+03	-1.135E+00	1.153E+04	3.373E+03	1.590E+04	1.086E+04		
9	8.911E+04	6.113E+03	3.153E+04	-4.713E+01	9.679E+04	4.883E+04	2.707E+05	1.552E+05	3.500E+06	
10	7.630E+01	-2.920E-01	3.042E+01	-1.680E-01	-5.060E+02	-5.777E+01	8.891E+00	-1.931E+02	2.767E+03	3.200E+01

DETERMINANT OF COVARIANCE MATRIX = 0.1521318E+30

CORRELATION MATRIX

	1 <i>Cu</i>	2 <i>Pb</i>	3 <i>Zn</i>	4 <i>Au</i>	5 <i>Ba</i>	6 <i>As</i>	7 <i>Cr</i>	8 <i>Zr</i>	9 <i>Ti</i>	10 <i>Ti</i>
1	1.0000									
2	0.4678	1.0000								
3	0.8501	0.3360	1.0000							
4	-0.0218	0.1224	-0.0496	1.0000						
5	0.3964	0.3935	0.4342	0.1209	1.0000					
6	0.5666	0.2640	0.5671	0.0038	0.5729	1.0000				
7	0.6811	0.4738	0.5060	-0.0359	0.0946	0.3715	1.0000			
8	0.6708	0.3320	0.5793	-0.0385	0.3723	0.5696	0.6541	1.0000		
9	0.7820	0.2580	0.7003	-0.0891	0.1740	0.4593	0.6199	0.7962	1.0000	
10	0.2215	-0.0041	0.2235	-0.1051	-0.3009	-0.1797	0.0067	-0.3277	0.2615	1.0000

EIGENVALUES OF CORRELATION MATRIX

4.6060	1.6114	1.0664	0.9291	0.7801	0.3823	0.2937	0.2044	0.1055	0.0211
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

EIGENMATRIX

	1	2	3	4	5	6	7	8	9	10
1	0.4285	-0.1600	-0.1119	0.0728	-0.0189	0.0349	-0.2577	-0.0448	-0.8380	0.0274
2	0.2527	0.1332	-0.4507	-0.2236	0.6845	0.0361	0.3157	-0.3023	0.0511	0.0424
3	0.3943	-0.1426	-0.0800	0.3018	-0.1079	0.1333	-0.4917	-0.5008	0.4522	0.0148
4	-0.0084	0.2952	-0.6921	-0.2704	-0.5992	-0.0292	0.0001	-0.0042	0.0202	-0.0178
5	0.2427	0.4830	-0.1290	0.4742	0.1536	0.3133	-0.0804	0.5738	0.0938	-0.0037
6	0.3335	0.2558	0.1297	0.3309	-0.1402	-0.7472	0.3264	-0.1112	0.0106	-0.0036
7	0.3484	-0.1328	0.0339	-0.5118	0.1435	-0.3781	-0.3978	0.4694	0.2338	0.0343
8	0.3926	0.1273	0.3137	-0.2847	-0.1692	0.2966	0.2405	-0.0602	0.0328	-0.6863
9	0.3891	-0.2775	0.1115	-0.0862	-0.2608	0.2883	0.4568	0.1260	0.1199	0.6014
10	0.0070	-0.6630	-0.3977	0.3093	0.0042	-0.0908	0.2334	0.2728	0.1059	-0.4037

FACTOR MATRIX COEFFICIENTS

	1	2	3	4	5	6	7	8	9	10
1	0.0033	-0.0021	-0.0018	0.0012	-0.0004	0.0009	-0.0078	-0.0016	-0.0424	0.0031
2	0.0093	0.0083	-0.0345	-0.0183	0.0612	0.0046	0.0460	-0.0528	0.0124	0.0231
3	0.0076	-0.0047	-0.0032	0.0130	-0.0051	0.0090	-0.0377	-0.0460	0.0579	0.0042
4	-0.0139	0.8230	-2.3717	-0.9926	-2.4005	-0.1670	0.0003	-0.0327	0.2200	-0.4347
5	0.0004	0.0013	-0.0004	0.0017	0.0006	0.0017	-0.0005	0.0043	0.0010	-0.0001
6	0.0027	0.0035	0.0022	0.0060	-0.0028	-0.0213	0.0106	-0.0043	0.0006	-0.0004
7	0.0007	-0.0004	0.0001	-0.0023	0.0007	-0.0026	-0.0031	0.0044	0.0031	0.0010
8	0.0018	0.0010	0.0029	-0.0028	-0.0018	0.0046	0.0043	-0.0013	0.0010	-0.0454
9	0.0001	-0.0001	0.0001	0.0000	-0.0002	0.0002	0.0005	0.0001	0.0002	0.0022
10	0.0006	-0.0923	-0.0671	0.0567	0.0009	-0.0260	0.0761	0.1067	0.0577	-0.4917

FACTOR STRUCTURE CHANNEL

	1	2	3	4	5	6	7	8	9	10
1	0.9196	-0.2031	-0.1156	0.0702	-0.0167	0.0216	-0.1397	-0.0203	-0.2722	0.0040
2	0.5423	0.1691	-0.4654	-0.2155	0.6045	0.0223	0.1711	-0.1366	0.0166	0.0062
3	0.8462	-0.1810	-0.0826	0.2909	-0.0953	0.0824	-0.2665	-0.2264	0.1469	0.0021
4	-0.0181	0.3748	-0.7147	-0.2606	-0.5292	-0.0180	0.0000	-0.0019	0.0066	-0.0026
5	0.5209	0.6132	-0.1332	0.4571	0.1357	0.1937	-0.0436	0.2594	0.0305	-0.0005
6	0.7157	0.3247	0.1339	0.3190	-0.1238	-0.4620	0.1769	-0.0503	0.0034	-0.0005
7	0.7476	-0.1686	0.0350	-0.4933	0.1267	-0.2338	-0.2156	0.2122	0.0759	0.0050
8	0.8426	0.1616	0.3240	-0.2744	-0.1494	0.1834	0.1303	-0.0272	0.0107	-0.0996
9	0.8350	-0.3523	0.1151	-0.0831	-0.2304	0.1783	0.2475	0.0570	0.0390	0.0873

058

467073

May 2 11:57 1990 //zeus/aberfoyle/jobs/lyn/images/lynex.stat Page 2

10	0.0151	-0.8416	-0.4045	0.2981	0.0038	-0.0562	0.1265	0.1233	0.0344	-0.0586
----	--------	---------	---------	--------	--------	---------	--------	--------	--------	---------

TOTAL NUMBER OF PIXELS: 619

CORRELATION MATRIX

467074

0.659

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 0.5160.0210.519-.2730.0400.303-.3090.8301.000

(No Ag
 No Au

S38 REC

Variable	Mean	Std. Error
Cu	74.10084	76.1392747903876
Pb	30.54714	57.3438467693049
Zn	56.65274	40.87233462514112
Ba	495.0477	409.9905202879624
As	14.00239	45.2268858160348
Cr	164.8986	224.7093976603711
Zr	214.5704	82.37473942831471
Ti	4627.613	2448.493591394451
RATIO	23.01247	12.18732695057541

Response Variable = Cu

Ind. Var.	Est. Coeff.	Std. Error	t Value	Beta Weight
Pb	-.0830248	2.952766E-02	2.811764	-6.252964E-02
n	1.040138	.0508128	20.46999	.5583565
Ba	3.412671E-03	4.676613E-03	.7297314	1.837636E-02
As	.100013	3.890981E-02	2.570381	5.940795E-02
r	8.327992E-02	8.096906E-03	10.2854	.2457835
r	6.146843E-02	3.800138E-02	1.617532	6.650242E-02
Ti	-2.22097E-03	2.148847E-03	1.033564	-7.142214E-02
RATIO	1.47635	.4528874	3.259861	.2363138

Constant = -35.99822

Coeff. of Determination = 0.629

Correlation Coefficient = 0.793

Durbin-Watson statistic = 0.828

F Value = 175.5411

v1 = 8

v2 = 828

Mean Square Error = 2172.653

467075

APPENDIX III

ROCK CHIP SAMPLE LOCATIONS

Sample No.	Co-ordinates	
	Easting	Northing
Specimen Creek Grid		
482135	2375	4010
482136	2362	4043
482137	2352	4040
482592	1241	2600
482593	1243.8	2600
482594	1317	2572
482595	1332	2584
482596	1243.8	2600
Reional Programme		
482138	380792	5336605
482140	380681	5336520
482141	380500	5336588

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

FAX: 004 31 8990

ANALYTICAL REPORT No. 23.3.08.06241

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ORDER No.

PROJECT

Aberfoyle Resources Exp. Division
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Tasmania 7320

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21/06/89

1

3

STATE OF SAMPLES REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT							ANALYSIS			
		DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METH	
	482135/37	Rd	Prep: 005,009,018							Cu,Pb,Zn,Ag/101,As/114		
	482135/37	Pu								Ba,Cr,Zr,Ti,Y/401,Au/309		
	482135/37	Pu								Ba/403		

RESULTS

TO

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

RESULTS

TO

REMARKS

LYN

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
whole core	WC	perchloric acid	A1	cold acid	CA	atomic absorption	AAS
split core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
cutting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
rock	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
soil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
pulp	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemicals means	CHEM
tissue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
stream sediment	SS					fluorescence	FLUOR
heavy mineral	HM					Inductively coupled plasma	ICP

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[Signature]

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.06241

21/06/89

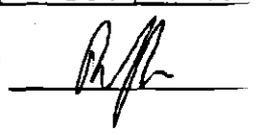
7826

1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Ba	Ba	As	Cr
1	482135	30	825	115	<0.5	<0.008	-	0.68	20	270
2	482136	105	15	155	<0.5	0.012	860	-	3	440
3	482137	60	10	135	<0.5	<0.008	1550	-	2	190
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.5	0.008	10	0.01	1	5
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM
25	METHOD	101	101	101	101	309	401	403	114	401

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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467079

ANALYTICAL DATA

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23.3.08.06391

22/08/89

B260

2 OF 2

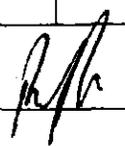
TUBE No.	SAMPLE No.	Ca	Na	Wt	CaO	Na ₂ O			
1	482585	--	--	-					
2	482586	--	--	-					
3	482587	-	-	24.00					
4	482588	-	-	-					
5	482589	-	-	16.00					
6	482590	-	-	8.00					
7	482591	-	-	9.00					
8	482592	-	-	-					
9	482593	<25	350	-	X	472			
10	482594	<25	150	-	X	202			
11	482595	225	200	-	315	270			
12	482596	-	-	-					
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	25	25	0.01					
24	UNITS	PPM	PPM	PPM					
25	METHOD	104	104	159					

Na ppm → Na₂O ppm 2×61.97894
 $\frac{22.98977 \times 2}{23}$

Ca → Ca₂O 2×56.0794
 $\frac{40.08}{20}$

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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APPENDIX IV

ANALABS

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52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

FAX: 004 31 8890

ANALYTICAL REPORT No. 23.3.08.08.06816

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PROJECT

R DeBomford
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Burnie
Tas 7320

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27

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS					
			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD		
		<4826,51/77	RC	Prep: 014								Cu,Pb,Zn,Ag/101		
		<4826,51/77	RC									Au,AuChk/309		
		<4826,51/77	RC									Ba,As/401		

RESULTS

TO

R DeBomford
Aberfoyle Resources Exploration Division
P O Box 952
Burnie
Tas 7320

RESULTS

TO

REMARKS

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHEM
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUOR
heavy mineral HM		inductively coupled plasma ICP

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467081

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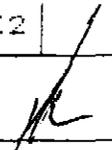
9397

1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	As
1	482651	20	10	70	<0.5	<0.008	<0.008	860	2
2	482652	15	10	65	<0.5	<0.008	-	740	<2
3	482653	20	5	100	<0.5	<0.008	-	840	<2
4	482654	25	90	295	<0.5	<0.008	-	970	8
5	482655	15	20	120	<0.5	<0.008	-	1100	2
6	482656	15	5	55	<0.5	0.057	0.065	1050	8
7	482657	20	20	110	<0.5	<0.008	-	410	2
8	482658	20	25	135	<0.5	<0.008	-	440	<2
9	482659	20	60	90	<0.5	<0.008	-	450	<2
10	482660	20	15	125	<0.5	<0.008	-	570	<2
11	482661	20	20	145	<0.5	<0.008	-	680	<2
12	482662	20	15	190	<0.5	0.017	<0.008	630	<2
13	482663	15	10	280	<0.5	<0.008	-	1100	<2
14	482664	20	15	160	<0.5	<0.008	-	820	<2
15	482665	20	10	240	<0.5	<0.008	-	1400	<2
16	482666	20	20	290	0.5	<0.008	<0.008	1100	<2
17	482667	20	25	95	<0.5	<0.008	-	760	2
18	482668	15	15	125	0.5	<0.008	-	810	<2
19	482669	20	15	80	<0.5	<0.008	-	960	<2
20	482670	15	10	45	<0.5	<0.008	-	1000	<2
21	482671	25	5	25	<0.5	<0.008	-	680	7
22	482672	15	5	40	<0.5	<0.008	-	700	7
23	482673	20	10	45	0.5	<0.008	-	660	7
24	482674	20	10	35	0.5	<0.008	<0.008	730	3
25	482675	20	10	50	<0.5	<0.008	-	910	<2

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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467083

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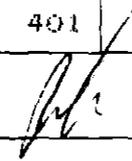
9397

2 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	As
1	482676	20	10	95	<0.5	0.012	-	1050	3
2	482677	20	5	80	0.5	<0.008	-	810	2
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	5	5	5	0.5	0.008	0.008	10	2
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
25	METHOD	101	101	101	101	309	309	401	401

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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467084

APPENDIX V

467085

Sample No:	Co-Ordinate	Depth	Sample Type	Sample Desc.
482135	4010N 2375E	Surface	Pulverised Rock	A mildly sericite altered basaltic lava

Sample No:	Cu (ppm)	Pb	Zn	Ag	Au	Ba	As	Cr	Zr	Ti	Y
482135	30	825	115	x	x	0.68%	20	270	520	5200	50

085

467086

Sample No:	Cu (ppm)	Pb	Zn	Ag	Au	As	Ba	Cr	Zr	Ti
482559	150	5300	220	x	0.040	52	840	2100	190	3700
482568	1150	9775	275	x	0.050	43	3.6%	730	140	2800
482582	150	1795	240	1.0	0.023	61	1550	1100	190	3900

Sample No:	Co-ordinate	Depth	Sample Type	Sample Description
482559	1232E 2640N	0.75m	Pulverised Rock Chip	Intensely Sericite Fuchsite, Pyrite altered Andesitic lava
482568	1232E 2626N	0.5m	"	"
482582	1247E 2600N	1.0m	"	"

ATTACHMENT

Sample No.	Co-ordinate	Depth	Location	Sample	Sample Description
482122	379662E 5331714N	85m	Power Tunnel 6215m	Galena	White Quartz vein hosted pyrite, galena, sphalerite and chalcopyrite mineralisation in black shale.

086

467087

Sample No:	Co-Ordinate	Depth	Sample Type	Sample Description
482555	1232E 2632N (local)	1.0m	Pulverised Rock Chip	Intensely Sericite, Fuchsite altered Andesitic lava
482124	379827E 5332083N (AWG)	Surface	Pulverised Rock Chip	Gossanous Float
514452	1250E 2600N (local)	1.0m	Soil Sample C-Horizon	Orange Brown Clay

087

467038

467039

Sample No:	Cu (ppm)	Pb	Zn	Ag	As	Ba	Cr	Zr	Ti
482555	140	6700	300	<0.5	230	-	-	-	-
482124	10	1450	490	4.0	800	210	80	120	610
514452	185	240	220	<0.5	75	540	1500	160	5650

0889

Sirotope



CSIRO
AUSTRALIA

467090

Division of Exploration Geoscience

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Telephone (02) 887 8666. Telex AA25817 Fax (02) 887 8909

Chief: Dr. B.J.J. Embleton

REPORT TO ABERFOYLE RESOURCES LIMITED

ON THE Pb ISOTOPIC COMPOSITIONS

AND METALLOGENIC ASSOCIATION OF EXPLORATION SAMPLES

FROM THE LYNCHFORD E.L., WESTERN TASMANIA

REPORT SR 093

**GRAHAM R. CARR
JUDITH A. DEAN**

29/8/89

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Telex: AA26296
Fax: (02) 467 1902

1. AIMS OF STUDY

The aim of this study has been to determine the likely metallogenic association of exploration samples from the Lynchford E.L., located to the south of Queenstown, by comparing their Pb isotopic compositions with those of known mineralization in the region.

2. SAMPLES

Four samples were provided by Danny Noonan from an area south of Queenstown. Sample 482122 is galena from a quartz vein hosted within a Cambrian black shale and quartz phyric dacite lava sequence. Samples 482555 (rock chip) and 514451 (soil) are lead-rich and from areas of sericite-fuchsite altered andesitic lavas. Sample 482124 is of gossanous float from a creek draining north into the King River.

3. TARGET SIGNATURES

All major Cambrian ore deposits of western Tasmania have similar Pb isotopic compositions confirming that they formed as part of a major metallogenic event (see Gulson and Porritt, 1987). A relatively homogeneous isotopic composition over such a region suggests the hydrothermal systems were very large, leaching Pb and other elements from a significant volume of crust and thus tending to average out local variations in the Pb isotopic composition of the source rocks. The Cambrian massive sulfide ("target") signature is represented in this study by the overlapping fields for Hellyer, Que River and Rosebery(+Hercules) (Fig. 1). The fields are 95% confidence ellipses which depict the mean \pm 2 x standard deviations of data from each deposit. Despite the averaging effect of the hydrothermal systems, minor differences can be expected between deposits, as is exemplified

by Rosebery/Hercules and Que River/Hellyer fields.

Minor mineralization in western Tasmania commonly consists of discontinuous pods or veins. The isotopic composition of such mineralization varies between occurrences indicating that the hydrothermal systems were probably much smaller. Most examples of this mineralization have isotopic compositions that are more radiogenic than the Cambrian target (i.e. higher $^{206}\text{Pb}/^{204}\text{Pb}$ ratios, Fig 1.) and some can be associated with Devonian plutonism (e.g. Queen Hill, Mt Farrell).

However, other examples have isotopic compositions that are less radiogenic than the Cambrian target, e.g. WOW/CAB, an old Comstaff prospect in the Oonah Formation and the Marionoak mineralization on the Pieman Dam road (Fig. 1). While the origin of such mineralization remains enigmatic, the low $^{206}\text{Pb}/^{204}\text{Pb}$ ratios may result from leaching of Pb from nearby Precambrian source rocks. At both WOW/CAB and Marionoak both more radiogenic and less radiogenic populations are present indicating a complex

Although it is likely that Devonian thermal events were responsible for the generation of these relatively localized hydrothermal systems, it is possible they developed at other times, even during the Cambrian. Irrespective of the age, it is unlikely that such mineralization would have significant economic potential.

4. METHODS

Whole rock powders provided by Aberfoyle were leached in a mixture of 7N HNO_3 and 7N HCl acids. Lead was purified from the leachate by anion exchange in HBr solutions and by micro-electrodeposition techniques.

Analyses were performed on an ISOMASS 54E thermal ionization

0003
mass spectrometer run in fully automated mode. Precision 467093
estimates for the ratios are depicted as error bars in the upper
left hand corner of the ratio plots and are based on the analyses
of over 1000 standards.

5. RESULTS

The results are listed in Table 1 and plotted in Figure 2. There is measurable variation in the $^{206}\text{Pb}/^{204}\text{Pb}$ ratio between samples, but the results for each sample are internally consistent within the limits of analytical error (replicate analyses of single samples are grouped using dashed ellipses in Fig. 2). All results plot outside the Target fields for Cambrian massive sulfide deposits of the region, and are different to data for the Tasman and Crown Lyell Extended and Prince Lyell deposits at Mt Lyell (Gulson and Porritt, 1987, p.296). Samples 482555 (pts 4 & 5) and 482124 (pts 6 & 7) plot close to the Hellyer target ellipse, but the galena sample 482122 (pts 1-3) has significantly higher $^{206}\text{Pb}/^{204}\text{Pb}$ ratios. Sample 514452 (pts 8 & 9) has a similar isotopic composition to 482122, but has a relatively lower Pb content (240ppm).

6. DISCUSSION

The data plot between the fields for Cambrian mineralization and the well established Devonian mineralization at Queen Hill and Mt Farrell. As with the results for the Mackintosh Licence sample (see Report SR 092) we are posed with a dilemma; could this represent as yet unrecognised local variation in the Cambrian signature of a scale similar to the differences between Rosebery/Hercules and Que River/Hellyer or is it part of the broad Devonian signature? In the southernmost extension of the

Mt Read volcanics at Elliot Bay, the Cambrian signatures have significantly lower $^{206}\text{Pb}/^{204}\text{Pb}$ ratios than the Rosebery/Hercules, Que River/Hellyer fields (Gulson et al, 1987). Some mineralization in the Farrell Slates (e.g. Murchison Lode, Gulson and Porritt, 1987), with isotopic compositions similar to the Lynchford samples are considered to be Devonian in age (Polya et al., 1986). Thus, based on these empirical considerations, it would seem more likely the mineralization is related to Devonian rather than Cambrian events.

However, considered as a separate group, samples 482555 and 482124 cannot be readily distinguished from the Prince Lyell high-Pb samples. Sample 514452 may well also be part of this group, but due to its relatively low Pb content it is possible radiogenic ^{206}Pb has been added over the past 400-500Ma due to in situ decay of ^{238}U thus resulting in an increase in the $^{206}\text{Pb}/^{204}\text{Pb}$ ratio (see P174, P185, Table 3, Gulson and Porritt, 1987 for the effects on the $^{206}\text{Pb}/^{204}\text{Pb}$ ratio of relatively high U samples at Prince Lyell). Thus we cannot rule out that these samples might represent a Cambrian signature for the area to the south of Queenstown. Similarly, considered alone the vein galena in sample 482122 has closer affinities to Devonian vein systems. The relationship between 482122 and the other samples could only be ascertained by further analyses, although the geographical distribution and geological context should give some clues.

7. CONCLUSIONS

Unfortunately, the Pb isotopic compositions of the samples do not give a definitive answer to the question of whether the Lynchford E.L. represents Cambrian or Devonian mineralization. We would contend that the variation from the Cambrian signatures

reduces the probability that the E.L. is likely to represent a significant massive sulfide, but would recommend that further exploration is warranted. The Pb isotopic analysis of 3 to 4 more high-Pb samples (>1000ppm if possible) may help clarify whether the data represents two populations, one of which may be similar to Prince Lyell.

8. REFERENCES

- Gulson, B.L. and Porritt, P.M., 1987. Base metal exploration of the Mount Read Volcanics, Western Tasmania: Pt II. Lead isotope signatures and genetic implications. *Econ. Geol.*, 82, pp. 291-307.
- Gulson, B.L., Large, R.R and Porritt, P.M., 1987. Base metal exploration of the Mount Read Volcanics, Western Tasmania:Pt III. Application of lead isotopes at Elliott Bay. *Econ. Geol.*, 82, pp. 308-327.
- Polya, D.A., Solomon, M., Eastoe, C.J. and Walshe, J.L., 1986. The Murchison Gorge Tasmania - a Possible cross section through a Cambrian massive sulfide system. *Econ. Geol.*, 81, pp. 1341-1355.

TABLE 1. LEAD ISOTOPE RATIOS OF LYNCHFORD E.L. SAMPLES.

Sample	$\frac{208 \text{ Pb}}{206 \text{ Pb}}$	$\frac{207 \text{ Pb}}{206 \text{ Pb}}$	$\frac{206 \text{ Pb}}{204 \text{ Pb}}$	$\frac{207 \text{ Pb}}{204 \text{ Pb}}$	$\frac{208 \text{ Pb}}{204 \text{ Pb}}$	Pb(ppm)
1 482122gl	2.0749	0.8456	18.444	15.595	38.270	870,000
2 482122glR/1	2.0757	0.8458	18.453	15.607	38.304	
3 482122glR/2	2.0750	0.8456	18.451	15.601	38.285	
4 482555	2.0772	0.8477	18.395	15.593	38.209	6,700
5 482555R	2.0749	0.8472	18.391	15.582	38.159	
6 482124	2.0736	0.8468	18.404	15.584	38.162	1,450
7 482124R	2.0746	0.8469	18.421	15.601	38.217	
8 514452	2.0724	0.8445	18.447	15.578	38.229	240
9 514452R	2.0718	0.8438	18.457	15.575	38.240	

R, R/1, R/2 denote repeat dissolution and analysis.

gl denotes galena

Sample No prefixes are used to plot points in Figure 2.

REFERENCE DATA - TASMANIA

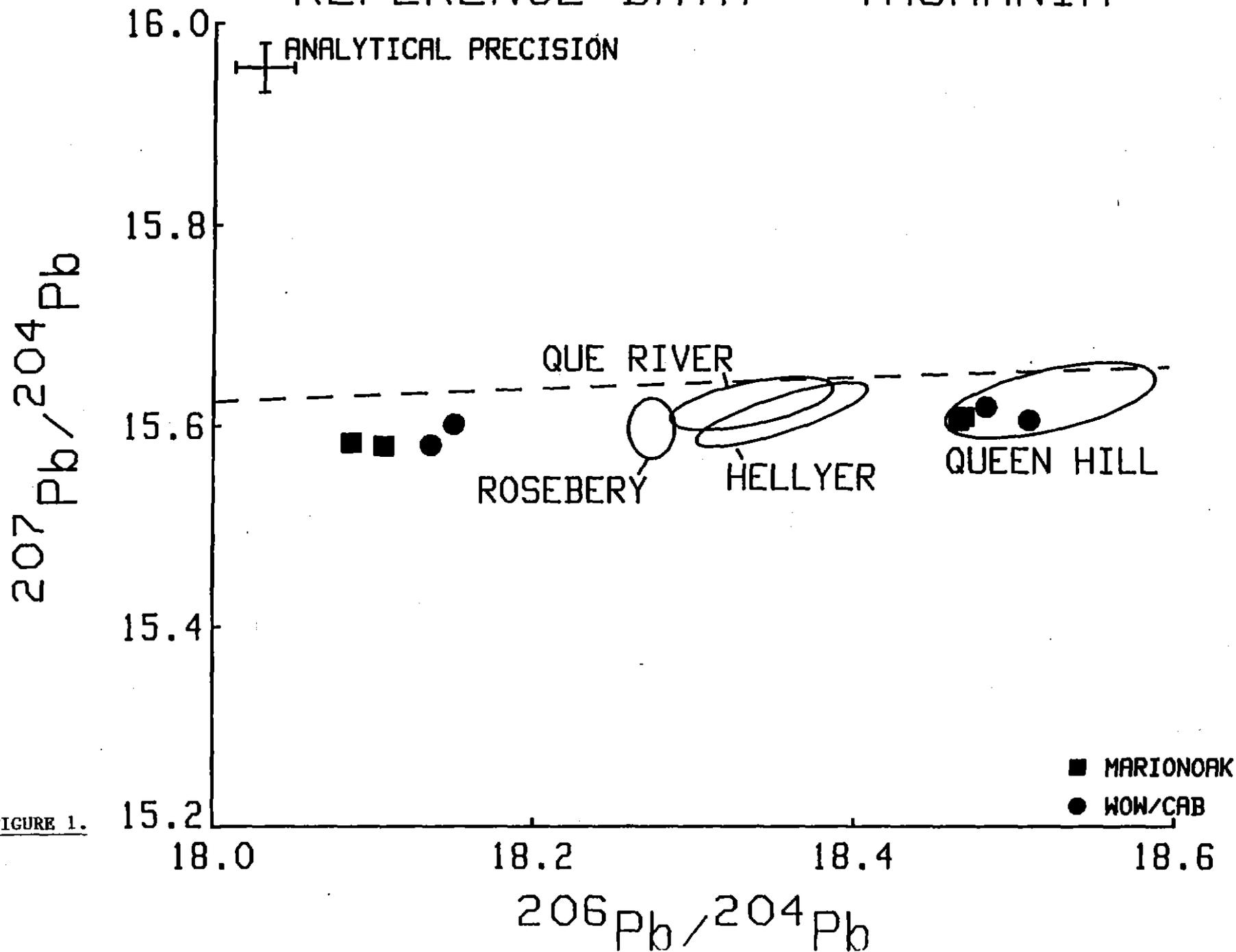


FIGURE 1.

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LYNCHFORD E.L.

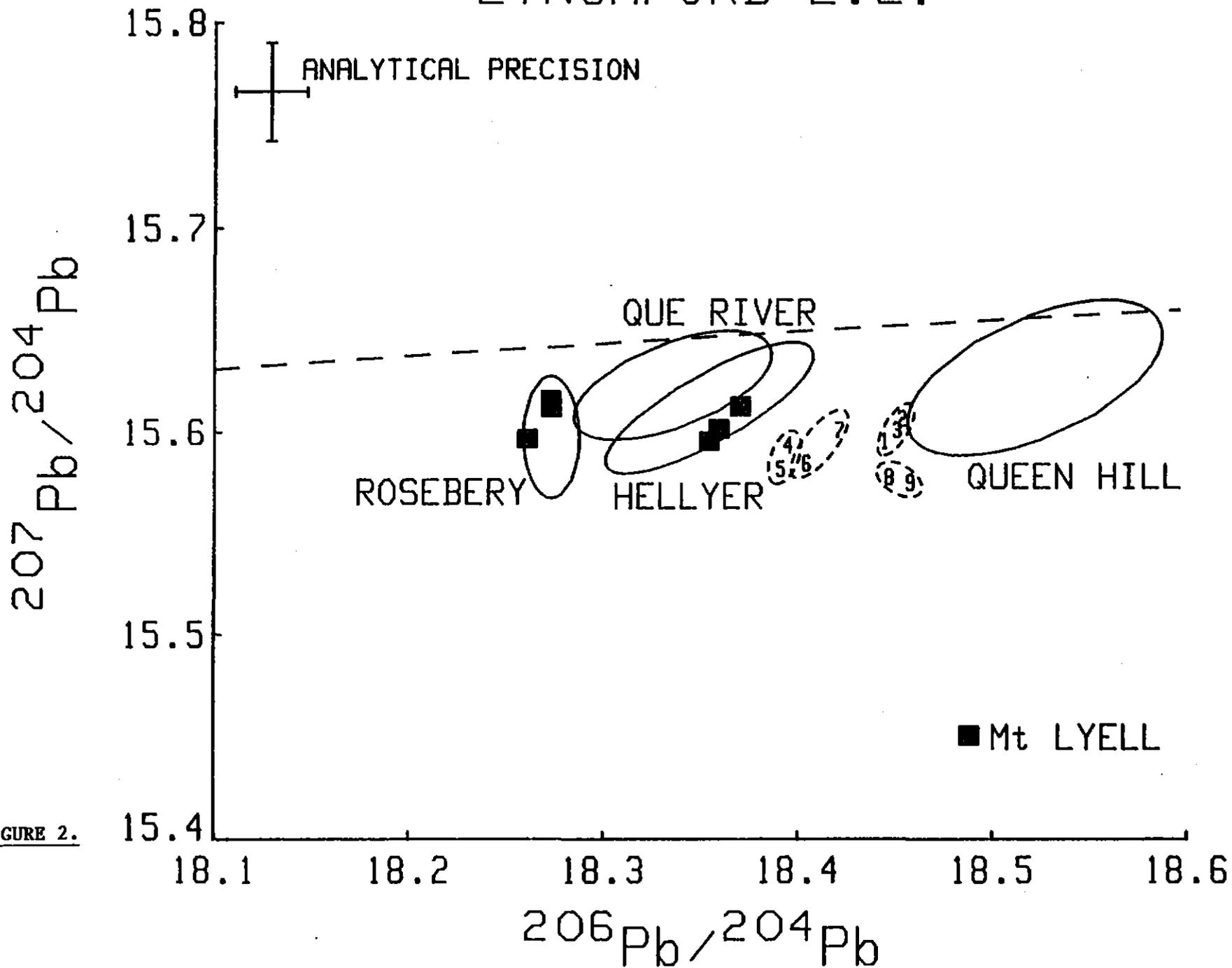


FIGURE 2.

008
Sirotope



CSIRO
AUSTRALIA

467099

Division of Exploration Geoscience

Delhi Road, North Ryde, NSW. Postal Address: PO Box 136, North Ryde NSW 2113.
Telephone (02) 887 8666. Telex AA25817. Fax (02) 887 8909

Chief: Dr. B.J.J. Embleton

9.11.89

Mr Danny Noonan,
Aberfoyle Resources Ltd,
P.O. Box 952,
Burnie Tasmania 7320

Dear Danny,

Please find enclosed our report on the additional samples from Lynchford. As you can see we get a homogeneous population which is similar to Prince Lyell and could be considered to be a Cambrian signature. However, the situation is not as clear cut as it is closer to the major VMS deposits around Rosebery/Que River/Hellyer because the Cambrian signature is getting close to the recognised Devonian signature.

Unless we come up with evidence of abnormally high U in sample 482135, I would say that it represents minor post-Cambrian vein mineralization. We will get back to you on this soon.

Cheers for now.

Yours sincerely,

(Dr Graham R. Carr,
Senior research Scientist)

R e s e a r c h A d v a n c i n g A u s t r a l i a

Floreat Park
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Lindfield
Location: Bradfield Road, Lindfield
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Telex: AA26296
Fax: (02) 467 1902

009
Sirotope



467100

Division of Exploration Geoscience
Delhi Road, North Ryde, NSW Postal Address: PO Box 136, North Ryde NSW 2113
Telephone (02) 887 8666. Telex AA25817. Fax (02) 887 8909

Chief: Dr. B.J.J. Embleton

REPORT TO ABERFOYLE RESOURCES LIMITED

ON THE Pb ISOTOPIC COMPOSITIONS

AND METALLOGENIC ASSOCIATIONS OF FURTHER EXPLORATION SAMPLES

FROM THE LYNCHFORD E.L., WESTERN TASMANIA

SR 099

GRAHAM R. CARR
JUDITH A. DEAN
8/11/89

R e s e a r c h A d v a n c i n g A u s t r a l i a

Floreat Park
Location: Underwood Avenue, Floreat Park
Postal Address: CSIRO Private Bag, PO Wembley WA 6014
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Fax: (02) 467 1902

SUMMARY

Additional samples from Lynchford were analysed in an attempt to determine if a Cambrian Pb isotope signature is present for this area of the Mount Read Volcanics.

The majority of samples from Lynchford form a homogeneous cluster with $^{206}\text{Pb}/^{204}\text{Pb}$ ratios slightly higher than for Hellyer/Que River and Prince Lyell. It is concluded that this population probably represents the Cambrian signature for this region.

1. AIM OF STUDY

Previous Pb isotopic studies in the Lynchford E.L., south of Queenstown, (SR 093, 29/8/89) failed to resolve the question of the metallogenic association of exploration samples from the region. The analyses of additional samples was recommended in order to help clarify the Cambrian or Devonian nature of the alteration and this study presents these results.

2. SAMPLES

Four high Pb pulps were submitted by Danny Noonan. Samples 482559 and 482568 represent costean channel samples located respectively 5m north and 5m south of the previously examined sample 482555. Sample 482582 is a costean channel sample from over a 3m interval, and located 50m southeast of 482555. All these samples represent rock chips from an area of intensely sericite-fuchsite-pyrite altered andesitic lava. The fourth pulp, 482135, is a sample of rock chip from a fault dislocated block of mildly sericite altered basaltic lava from the northeast part of the Lynchford E.L. It has anomalous Ba and Pb.

3. TARGET Pb ISOTOPE SIGNATURES

As discussed in previous SIROTOPE Reports, the Pb isotopic characteristics of Cambrian mineralization in western Tasmania are well established. The 95% confidence ellipses in the accompanying diagrams define the fields for mineralization at Hellyer, Que River and Rosebery(+Hercules), as well as a field for mineralization in the Cethana area. Devonian mineralization tends to have more heterogeneous Pb isotopic compositions, and commonly may have either more, but can also have less, radiogenic values (i.e. higher or lower $^{206}\text{Pb}/^{204}\text{Pb}$ ratios) than the Cambrian mineralization. In the accompanying diagrams the field

for the mineralization at Queen Hill is also represented as a 95% confidence ellipse.

Previous work in the Lynchford E.L. seemed to indicate that there may be two Pb isotope populations, one similar to Prince Lyell, represented by analyses of 482555 and 482124 and the other represented by galena from a quartz vein from an HEC tunnel (sample 482122) having slightly more radiogenic values. The possible association of another sample (514452) was even more uncertain due to its relatively low Pb content.

4. METHODS

About 0.2g of each pulp was digested in a 1:1 mixture of 7N HNO₃ and 7N HCl acids in Teflon beakers. Lead was separated by anion exchange techniques in dilute HBr solutions and purified by electroplating onto Pt electrodes. Lead isotope ratios were determined on an ISOMASS 54E solid source thermal ionization mass spectrometer run in fully automated mode. Precision estimates, representing 2 standard deviations about the mean of over 1000 analyses of international standards and natural samples, are shown in the upper left hand corner of the following diagrams.

5. RESULTS

Isotope results for this study are given in Table 1, along with the data from SIROTOPE report 093 and are plotted in Figure 1 and on an expanded scale plot in Figure 2. Samples 482555, 482124 from the previous study and 482559, 568 and 582 from this study have very similar Pb isotope ratios. They plot close to the fields for Que River and Hellyer, although they have slightly higher ²⁰⁶Pb/²⁰⁴Pb ratios. Sample 482135 (point 6, Fig. 1) has a Pb isotopic composition which is very different to the

103
other analyses, having a very high $^{206}\text{Pb}/^{204}\text{Pb}$ ratio (18.776 compared with an average of 18.404 for the other three analyses from this study).

6. DISCUSSION

The combined data for Lynchford (excluding 482122, 482135, and 514452) define a homogeneous population which plots close to the established Cambrian Target signatures, particularly Que River/Hellyer and Prince Lyell. It seems probable, therefore, that this population represents a Cambrian signature for the Lynchford area. However, because these data also plot relatively close to the Devonian Queen Hill signature, we do not have the same degree of confidence in discriminating the Cambrian and Devonian events as we do elsewhere in the Mt Read Volcanics.

The Pb isotopic composition of galena from a HEC tunnel (482122) reported in SR 093 95% plots well outside the 95% confidence ellipse for the main Lynchford data (Fig.2) and thus we are led to conclude they probably represent separate mineralizing events. Also, the similarity of 482122 to the Queen Hill signature possibly indicates that the galena is Devonian in age.

The relatively high $^{206}\text{Pb}/^{204}\text{Pb}$ ratio for 482135 compared to the assumed Cambrian signature and to the rest of the samples from the Lynchford E.L. could be due to a number of reasons:

i). The alteration represented by this sample is unrelated to ?Cambrian sericite-fuchsite-pyrite alteration, possibly being part of a younger ? Devonian event,

ii). The lead content of sample 482135 is much lower than the value of 825ppm indicated by Aberfoyle or it has a very high U content ($\approx 50\text{ppm}$), and its isotopic composition has been

changed by the addition of radiogenic Pb since the Palaeozoic by the in situ decay of U and Th. We consider this possibility unlikely, but will analyse the sample for Pb and U in the near future.

7. CONCLUSIONS

Based on the Pb isotope results from both studies, it is apparent the metallogenic history of the Lynchford area is complex. Samples 482555, 124, 559, 568 and 582, form a homogeneous group which probably defines a Cambrian signature for VMS mineralization in the area. A different mineralizing event, possibly related to Devonian activity, is represented by 482122 galena but the isotopic composition of sample 514452 may have been affected by radiogenic addition because of its relatively low Pb content (240ppm). The data for 482135 require further investigation.

8. FOLLOW-UP

As soon as possible 482135 will be reanalysed and its Pb and U contents determined by isotope dilution techniques. The U and Pb contents of 514452 will also be determined.

TABLE 1. LEAD ISOTOPE RATIOS OF SAMPLES FROM THE LYNCHFORD AREA.

Sample	$\frac{208 \text{ Pb}}{206 \text{ Pb}}$	$\frac{207 \text{ Pb}}{206 \text{ Pb}}$	$\frac{206 \text{ Pb}}{204 \text{ Pb}}$	$\frac{207 \text{ Pb}}{204 \text{ Pb}}$	$\frac{208 \text{ Pb}}{204 \text{ Pb}}$	Pb(ppm)
1 482122gn	2.0749	0.8456	18.444	15.595	38.270	870,000
2 482122gnR/1	2.0757	0.8458	18.453	15.607	38.304	870,000
3 482122gnR/2	2.0750	0.8456	18.451	15.601	38.285	870,000
4 482124	2.0736	0.8468	18.404	15.584	38.162	1,450
5 482124R	2.0746	0.8469	18.421	15.601	38.217	1,450
6 482135	2.0584	0.8329	18.776	15.639	38.648	825
7 482555	2.0772	0.8477	18.395	15.593	38.209	6,700
8 482555R	2.0749	0.8472	18.391	15.582	38.159	6,700
9 482559	2.0771	0.8477	18.391	15.589	38.200	5,300
10 482559rel	2.0753	0.8472	18.405	15.592	38.197	5,300
11 482568	2.0778	0.8480	18.406	15.608	38.243	9,775
12 482582	2.0752	0.8469	18.403	15.586	38.190	1,795
13 482582rel	2.0764	0.8473	18.402	15.593	38.210	1,795
14 514452	2.0724	0.8445	18.447	15.578	38.229	240
15 514452R/1	2.0718	0.8438	18.457	15.575	38.240	240
16 514452R/2	2.0721	0.8443	18.448	15.575	38.225	240

Sample No prefixes are used for plotting points in Figures 1 and 2
gn denotes galena

R,R/1,R/2 denote repeat analyses

rel denotes reload from same sample dissolution

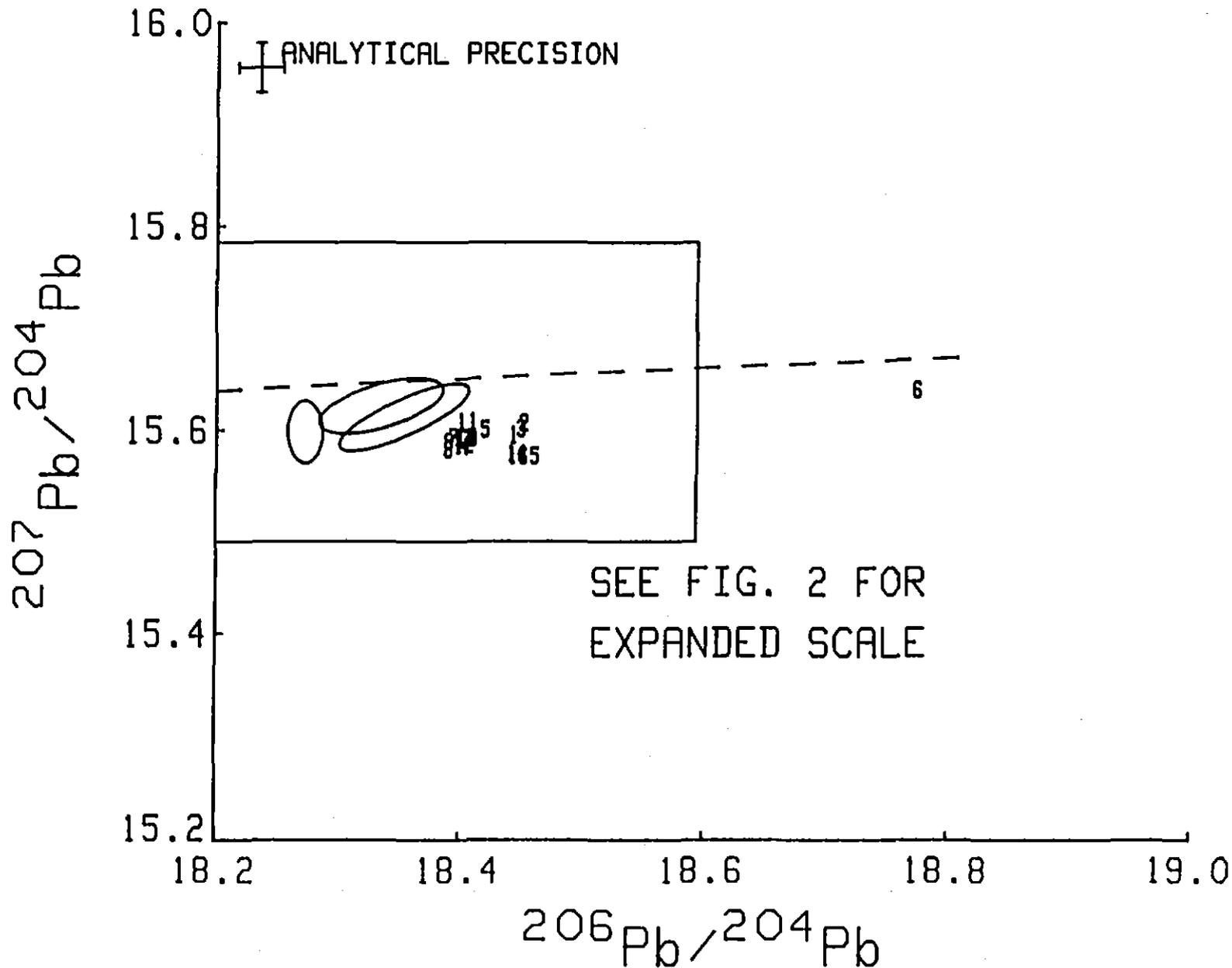


Figure 1: A $^{207}\text{Pb}/^{204}\text{Pb}$ diagram showing all the data for Lynchford compared to 95% confidence ellipses for Cambrian VMS mineralization at Que River, Hellyer and Rosebery.

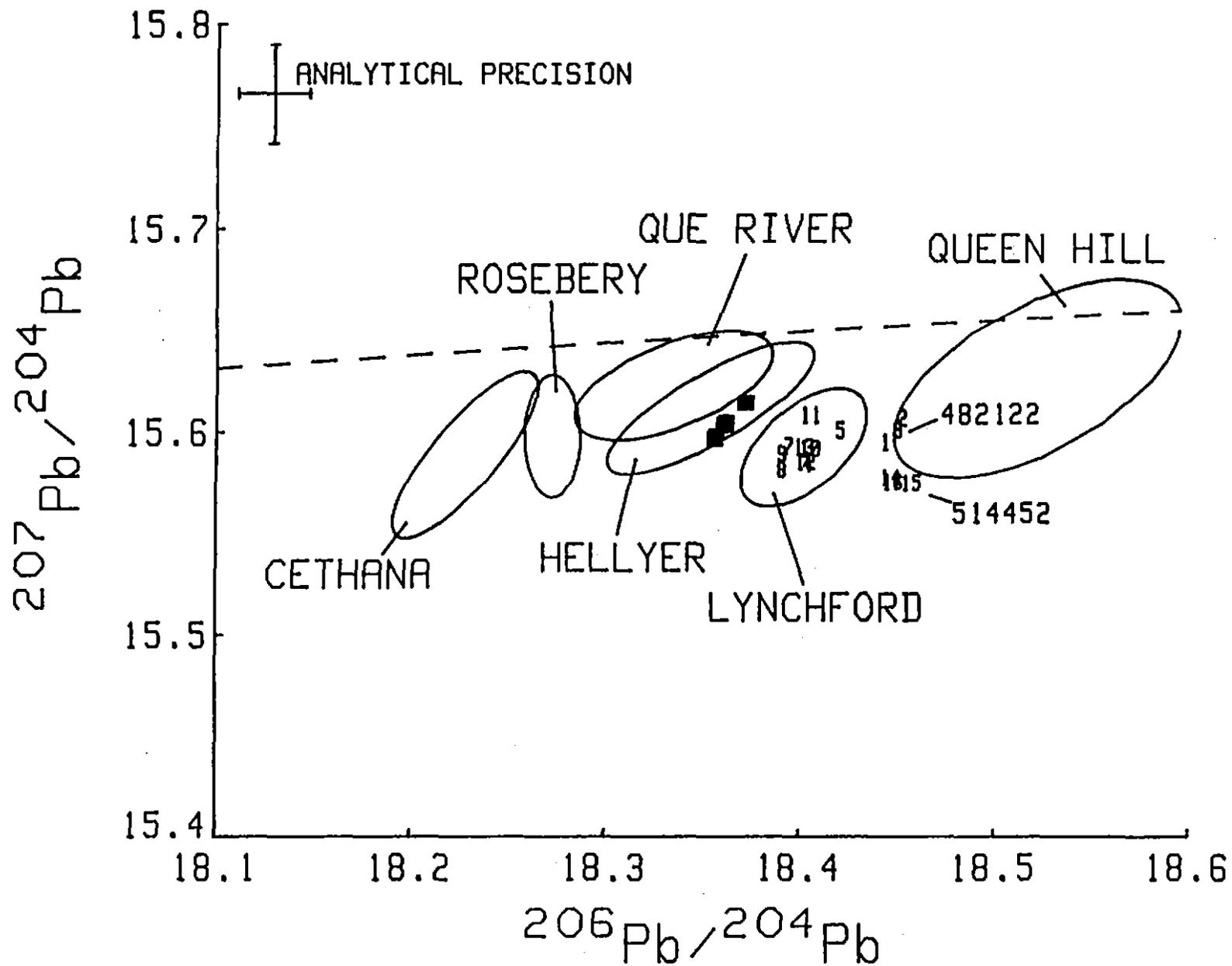


Figure 2: An expanded scale diagram of Fig. 1. An ellipse has been drawn around the data for Lynchford samples 482124, 555, 559, 568 and 582. Also shown are the fields for Queen Hill and Cethana and reference points (■) for Prince Lyell.

467109

APPENDIX VI



The University of Queensland
DEPARTMENT OF GEOLOGY AND MINERALOGY
St. Lucia, Queensland, Australia, 4067.

Head of Department: Dr. G.R. Orme

467110

Telephone: (07) 377 2375
International: 61 7 377 2375
Telex: UNIVQLD A40315
Facsimile: (07) 870 4993

SDG:YMH

February 28, 1990

Mr D.J. Noonan,
Geologist,
Aberfoyle Resources Limited,
P.O. Box 952,
BURNIE TAS 7320

Dear Danny,

Sulphur Isotope Analyses

Sample	Mineral	$\delta^{34}\text{S}/\text{‰ CDT}$
482036	pyrite	1.8, 0.6
482114	pyrite	1.4, 1.3
482349	pyrite	11.4, 11.5

1. Sulphides were combusted at 900°C with Cu_2O to extract SO_2
2. Isotopic analyses were performed with an MM602E mass spectrometer.
3. NBS 122 (0.5‰ CDT) and NBS 123 (17.0‰ CDT) were used to establish a calibration curve.

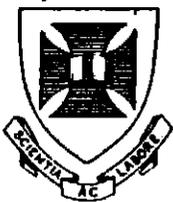
As per our previous letter, the fine-grained pyrites from Lynchford were prepared by digestion in cold acids before sulphur isotope analysis. If you plan to submit further disseminated pyrite samples for analysis, we would appreciate your prior advice in order to schedule the acid dissolution and subsequent analysis more efficiently. For your information, a current price list is enclosed.

Yours sincerely,

Sue Golding

Dr Sue Golding
Senior Research Officer
for Dr Stephen Dobos
Director, Isotope Geochemistry Laboratories

Enc



The University of Queensland
DEPARTMENT OF GEOLOGY AND MINERALOGY
St. Lucia, Queensland, Australia, 4067.

LYN GENERAL

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International: 61 7 377 2375
Telex: UNIVQLD A40315
Facsimile: (07) 870 4993

467111

Head of Department: Dr. G.R. Orme
SDG:YH
June 30 1989

Mr D.J. Noonan
Geologist
Aberfoyle Resources Limited
Exploration Division
PO Box 952
BURNIE TAS 7320

Dear Danny

Sulphur Isotope Analyses

Sample	Minerals	$\delta^{34}\text{S}^{\circ}/\text{oo CDT}$
482350	pyrite	6.9
482014	barite	26.1
482112	barite	26.0
482118	barite	25.8

1. Sulphides were combusted at 900°C with Cu_2O to extract SO_2 .
2. Sulphates were thermally decomposed at 900°C in the presence of BaSO_4 and V_2O_5 to extract SO_2 .
3. Isotopic analyses were performed with an MM602E mass spectrometer.
4. CSIRO Ag_2S (2) ($0.2^{\circ}/\text{oo CDT}$) and NBS 123 ($17.2^{\circ}/\text{oo CDT}$) were used to establish a calibration curve.

As discussed in our phone call, the remaining fine-grained pyrites from Lynchford will be prepared by digestion in cold acids and analysed for $\delta^{34}\text{S}$ at the earliest opportunity. I will be happy to comment critically on your interpretation of these analyses.

Yours sincerely,

Sue Golding

Dr Sue Golding
Senior Research Officer
for Dr Stephen Dobos
Director, Isotope Geochemistry Laboratories

ATTACHMENT

Sample No.	Co-ordinate	Depth	Location	Sample	Sample Description
482014	2335E 4000N	Surface	Specimen Creek grid	Barite	Subcropping pods of Barite with wh. vein quartz in Dacitic lapilli volcanoclastics.
482112	2270E 3610N	Surface	Specimen Creek grid	Barite	Subcropping pods of Barite within gn Andesite lava.
482118	1675E 4075N	Surface	Specimen Creek grid	Barite	Subcropping pods of Barite within a dominantly mudstone sequence.

487112

ATTACHMENT

Sample No:	Co-ordinate	Depth	Location	Sample	Sample Description
482036	1160E 2400N	Surface	Specimen Creek grid	Pyrite	Subcropping extensively altered felsic lava. Extensive sericite carbonate alteration with lesser disseminated pyrite.
482114	1155E 2400N	Surface	Specimen Creek grid	Pyrite	Subcropping extensively altered felsic lava. Extensive sericite carbonate alteration with lesser disseminated pyrite.
482349	379451 5331726	-100m	King River Power Tunnel		Rhyolitic lava with disseminated pyrite and sericite-carbonate overprint.
482350	378894 5331782	-100m	King River Power Tunnel		Rhyolitic lava with abundant pyrite and mild sericite-carbonate overprint.

467113 44

487114

APPENDIX VII

Client : ABERFOYLE EXPLN.

Surveyed by : HIGHLAND EXPLN.

Prospect : LYNCHFORD

Survey Date : JULY 1989

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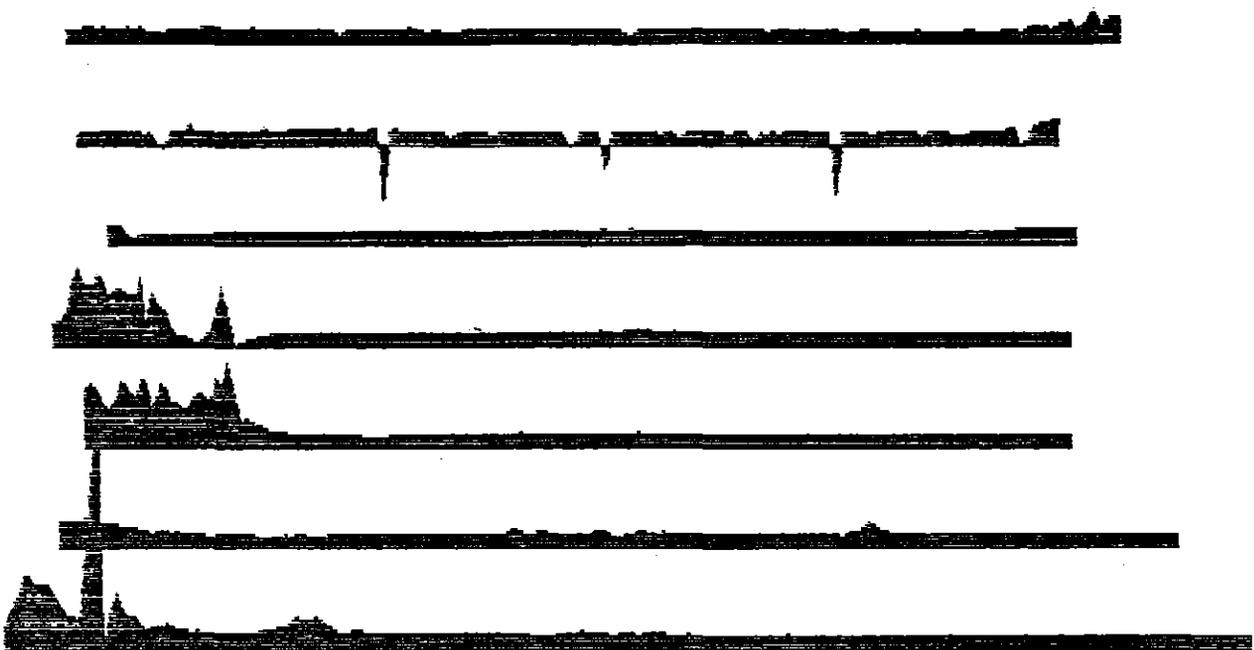
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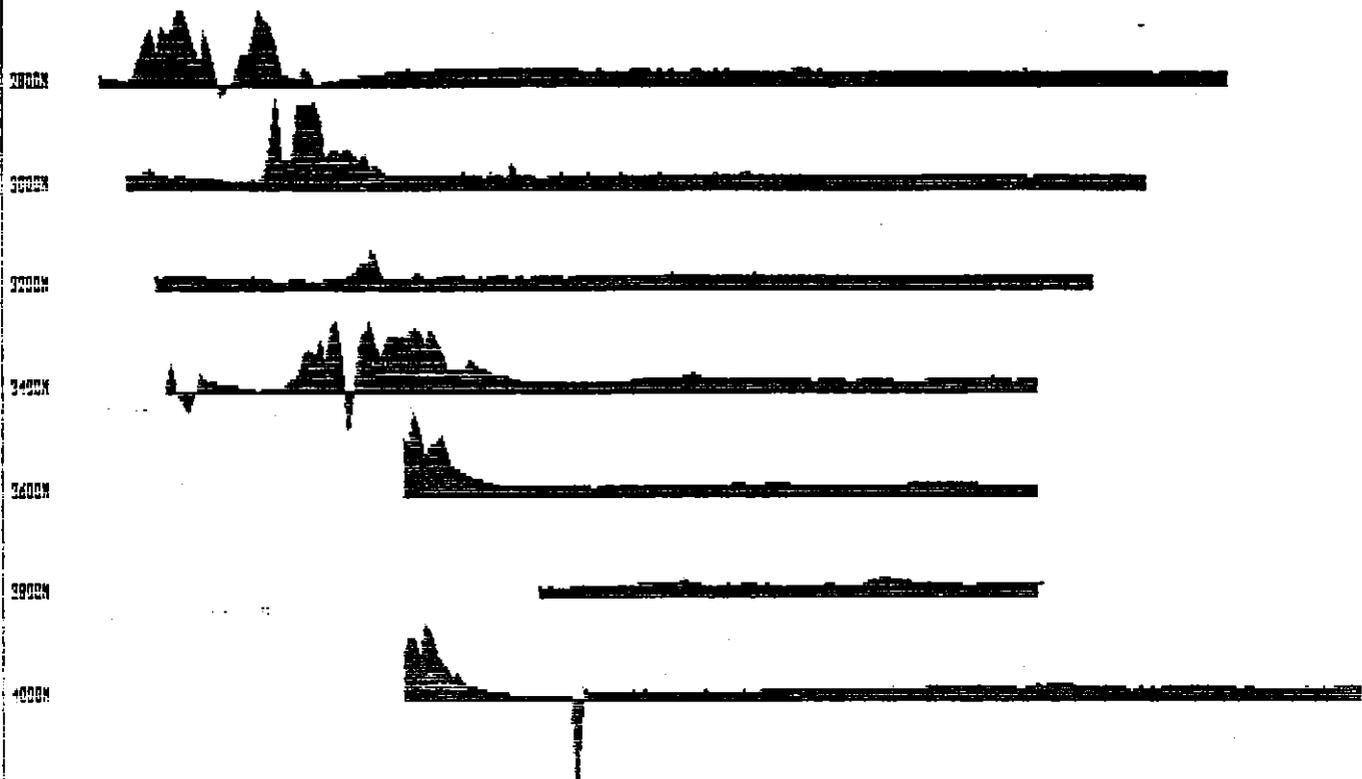
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Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

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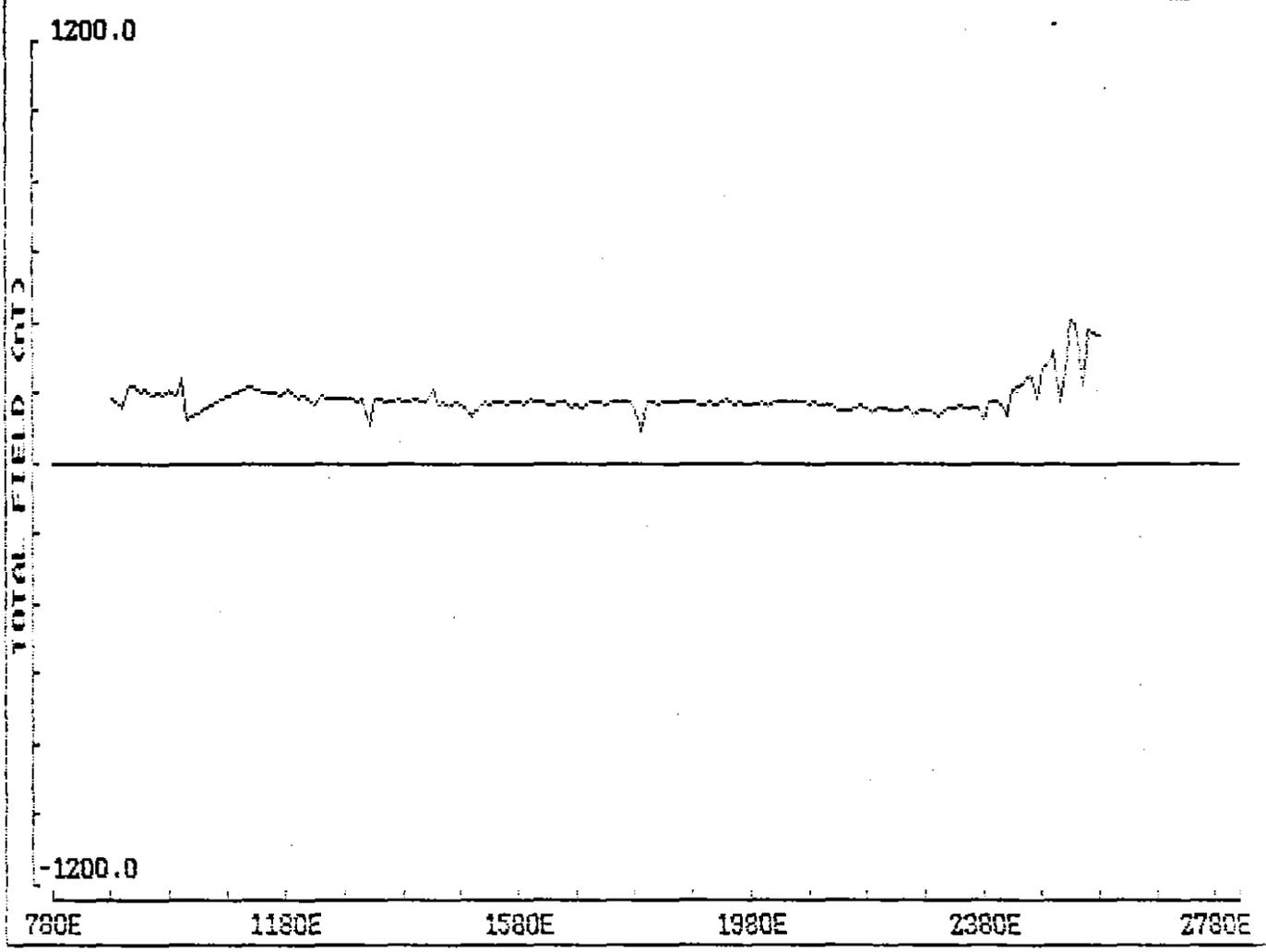
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Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

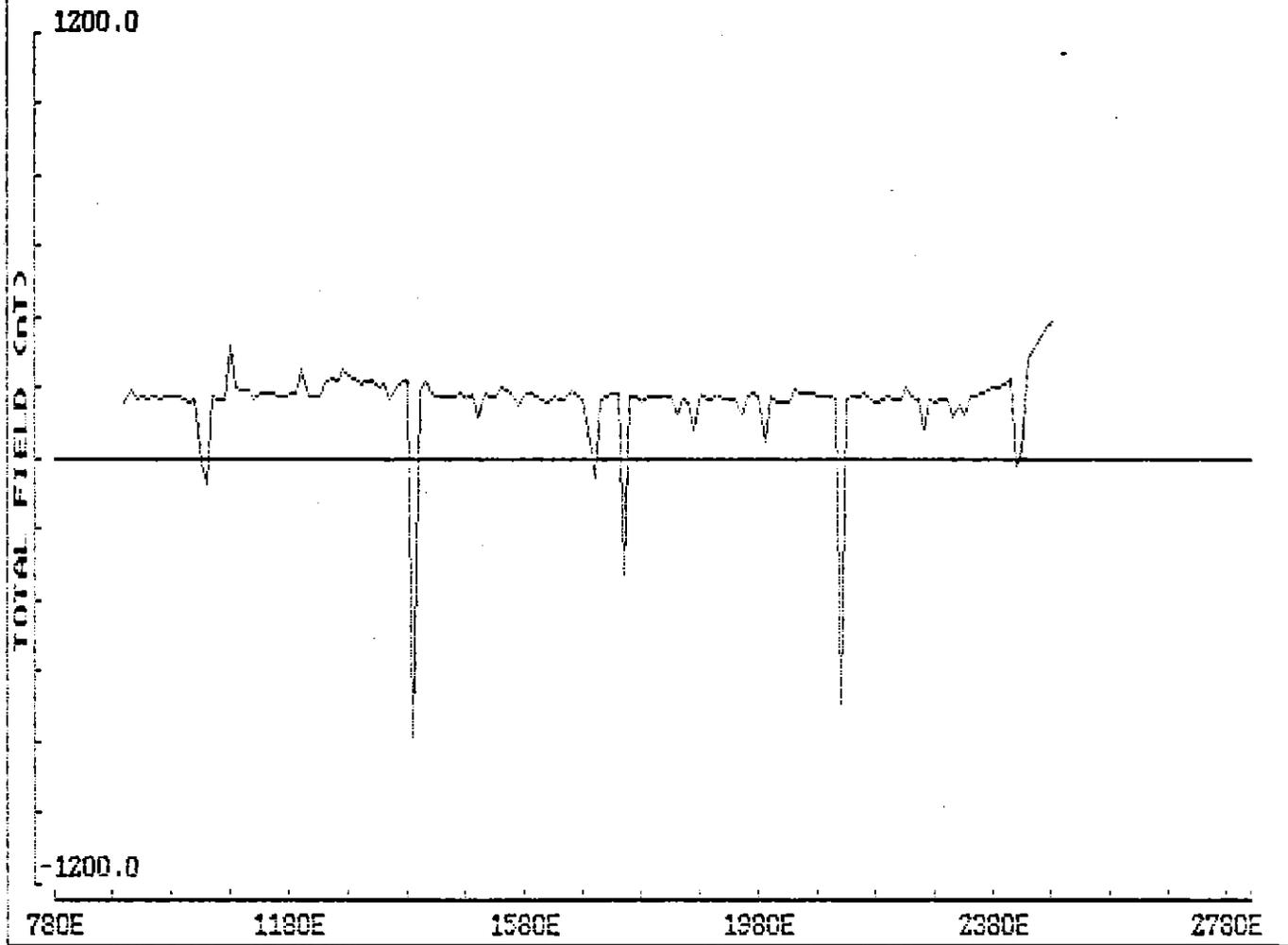
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Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

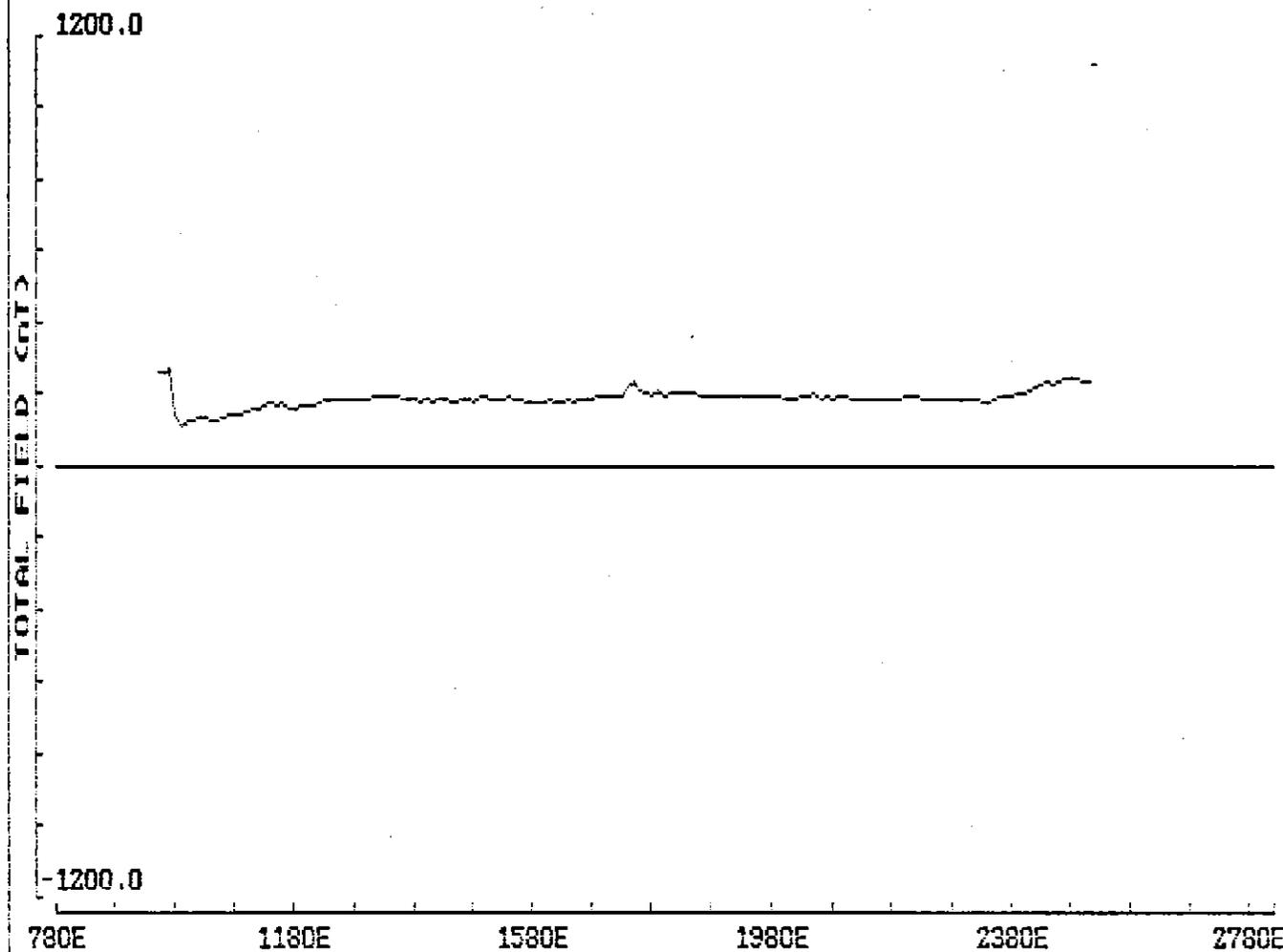
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Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

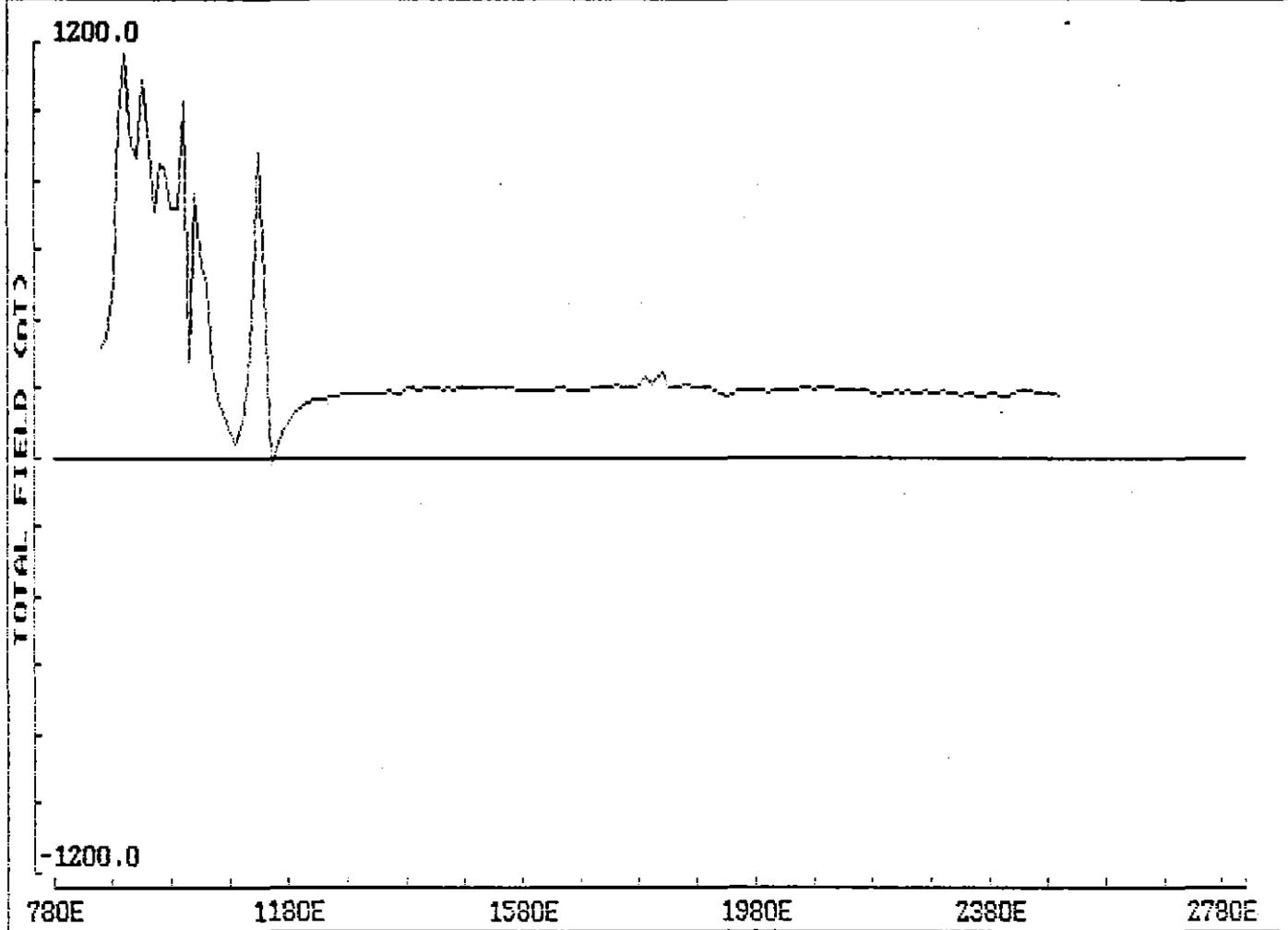
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Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

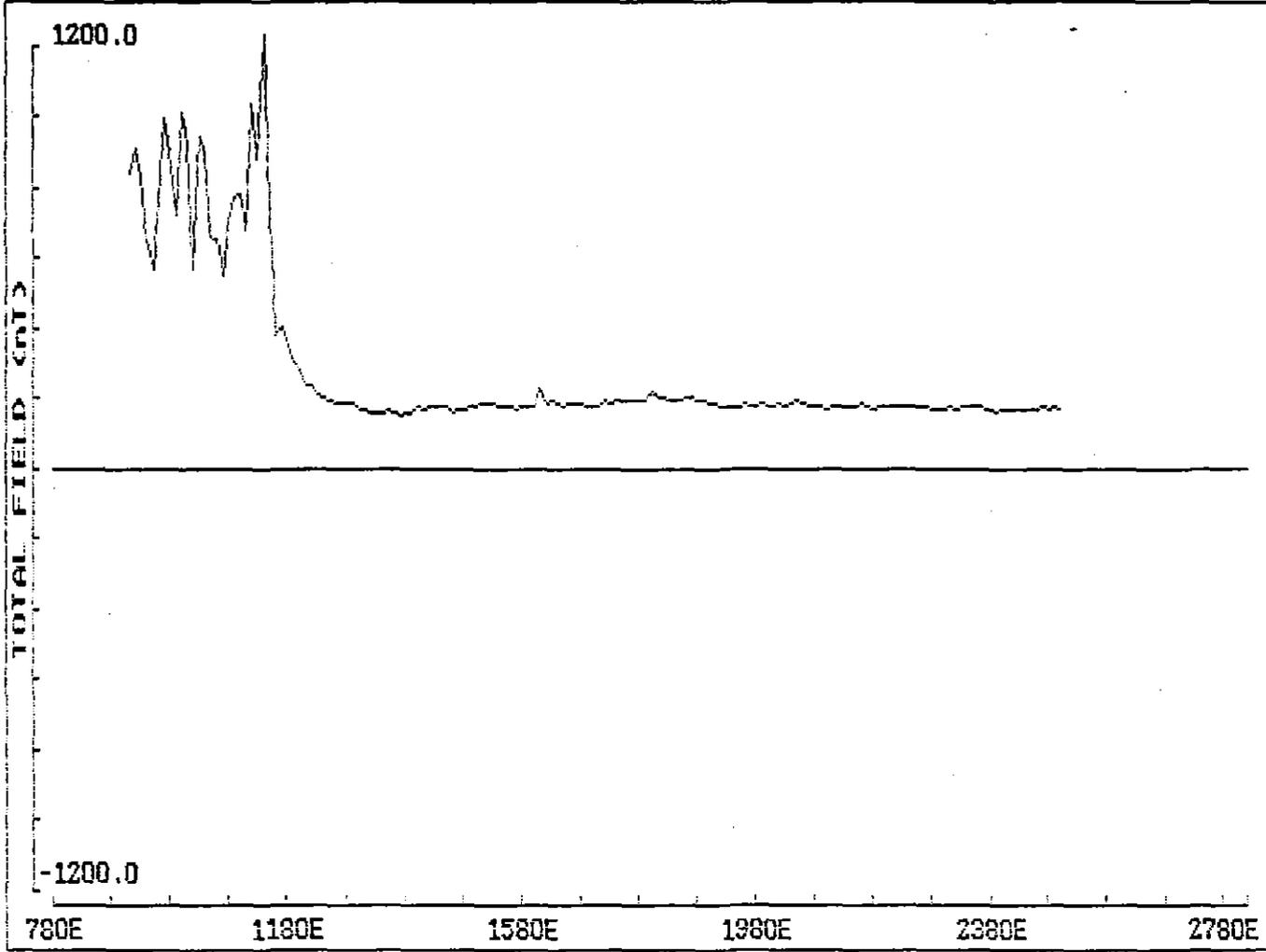
2000N



Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

ZZOON



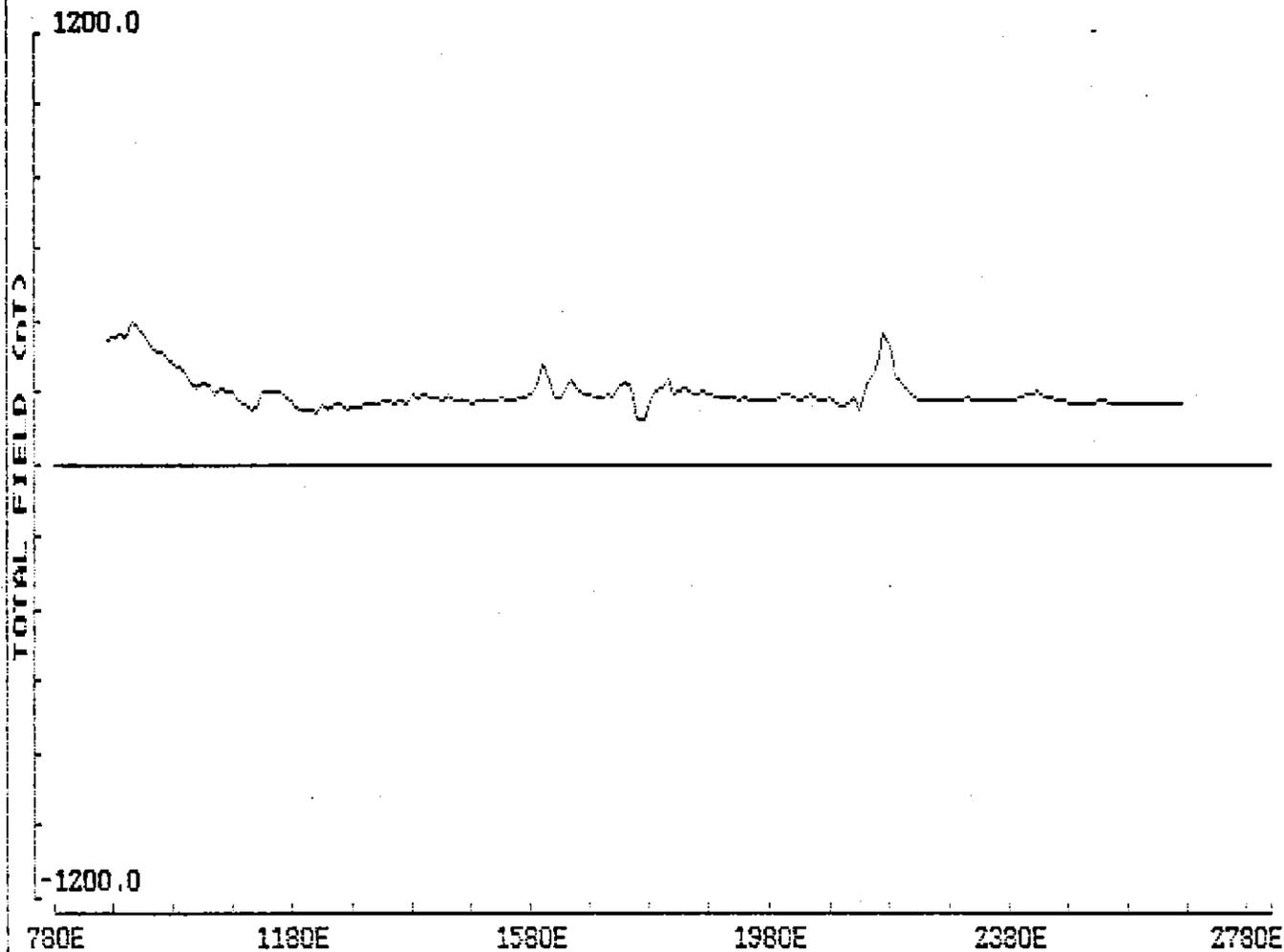
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Surveyed by : HIGHLAND EXPLN.

Prospect : LYNCHFORD

Survey Date : JULY 1989

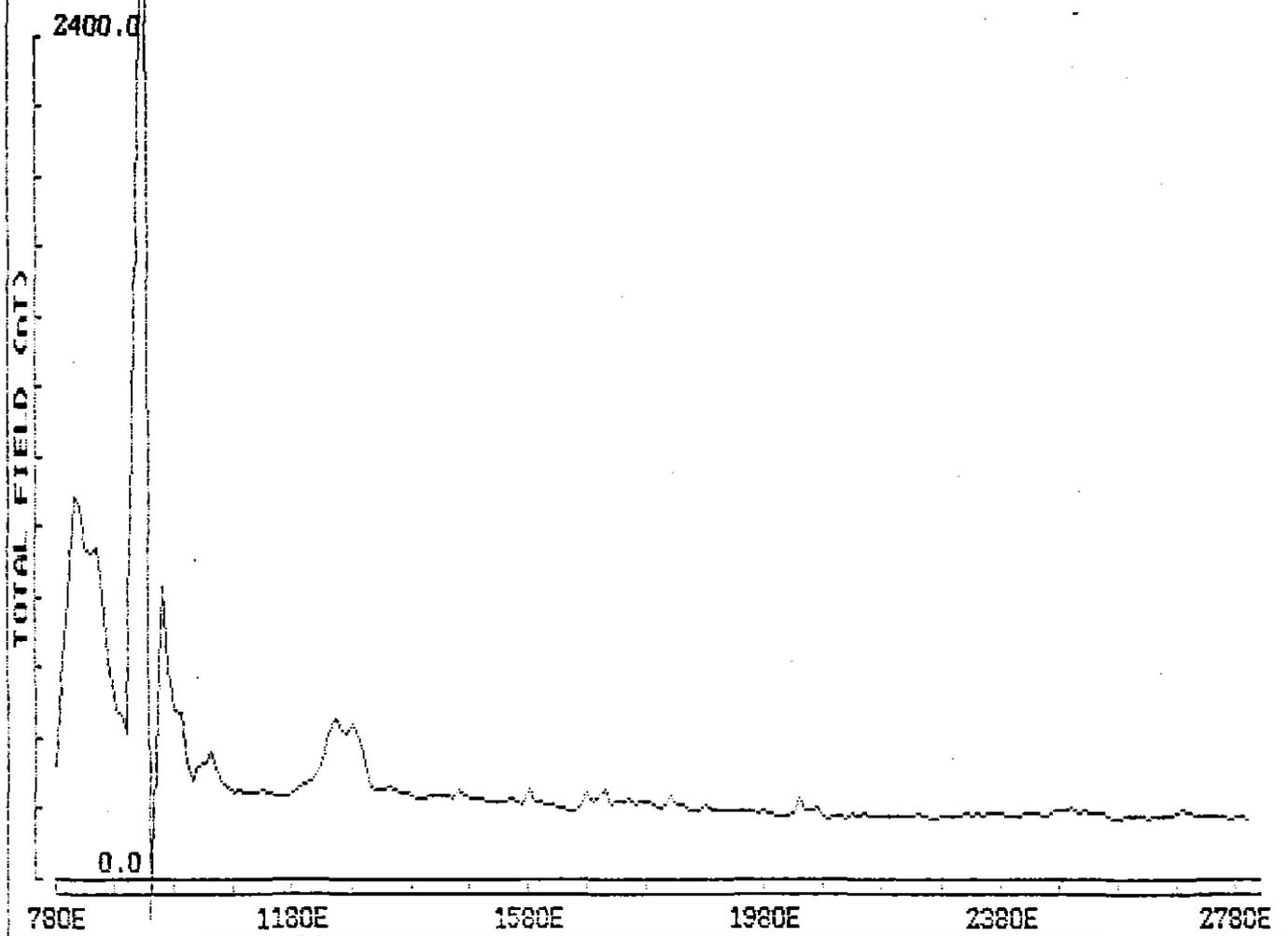
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Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

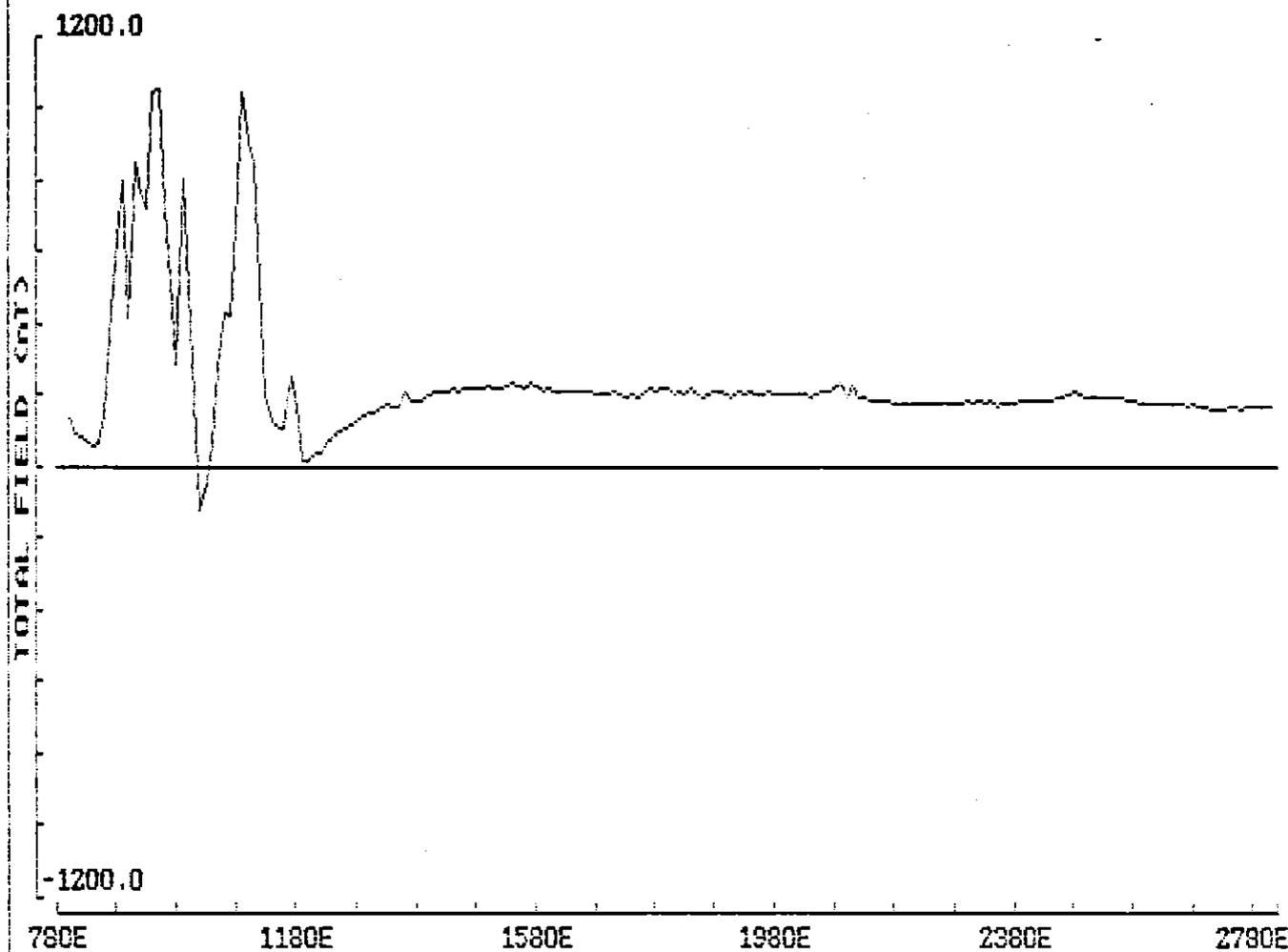
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Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

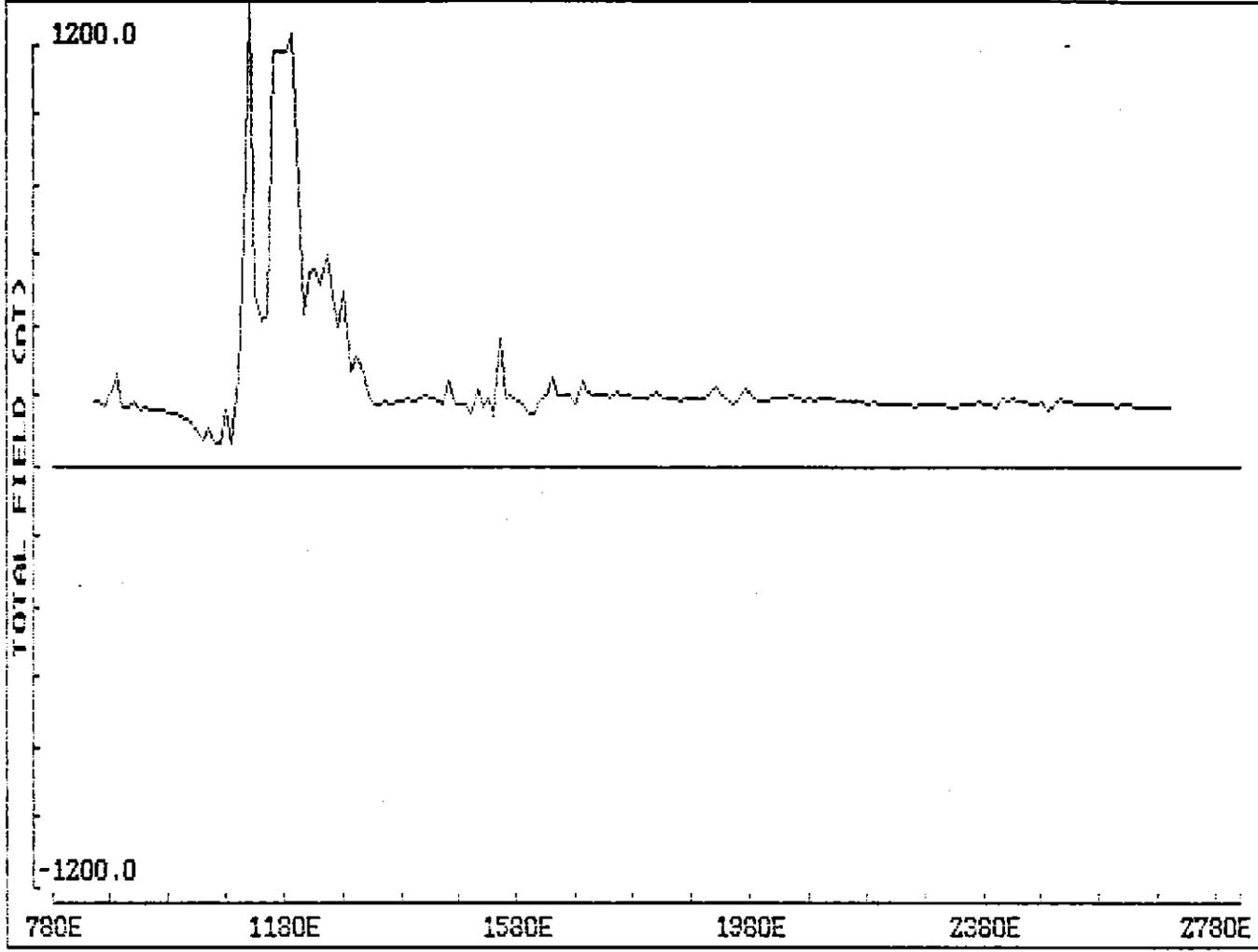
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Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

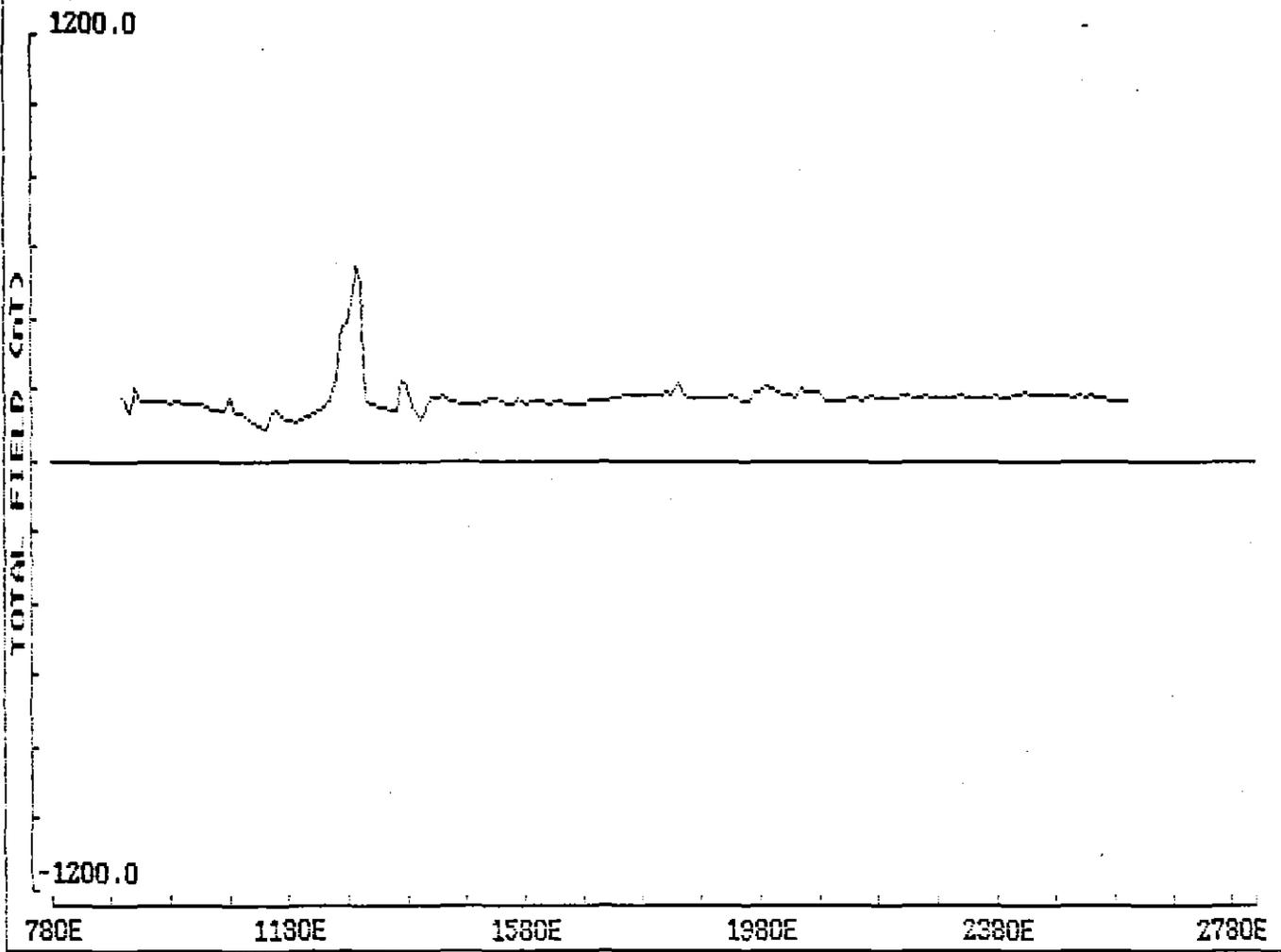
3000N



Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

3200N



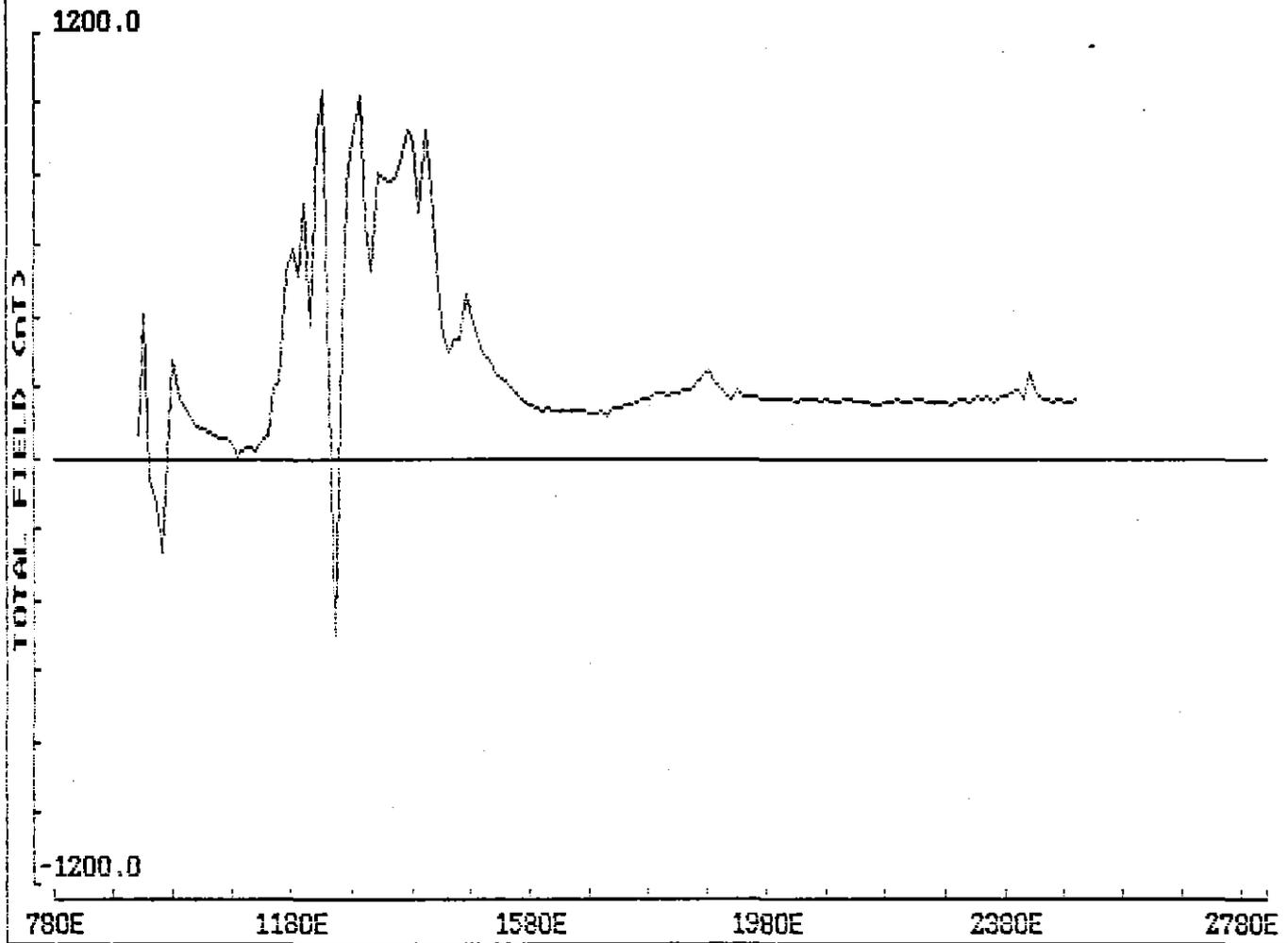
Client : ABERFOYLE EXPLN.

Surveyed by : HIGHLAND EXPLN.

Prospect : LYNCHFORD

Survey Date : JULY 1989

3400N



467128

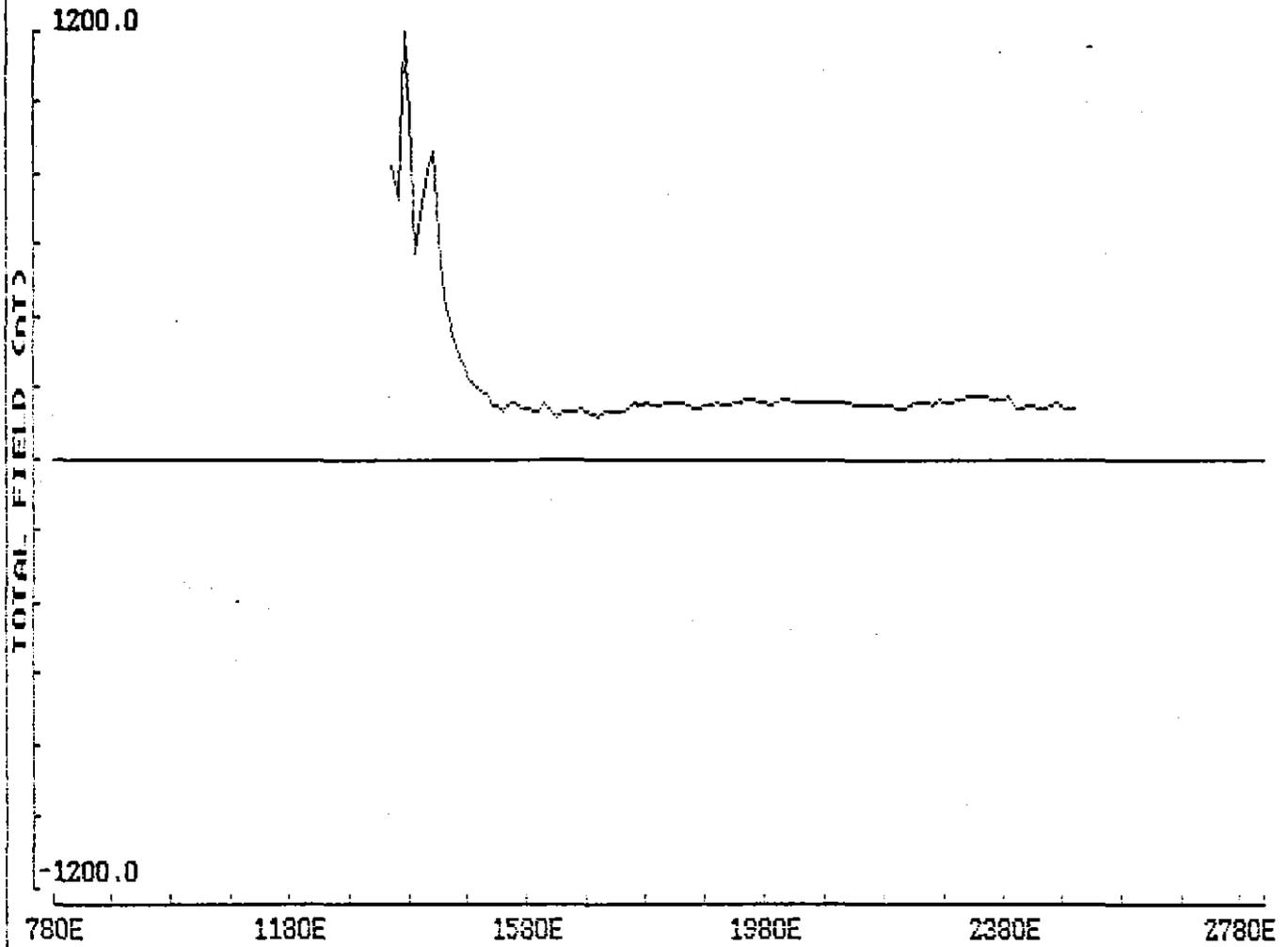
Client : ABERFOYLE EXPLN.

Surveyed by : HIGHLAND EXPLN.

Prospect : LYNCHFORD

Survey Date : JULY 1989

3600N



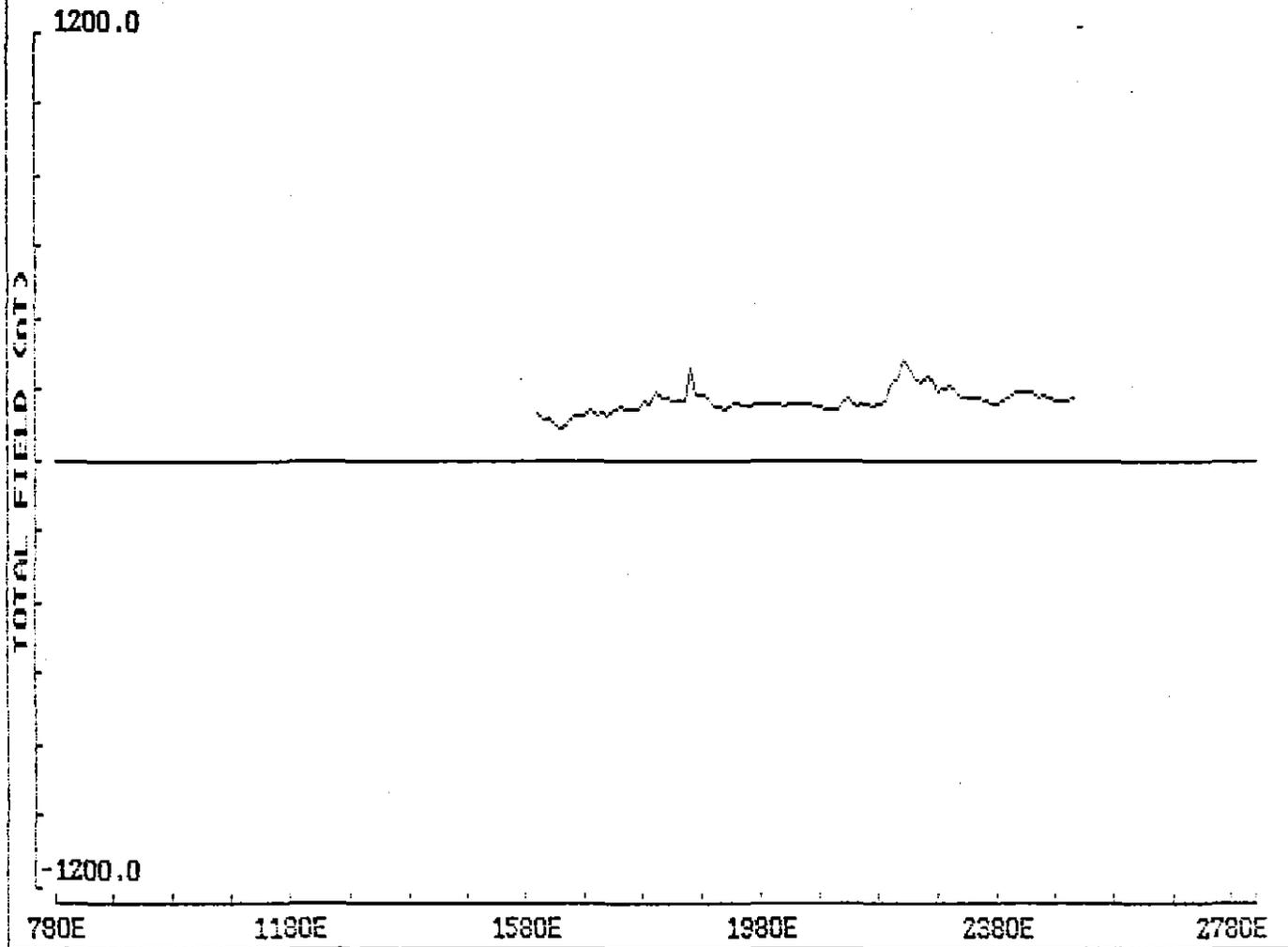
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Surveyed by : HIGHLAND EXPLN.

3800N

Prospect : LYNCHFORD

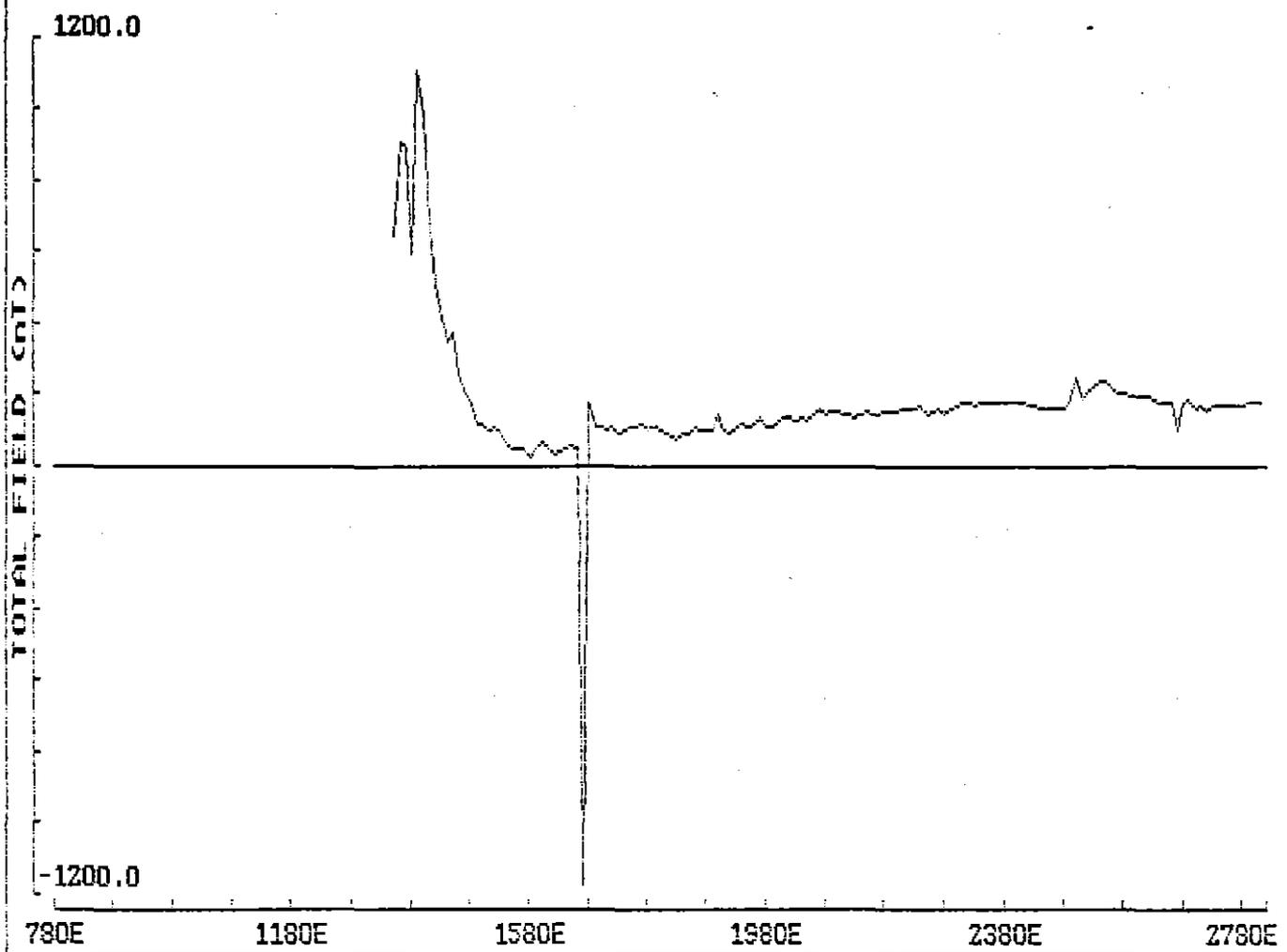
Survey Date : JULY 1989



Client : ABERFOYLE EXPLN.
Prospect : LYNCHFORD

Surveyed by : HIGHLAND EXPLN.
Survey Date : JULY 1989

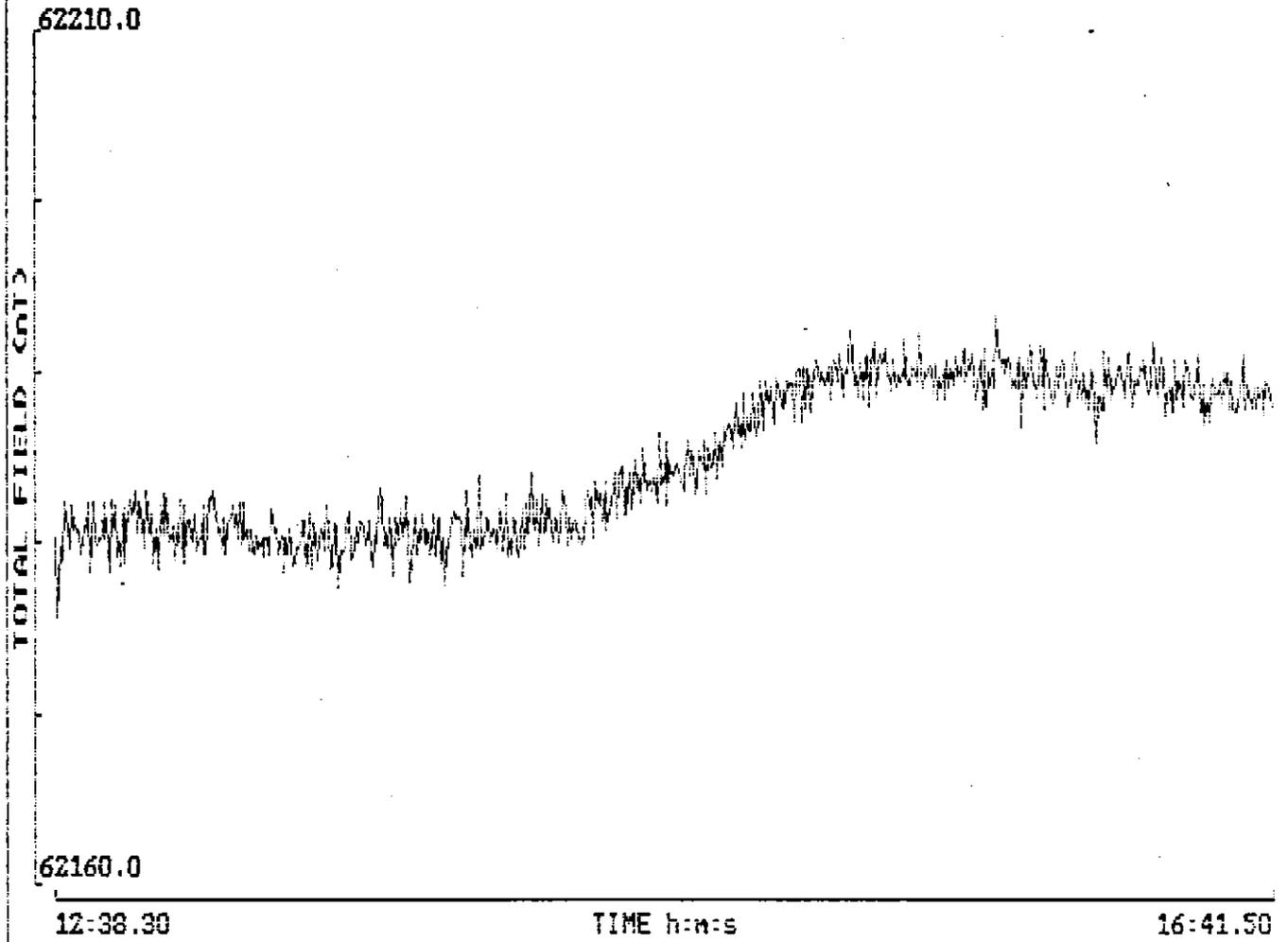
4000N



Client : LYNCHFORD
Prospect : ABERFOYLE EXPLN.

Surveyed by : HIGHLAND EXPLN.
Survey Date : 14/7/1989

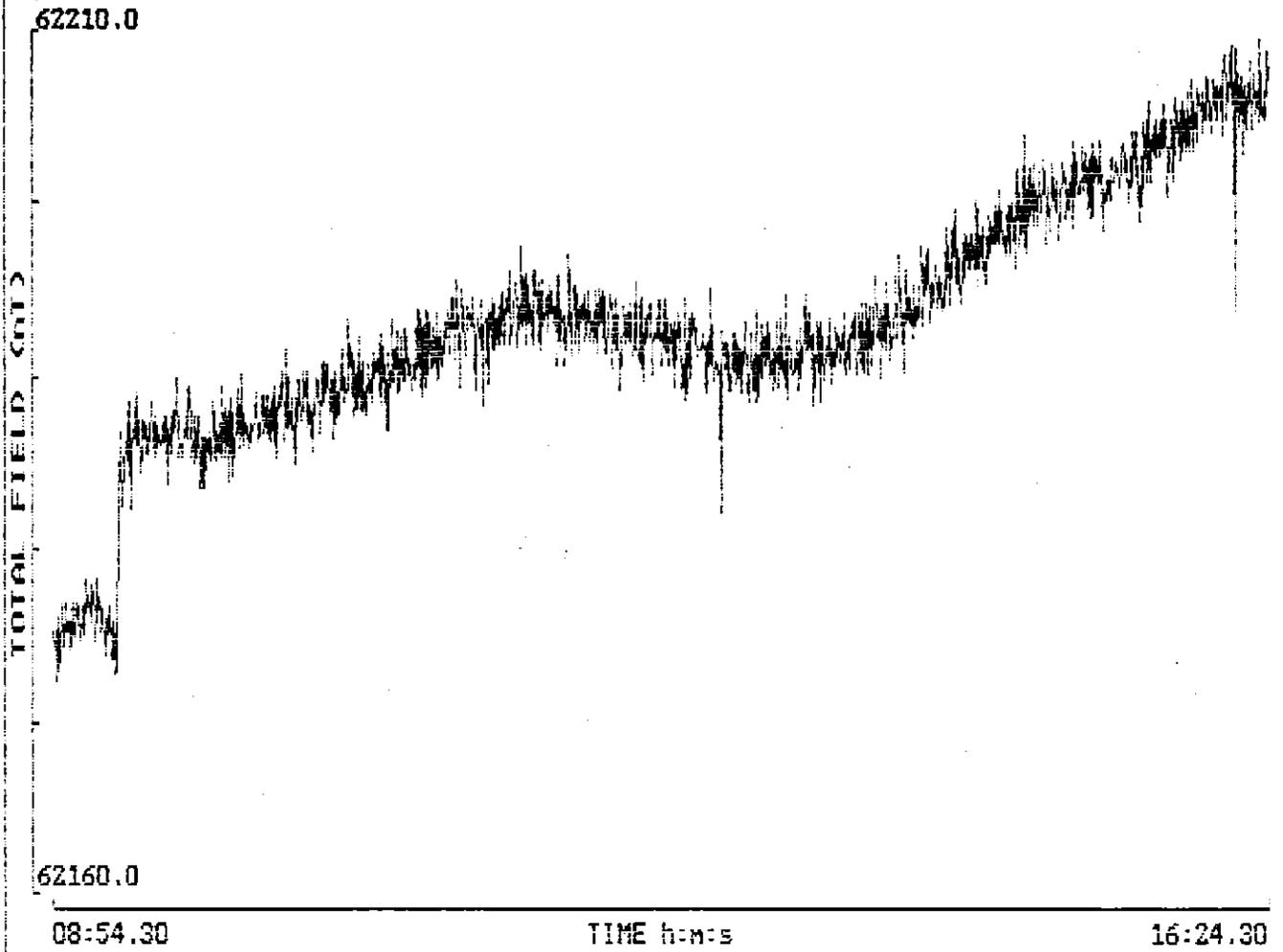
DIURNAL



Client : LYNCHFORD
Prospect : ABERFOYLE EXPLN.

Surveyed by : HIGHLAND EXPLN.
Survey Date : 15/7/1989

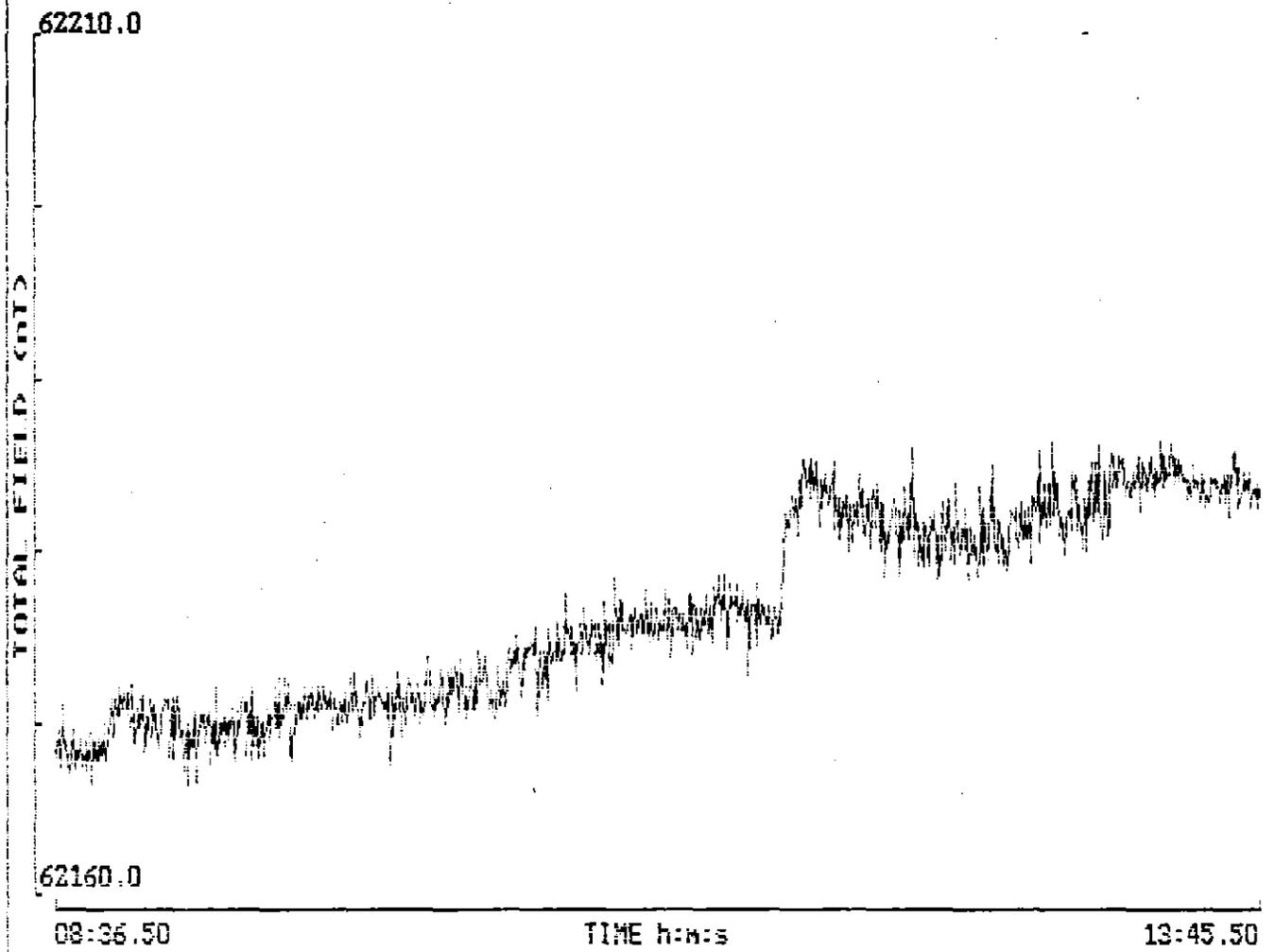
DIURNAL



Client : LYNCHFORD
Prospect : ABERFOYLE EXPLN.

Surveyed by : HIGHLAND EXPLN.
Survey Date : 16/1/1988

DIURNAL



467134

APPENDIX VIII

ATTACHMENT

SAMPLE NO:

CO-ORDINATES

	EAST	NORTH
482032	379470	5336553
482114	378600	5335945
482123	379904	5332040
482126	380680	5331848
482129	380570	5332369
482130	378575	5335767
482131	379462	5334493
482132	378495	5335985
482134	378797	5336885
482302	379687	5331623
482318	379544	5331715
482324	379364	5331735
482327	379276	5331745
482336	379012	5331777
482340	378894	5331791
482347	379623	5331705
482349	379451	5331726
482350	378894	5331782
482351	379693	5331697
482352	379032	5331773

T.C. 22

467136

SAMPLE: 482135

4010 N 2474 E

SUMMARY: This sample is an holocrystalline aphyric meta-dacite or acid andesite probably from a shallow intrusive dome or dyke. It has been fractured and strongly chloritized.

THIN SECTION DESCRIPTION:

This sample is an almost aphyric andesitic to dacitic rock composed dominantly of an intergrowth of albitized plagioclase laths and chlorite, with some interstitial quartz and minor sericite. The sole phenocryst phase is albite, which occurs as a few small microphenocrysts. These are euhedral equidimensional prisms about 0.2-0.4mm long, with a slight alteration to sericite.

The remainder of the sample is composed of a holocrystalline interlocking network of more lath-like plagioclase (also with minor sericite alteration) and pale green chlorite, probably after interstitial augite and mesostasis. Tiny trains of Fe oxide are scattered throughout the groundmass, and small almost circular spots of secondary quartz are common.

A prominent feature of this sample is that it is cut by abundant meandering chlorite sericite veinlets, and less abundant but thicker angular quartz-chlorite fracture fillings. These are not intense enough to describe the rock as autobrecciated.

I think the best diagnosis of this sample is that it was a shallow intrusive acid andesite to dacite body that was cracked and fractured extensively perhaps in the central, more slowly-cooled portions of a dacitic dome-type body. Subsequent hydrothermal alteration has produced extensive chloritization of the groundmass, and introduction of the chlorite-quartz fillings along randomly orientated fractures.

PETROGRAPHIC REPORT

Rocks from LYNCHFORD E.L..

For Aberfoyle Exploration Ltd. 5/5/89

Attn. DANNY NOONAN

by

**Anthony J. Crawford
Geology Department
University of Tasmania**

SAMPLE NUMBER: 482340

467138

SUMMARY:

This is a quartz+feldspar-phyric rhyolitic lava with a weak fracture cleavage, and quite strong calcite-chlorite-sericite alteration. It contains minor but significant concentrations of pyrite and chalcopyrite.

HAND SPECIMEN:

This is a massive grey-green quartz-phyric felsic lava or tuff with some apparent silicification(?) of the groundmass.

THIN SECTION DESCRIPTION:

This rock in thin section is clearly a quartz+feldspar-phyric rhyolitic lava. Quartz phenocrysts make up around 5-10 modal% of the rock and are up to 3mm across. They are invariably rounded and resorbed grains that contain fairly abundant round, green chloritized melt inclusions. Angular broken crystals are absent. Feldspar phenocrysts are smaller than the quartz phenocrysts but slightly more abundant. They are elongate blocky prisms composed of albite after a more calcic plagioclase precursor. Many albitized plagioclase phenocrysts are slightly to notably rounded, and have been clearly reacting with the magma. Most are fairly thoroughly sericitized. Former biotite phenocrysts have broken down to chlorite, sericite and ilmenite, but make up only about 1 modal% or less of the sample. The ilmenite occurs as bladed grains grown with their long axes orientated along the former biotite cleavage, and form due to the inability of chlorite and sericite to accept Ti released during biotite breakdown. Calcite also occurs within altered biotite phenocrysts. Altered FeTi oxide phenocrysts are not uncommon, and are replaced by leucoxene and magnetite/ilmenite intergrowths. Small euhedral zircon crystals are quite common in this section.

The recrystallized formerly glassy groundmass of this sample is a fine-grained mosaic intergrowth of albite and quartz that has been riddled with sericite and tiny rhombic calcite crystals. Grain size within the groundmass and also extent of calcite alteration vary in a patchy fashion across the slide. Calcite is clearly replacing

quartz-albite in the groundmass. Sericite also occurs in dense mesh-like veins across the sample; these veins define what is probably a rough fracture cleavage, since many are subparallel.

Examination of the slide in reflected light shows a number of interesting features. Firstly, chalcopyrite is relatively abundant (but nevertheless still constituting only a tiny fraction of one modal% of the rock) as tiny blebs scattered randomly in the groundmass; it also occurs in several more concentrated patches in the groundmass, where some small cpy grains can be seen to be altering to magnetite. These concentrations of cpy do not appear to be replacing another opaque or silicate phase, but are within the groundmass. In similar fashion, a small concentration of pyrite containing minor intergrown chalcopyrite also occurs in the groundmass. No sulphide occurs along the weak fracture cleavage, although very fine-grained hematite(?) is common.

I think that this rhyolitic lava is similar to some of those I described for you in the last lot from Lynchford. The abundance of quartz phenocrysts and zircon would normally have suggested a similarity with Tyndall-Southwell Subgroup correlates, although there is no way to be sure of this. The degree of calcite-sericite alteration is notably more than typical 'background' levels in the regionally altered Mount Read Volcanics, and the pyrite-chalcopyrite development, although still minor, is more than typically seen in Mount Read felsic lavas away from known mineralization.

SAMPLE NUMBER: 482336

SUMMARY:

This rock is almost identical 482340 except that it shows a much stronger cleavage development in thin section, marked by subparallel sericite-chlorite bands and layers. The sulphide abundance and mineralogy is also identical to that in 482340, except that the small sulphide concentrations in the latter are dragged out into the cleavage in this sample.

HAND SPECIMEN:

This is a massive, grey-green quartz-phyric felsic lava with a weak fracture cleavage defined by sericite and chlorite.

THIN SECTION DESCRIPTION:

In thin section, this sample is seen to be almost identical to 482340 described above, except for one important point. That is, this sample shows a much better developed fracture cleavage which is well defined in thin section by a prominent subparallel anastomosing mesh of sericite and pale green chlorite traversing the rock. Also, some of the quartz phenocrysts have fractured and rotated slightly in the cleavage, giving the appearance of angular grains; some quartz phenocrysts show subgrain recrystallization along healed fractures.

Polished section examination of this slide shows that sulphides occur in approximately the same abundance in this sample as in 482340, but in this sample they occur scattered along several chlorite-sericite cleavage bands rather than as local concentrations. Again, the sulphide mineralogy is simply dominant pyrite with minor chalcopyrite, mainly occurring as separate tiny anhedral, almost rounded equidimensional grains in the cleavage. They probably represent former concentrations of pyrite-chalcopyrite drawn out into the cleavage during deformation. On this basis, in both samples there is no evidence that the introduction of sulphides or carbonate accompanied cleavage development (deformation).

SAMPLE NUMBER: 482352

SUMMARY:

This rock is a cleaved rhyolitic crystal vitric tuff.

HAND SPECIMEN:

This is a massive grey fine-grained lithic crystal tuff with a distinct cleavage, traversed by a few calcite veins up to 3mm thick.

THIN SECTION DESCRIPTION:

This rock is composed of around 25 modal% of angular volcanic quartz grains, and minor chloritized biotite and sericitized feldspar phenocrysts in a foliated very fine-grained quartz-sericite-albite groundmass. Besides the obvious quartz grains, other grains in the murky matrix of this rock include sericitized feldspar phenocrysts and devitrified and sericitized formerly glassy lithic fragments. Occasional biotite phenocrysts are replaced by sericite and chlorite. The fine-grained groundmass probably has a large vitric component, but shows a fairly well-developed cleavage defined by concentrations of sericite and pale green chlorite. Relatively large zircon microphenocrysts are scattered sparsely through the rock.

Calcite veins 1 to 2mm wide transect the rock, and are composed of polygonal calcite grains around 0.1mm across.

The angular nature of the quartz grains in this sample, and the devitrified fine-grained quartz-albite-sericite groundmass suggest that this sample was originally a rhyolitic crystal vitric tuff.

SAMPLE NUMBER: 482324

SUMMARY:

This rock is a brittle-fractured quartz+feldspar+FeTi oxide-phyric rhyolitic lava originally probably identical to the previously described two samples (482340 and 336), but the cleavage seen strongly in 336 and weakly in 340 is absent in this sample; alteration is carbonate-sericite dominated, and certainly more intense than usually encountered in Mount Read rhyolites away from known mineralization. Very minor pyrite is present. There is less chlorite development than in 482340 and 336.

HAND SPECIMEN:

This is a light green-pale grey, highly altered quartz-phyric felsic lava.

THIN SECTION DESCRIPTION:

In thin section, this sample is seen to be an altered rhyolitic lava that would have been quite similar originally to the two previously described samples. Subequal amounts of quartz and feldspar phenocrysts (each approximately 3-5 modal%) are present. The quartz grains, to 2mm across, have been fractured and partially recrystallized via subgrain development along former fractures; some grains have recrystallized entirely. Albitized feldspar phenocrysts are slightly sericitized. The formerly glassy groundmass has recrystallized to quartz-albite-chlorite-sericite mosaics and sparse former biotite phenocrysts are replaced by sericite-pale green chlorite intergrowths, with the cleavage preserved.

This sample has been fairly extensively brittle-fractured, with narrow fractures defining irregular angular branches rather than a subparallel fracture cleavage. Fracture planes are defined by polygonal secondary quartz, calcite, sericite and even some clean secondary albite in wider crush zones.

Polished section examination shows that this sample contains an exceedingly small amount of pyrite that occurs scattered through the rock as tiny discrete grains, and also as two or three very narrow, irregular veinlets. No chalcopyrite was seen.

467143

SAMPLE NUMBER: 482318

SUMMARY:

This rock was a glassy quartz+feldspar+biotite+FeTi oxide-phyric rhyolitic lava and was the probable precursor of the more deformed and altered samples described above. Chlorite alteration is even less significant in this sample than 482324.

HAND SPECIMEN:

This is a massive light grey-green felsic lava with 5-10 modal% quartz phenocrysts. It is very similar to 482324 described immediately above.

THIN SECTION DESCRIPTION:

This sample is a quartz+albite+altered biotite+altered FeTi oxide-phyric rhyolitic lava that had originally a glassy groundmass. It is better preserved than any of the previously-described three samples, and is probably identical to the protolith of those samples. Large (to 2mm) quartz phenocrysts make up around 8 modal% of the sample and are slightly rounded, and contain common rounded melt inclusions that have been chloritized. Feldspar phenocrysts are slightly less abundant than the quartz phenocrysts and have been albitized, and slightly sericitized. They are also slightly to notably rounded. Former biotite phenocrysts are replaced by calcite, chlorite and sericite, with FeTi oxide dust defining former cleavage planes. They often contain relatively large zircon inclusions, and the same mineral occurs as small microphenocrysts throughout the groundmass in small but notable amounts.

The formerly glassy groundmass has devitrified and recrystallized to a relatively coarse-grained mosaic of albite and quartz. Alteration is restricted to meandering calcite+sericite-filled fractures, and occasional concentrations of calcite through the groundmass.

Polished thin section examination shows that the only sulphides in this sample are tiny pyrite grains which make up a meandering veinlet about 0.1mm wide that traverses this sample. No other sulphide phase was noted intergrown with the pyrite.

100
SAMPLE NUMBER: 482350

467144

SUMMARY:

This rock is a porphyritic rhyolite originally similar to the samples described above, but it contains discontinuous bands of pyrite cubes up to 5mm wide, and scattered pyrite cubes throughout the devitrified groundmass of this formerly glassy lava. Chlorite and calcite are very sparse.

HAND SPECIMEN:

This is a massive brown quartz-phyric felsic lava containing quite abundant pyrite cubes up to about 1mm across in diffuse layers and irregular bands traversing the rock.

THIN SECTION DESCRIPTION:

This rock was probably very similar to the previous four samples originally, being a quartz+feldspar+biotite+FeTi oxide-phyric rhyolitic lava. However, although it is not apparently very deformed compared with samples 340 and 336 for example, the rock has been permeated by mineralizing solutions from which have grown abundant quite large euhedral pyrite grains. These form discontinuous bands of discrete crystals and aggregates, and also discrete cubes scattered randomly through the rock. In the bands, pyrite occurs intergrown with minor pale rusty coloured carbonate (siderite?), muscovite or well-crystallized sericite, and fibrous ribbon quartz. The latter also occurs as well-formed pressure fringes on pyrite cubes. The groundmass is variably recrystallized and quite strongly sericitized, and chlorite is rare.

In reflected light, the pyrite is seen to be free of other sulphide inclusions, but contains slight marginal alteration to an Fe-oxide or hydroxide phase.

SAMPLE NUMBER: 482351

SUMMARY:

This rock is a uniform, weakly cleaved rhyolitic vitric tuff containing sparse quartz and feldspar crystal debris in a groundmass of devitrified and recrystallized glassy shards.

HAND SPECIMEN:

This is a pale green, very fine-grained aphyric vitric tuff that shows a weak fracture cleavage.

THIN SECTION DESCRIPTION:

This sample is composed of a very fine-grained quartz-feldspar-sericite intergrowth with the sericite defining a weak cleavage.

Dispersed throughout the very fine-grained 'groundmass' is about 3-5 modal% of devitrified, well-formed glass shards, now composed of a very fine-grained mosaic of quartz. A similar modal abundance of small angular crystal fragments, mainly formerly feldspar, are also replaced by quartz-albite mosaics. The sample was clearly a glass-rich rhyolitic vitric tuff containing a small component of crystal debris. Chlorite is a very minor component of this sample.

In reflected light, the sample is seen to contain no sulphides, but tiny trains of secondary Fe oxides follow the cleavage.

SAMPLE NUMBER: 482327

SUMMARY:

This rock was formerly a quartz+feldspar-phyric rhyolitic lava or tuff with a glassy groundmass. It is cut by abundant quartz veinlets and shows fairly widespread carbonate alteration of both the groundmass and the quartz veinlets.

HAND SPECIMEN:

This is an altered and silicified brownish felsic lava or tuff extensively cut by narrow quartz veinlets.

THIN SECTION DESCRIPTION:

This rock in thin section is seen to be a quartz+feldspar-phyric rhyolitic lava or tuff composed of crystals fragments of quartz that vary from quite rounded and reacted to angular broken crystal fragments to about 2mm across. Feldspar crystal fragments are modally subordinate to quartz and are slightly sericitized albite grains that usually contain small pools of calcite. Rare biotite phenocrysts are replaced by green chlorite and seicite with FeTi oxide granules along cleavage traces. The groundmass is fairly uniform textured and composed of a fine-grained mosaic intergrowth of albite and quartz, with minor sericite and chlorite speckling, and replaces former devitrified glass. It is difficult to judge whtehr this was a lava or a crystal tuff originally. The abundance of broken grains tends to support the latter possibility, but the uniform groundmass and common rounded reacted, entire quartz grains are more like assemblages in a lava.

The rock is cut by abundant narrow veinlets of polygonal secondary quartz, and calcite has overprinted large sections of the quartz veinlets, and also occurs spotted over the groundmass.

In reflected light, pyrite is seen to be scattered through the rock in small aggregates of tiny well-formed euhedra, as well as occurring as occasional larger cubes. It does not seem to be associated with the carbonate alteration, or with the quartz veining. Chalcopyrite is present as only a few tiny specks in the rock.

SAMPLE NUMBER: 482349

SUMMARY:

This is a quartz+feldspar+biotite+FeTi oxide-phyric rhyolitic lava in which an early generation of euhedral pyrite grains has grown prior to the carbonate alteration that has overprinted parts of this rock.

HAND SPECIMEN:

This is a very fine-grained green felsic lava or tuff containing common quartz phenocrysts and cut by a 7mm wide quartz vein.

THIN SECTION DESCRIPTION:

In thin section, this sample is seen to have been a quartz+feldspar+biotite+FeTi oxide-phyric rhyolitic lava with a fine grained uniform groundmass composed of a quartz-albite mosaic after devitrified glass. It is essentially identical to sample 482318 described above. Quartz phenocrysts are quite rounded, and feldspar phenocrysts are albitized and flecked by sericite. Biotite phenocrysts, which make up around 1 modal% or less of the rock, are replaced by chlorite and sericite that have been replaced, in turn, by calcite. Well-formed zircon microphenocrysts are not uncommon, and perfectly euhedral pyrite cubes are quite abundant scattered through the sample. The pyrite cubes occur in the groundmass, but also within the phenocrysts, and a single large cube occurs in the quartz vein that cuts this rock.

Anastomosing fractures across the rock are filled by pale sericite and calcite. The quartz vein cutting this sample is made up of strained ribbon quartz grains that have been partly overgrown by calcite.

In reflected light, the pyrite is seen to be unaltered and inclusion-free, and to be clearly unrelated to the carbonate alteration that has overprinted the quartz veining. No other sulphides were noted in this sample.

SAMPLE NUMBER: 482347

SUMMARY:

This is a rhyolitic lava breccia that has been extensively carbonated and contains a significant abundance of disseminated pyrite cubes.

HAND SPECIMEN:

This is a coarse-grained felsic lava breccia with carbonate-altered pale grey formerly glassy lava fragments to at least 3cm across separated by sulphide-rich matrix that sometimes contains an unusual red coloured mineral.

THIN SECTION DESCRIPTION:

In thin section, this rock is seen to be a former quartz-phyric rhyolitic lava breccia that has been very largely replaced by polygonal calcite intergrowths. Former quartz phenocrysts are occasionally preserved, and vary from angular to rounded, and from undeformed to extensively strained and subgrain-recrystallized. More than 80 modal% of the sample, including all the matrix/groundmass has been replaced by a dense carbonate mass composed of small interlocking calcite rhombs. Margins of these carbonate masses are reddish stained siderite (?) or ankerite that constitutes the reddish-purple areas so notable in hand specimen.

About 2-3 modal% of the sample consists of euhedral pyrite cubes to a maximum size of around 1mm. In thin section, these are seen to be fresh and inclusion-free, slightly 'moth-eaten' in places, and scattered through the rock randomly as single and rarely twin cubes. Many show well-developed quartz ribbon pressure fringes. As with the sample described above, it is difficult to argue that the sulphides formed in the same episode as the carbonate alteration, although the pyrite is certainly more abundant in inter-fragment matrix.

SAMPLE NUMBER: 482302

SUMMARY:

This rock was a rhyolitic lava containing phenocrysts of quartz+feldspar+biotite+FeTi oxide, and is essentially identical to 482318.

HAND SPECIMEN:

This sample on a freshly cut face is a pale green-grey quartz+feldspar-phyric rhyolitic lava very similar to 482318 and 324.

THIN SECTION DESCRIPTION:

This sample is almost identical to the Quartz+feldspar+biotite +FeTi oxide-phyric rhyolitic lava 482318, except that the recrystallized formerly groundmass is somewhat finer-grained and laced with very wispy sericite compared to 318. In other respects it could be the same sample as 318. In reflected light, the sample is seen to contain only two or three tiny pyrite grains each less than 0.05mm across.

COMMENTS ABOUT THE KING RIVER POWER TUNNEL SUITE

These eleven samples are broadly cogenetic in that they are all derived from a quartz+feldspar+biotite+FeTi oxide phenocryst-bearing rhyolitic magma that contained relatively large and common (av. 10-15 per thin section) well-formed zircon microphenocrysts. Most samples are lavas, several are vitric or crystal vitric tuffs, and one is a coarse lava breccia. As might be expected, the porous breccia is the most altered. Although these lavas are apparently considered to be Central Volcanic Complex in affinities, I think they are more like the quartz-phyric, zircon-bearing rhyolites that characterize the Southwell Sub-group in the area NE of Hellyer, and the Tyndall Group further south. That is not to say that these lavas cannot be a poorly known quartz-phyric section of the Central Volcanic Complex, but where I have examined the latter in detail, the felsic lavas are almost always quartz phenocryst-free, feldspar-phyric lavas.

The alteration of these samples may be assigned to three types. The earliest phase involved devitrification and recrystallization of felsic groundmass glass. This phase may have involved introduction of the pyrite which is quite abundant in these samples relatively to 'typical'

Mount Read felsic lavas. A later phase of silica veining and pressure solution accompanying cleavage formation in some samples was followed by an overprinting by calcite.

It is significant that the only two samples showing chlorite alteration contain chalcopyrite in addition to the more ubiquitous pyrite.

467151

APPENDIX IX

ANALABS

A division of MacDonalid Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

FAX: 004 31 8890

ANALYTICAL REPORT No. 23.3.08.06504

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

01
Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
Burnie Tasmania 7320

ORDER No.	PROJECT
3465	
DATE RECEIVED	RESULTS REQUIRED
11/09/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
1	20/09/89	1	2

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						OTHER SEE REMARKS	NONE	ANALYSIS			
			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	REFER TO ANALYSIS SECTION			PREPARATION	METHOD		
		82555, 482568	PU									V20, MgO, CaO, Na2O/104		

RESULTS

TO

R. de Bomford
Aberfoyle Resources Limited
Exploration Division
P.O. Box 952
Burnie Tasmania 7320

RESULTS

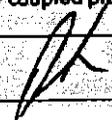
TO

REMARKS

*LYN. COSTRANS
FOR ALTN. ELEMENTS
DOB 6391, 6351*

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHE
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUC
heavy mineral HM		inductively coupled plasma ICP

AUTHORISED OFFICER



467152

ANALABS

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467153

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

SAMPLE PREFIX		REPORT NUMBER				REPORT DATE	CLIENT ORDER No.			PAGE
		23.3.08.06504				20/09/89	8465			1 OF 1
TUBE No.	SAMPLE No.	K ₂ O	MgO	CaO	Na ₂ O					
1	482555	2.60	2.60	<25	168					
2	482568	1.24	0.25	<25	269					
3										
4										
5										
6										
7										
8										
9										
10										
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12										
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16										
17										
18										
19										
20										
21										
22										
23	DETECTION	0.01	0.01	25	25					
24	UNITS	%	%	PPM	PPM					
25	METHOD	104	104	104	104					

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER



ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

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52 Murray Road, Welshpool, W.A. 6106

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FAX: 004 31 8890

ANALYTICAL REPORT No. 23.3.08.06391

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Aberfoyle Resources Exp. Division
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Burnie
Tasmania 7320

ORDER No. 8260	PROJECT
DATE RECEIVED 02/08/89	RESULTS REQUIRED ASAP

No. OF PAGES OF RESULTS 2	DATE REPORTED 22/08/89	No. OF COPIES 1	TOTAL No. OF SAMPLES 37
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STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS				
			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	ME	
		482563/596,482114	RO	Prep: 01b							Cu,Pb,Zn,Ag/101,As/114		
		482563/596,482114	RO								Ba,Cr,Zr,Ti/401		
		482563/596,482114	RO								Au,AuChk/309		
		Various	RO								Ca,Na,/104		
		482123	RO								Cu,Pb,Zn/104		

RESULTS

TO

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

RESULTS

TO

(Empty box for results to)

REMARKS

L/NCHYOLD.

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemical means CHEM
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUC
heavy mineral HM		inductively coupled plasma ICP

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467154

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

467155

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

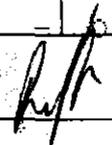
CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Cu	Cu	Pb	Pb	Zn	Zn	Ag	Ag	Au
	52									
				23.3.08.06391		22/08/89		8260		1 OF 4
1	482036	-	-	-	-	-	-	-	-	-
2	482114	20	-	40	-	30	-	6.5	-	0.0
3	482123	-	25	-	25	-	600	-	-	-
4	482563	155	-	145	-	55	-	1.5	-	<0.0
5	482564	110	-	125	-	220	-	1.5	-	<0.0
6	482565	215	-	110	-	110	-	1.5	-	<0.0
7	482566	235	-	90	-	60	-	1.5	-	0.0
8	482567	225	-	1345	-	350	-	9.5	-	0.0
9	482568	115	-	-	9775	275	-	-	<2	0.0
10	482569	150	-	-	1875	255	-	-	<2	0.0
11	482570	130	-	50	-	60	-	1.5	-	0.0
12	482571	90	-	45	-	65	-	1.0	-	0.0
13	482572	125	-	40	-	20	-	1.0	-	0.0
14	482573	145	-	100	-	25	-	1.0	-	0.0
15	482574	180	-	70	-	25	-	1.0	-	0.0
16	482575	210	-	70	-	40	-	1.0	-	0.0
17	482576	210	-	100	-	65	-	1.0	-	0.0
18	482577	135	-	230	-	315	-	1.0	-	0.0
19	482578	50	-	215	-	50	-	0.5	-	0.0
20	482579	105	-	125	-	50	-	0.5	-	0.0
21	482580	110	-	215	-	70	-	0.5	-	0.0
22	482581	235	-	355	-	70	-	1.0	-	0.0
23	482582	150	-	1795	-	240	-	1.0	-	0.0
24	482583	140	-	1345	-	225	-	1.0	-	0.0
25	482584	125	-	350	-	355	-	1.0	-	0.0

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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ANALYTICAL DATA

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REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Cu	Cu	Pb	Pb	Zn	Zn	Ag	Ag	Au
	150									
		23, 3.08, 06391				22/08/89		8260		2 OF 4
1	482585	160	-	135	-	155	-	0.5	-	0.0
2	482586	140	-	130	-	140	-	0.5	-	0.0
3	482587	185	-	235	-	185	-	2.0	-	0.0
4	482588	220	-	210	-	185	-	1.0	-	0.0
5	482589	150	-	70	-	60	-	1.5	-	0.0
6	482590	140	-	55	-	60	-	1.5	-	0.0
7	482591	180	-	40	-	75	-	1.5	-	0.0
8	482592	80	-	165	-	35	-	2.0	-	0.0
9	482593	80	-	275	-	40	-	-	11	0.0
10	482594	175	-	445	-	75	-	1.5	-	0.0
11	482595	190	-	30	-	70	-	2.0	-	0.0
12	482596	250	-	160	-	30	-	-	75	0.0
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	25	5	25	5	25	0.5	2	0.0
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	P
25	METHOD	101	104	101	104	101	104	101	104	3

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

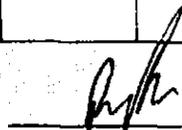
CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Au	Chk	Ba	Ba	As	Cr	Zr	Ti	OF	4
	558									3	4
						23.3.08.06391	22/08/89	8260			
1	482036	-	-	-	-	-	-	-	-		
2	482114	-	-	1250	-	27	65	200	2550		
3	482123	-	-	-	-	-	-	-	-		
4	482563	-	-	1550	-	25	310	250	4800		
5	482564	-	-	700	-	26	440	240	4800		
6	482565	-	-	280	-	33	1950	100	3400		
7	482566	-	-	700	-	43	1300	130	3550		
8	482567	-	-	-	1.87	70	610	120	2900		
9	482568	-	-	-	3.60	43	730	140	2800		
10	482569	-	-	3300	-	54	620	130	3000		
11	482570	0.026	-	880	-	16	100	140	2300		
12	482571	-	-	920	-	16	130	160	2250		
13	482572	-	-	1350	-	25	150	160	2300		
14	482573	-	-	1100	-	43	170	110	2200		
15	482574	-	-	1250	-	39	180	140	3150		
16	482575	-	-	1150	-	32	230	140	3050		
17	482576	-	-	1500	-	31	210	130	2650		
18	482577	-	-	1100	-	18	1950	170	3500		
19	482578	0.187	-	2250	-	21	520	150	2400		
20	482579	-	-	1600	-	14	360	150	2500		
21	482580	-	-	1950	-	43	880	190	3350		
22	482581	-	-	1750	-	66	1250	160	3000		
23	482582	-	-	1550	-	61	1100	190	3900		
24	482583	-	-	1250	-	36	1000	150	3350		
25	482584	-	-	850	-	35	1150	170	3600		

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
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ANALYTICAL DATA

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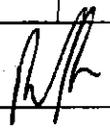
CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	AuChk	Ba	Ba	As	Cr	Zr	Ti		
257		23.3.08.06391			22/08/89		8240		4 OF 4	
1	482585	-	1050	-	46	1250	150	3250		
2	482586	-	530	-	53	1550	160	3700		
3	482587	-	320	-	36	2200	190	5150		
4	482588	-	710	-	46	2200	220	6150		
5	482589	-	840	-	35	150	180	4450		
6	482590	-	1000	-	18	120	170	4300		
7	482591	-	770	-	12	120	150	450		
8	482592	0.066	220	-	85	970	140	2550		
9	482593	-	2300	-	220	1550	170	2850		
10	482594	-	2450	-	59	530	160	3400		
11	482595	-	940	-	46	180	950	1950		
12	482596	0.078	1950	-	210	110	140	2450		
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	0.008	10	0.01	1	5	5	50		
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM		
25	METHOD	309	401	403	114	401	401	401		

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
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ANALYTICAL DATA

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REPORT DATE

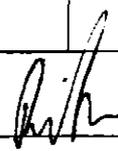
CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Ca	Na	Wt		CaO	Na ₂ O					
	158				23, 3.08.06391				22/08/89	8260	1	OF 2
1	482036	1150	1075	-		1609	1449					
2	482114	1775	825	22.00		2484	1112					
3	482123	20400	14000	-		28543	18872					
4	482563	-	-	10.00								
5	482564	-	-	17.00								
6	482565	-	-	9.00								
7	482566	-	-	14.00								
8	482567	-	-	20.00								
9	482568	-	-	6.00								
10	482569	-	-	16.00								
11	482570	-	-	-								
12	482571	-	-	23.00								
13	482572	-	-	23.00								
14	482573	-	-	-								
15	482574	-	-	-								
16	482575	-	-	-								
17	482576	-	-	27.00								
18	482577	-	-	16.00								
19	482578	-	-	-								
20	482579	25	250	-		35	337					
21	482580	75	275	18.00		105	371					
22	482581	25	225	25.00		35	303					
23	482582	-	-	-								
24	482583	-	-	-								
25	482584	-	-	-								

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

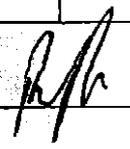
TUBE No.	SAMPLE No.	Ca	Na	Wt	CuO	Na ₂ O			
	508								
				23, 3, 08, 06391					
					22/08/89	8260			
								2	OF 2
1	482585	-	-	-					
2	482586	-	-	-					
3	482587	-	-	24.00					
4	482588	-	-	-					
5	482589	-	-	16.00					
6	482590	-	-	8.00					
7	482591	-	-	9.00					
8	482592	-	-	-					
9	482593	<25	350	-	X	472			
10	482594	<25	150	-	X	202			
11	482595	225	200	-	315	270			
12	482596	-	-	-					
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	25	25	0.01					
24	UNITS	PPM	PPM	PPM					
25	METHOD	104	104	199					

$Na \text{ ppm} \rightarrow Na_2O \text{ ppm}$
 2×61.97894
 $\underline{22.98977 \times 2}$

$Ca \rightarrow Ca_2O$
 2×56.0794
 $\underline{40.08}$

Results in ppm unless otherwise specified
 T = element present, but concentration too low to measure
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 - = element not determined

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A division of MacDonald Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

FAX: 004 31 8890

ANALYTICAL REPORT No. 23.3.08.06351

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

ORDER No.	PROJECT
8227	
DATE RECEIVED	RESULTS REQUIRED
13/07/89	ASAF

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
4	15/08/89	1	32

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS				
			DRY	CRUSH	SPLIT	PUL-VERSE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD	
		Various	SO	Prep: 0.6							Cu, Pb, Zn, Ag/101, As/114		
		Various	SO								Ba, Cr, Zr, Ti/401		
		Various	SO	Prep: 0.6							Au, AuChk/309		

RESULTS

TO

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

RESULTS

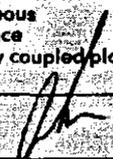
TO

REMARKS

*Coarse
&
Adib.*

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHE
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUC
heavy mineral HM		inductively coupled plasma ICP

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

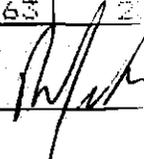
CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	As	Cr
16		23.3.08.06351			15/08/89		8227		1 OF 4	
1	482548	150	15	80	<0.5	0.030	-	1150	17	40
2	482549	45	40	145	<0.5	0.037	-	1450	6	4
3	482550	150	25	80	<0.5	0.028	-	440	13	30
4	482551	140	20	60	<0.5	0.023	-	95	5	
5	482552	100	15	45	<0.5	<0.008	-	150	6	10
6	482553	105	15	40	<0.5	0.025	-	1150	13	1
7	482554	180	1900	260	3.0	0.053	-	3600	160	150
8	482555	140	6700	300	<0.5	0.031	-	3350	230	30
9	482556	320	1650	310	<0.5	0.055	-	3350	200	40
10	482557	200	2250	360	<0.5	0.058	0.056	2900	180	10
11	482558	200	2550	325	<0.5	0.058	0.058	1900	140	12
12	482559	150	5300	220	<0.5	0.040	-	840	52	21
13	482560	110	30	70	<0.5	0.020	-	240	8	2
14	482561	140	15	65	<0.5	0.027	-	1150	16	2
15	482562	90	15	50	<0.5	0.031	-	1000	11	2
16	482603	20	15	25	<0.5	0.032	-	2250	100	
17	482604	25	15	30	<0.5	0.104	-	2800	300	
18	482605	25	25	35	<0.5	<0.008	-	3450	79	
19	482606	25	15	20	<0.5	<0.008	-	2050	100	
20	482607	25	15	30	<0.5	0.011	-	1650	42	
21	482608	15	20	25	<0.5	<0.008	-	2300	20	
22	482609	15	15	40	<0.5	<0.008	-	3800	21	
23	482610	80	15	45	<0.5	0.057	0.059	7550	73	1
24	482611	55	35	40	<0.5	0.021	-	4850	40	2
25	482612	170	20	85	<0.5	0.010	-	2750	63	2

Results in ppm unless otherwise specified
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467163

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	As	Cr
		23.3.08.06351				15/08/89	8227		2 OF 4	
1	482613	80	20	50	<0.5	0.012	0.011	2000	43	10
2	482614	70	20	35	<0.5	0.030	-	1150	110	-
3	482615	30	20	40	<0.5	0.048	-	1150	89	-
4	482616	50	100	45	0.5	0.016	-	2600	190	-
5	482617	50	35	40	0.5	0.054	-	3150	160	-
6	482618	50	20	35	<0.5	0.041	-	3600	102	-
7	482619	25	25	20	<0.5	0.034	0.037	2150	33	-
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.5	0.008	0.008	10	1	-
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
25	METHOD	101	101	101	101	309	309	401	114	4

Results in ppm unless otherwise specified
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ANALYTICAL DATA

467164

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

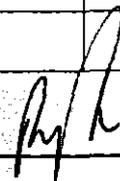
CLIENT ORDER No.

PAGE

SAMPLE PREFIX		REPORT NUMBER		REPORT DATE		CLIENT ORDER No.		PAGE	
		23.3.08.06351		15/08/89		8227		3 OF 4	
TUBE No.	SAMPLE No.	Zr	Ti						
1	482548	180	3400						
2	482549	190	3550						
3	482550	170	3750						
4	482551	70	1400						
5	482552	90	1800						
6	482553	160	3200						
7	482554	170	3350						
8	482555	170	3100						
9	482556	150	3350						
10	482557	190	3500						
11	482558	180	3800						
12	482559	190	3700						
13	482560	140	2900						
14	482561	180	3550						
15	482562	180	4000						
16	482603	110	820						
17	482604	170	1450						
18	482605	160	1150						
19	482606	100	720						
20	482607	140	940						
21	482608	130	1000						
22	482609	150	1400						
23	482610	230	3000						
24	482611	280	3950						
25	482612	260	4250						

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No

PAGE

TUBE No.	SAMPLE No.	Zr	Ti						
				23.3.06.06351		15/08/89		8227	
								4	OF 4
1	482613	230	2400						
2	482614	150	900						
3	482615	200	960						
4	482616	180	1700						
5	482617	200	1550						
6	482618	200	1500						
7	482619	190	1150						
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	5	50						
24	UNITS	PPM	PPM						
25	METHOD	401	401						

Results in ppm unless otherwise specified
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 - = element not determined

AUTHORISED OFFICER



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Phone (09) 458 7999

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52 Murray Road, Welshpool, W.A. 6106
FAX: 004 31 8890

Telex AA92560

ANALYTICAL REPORT No. 23.3.08.06328

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150
Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

ORDER No.	PROJECT
8212	
DATE RECEIVED	RESULTS REQUIRED
05/07/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
6	07/08/89	1	50

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS				
			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	ME	
		Various	50	Prep: 005,016							Cu, Pb, Zn, Ag/101, As/114,		
		Various	50								Ba, Cr, Ir, Ti/401		
		Various	50								Au, AuChk/309		
		Various	50								Ba/406		

RESULTS TO RESULTS TO

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

REMARKS
SOLIC SAMPLES
Costars 514721
482526-542
+ Ad: 5 482601 602

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAC
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHE
tissue TI	fusion A8	miscellaneous MIS
stream sediment SS		fluorescence FLU
heavy mineral HM		inductively coupled plasma ICP

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467167

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

05

25.3.08.06328

07/08/89

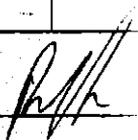
8212

1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	Ba	As
1	462501	20	35	15	<0.5	0.024	-	2200	-	
2	462502	35	50	25	<0.5	0.030	-	2700	-	
3	462503	50	50	15	<0.5	0.075	0.058	3600	-	
4	462504	40	35	20	<0.5	0.037	-	2000	-	
5	462505	20	20	35	<0.5	0.008	-	1700	-	
6	462506	20	30	20	<0.5	0.031	-	2500	-	
7	462507	30	40	70	<0.5	<0.008	-	770	-	
8	462508	40	30	65	<0.5	0.011	-	700	-	
9	462509	25	25	35	<0.5	0.010	-	590	-	
10	462510	55	30	30	<0.5	<0.008	-	340	-	
11	462511	45	30	35	<0.5	<0.008	-	750	-	
12	462512	25	25	40	<0.5	<0.008	-	250	-	
13	462513	30	15	70	<0.5	<0.008	-	260	-	
14	462514	65	35	70	<0.5	<0.008	-	310	-	
15	462515	30	30	40	<0.5	<0.008	-	520	-	
16	462516	25	30	55	<0.5	<0.008	-	280	-	
17	462517	35	15	55	<0.5	<0.008	-	290	-	
18	462518	65	25	30	<0.5	<0.008	-	290	-	
19	462519	275	40	130	<0.5	<0.008	-	1200	-	
20	462520	450	30	320	<0.5	0.012	-	2100	-	
21	462521	250	125	55	<0.5	0.015	-	750	-	
22	462522	90	195	30	<0.5	<0.008	-	330	-	
23	462523	45	35	30	<0.5	0.007	-	450	-	
24	462524	30	30	20	<0.5	0.023	-	670	-	
25	462525	15	55	15	<0.5	<0.008	-	560	-	

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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A Division of Macdonald Hamilton & Co. Pty Ltd.

467168

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

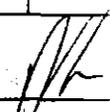
CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	Ba	As
		23.3.08.06325			07/08/89		8212		2 OF 6	
1	482526	10	25	5	<0.5	<0.008	-	530	-	
2	482528	10	50	10	<0.5	<0.008	-	590	-	
3	482529	20	55	15	<0.5	<0.008	-	650	-	
4	482530	15	20	15	<0.5	<0.005	-	750	-	
5	482531	190	45	155	<0.5	0.014	0.014	560	-	
6	482532	185	30	170	<0.5	0.014	-	750	-	
7	482533	250	25	160	<0.5	0.020	-	360	-	
8	482534	220	30	200	<0.5	0.036	-	650	-	
9	482535	140	35	180	<0.5	0.030	-	990	-	
10	482536	65	30	85	<0.5	0.036	-	960	-	
11	482537	360	30	210	<0.5	0.013	-	290	-	
12	482538	230	30	135	<0.5	0.015	-	300	-	
13	482539	260	45	135	<0.5	0.068	-	300	-	
14	482540	195	30	110	<0.5	0.031	-	530	-	
15	482541	220	30	75	<0.5	0.010	-	670	-	
16	482542	215	5	35	<0.5	0.015	-	-	16.00	
17	482543	270	30	105	<0.5	0.014	-	930	-	
18	482544	300	35	70	<0.5	0.025	-	520	-	
19	482545	290	40	80	<0.5	0.025	-	660	-	
20	482546	330	35	135	<0.5	0.036	-	1150	-	
21	482547	220	30	95	<0.5	0.033	-	1250	-	
22	482600	20	35	15	<0.5	0.027	-	3500	-	
23	482601	20	15	10	<0.5	0.211	0.163	2600	-	
24	482602	20	20	10	<0.5	0.075	-	2550	-	
25	514721	270	35	140	<0.5	-	-	340	-	

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

437169

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

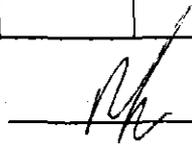
CLIENT ORDER No.

PAGE

58		23.3.08.06326				07/08/89		8212		3 OF 6	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	AuChk	Ba	Ba	As	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22	DETECTION	5	5	5	0.5	0.005	0.005	10	0.01		
23	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%		
24	METHOD	101	101	101	101	309	309	401	406		
25											

Results in ppm unless otherwise specified
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467170

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

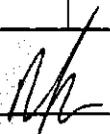
CLIENT ORDER No.

PAGE

SAMPLE PREFIX		REPORT NUMBER			REPORT DATE	CLIENT ORDER No.			PAGE
50		23.3.08.06328			07/08/89	8212			4 OF
TUBE No.	SAMPLE No.	Cr	Zr	Ti					
1	482501	110	160	1150					
2	482502	45	180	1150					
3	482503	25	250	1350					
4	482504	12	280	1700					
5	482505	75	190	830					
6	482506	60	220	1000					
7	482507	40	220	2500					
8	482508	100	270	2900					
9	482509	40	310	2700					
10	482510	95	240	1600					
11	482511	45	230	1350					
12	482512	95	210	2650					
13	482513	130	230	4600					
14	482514	140	200	5100					
15	482515	140	230	4800					
16	482516	180	200	4550					
17	482517	150	240	6000					
18	482518	180	250	5150					
19	482519	2000	610	8300					
20	482520	920	750	8600					
21	482521	560	740	8000					
22	482522	120	360	3150					
23	482523	50	340	3100					
24	482524	35	310	3100					
25	482525	35	280	3150					

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Cr	Zr	Ti					
	170				23.3.08.06328	07/08/89	8212	5	OF 5
1	482526	55	140	2400					
2	482528	30	250	2300					
3	482529	150	160	2950					
4	482530	40	300	2150					
5	482531	250	170	4600					
6	482532	270	200	5100					
7	482533	310	190	4800					
8	482534	440	200	4050					
9	482535	570	160	3650					
10	482536	260	210	3250					
11	482537	290	160	4600					
12	482538	240	160	4400					
13	482539	270	130	4700					
14	482540	170	130	4100					
15	482541	160	170	3530					
16	482542	140	60	3300					
17	482543	200	140	3500					
18	482544	220	160	3200					
19	482545	1630	670	4050					
20	482546	1050	630	3300					
21	482547	780	700	3330					
22	482500	30	230	1450					
23	482501	10	130	630					
24	482502	10	210	1650					
25	514721	150	140	4700					

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
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 - = element not determined.

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.06326

07/08/89

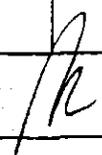
8212

6 OF 6

TUBE No.	SAMPLE No.	Cr	Zr	Ti					
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22	DETECTION	5	5	50					
23	UNITS	PPM	PPM	PPM					
24	METHOD	401	401	401					
25									

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
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A division of MacDonold Hamilton & Co. Pty Ltd.

Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

ANALYTICAL REPORT No. 23.3.08.06242

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

124
Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

ORDER No.	PROJECT
7827	LYN
DATE RECEIVED	RESULTS REQUIRED
30/05/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
4	23/06/89	1	26

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT						ANALYSIS				
			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	ME	
		482150/177	So	Prep: 006,010,018							Cu,Pb,Zn,Ag/101,As/114		
		482150/177	Pu								Ba,Cr,Zr,Ti/401,Au/309		
		482150/177	Pu								Ti,Ba/406,Ba/403		

RESULTS

TO

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

RESULTS

TO

(Empty box for results to)

REMARKS

Costars
4000N 2335E
482/50 - 163
3420N 1478E
482/64 - 177

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ra	aque regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHE
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUC
heavy mineral HM		inductively coupled plasma ICP

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[Signature]

467175

437176

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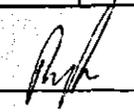
A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX REPORT NUMBER REPORT DATE CLIENT ORDER No. PAGE

1715		23.3.08.06242				23/06/89		7827		1 OF 4	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Ba	Ba	Ba	As	
1	482150	60	20	65	<0.5	0.011	1750	-	-		
2	482151	165	20	125	<0.5	0.009	800	-	-		
3	482152	140	15	105	<0.5	<0.008	480	-	-		
4	482153	110	10	65	<0.5	0.012	850	-	-		
5	482154	90	15	50	<0.5	<0.008	-	0.83	-		
6	482155	110	<5	90	<0.5	<0.008	980	-	-		
7	482156	75	<5	65	<0.5	<0.008	2300	-	-		
8	482157	65	<5	45	<0.5	<0.008	-	-	9.6		
9	482158	10	<5	10	<0.5	<0.008	-	-	58.6		
10	482159	55	<5	45	<0.5	<0.008	-	1.87	-		
11	482160	115	<5	45	<0.5	<0.008	-	-	3.6		
12	482161	80	10	95	<0.5	<0.008	-	1.13	-		
13	482162	210	<5	120	<0.5	<0.008	-	1.87	-		
14	482163	315	15	190	<0.5	0.009	1500	-	-		
15	482164	25	15	115	<0.5	<0.008	490	-	-		
16	482165	40	30	125	<0.5	<0.008	350	-	-		
17	482166	35	10	70	<0.5	0.008	400	-	-		
18	482167	125	15	35	<0.5	0.024	380	-	-		
19	482168	5	<5	20	<0.5	0.018	140	-	-		
20	482169	<5	10	165	<0.5	0.009	310	-	-		
21	482170	<5	40	25	<0.5	<0.008	260	-	-		
22	482171	<5	10	15	<0.5	0.009	150	-	-		
23	482172	60	50	15	<0.5	<0.008	390	-	-		
24	482173	40	10	20	<0.5	<0.008	90	-	-		
25	482174	20	25	20	<0.5	0.008	110	-	-		

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER 

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A Division of Macdonald Hamilton & Co. Pty Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

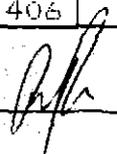
SAMPLE PREFIX		REPORT NUMBER				REPORT DATE	CLIENT ORDER No.			PAGE
270		23.3.08.06242				23/06/89	7327			2 OF 4
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Ba	Ba	Ba	As
1	482175	25	15	10	<0.5	0.010	75	-	-	
2	482176	230	140	105	<0.5	0.009	580	-	-	
3	482177	140	55	25	<0.5	<0.008	310	-	-	
4										
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18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.5	0.008	10	0.01	0.1	
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	%	%	
25	METHOD	101	101	101	101	309	401	403	406	

Results in ppm unless otherwise specified

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- = element not determined

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A Division of Macdonald Hamilton & Co. Pty Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

23.3.08.06242

23/06/89

7827

3 OF 4

TUBE No.	SAMPLE No.	Cr	Zr	Ti	Ti					
1	482150	250	230	4500	-					
2	482151	250	260	4150	-					
3	482152	280	200	4200	-					
4	482153	200	180	3100	-					
5	482154	140	180	2550	-					
6	482155	75	270	3350	-					
7	482156	45	490	3750	-					
8	482157	45	230	1850	-					
(482158	<5	<5	-	<0.01					
10	482159	110	160	2350	-					
11	482160	65	220	2200	-					
12	482161	130	180	3200	-					
13	482162	160	240	3600	-					
14	482163	310	250	5200	-					
15	482164	180	270	4950	-					
16	482165	160	280	5050	-					
17	482166	120	310	5800	-					
18	482167	45	100	880	-					
19	482168	10	240	1750	-					
20	482169	30	70	830	-					
21	482170	45	40	820	-					
22	482171	30	150	2750	-					
23	482172	11	270	4900	-					
24	482173	45	70	600	-					
25	482174	45	30	160	-					

Results in ppm unless otherwise specified
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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

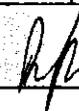
CLIENT ORDER No.

PAGE

SAMPLE PREFIX		REPORT NUMBER				REPORT DATE	CLIENT ORDER No.			PAGE
270		23.3.08.06242				23/06/89	7827			4 OF 4
TUBE No.	SAMPLE No.	Cr	Zr	Ti	Ti					
1	482175	30	70	590	-					
2	482176	140	240	3150	-					
3	482177	170	320	4600	-					
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	50	0.01					
24	UNITS	PPM	PPM	PPM	%					
25	METHOD	401	401	401	406					

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 -- = element not determined

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649

ALTERATION INDEX CALCULATIONS

Sample No.	K2O	MgO	CaO	Na2O	(K2O+MgO/K2O+MgO+CaO+Na2O)	Sample Type
482555	2.60	2.60	0.0025	0.0168	99.630	costean
482568	1.24	0.25	0.0025	0.0269	98.065	costean
482036			0.1609	0.1449		rock chip
482114			0.2484	0.1112		rock chip
482123			28543	18872		rock chip
482579			0.0035	0.0337		costean
482580			0.0105	0.0371		costean
482581			0.0035	0.0303		costean
482593				0.0472		rock chip
482594				0.0202		rock chip
482595			0.0315	0.027		rock chip
482141	2.74	6.32	0.62	2.6	73.779	rock chip
482135	5.22	4.95	1.07	1.85	77.693	rock chip
482080	1.83	6.16	4.53	4.28	47.560	rock chip
482074	1.36	4.18	7.38	4.85	31.176	rock chip
482071	3.15	4.97	6.45	3.35	45.312	rock chip

437130

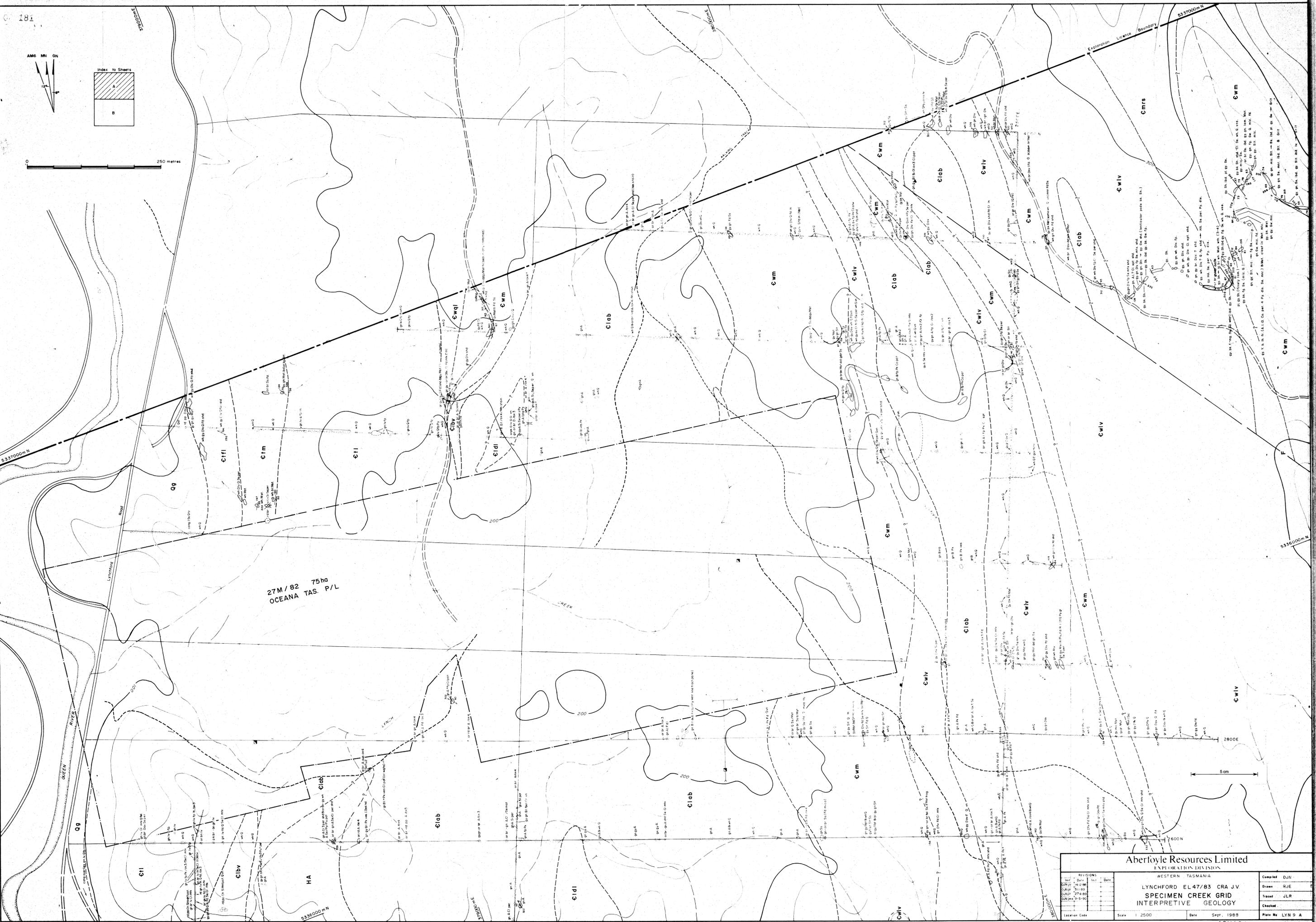
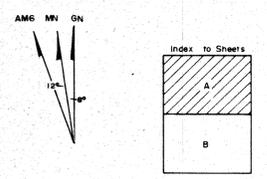
TABLE 3: Wholerock XRF analyses of mafic lavas from the Western Volcanic Sequence S of the Henry Fault

SAMPLE	Z627	Y408	31767A	31820	31820	RM49	Z102	C11	Z96	C9	C8	06	
SiO2	49.5	51.8	52.1	52.4	52.6	52.9	53.3	54.2	55.05	56.8	56.9	57.2	61.1
TiO2	0.32	0.41	0.57	0.42	0.81	0.50	0.60	0.38	0.57	0.47	0.55	0.47	0.52
Al2O3	8.9	12.5	17.5	11.9	18.1	19.1	16.6	12.0	18.2	13.7	17.5	15.9	15.0
FeO*	10.50	10.00	12.50	8.44	9.53	9.21	10.10	9.10	8.50	8.82	7.78	7.95	7.23
MnO	0.20	0.18	0.15	0.16	0.11	0.09	0.09	0.14	0.18	0.17	0.16	0.14	0.26
MgO	16.40	11.40	6.16	10.70	4.18	4.97	9.37	9.84	5.09	6.91	5.04	6.26	3.55
CaO	11.90	9.48	4.53	10.30	7.38	6.45	2.92	9.20	5.19	6.55	5.99	5.73	4.49
Na2O	1.35	2.02	4.20	2.46	4.85	3.32	2.50	2.92	4.36	3.23	3.99	3.41	4.70
K2O	0.70	1.66	1.83	2.08	1.36	3.15	4.19	2.21	2.39	3.11	1.68	2.61	2.61
P2O5	0.17	0.48	0.36	0.19	1.00	0.26	0.31	0.20	0.35	0.23	0.24	0.28	0.29
LOI	3.28	4.07	3.41	2.43	3.53	2.82	4.44	2.87	4.06	2.50	4.28	3.87	3
Ni	303	130	70	132	34	73	125	115	39		42	57	19
Cr	819	580	85	601	47	75	295	640	74		85	152	20
V	221	240	294	255	305	264	284	240	300		217	227	256
Sc	49	39	33		36	30	47		42		19	21	20
Zr	53	105	168	80	254	103		75	130		114	137	147
Nb	4	4	9.3	4.3	9.8	4.5		1.5	6		9	45	6
Y	34	32	22	23	35	27		17	25		20	24	23
Sr	182	420	372	252	1025	410		185	518		372	636	696
Tb	155	41	41	44	31	92		45	45		35	34	63
Ba	382	1300	1052	1869	1352	1404	2599	1750	1740		825	1650	1500
Tl/Zr	36.2	23.4	20.3	31.7	19.1	29.1		30.0	26.3		28.9	20.6	21.2
Zr/Y	1.6	3.3	7.6	3.5	7.3	3.8		4.5	5.2		5.7	5.7	6.4
Zr/Nb	13.3	26.3	18.1	18.6	25.9	22.9		50.7	21.7		12.7		24.5
Y/Nb	8.5	8.0	2.4	5.3	3.6	6.0		11.3	4.2		2.2		3.8
V/Sc	4.5	6.2	8.9		8.5	8.8	6.0	5.7	11.5		11.4	10.8	12.8
Zr/Sc	1.1	2.7	5.1		7.1	3.4		1.8	5.0		6.0	6.5	7.4
Tl/V	8.7	10.2	11.6	9.9	15.9	11.4	12.7	9.5	11.4		15.2	12.4	12.2
La		112.5		51.2			94.1	54.3		63.3	40.2	60.1	
Ce		209		96.1			153	99.9		117.1	79.7	124	
Pr		26.2		11.3			21.7	11.4		12.9	8.41	13.5	
Nd		103.4		42.6			70.2	43.6		47.8	33.5	50	
Sm		18.8		7.49			12.9	7.65		8.18	5.81	8.17	
Eu		4.49		1.85			3.11	1.96		1.89	1.37	2.16	
Gd		13.2		6.23			8.63	6.09		6.03	4.57	5.79	
Dy		7.51		4.01			6.36	3.84		4.41	3.81	4.33	
Er		3.67		2.30			3.94	2.15		2.75	2.69	2.67	
Yb		2.87		1.92			2.65	1.78		2.14	2.21	2.16	

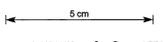
PS
 Doug's rocks from last job
 are included here. Yours are
 in smaller box. Tony.

467181

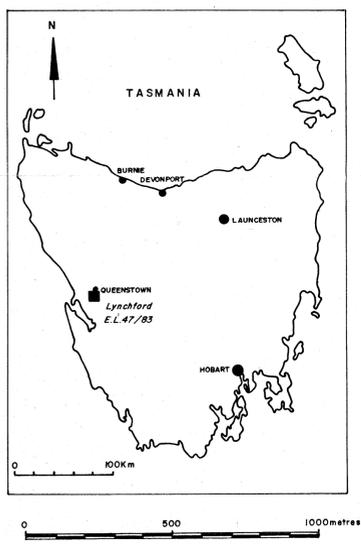
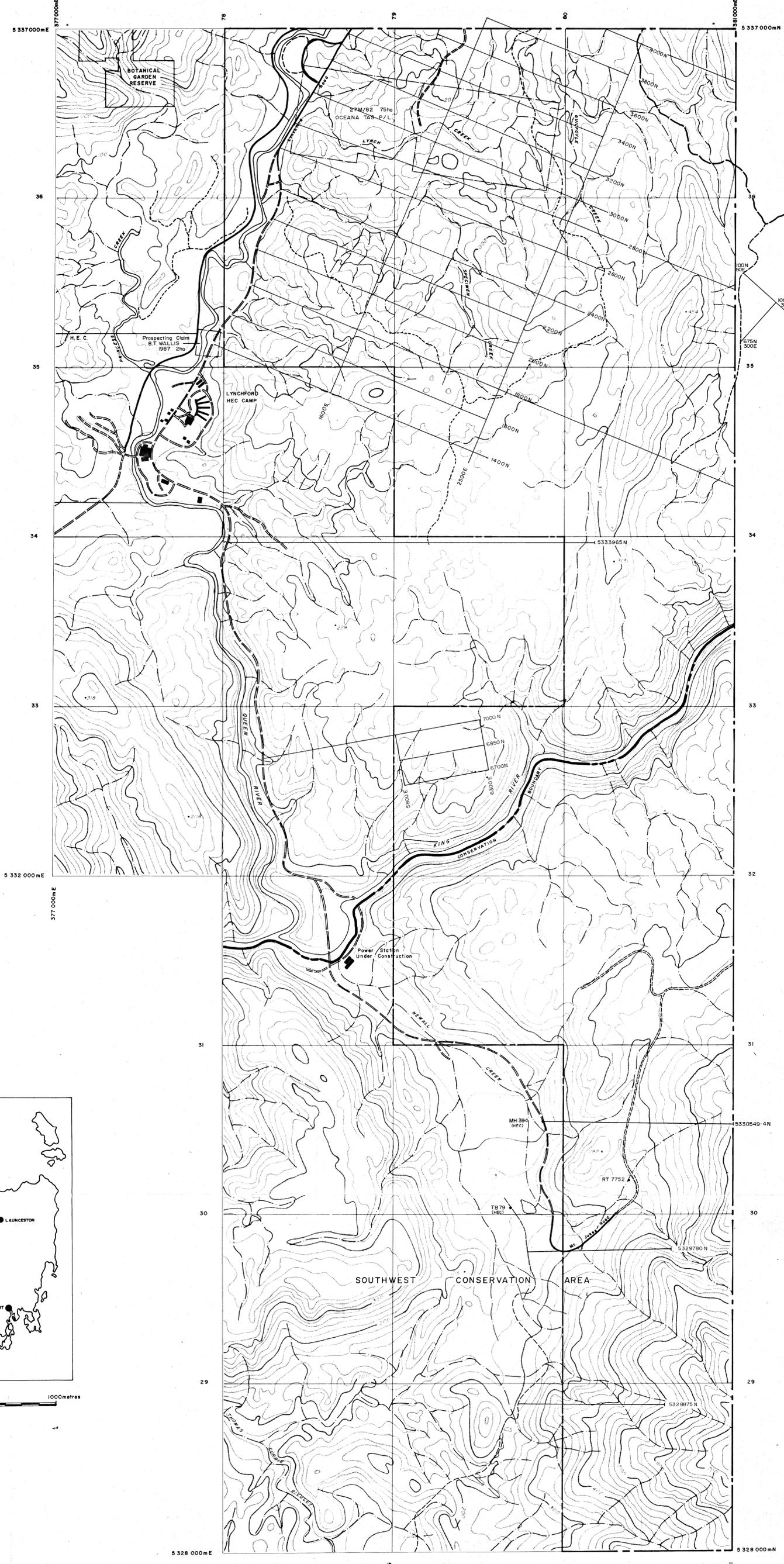
230



27M/82 75 ha
OCEANA TAS. P/L



Aberfoyle Resources Limited EXPLORATION DIVISION		Compiled DJN Drawn RJE Traced JLR Checked:
WESTERN TASMANIA LYNCHFORD EL47/83 CRA JV SPECIMEN CREEK GRID INTERPRETIVE GEOLOGY		State No LYN 9 A
REVISIONS No. Date Description 1 11/83 Initial 2 11/83 3 11/83 4 11/83	Location Code Scale 1:2500 Date Sept. 1988	Plate No LYN 9 A



90-3152.

Aberfoyle Resources Limited
EXPLORATION DIVISION

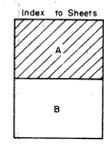
NORTH WEST TASMANIA
LYNCHFORD E.L. 47/83-CRA J.V.
GRIDDING 467184

REVISIONS			
Int.	Date	Int.	Date
1	15/90		

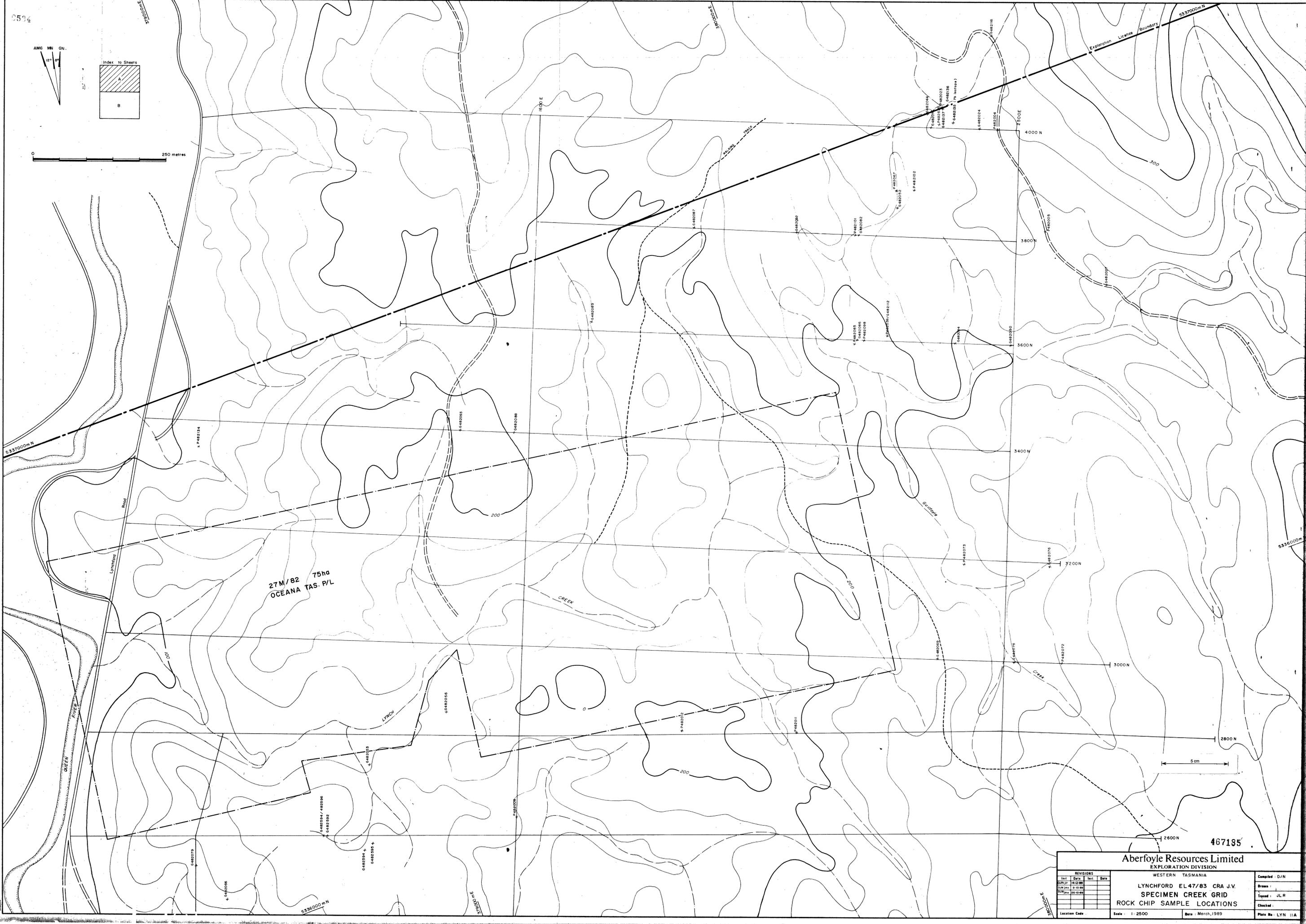
Location Code: Scale: 1:10,000 Date: March, 1989 Plate No: LYN 10

Compiled: DJN
Drawn: JLR
Traced: JLR
Checked:

AMG MLI GN



0 250 metres



27 M/82 75ha
OCEANA TAS. P/L

5 cm

467135

Aberfoyle Resources Limited
EXPLORATION DIVISION

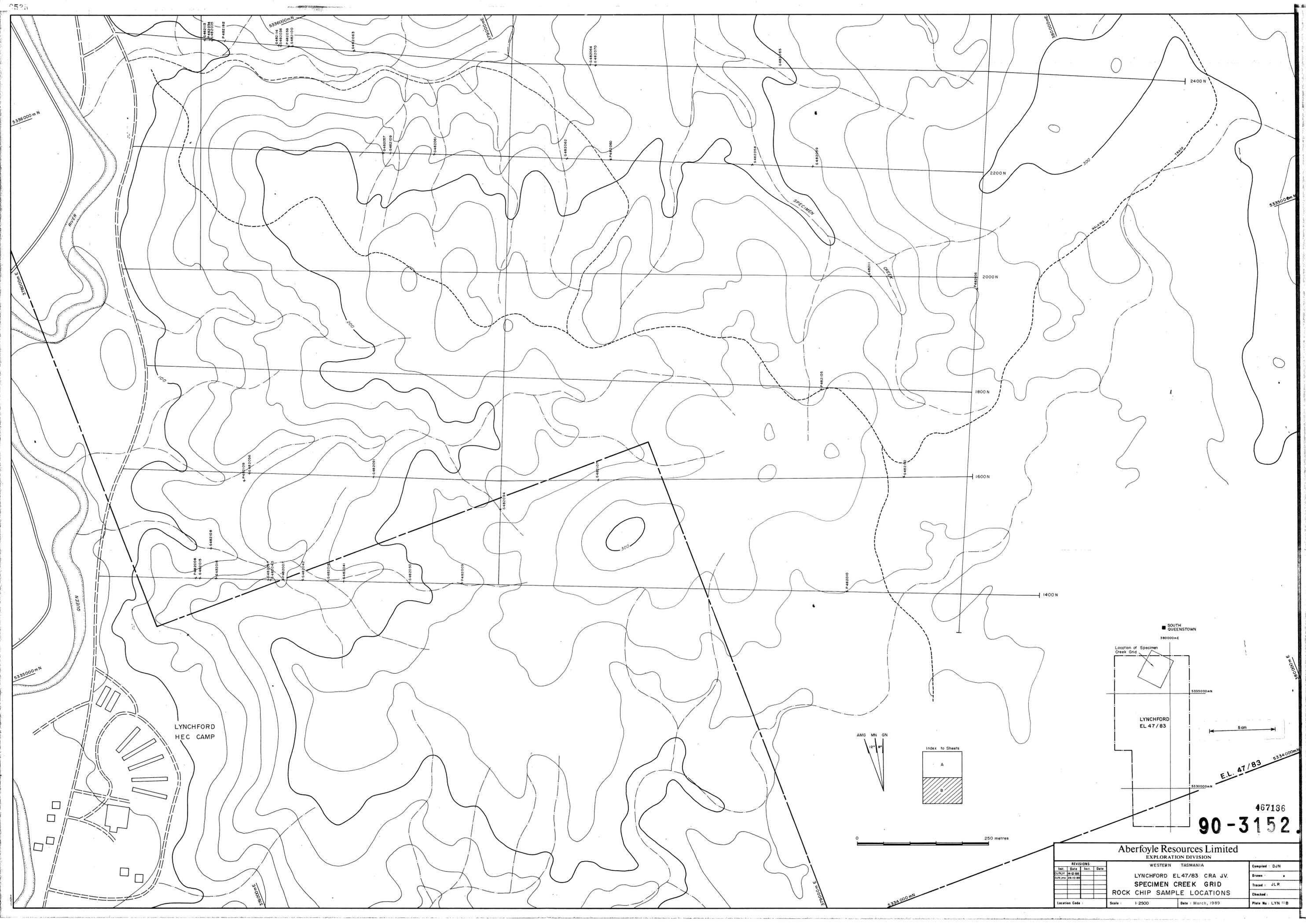
WESTERN TASMANIA

LYNCHFORD EL47/83 CRA J.V.
SPECIMEN CREEK GRID
ROCK CHIP SAMPLE LOCATIONS

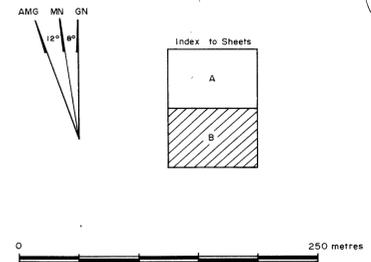
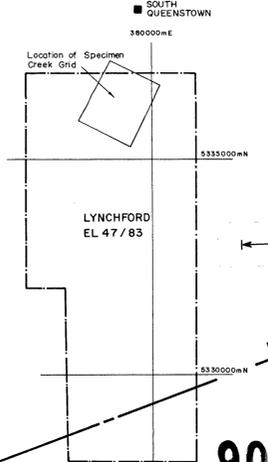
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Rev	Date	By	Date
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002	19-02-89		
003	28-02-89		

Location Code: Scale: 1:2500 Date: March, 1989

Compiled: D/JN
Drawn: JLR
Typed: JLR
Checked: JLR
Plate No: LYN 11A

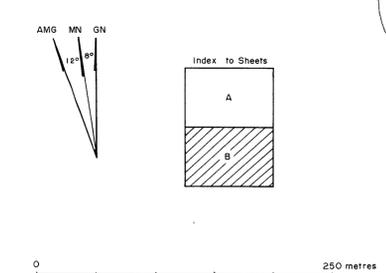
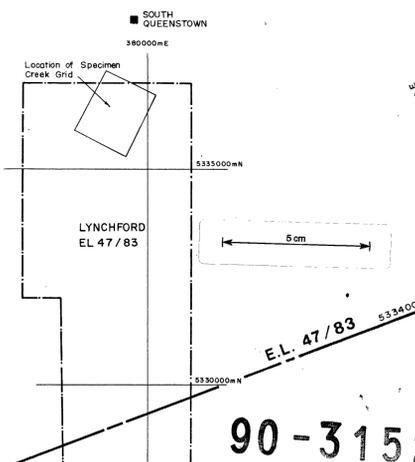
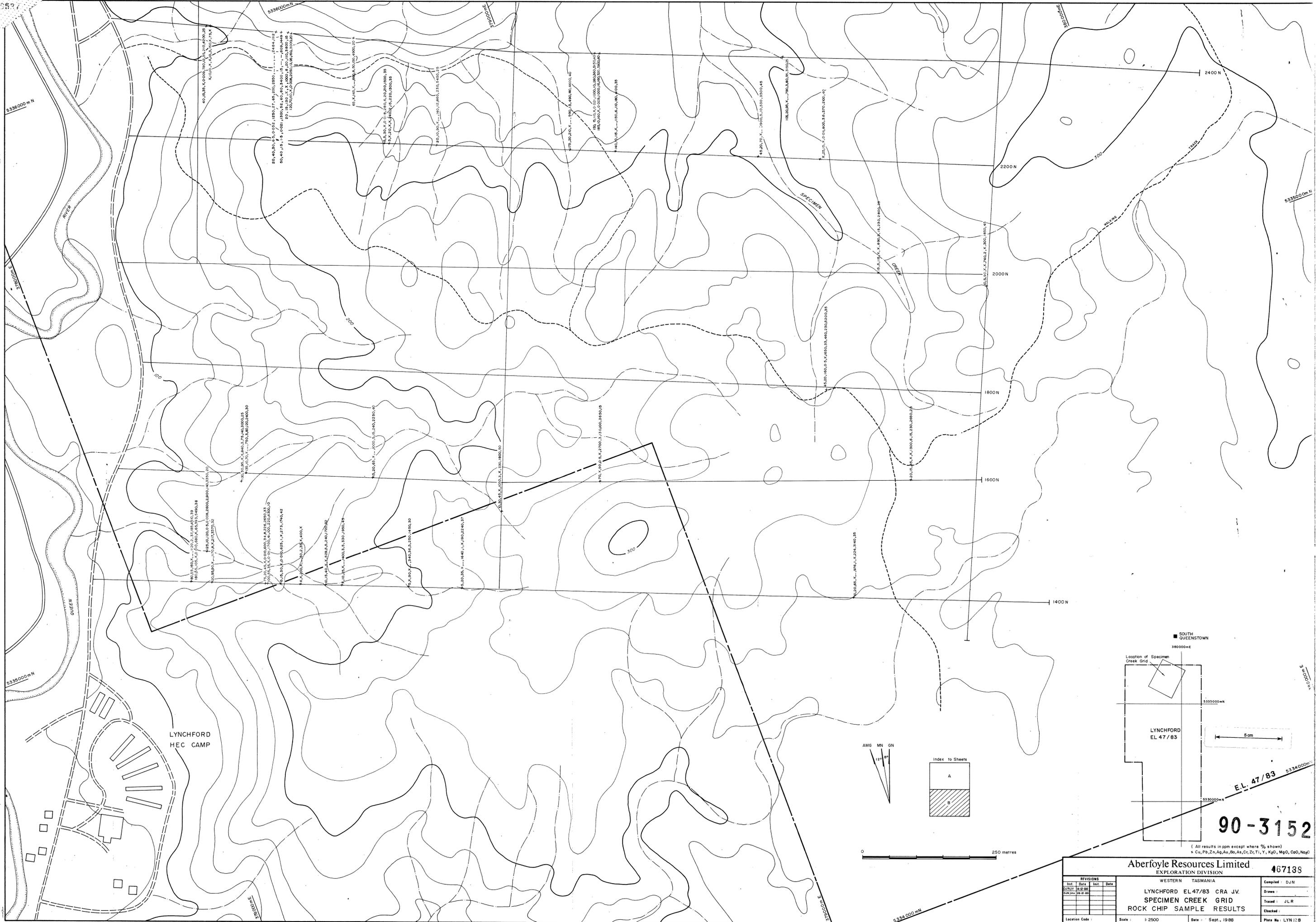


LYNCHFORD
HEC CAMP



467186
90-3152

Aberfoyle Resources Limited EXPLORATION DIVISION WESTERN TASMANIA LYNCHFORD EL47/83 CRA JV. SPECIMEN CREEK GRID ROCK CHIP SAMPLE LOCATIONS				Compiled: DJN Drawn: JLR Traced: JLR Checked: JLR Plate No: LYN 11B											
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Int.	Date	Int.	Date												
DJN/JJR	14-02-88														
DJN/JJR	28-10-89														



90-3152

(All results in ppm except where % shown)
 * Cu, Pb, Zn, Ag, Au, Bi, As, Cr, Zr, Ti, Y, K₂O, MgO, CaO, Na₂O

Aberfoyle Resources Limited 467138
 EXPLORATION DIVISION

WESTERN TASMANIA
 LYNCHFORD EL47/83 CRA JV.
 SPECIMEN CREEK GRID
 ROCK CHIP SAMPLE RESULTS

REVISIONS			
Int.	Date	Int.	Date
DJN	14-8-88		
DJN	26-8-88		

Location Code: Scale: 1:2500 Date: Sept., 1988 Plate No: LYN 12B

Compiled: DJN
 Drawn:
 Traced: J.L.R.
 Checked:
 Plate No: LYN 12B

3539

378 800 E

5332000N

5331600N

5331200N

379 200 E

379 600 E

380 000 E

X,X,45,X,X,50,X,70,260,2750
 X,X,55,X,X,60,X,70,260,2900
 X,X,45,X,X,60,X,80,X,90,230,2600
 X,X,45,X,X,60,X,90,X,100,2,75,2600,3000
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 +6600
 10,X,135,X,X,1000,2,85,260,2950
 +6600
 10,X,150,X,X,1400,1,70,220,2650
 +6600

E.L.47/83

10,5,345,X,X,650,1,90,240,3100

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PORTAL TUNNEL

x Cu,Pb,Zn,Ag,Au,Be,As,Cr,Zr,Ti



467100 90-3152.

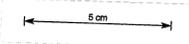
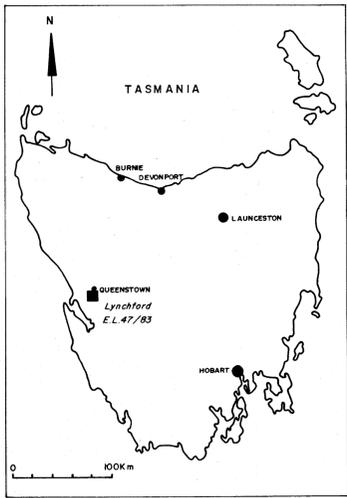
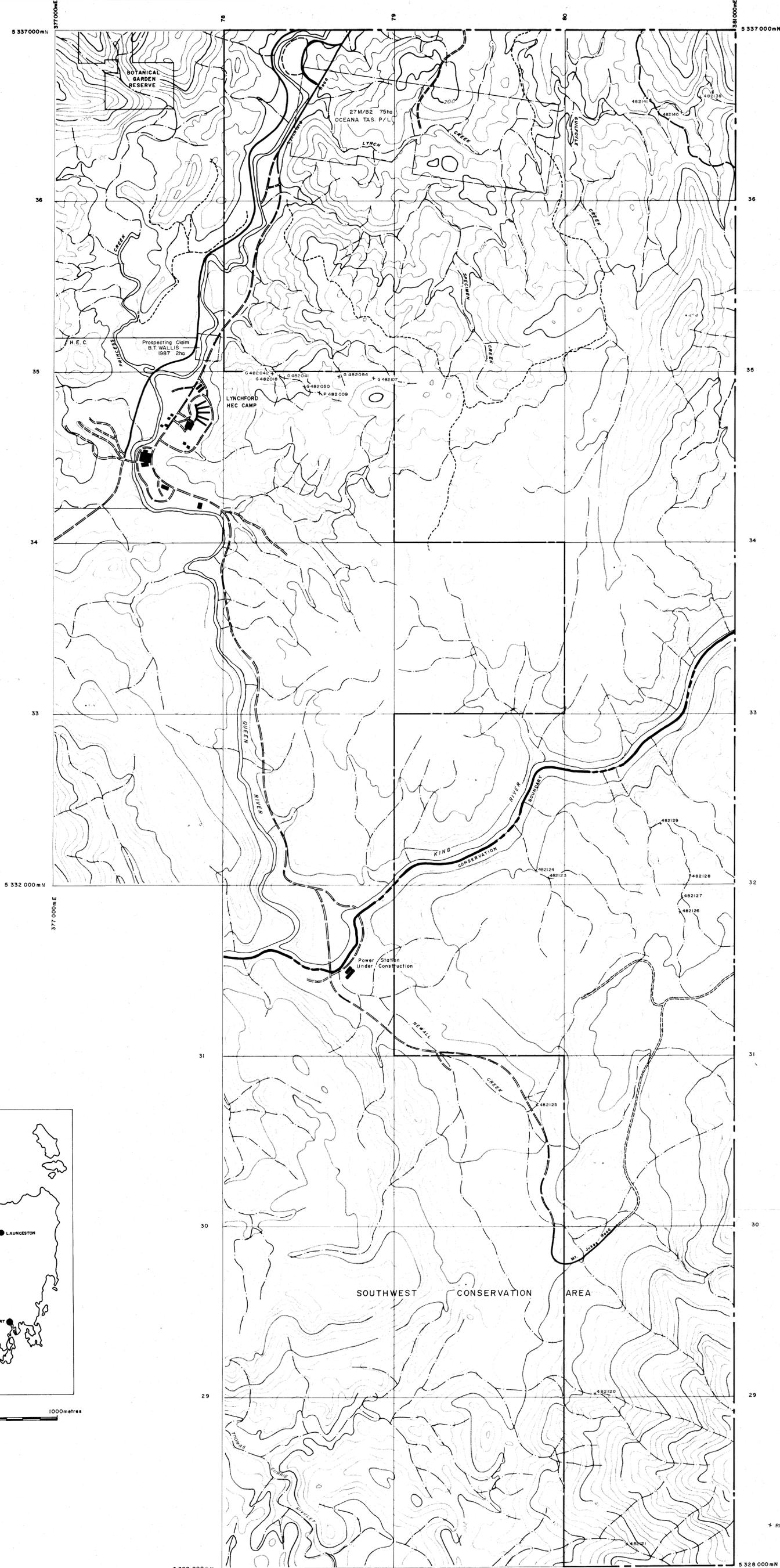
Aberfoyle Resources Limited
EXPLORATION DIVISION

REVISIONS			
Init.	Date	Init.	Date

NORTH WEST TASMANIA
 LYNCHFORD E.L.47/83
 KING RIVER POWER SCHEME-Development Tunnel
 ROCK CHIP SAMPLE RESULTS

Compiled	DJN
Drawn	JLR
Traced	
Checked	
Plate No	LYN18

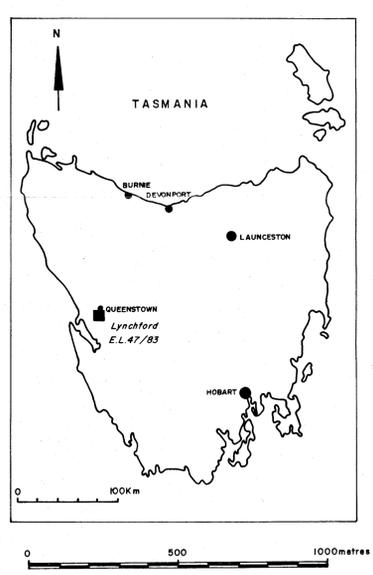
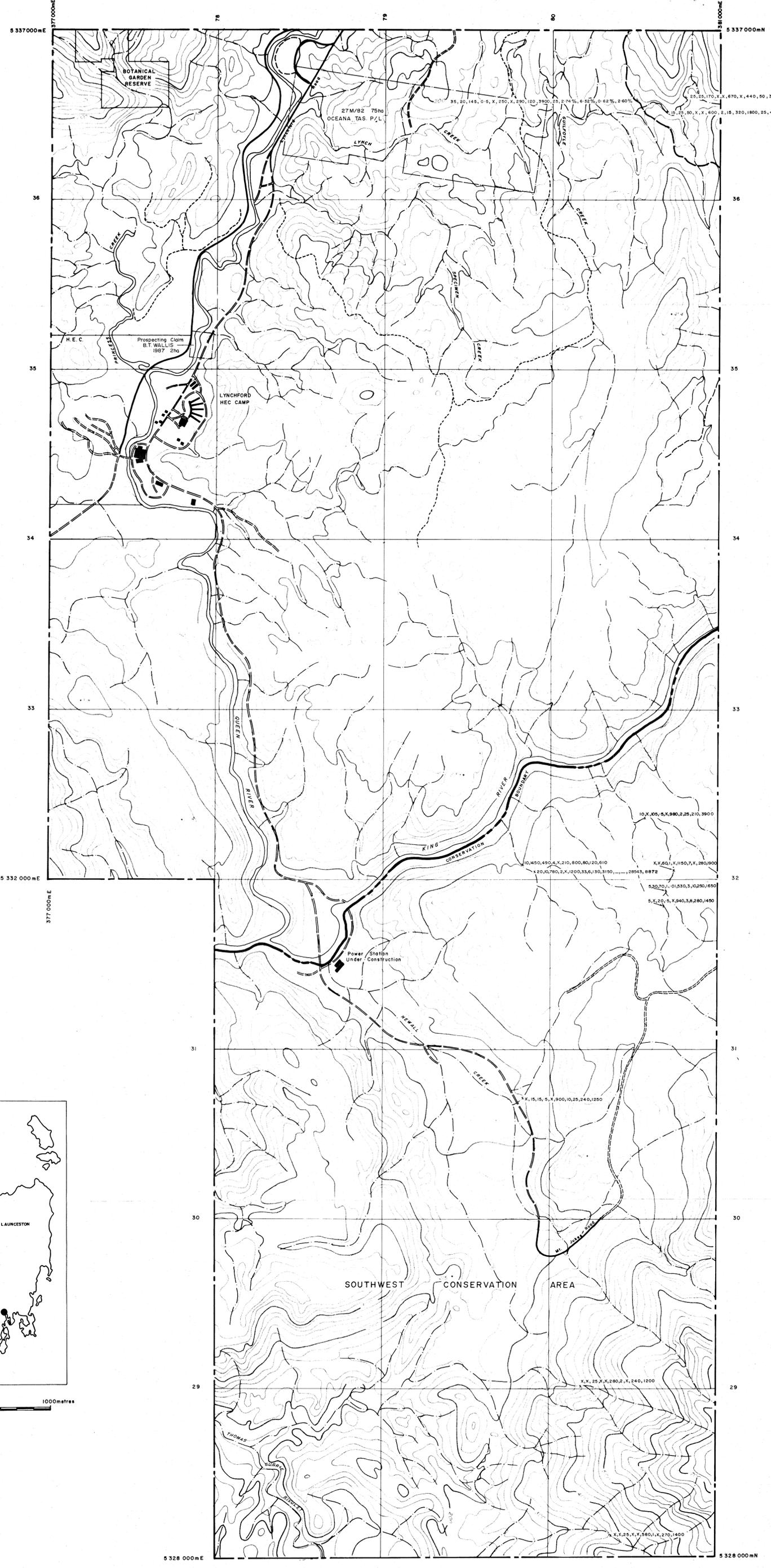
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* ROCK CHIP SAMPLE LOCATION
 467191
90-3152

Aberfoyle Resources Limited				EXPLORATION DIVISION	
NORTH WEST TASMANIA				Compiled: DJN	
LYNCHFORD E.L. 47/83-CRA J.V.				Drawn: JLR	
ROCK CHIP SAMPLE LOCATIONS				Checked:	
Location Code:				Date: May, 1989	
Scale: 1:10,000				Plate No: LYN 20	

REVISIONS			
No.	Date	By	Desc.
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02	13/2/80	DJN	Revised

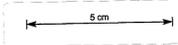
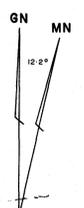
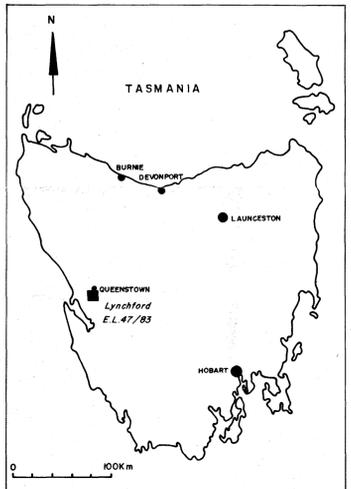
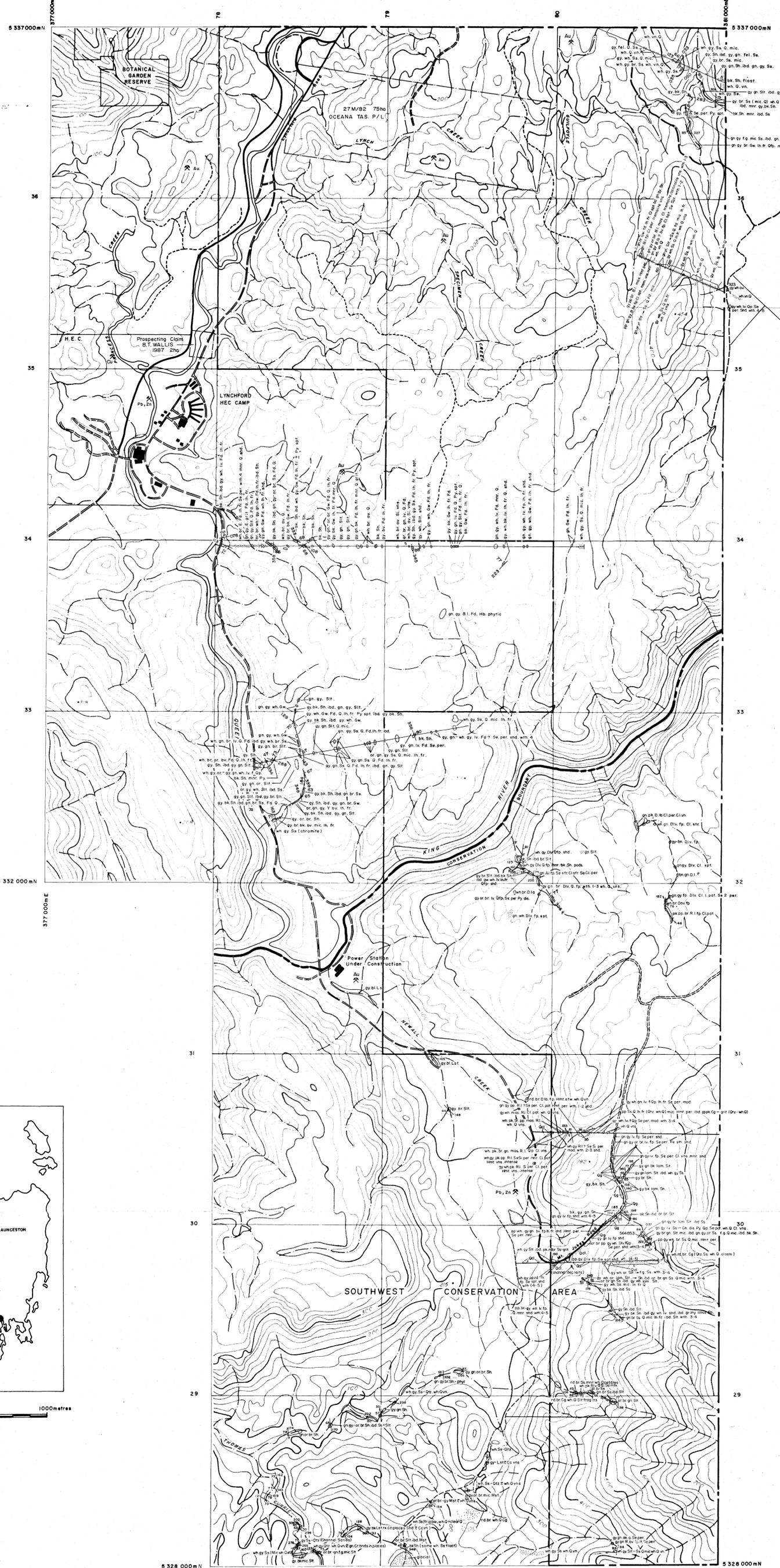


5 cm

90-3152.

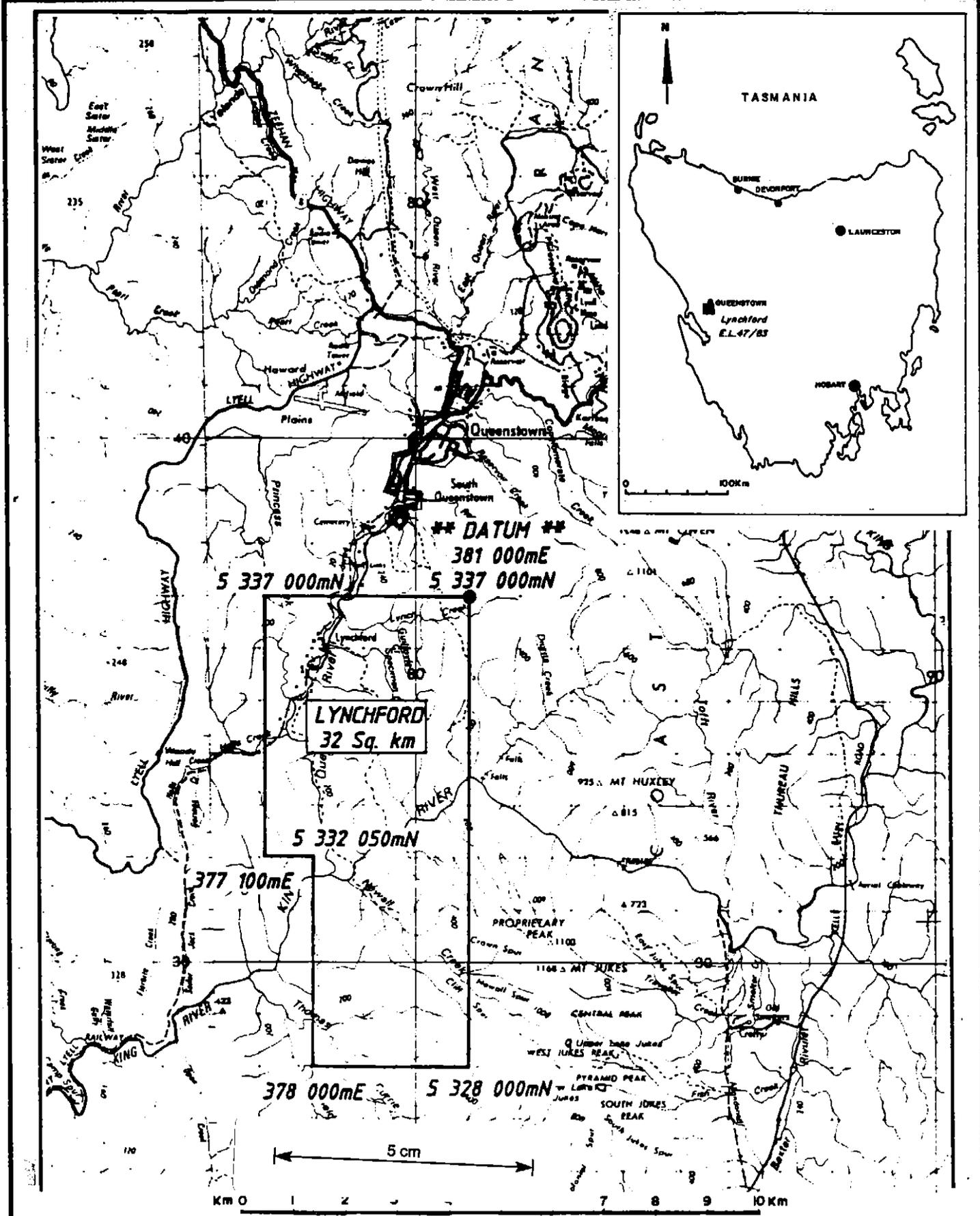
x Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti, K₂O, MgO, CoO, Ni₂O

Aberfoyle Resources Limited EXPLORATION DIVISION		407192
NORTH WEST TASMANIA LYNCHFORD E.L. 47/83-CRA J.V. ROCK CHIP SAMPLE RESULTS		
REVISIONS Init. Date Init. Date _____ _____ _____	Location Code:	Scale: 1:10,000 Date: May, 1989 Plate No: LYN 21
Compiled: D.J.N. Drawn: _____ Traced: J.L.R. Checked: _____		



90-3152.

Aberfoyle Resources Limited			467193												
EXPLORATION DIVISION															
NORTH WEST TASMANIA															
LYNCHFORD E.L. 47/83-CRA J.V.															
OUTCROP GEOLOGY															
Location Code:			Scale: T-10,000												
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Date	By														
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12/3/85	JLR														
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Drawn: JLR															
Traced: JLR															
Checked:															



Aberfoyle Resources Limited
EXPLORATION DIVISION

467194

NORTH WEST TASMANIA
LYNCHFORD E.L. 47/83
LOCATION PLAN

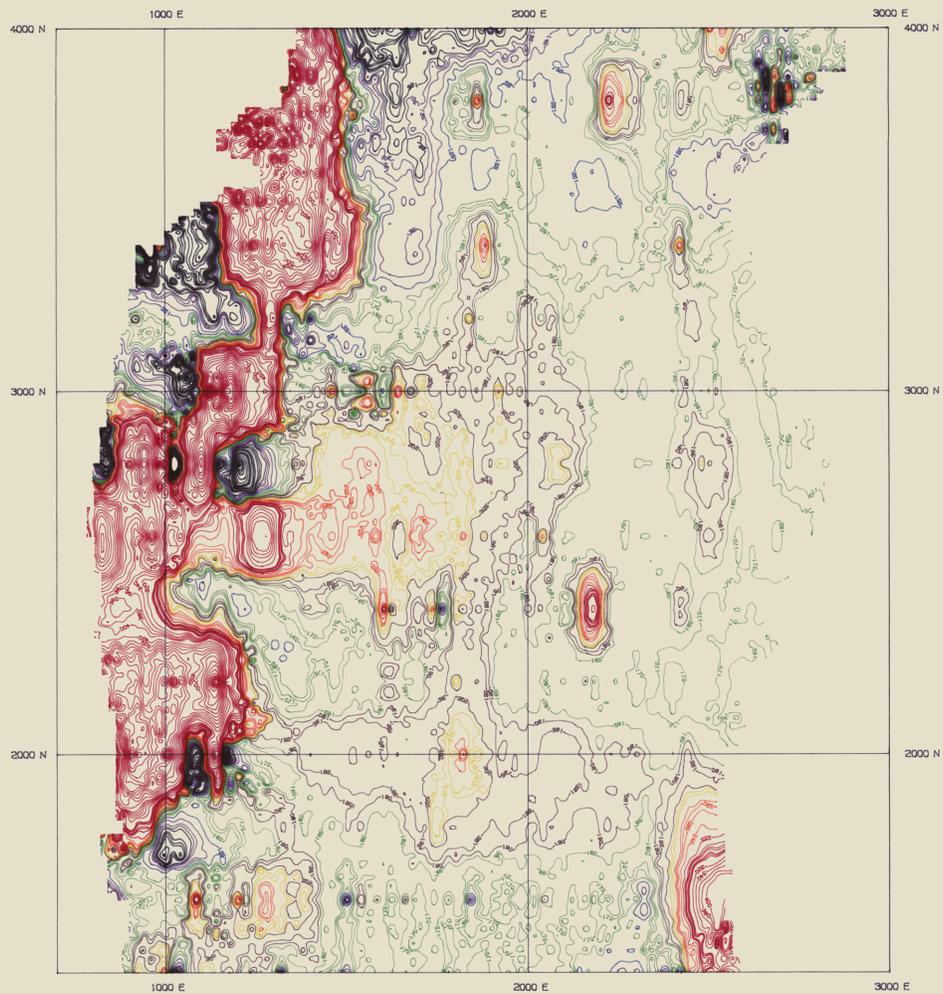
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Plate No. : LYN 24

REVISIONS			
Init.	Date	Init.	Date

Location Code :

Scale : 1:100 000

Date : May, 1989



5 cm

90-3152

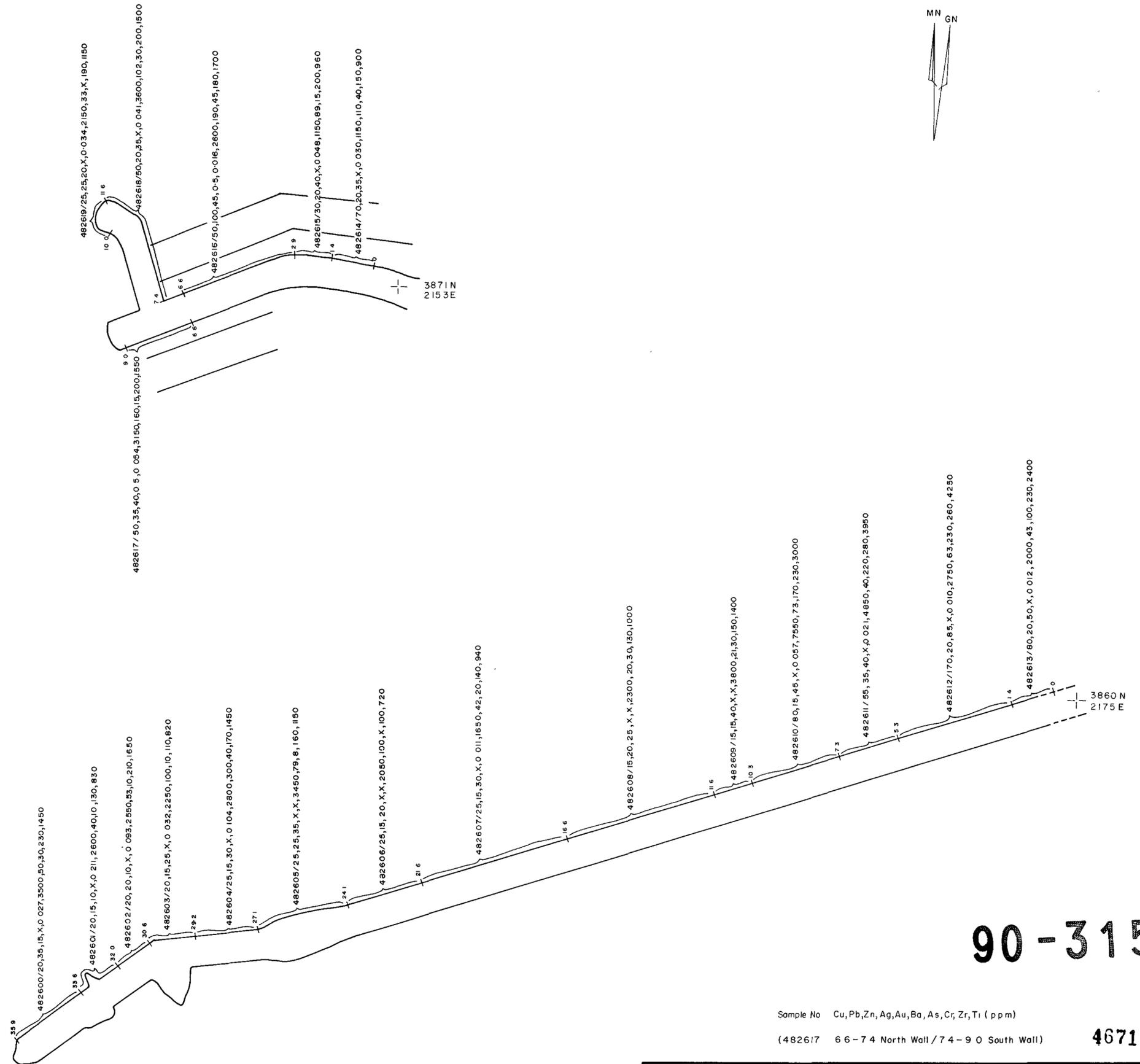
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-300 - 0 nT	50 nT	+125 - +145	Purple
0 - 300 nT	5 nT	+145 - +160	Blue
300 - 400 nT	20 nT	+160 - +185	Green
400 - 1400 nT	50 nT	+185 - +205	Brown
		+205 - +220	Yellow
		+220 - +245	Orange
		+245 - 1400	Red

467196



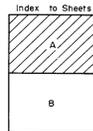
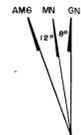
AUSTRALIAN MAP GRID

ABERFOYLE RESOURCES LIMITED EXPLORATION DIVISION																							
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Int.	Date	Int.	Date																				
Location Code:		Date: 11 SEPTEMBER 1989																					
Scale: 1:10000		Checked: GBW Drawn: APOLLO SYSTEM Title No: LYN 28																					

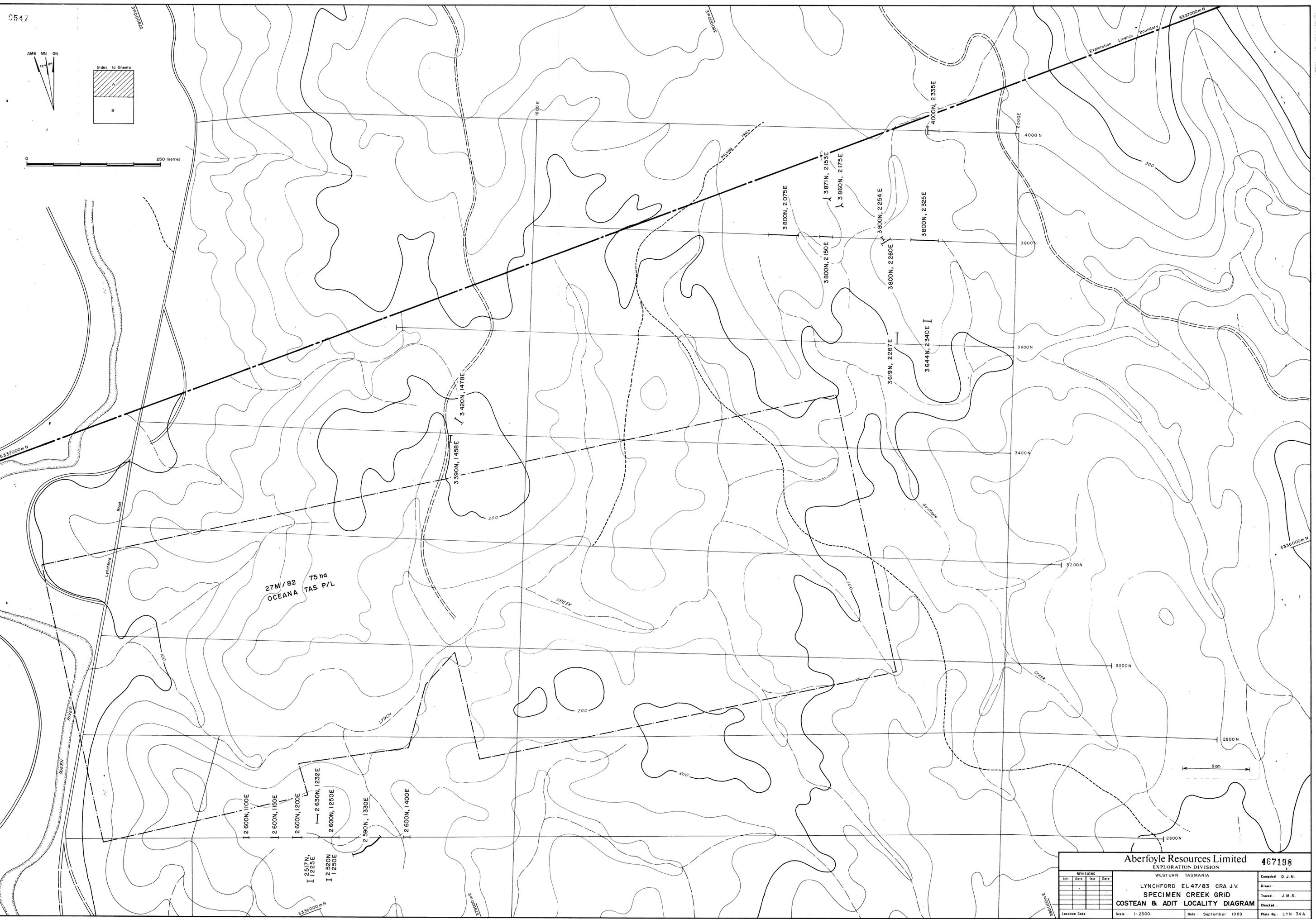


Sample No Cu,Pb,Zn,Ag,Au,Ba,As,Cr,Zr,Ti (ppm)
 (482617 66-74 North Wall/74-90 South Wall) 467197

Aberfoyle Resources Limited																																		
EXPLORATION DIVISION																																		
NORTH WEST TASMANIA																																		
LYNCHFORD E L 47 / 83																																		
SAMPLE LOCATIONS & ASSAY RESULTS																																		
(3871N/2153E, 3860N/2175E)																																		
Location Code		Scale : 1 100	Date : August, 1989																															
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REVISIONS																																		
Init.	Date	Init.	Date																															
		Drawn : DJN																																
		Traced : JLR																																
		Checked :																																
		Plate No : LYN 25 B																																



0 250 metres



27M/82 75 ha
OCEANA TAS. P/L

2 600N, 1100E
2 600N, 1150E
2 600N, 1200E
2 630N, 1232E
2 600N, 1250E
2 550N, 1250E
2 550N, 1330E
2 600N, 1400E

3 390N, 1458E
3 420N, 1476E

3 800N, 2 076E
3 800N, 2 150E
3 871N, 2 153E
3 860N, 2 175E
3 800N, 2 254E
3 800N, 2 260E
3 619N, 2 287E
3 644N, 2 340E
3 800N, 2 325E
4 000N, 2 335E

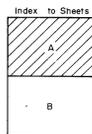
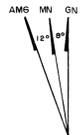
Aberfoyle Resources Limited 467198
EXPLORATION DIVISION
WESTERN TASMANIA

LYNCHFORD EL47/83 CRA J.V.
SPECIMEN CREEK GRID
COSTEAN & ADIT LOCALITY DIAGRAM

Compiled: D. J. N.
Drawn: _____
Traced: J. M. S.
Checked: _____

Scale: 1:2500 Date: September 1989 Plate No: LYN 34A

REVISIONS			
Init	Date	Text	Date



0 250 metres

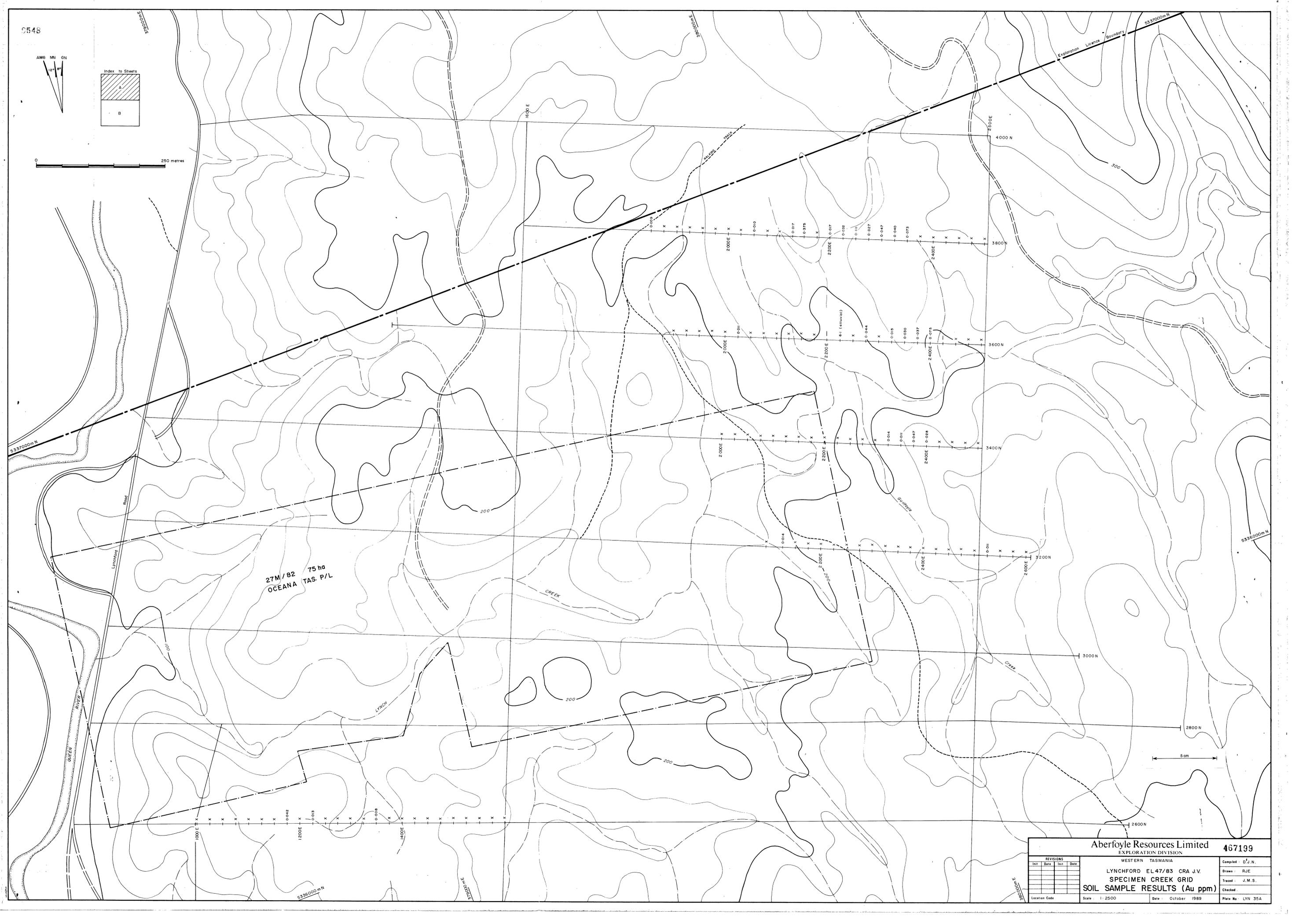
27M/82 75 ha
OCEANA TAS. P/L

Aberfoyle Resources Limited 467199
EXPLORATION DIVISION
WESTERN TASMANIA

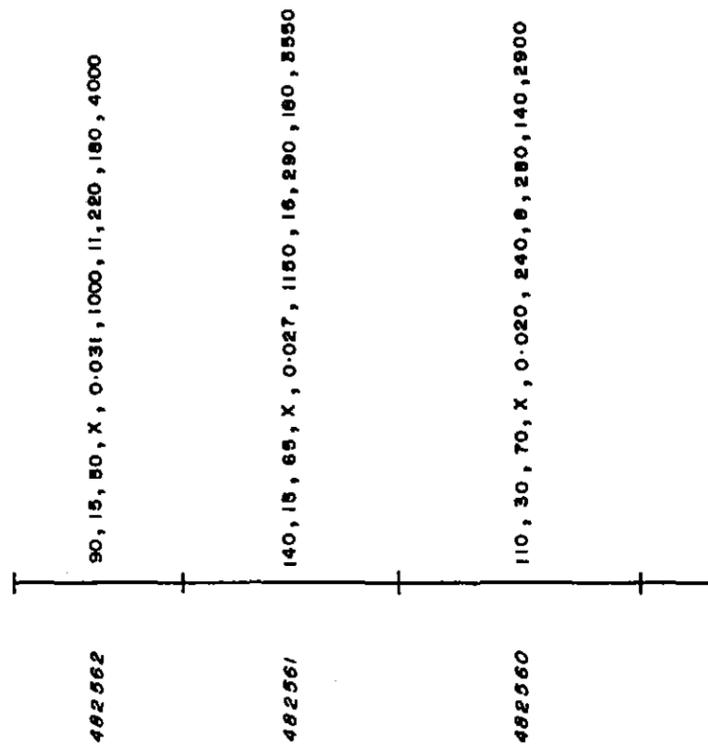
LYNCHFORD EL47/83 CRA J.V.
SPECIMEN CREEK GRID
SOIL SAMPLE RESULTS (Au ppm)

REVISIONS		Compiled
Init	Date	Init
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		Drawn
		R.J.E.
		Traced
		J.M.S.
		Checked

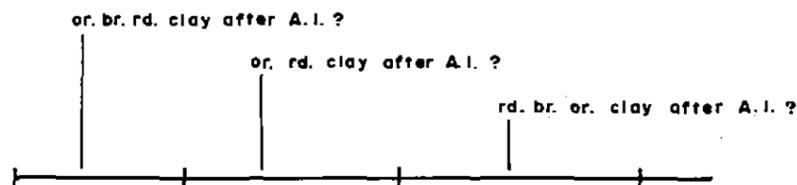
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9549



GEOCHEMISTRY



GEOLOGY

5 cm



90-3152.

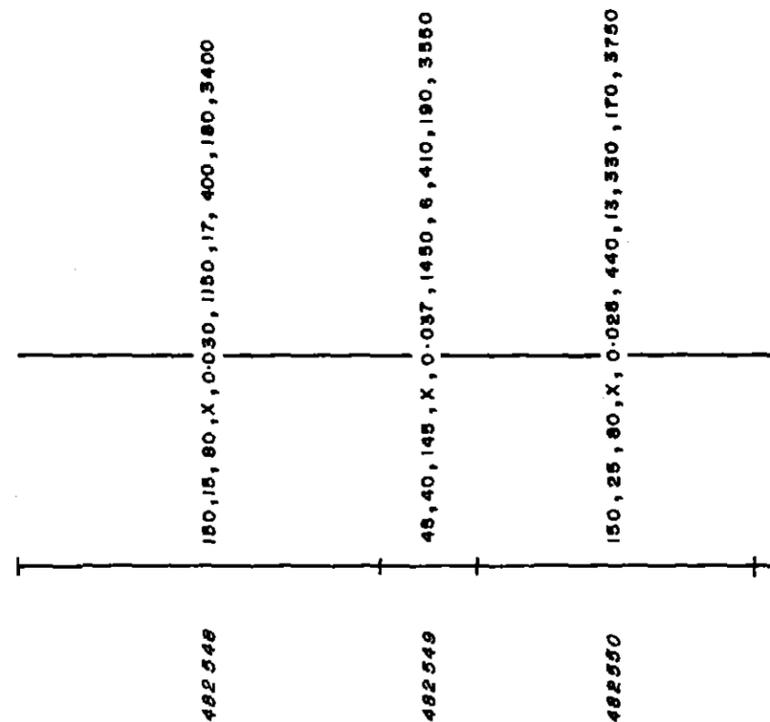
Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

Aberfoyle Resources Limited				467200
EXPLORATION DIVISION				
WESTERN TASMANIA				Compiled : D.J.N.
LYNCHFORD E.L. 47/83 CRA JV				
SPECIMEN CREEK GRID				Drawn :
COSTEAN SECTION 2520N, 1250E				Traced : J. M. S.
Location Code :				Checked :
Scale : 1:100		Date : October 1989		Plate No. : LYN. 36 A

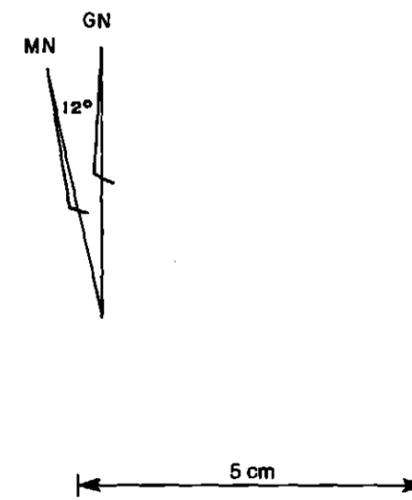
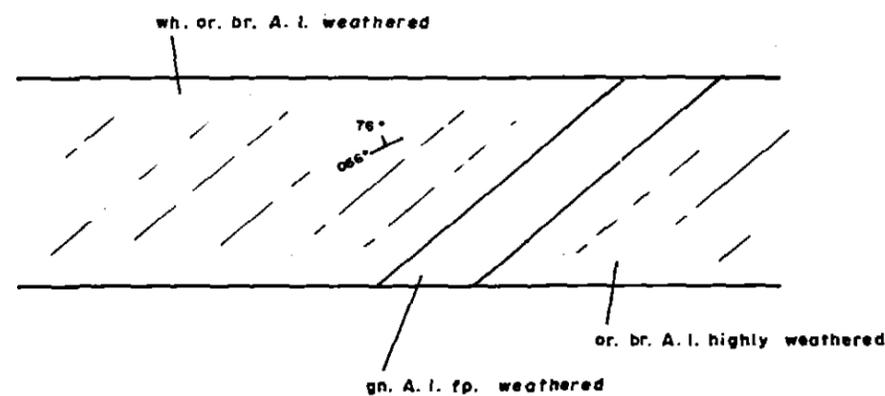
REVISIONS			
Init.	Date	Init.	Date

9550

GEOCHEMISTRY



GEOLOGY



90-3152

Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

Aberfoyle Resources Limited
EXPLORATION DIVISION

487201

REVISIONS			
Init.	Date	Init.	Date

WESTERN TASMANIA
LYNCHFORD E.L. 47/83 CRA JV
SPECIMEN CREEK GRID
COSTEAN SECTION 2517N, 1225E

Compiled : D.J.N.
Drawn :
Traced : J.M.S.
Checked :

Location Code :

Scale : 1:100

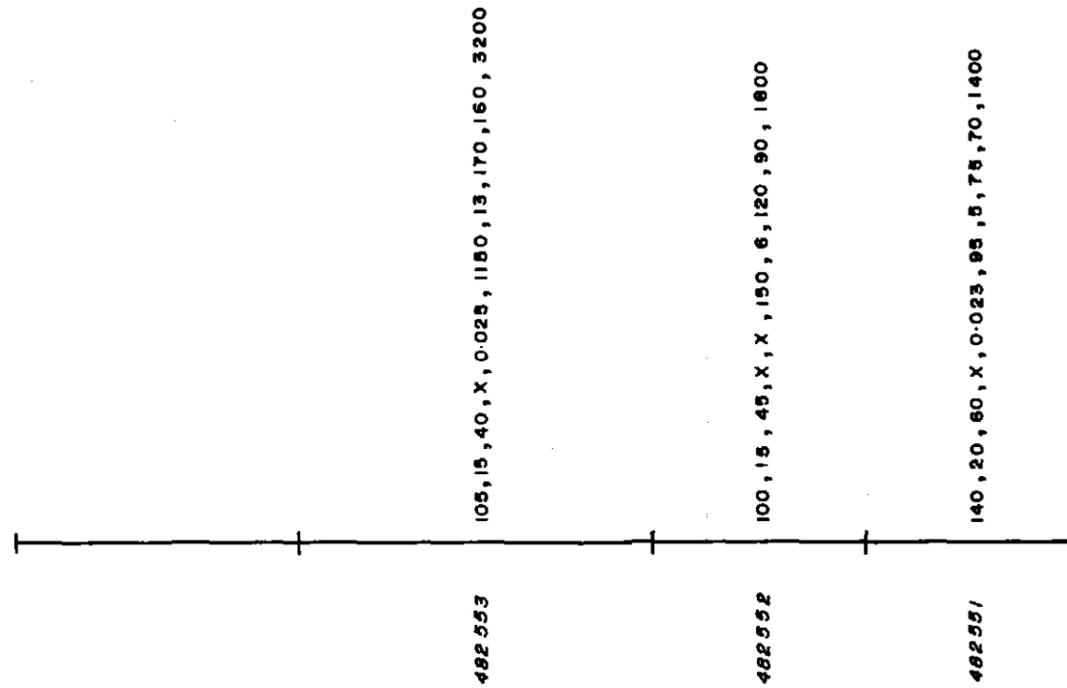
Date : October 1989

Plate No. : LYN 36 B

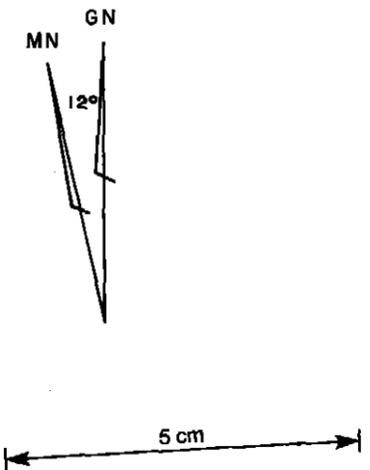
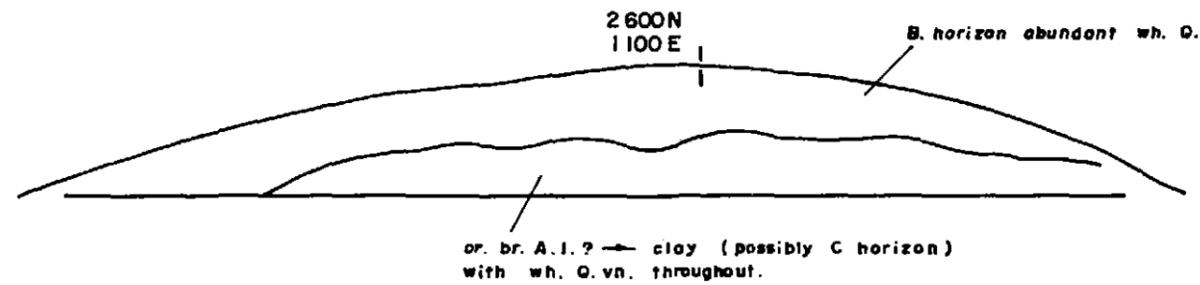
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9551

GEOCHEMISTRY



GEOLOGY

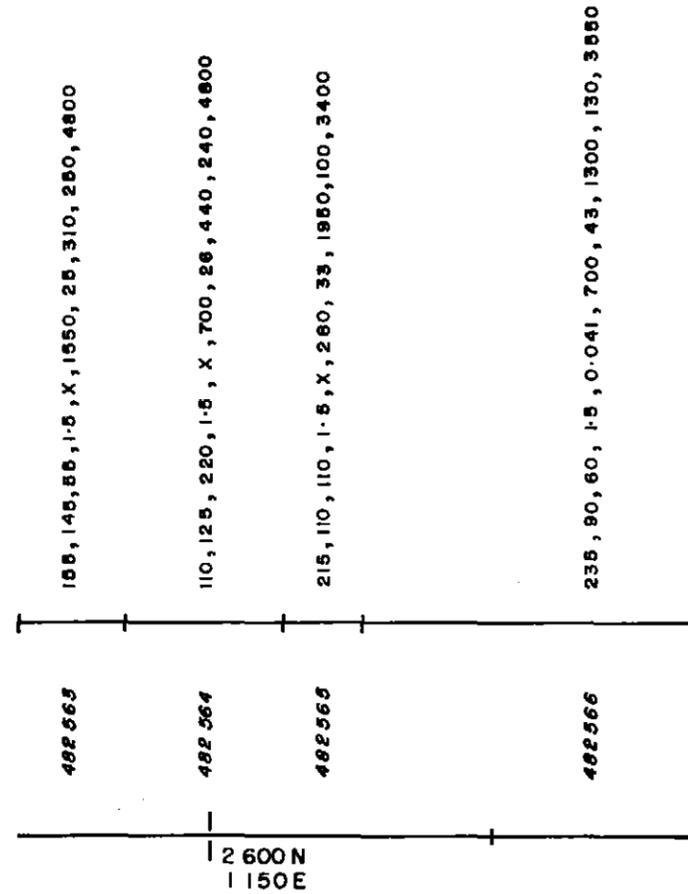


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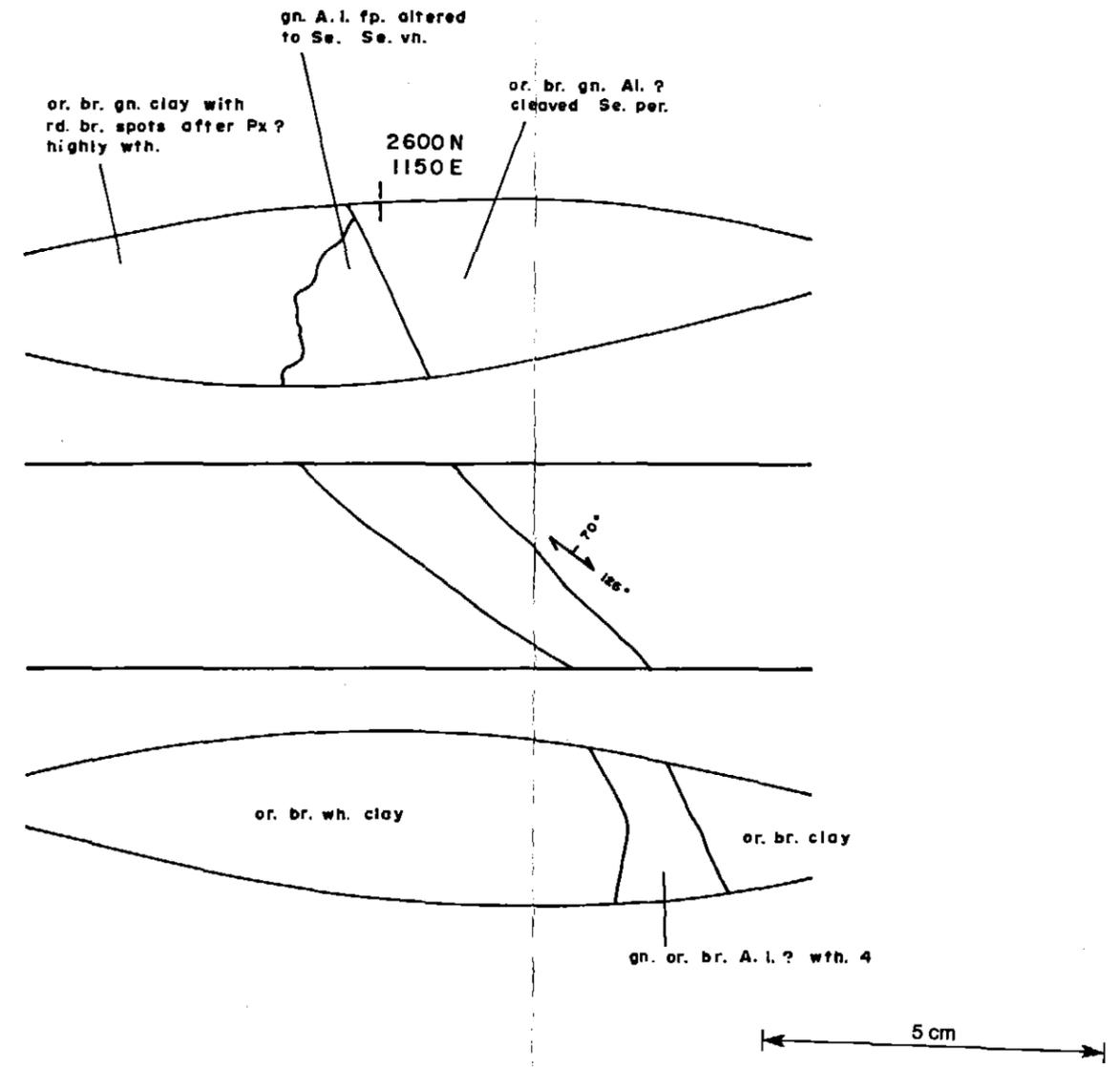
Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

Aberfoyle Resources Limited				467202																											
EXPLORATION DIVISION																															
WESTERN TASMANIA																															
LYNCHFORD E.L.47/83 CRA JV																															
SPECIMEN CREEK GRID																															
COSTEAN SECTION 2600N, 1100E																															
Location Code :		Scale : 1 : 100		Date : October 1989																											
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REVISIONS																															
Init.	Date	Init.	Date																												

GEOCHEMISTRY



GEOLOGY



Sample number - Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

Aberfoyle Resources Limited
EXPLORATION DIVISION

467203

REVISIONS			
Init.	Date	Init.	Date

WESTERN TASMANIA
LYNCHFORD E.L. 47/83 CRA JV
SPECIMEN CREEK GRID
COSTEAN SECTION 2600N, 1150E

Compiled : D. J. N.
Drawn :
Traced : J. M.S.
Checked :
Plate No. : LYN. 36 D.

Location Code :

Scale : 1:100

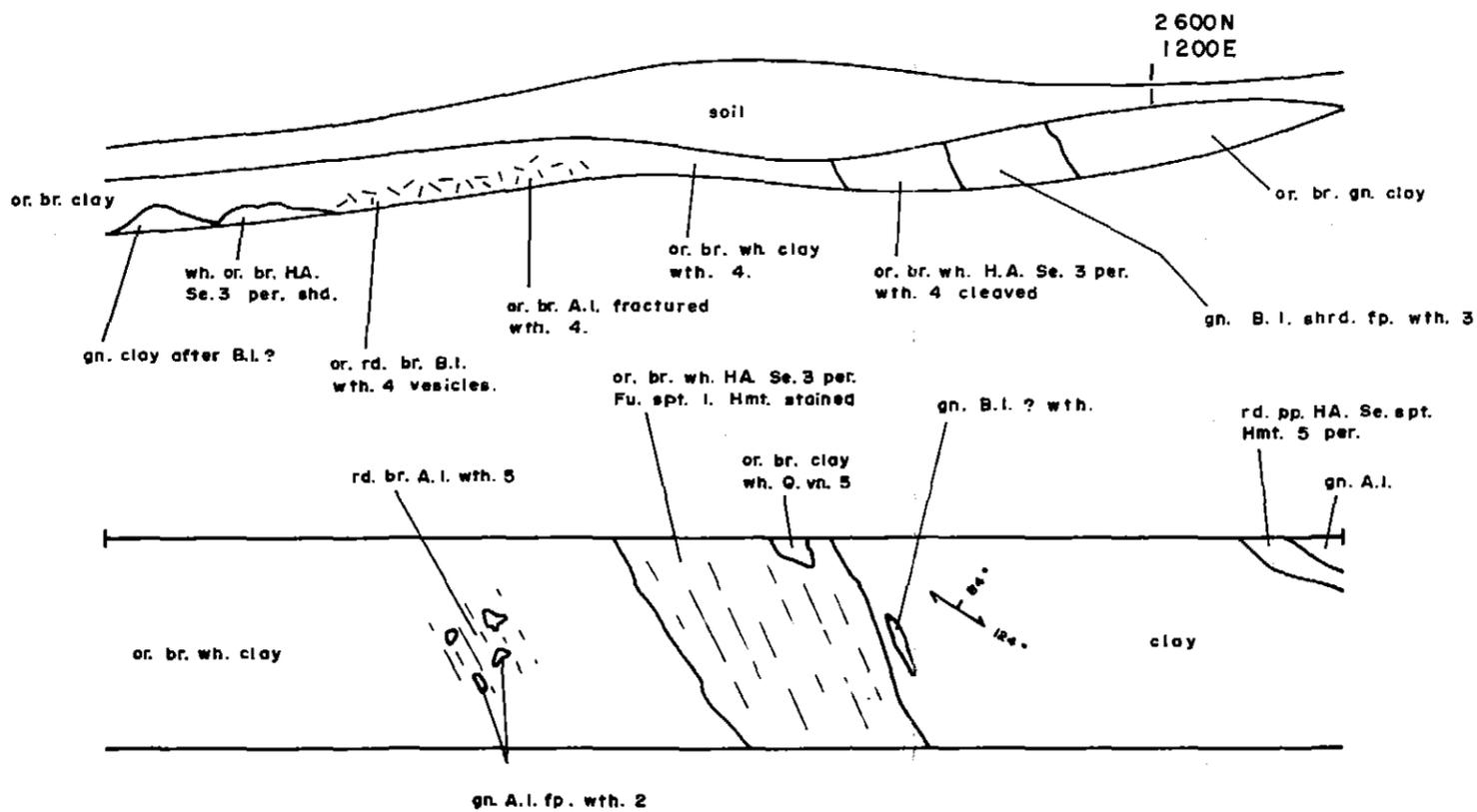
Date : October 1989

90-3152.

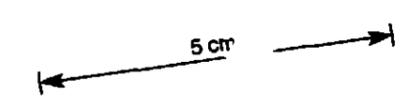
9553

210, 100, 65, 1.0, 0.036, 1500, 31, 210, 130, 2650	210, 70, 40, 1.0, 0.066, 1150, 32, 230, 140, 3050	180, 70, 25, 1.0, 0.053, 1250, 39, 180, 140, 3150	145, 100, 25, 1.0, 0.026, 1100, 43, 170, 110, 2200	125, 40, 20, 1.0, 0.034, 1350, 25, 150, 160, 2300	90, 45, 65, 1.0, 0.021, 920, 16, 130, 160, 2250	130, 50, 60, 1.5, 0.026, 880, 16, 100, 140, 2300
482576	482575	482574	482573	482572	482571	482570

GEOCHEMISTRY



GEOLOGY



90-3152.



Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

Aberfoyle Resources Limited
EXPLORATION DIVISION

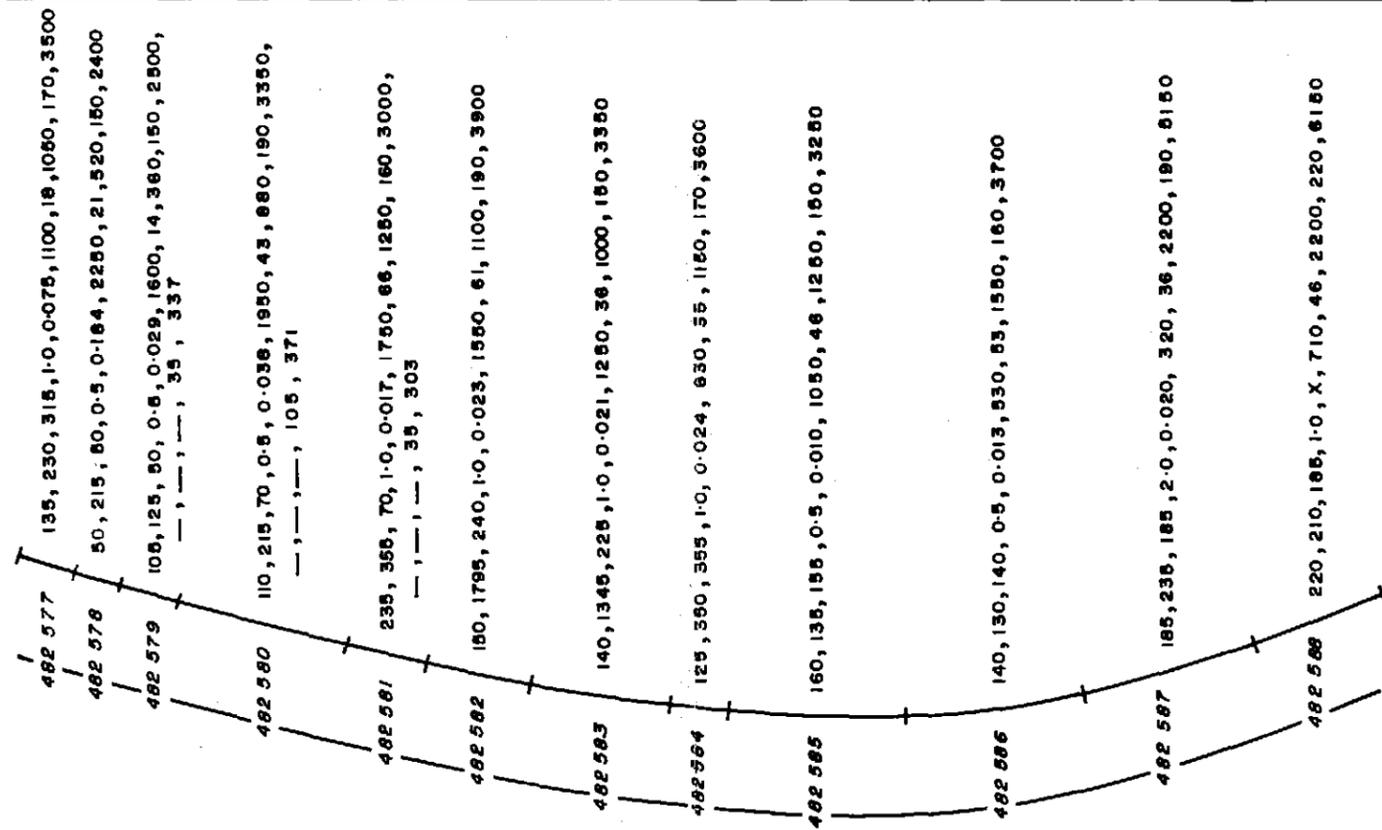
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REVISIONS			
Init.	Date	Init.	Date

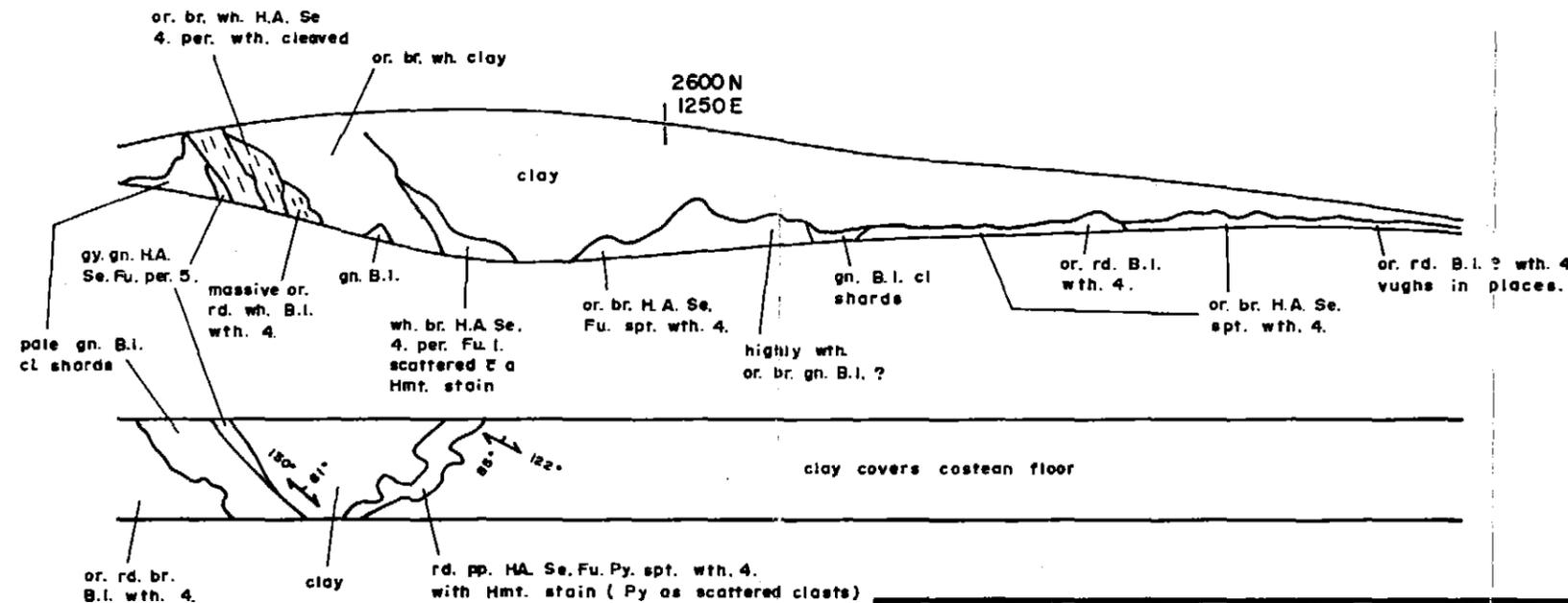
WESTERN TASMANIA
LYNCHFORD E.L. 47/83 CRA JV
SPECIMEN CREEK GRID
COSTEAN SECTION 2 600N, 1 200E

Compiled : D. J. N.
Drawn :
Traced : J. M. S.
Checked :
Plate No. : LYN. 36 E

Location Code : Scale : 1 : 100 Date : October 1989



GEOCHEMISTRY



GEOLOGY

90-3152.

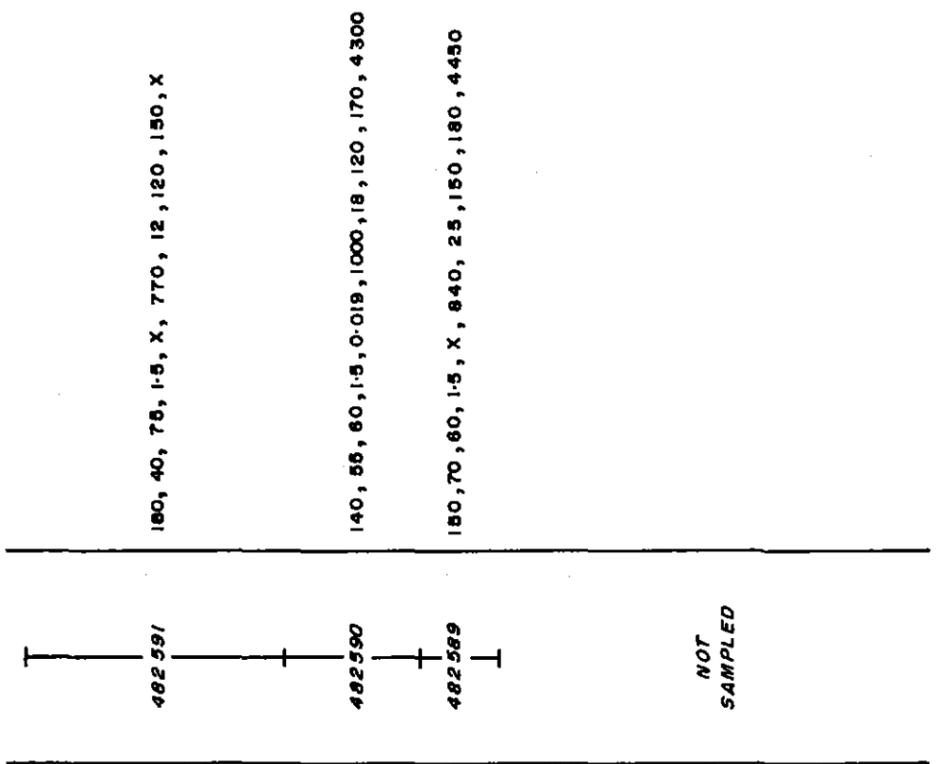


Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti, Y, K₂O, MgO, CaO, Na₂O (ppm)

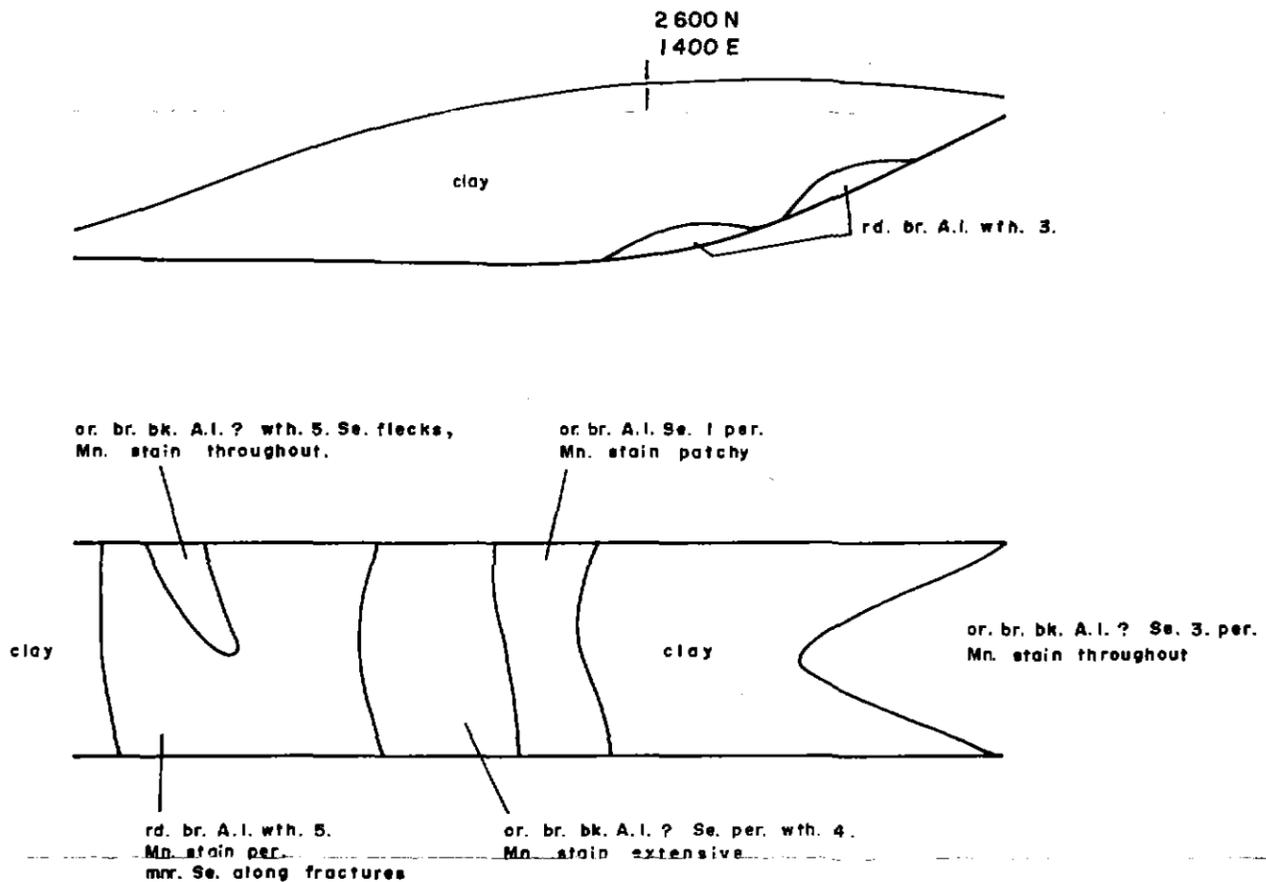
Aberfoyle Resources Limited 467205
EXPLORATION DIVISION

REVISIONS				WESTERN TASMANIA LYNCHFORD E.L. 47/83 CRA JV SPECIMEN CREEK GRID COSTEAN SECTION 2600N, 1250E	Compiled : D. J. N.	
Init.	Date	Init.	Date		Drawn :	
					Traced : J. M. S.	
					Checked :	
					Plate No. : LYN. 36 F	
Location Code :		Scale : 1:200 Hor. 1:100 Vert.		Date : October 1989		

GEOCHEMISTRY

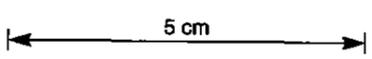


GEOLOGY



90-3152.

Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

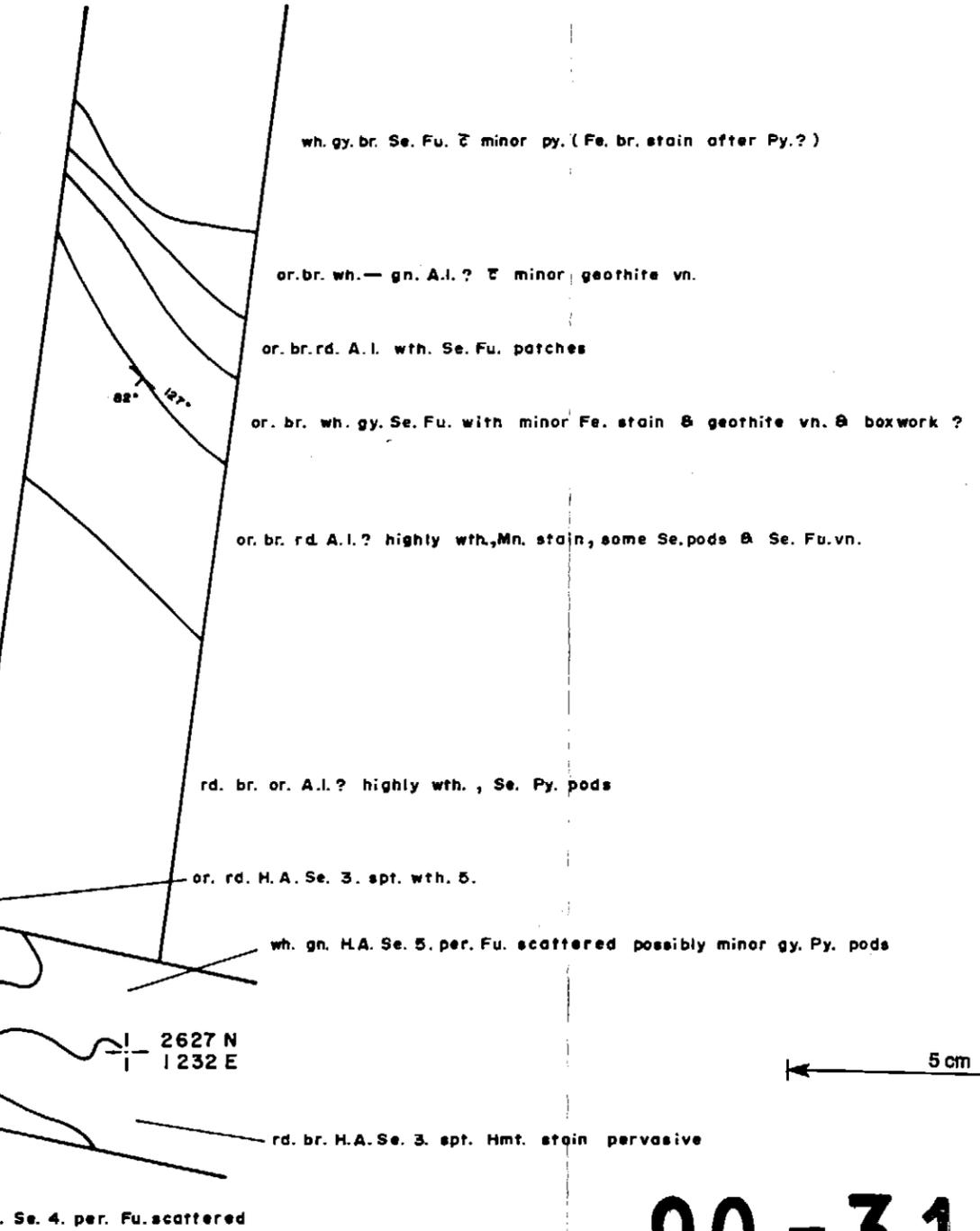


467206

Aberfoyle Resources Limited																											
EXPLORATION DIVISION																											
WESTERN TASMANIA		Compiled : D.J.N.																									
LYNCHFORD E.L. 47/83 CRA JV		Drawn :																									
SPECIMEN CREEK GRID		Traced : J.M.S.																									
COSTEAN SECTION 2600N, 1400E		Checked :																									
Location Code :		Scale : 1:100	Date : October 1989																								
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REVISIONS																											
Init.	Date	Init.	Date																								

GEOCHEMISTRY

GEOLOGY



90-3152.

Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti, Y, K₂O, MgO, CaO, Na₂O
results in (ppm) unless otherwise shown.

482555 submitted for Pb isotope analysis/alteration index.

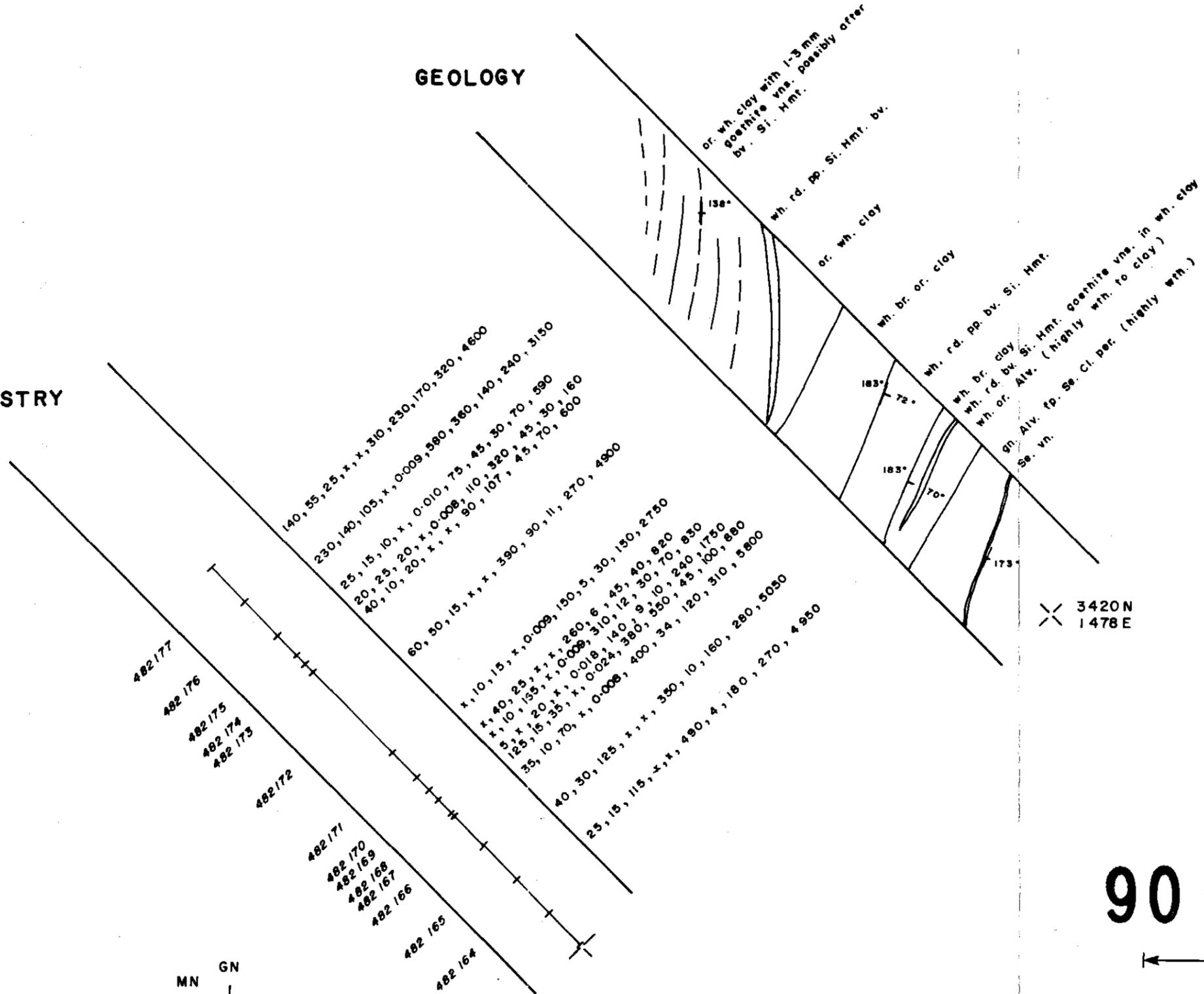


Aberfoyle Resources Limited				467207
EXPLORATION DIVISION				
WESTERN TASMANIA		LYNCHFORD E. L. 47/83 CRA JV		Compiled : D. J. N.
SPECIMEN CREEK GRID		COSTEAN SECTION 2630N, 1232E		Drawn :
Location Code :		Scale : 1:100		Traced : J. M. S.
Date : October 1989		Date : October 1989		Checked :
				Plate No. : LYN. 36 H.

9557

GEOCHEMISTRY

GEOLOGY



× 3420N
1478E

90-3152.

5 cm

Sample number - Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)



Aberfoyle Resources Limited
EXPLORATION DIVISION

467208

REVISIONS			
Init.	Date	Init.	Date

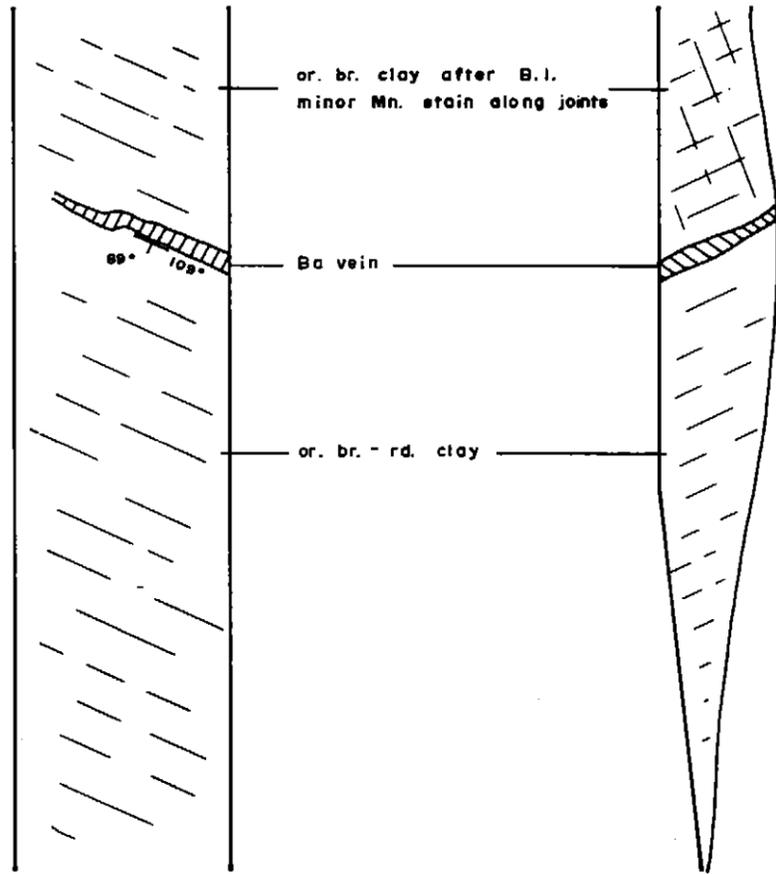
WESTERN TASMANIA
LYNCHFORD E.L. 47/83 CRA JV
SPECIMEN CREEK GRID
COSTEAN SECTION 3420N, 1478E

Compiled : D.J.N.
Drawn :
Traced : J.M.S.
Checked :
Plate No. : LYN 36 I

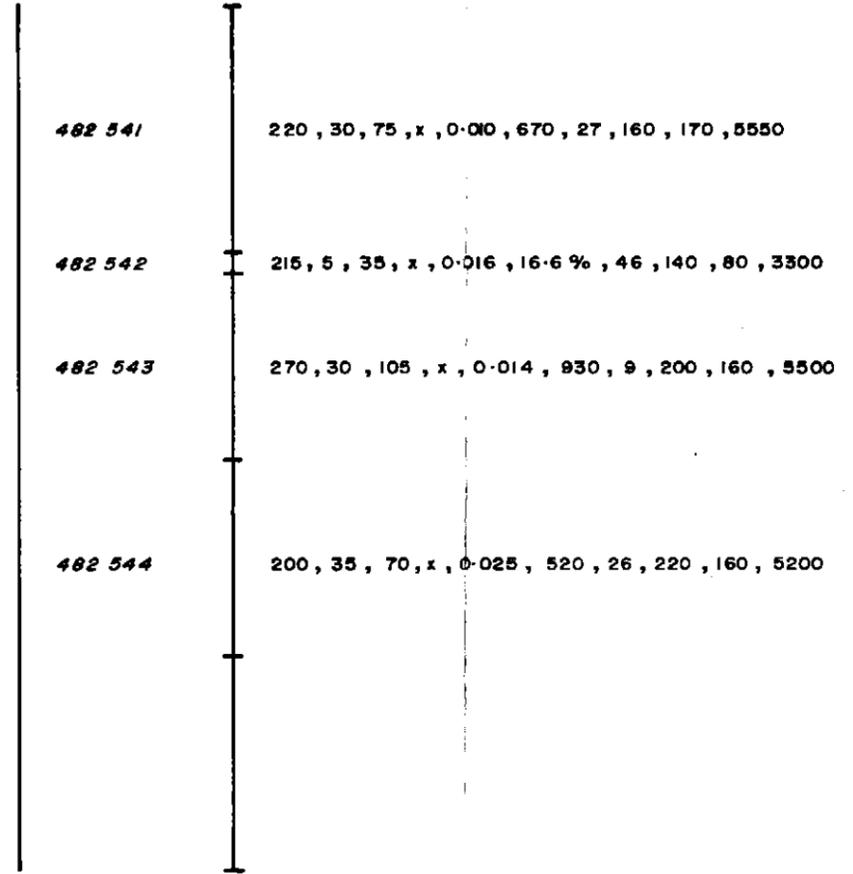
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Scale : 1:100

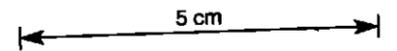
Date : September 1989



GEOLOGY



GEOCHEMISTRY



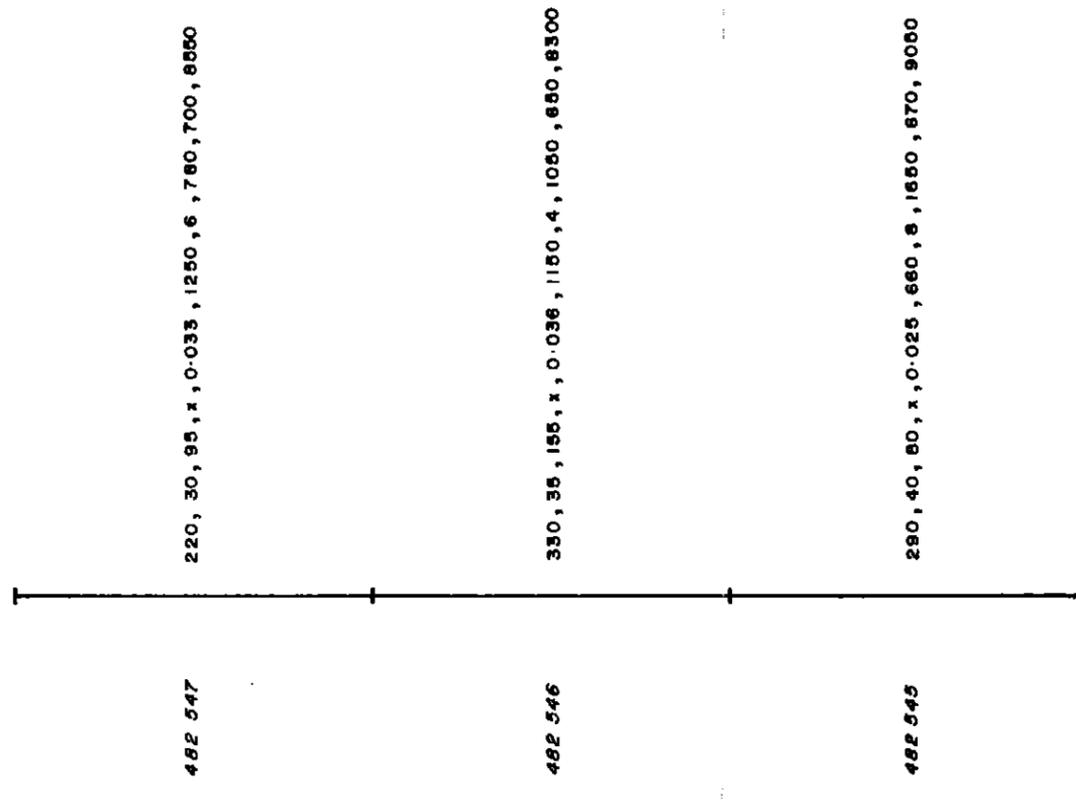
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Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

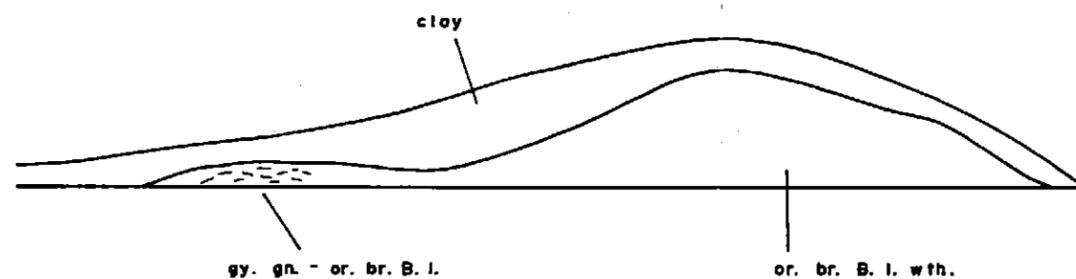
Aberfoyle Resources Limited				467209																												
EXPLORATION DIVISION																																
WESTERN TASMANIA LYNCHFORD E.L.47/83 CRA JV SPECIMEN CREEK GRID COSTEAN SECTION 3619N, 2287E				Compiled : D.J.N.																												
<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>Init.</th> <th>Date</th> <th>Init.</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>				REVISIONS				Init.	Date	Init.	Date																					Drawn :
				REVISIONS																												
Init.	Date	Init.	Date																													
Location Code :				Traced : J.M.S.																												
				Scale : 1:100	Date : September 1989																											
Plate No. : LYN. 36 J.				Checked :																												

9559

GEOCHEMISTRY



GEOLOGY



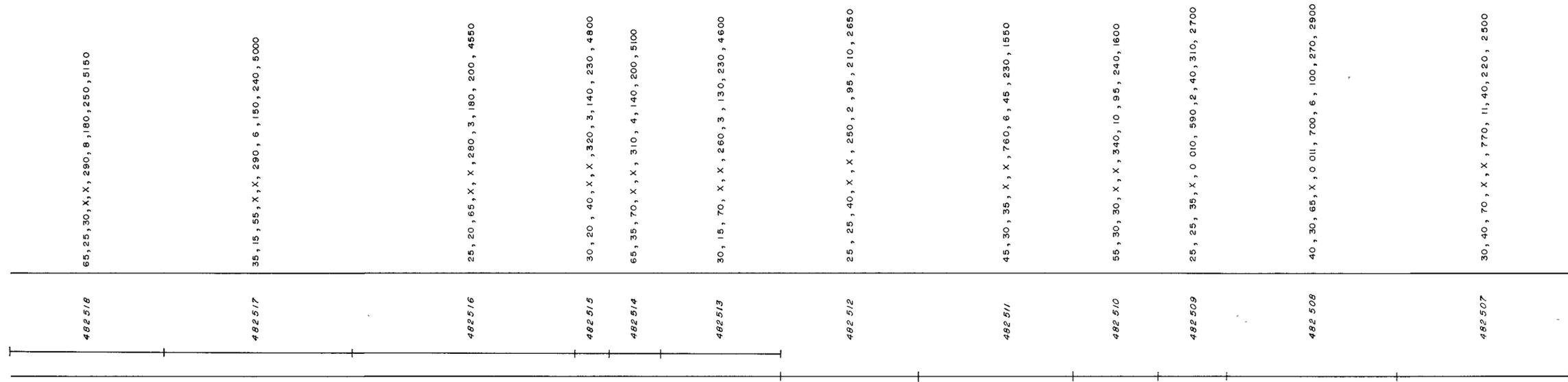
5 cm

90-3152.

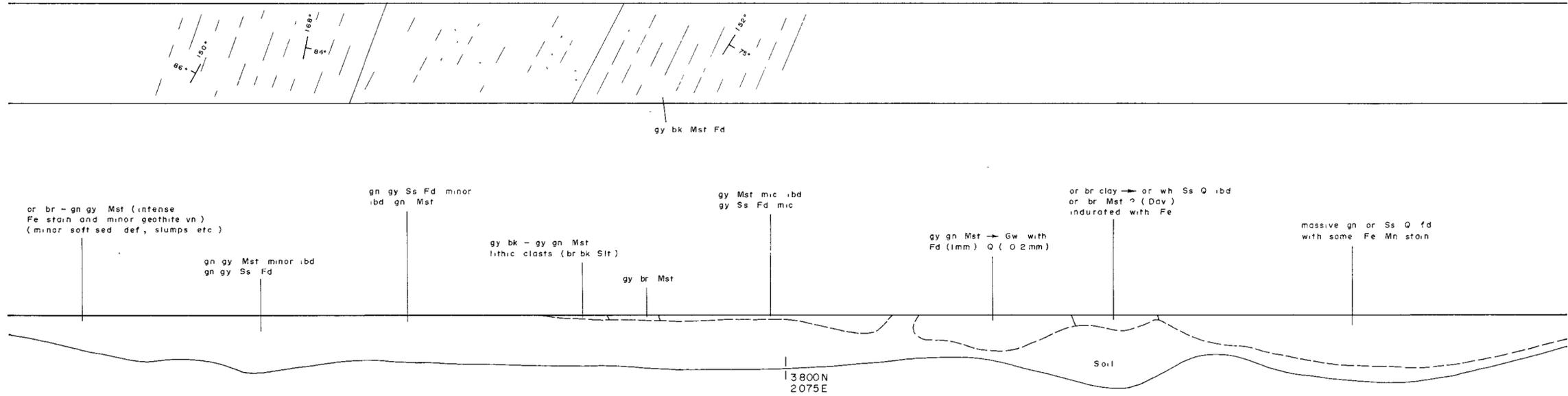
Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

Aberfoyle Resources Limited				467210
EXPLORATION DIVISION				
WESTERN TASMANIA				Computed : D. J. N.
LYNCHFORD E.L.47/83 CRA JV				
SPECIMEN CREEK GRID				Drawn :
COSTEAN SECTION 3644N, 2340E				Traced : J. M. S.
Location Code :				Checked :
Scale : 1 : 100		Date : September 1989		Plate No. : LYN. 36K.

REVISIONS			
Init.	Date	Init.	Date

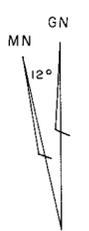


GEOCHEMISTRY



GEOLOGY

90-3152.

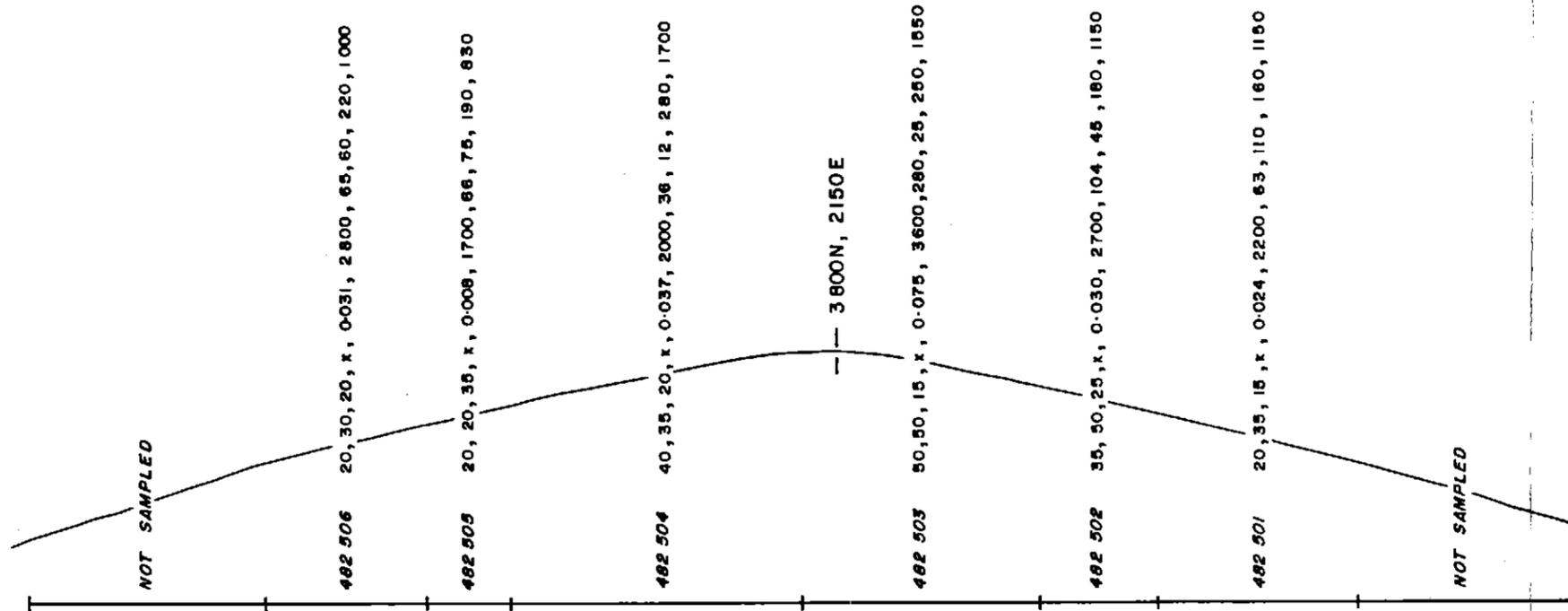


Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

Aberfoyle Resources Limited 467211 EXPLORATION DIVISION																							
WESTERN TASMANIA LYNCHFORD E.L 47/83 CRA JV SPECIMEN CREEK GRID COSTEAN SECTION 3800N, 2075E		Compiled : D J N Drawn : Traced : J M S Checked : Plate No : LYN 36 L																					
REVISIONS <table border="1"> <thead> <tr> <th>Init.</th> <th>Date</th> <th>Init.</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		Init.	Date	Init.	Date																	Location Code : Scale : 1:100 Hor 1:50 Vert Date : October 1989	
Init.	Date	Init.	Date																				

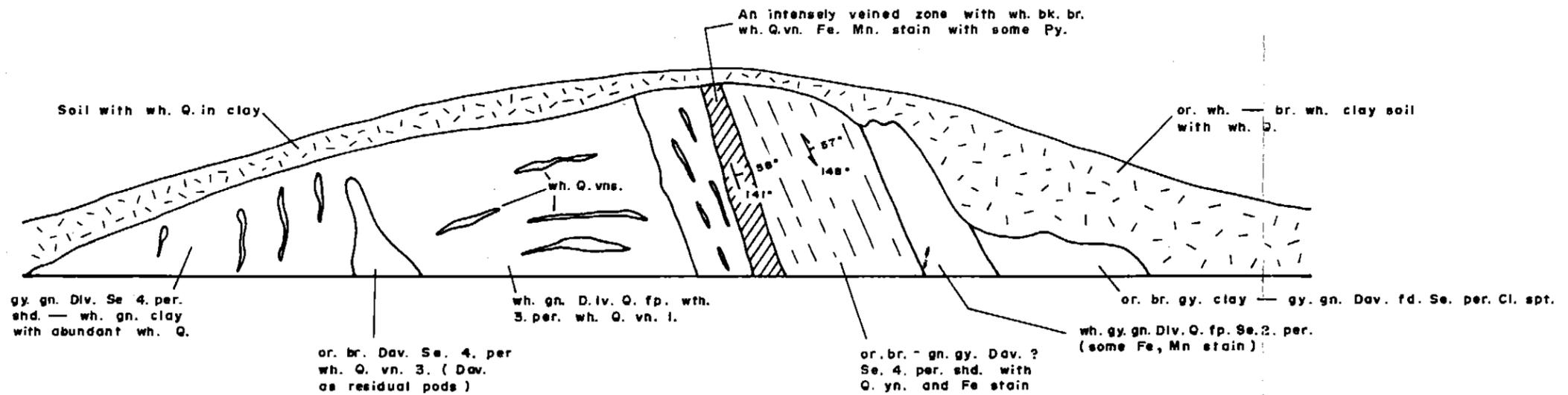
9561

GEOCHEMISTRY



90-3152.

GEOLOGY



Sample number — Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)



Aberfoyle Resources Limited
EXPLORATION DIVISION

467212

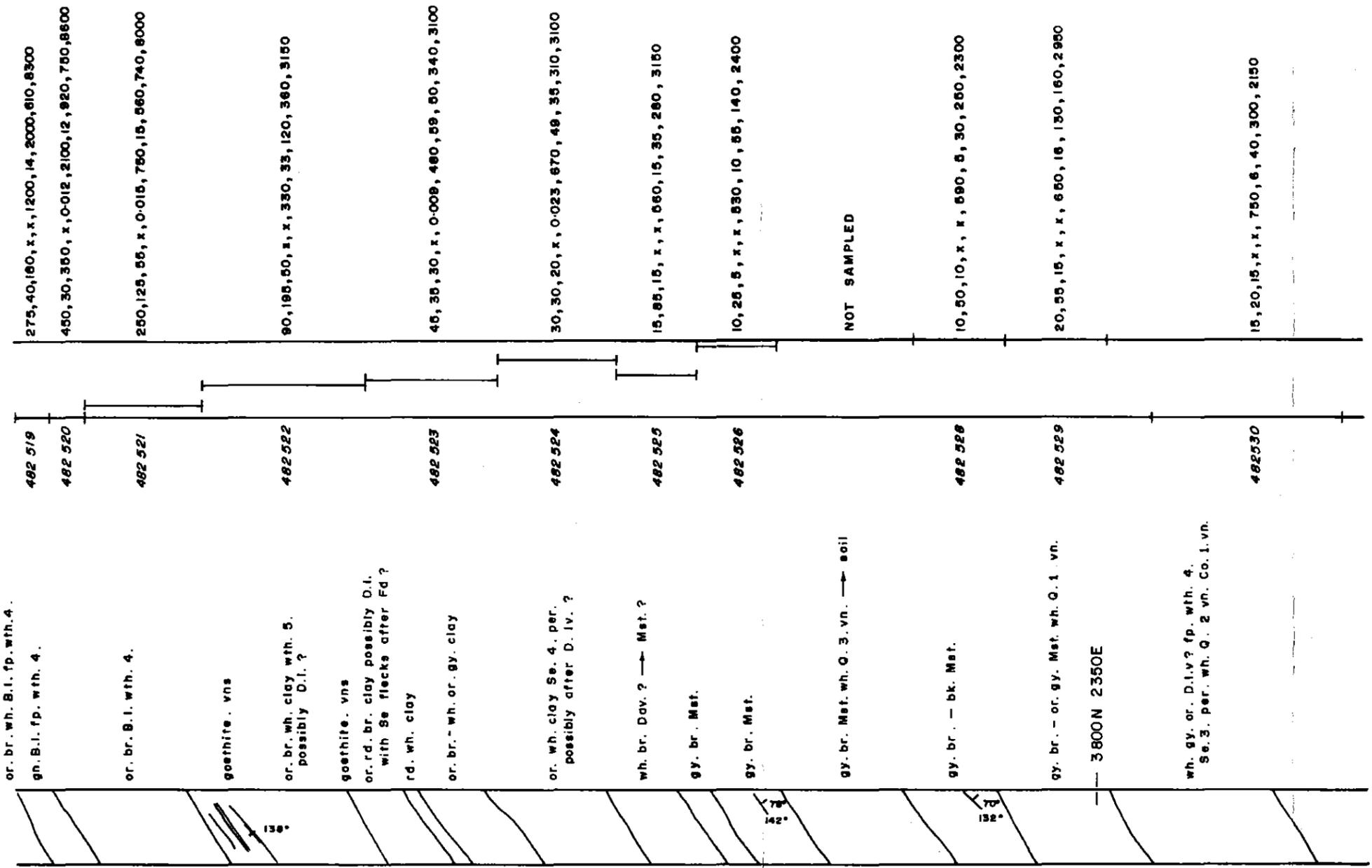
REVISIONS			
Init.	Date	Init.	Date

WESTERN TASMANIA
LYNCHFORD E.L.47/83 CRA JV
SPECIMEN CREEK GRID
COSTEAN SECTION 3800N, 2150E

Compiled : D.J.N.
Drawn :
Traced : J.M.S.
Checked :
Plate No. : LYN. 36M.

Location Code : Scale : 1:100 Hor. 1:50 Vert. Date : September 1989

9562



GEOCHEMISTRY

GEOLOGY

5 cm

90-3152.



Sample number - Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

Aberfoyle Resources Limited				437213
EXPLORATION DIVISION				
WESTERN TASMANIA		LYNCHFORD E.L. 47/83 CRA JV		Completed : D.J.N.
SPECIMEN CREEK GRID		COSTEAN SECTION 3800N, 2325E		Drawn :
Location Code :		Scale : 1:200		Traced : J.M.S.
		Date : September 1989		Checked :
				Plate No. : LYN. 36 N.

REVISIONS			
Init.	Date	Init.	Date

9563

482 160 115, x, 45, x, x, 3.6%, 11, 65, 220, 2200
 482 161 80, 10, 95, x, x, 1.18%, 8, 130, 180, 3200
 482 162 210, x, 120, x, x, 1.87%, 6, 160, 240, 3600
 482 163 315, 15, 190, x, 0.009, 1500, 8, 310, 250, 5200

55, x, 45, x, x, 1.87%, 6, 110, 160, 2350
 10, x, 10, x, x, 58.6%, 2, x, x, x
 65, x, 45, x, x, 9.6%, 7, 45, 230, 1850
 75, x, 65, x, x, 2300, 6, 45, 490, 3750
 110, x, 90, x, x, 960, 10, 75, 270, 3350
 90, 15, 50, x, x, 0.83%, 9, 140, 180, 2550
 110, 10, 65, x, x, 0.012, 850, 14, 200, 180, 3100
 140, 15, 105, x, x, 480, 13, 280, 200, 4200
 165, 20, 125, x, x, 0.009, 600, 31, 250, 260, 4150
 60, 20, 65, x, x, 0.011, 1750, 11, 250, 230, 4500
 NOT SAMPLED

NOT SAMPLED

482 159
 482 158
 482 157
 482 156
 482 155
 482 154
 482 153
 482 152
 482 151
 482 150

GEOCHEMISTRY

gn. or. br. A. lv. fp.

Ba. vn.

wh. gy. clay with goethite veins.

4 000N
2 335E

or. br. gn. A. lv. fp. shd.

Ba. vn.

gn. A. l. fp. with Q. vn. and some goethite

gn. gy. wh. clay with minor goethite vns.

or. gn. A. l. fp. goethite vns.

or. gn. gy. A. l. fp.

wh. gn. or. clay

gy. gn.-or. br. clay highly sericitic with some residual A. l. fp. abundant goethite vns.

or. clay

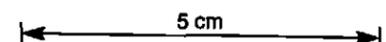
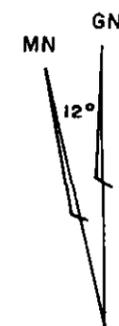
or. br. clay with goethite and Mn bands.

or. br. clay with goethite veins.

gn. A. l. fp.

gn. A. l. fp.

4 000N
2 350E



90-3152

GEOLOGY

Sample number - Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)

Aberfoyle Resources Limited
EXPLORATION DIVISION

467214

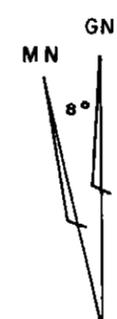
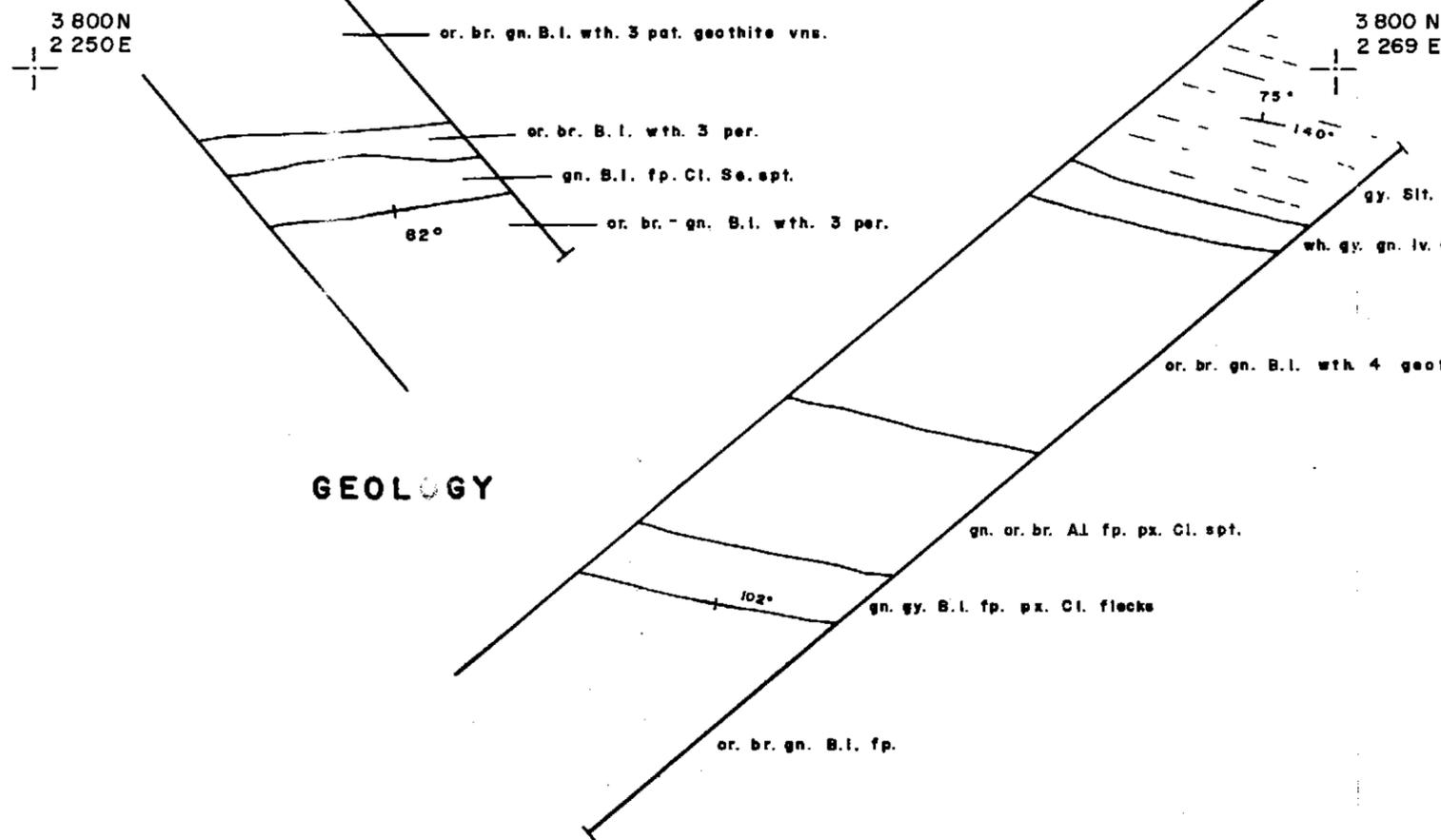
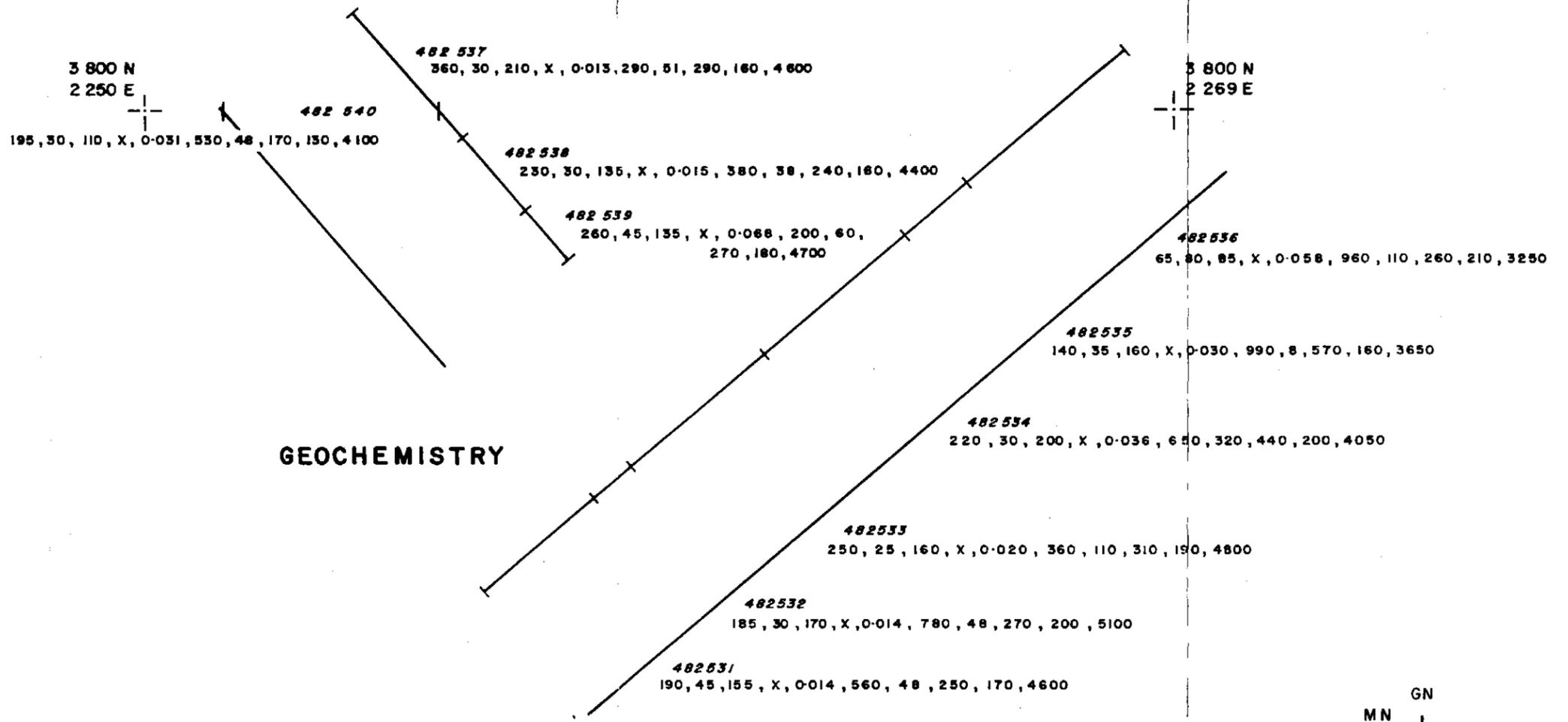
REVISIONS			
Init.	Date	Init.	Date

WESTERN TASMANIA
 LYNCHFORD E.L. 47/83 CRA JV
 SPECIMEN CREEK GRID
 COSTEAN SECTION 4000N, 2335E

Compiled : D. J. N.
 Drawn :
 Traced : J. M. S.
 Checked :
 Plate No. : LYN. 36.0.

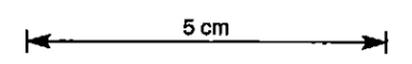
Location Code : Scale : 1 : 100 Date : September 1989

9564



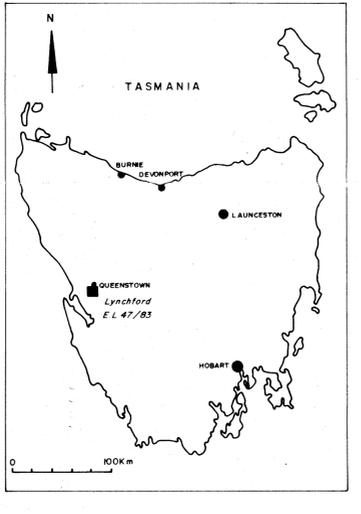
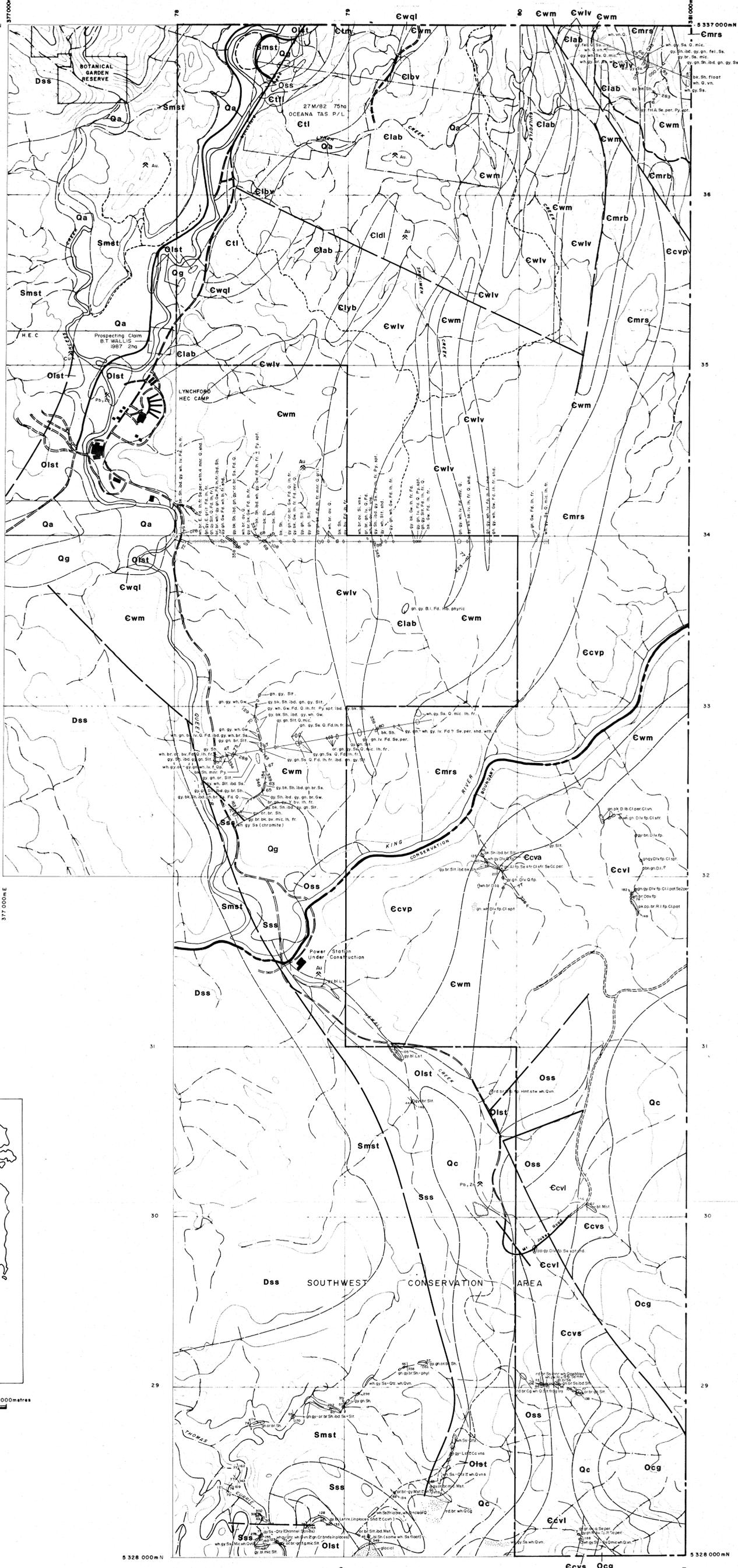
90-3152.

Sample number - Cu, Pb, Zn, Ag, Au, Ba, As, Cr, Zr, Ti (ppm)



Aberfoyle Resources Limited				467215
EXPLORATION DIVISION				
WESTERN TASMANIA				Compiled : D.J.N. Drawn : Traced : J.M.S. Checked : Plate No. : LYN. 36 P
LYNCHFORD E.L. 47/83 CRA JV				
SPECIMEN CREEK GRID				
COSTEAN SECTION 3800N, 2260E				
REVISIONS		Location Code :		Scale : 1 : 100
Init.	Date	Init.	Date	Date : October 1989

- QUATERNARY**
- Qa Recent alluvial Deposits
 - Qc Colluvial Scree
 - Qg Glacial till and outwash gravels
- DEVONIAN**
- Dss Fine grained quartz rich sandstone and minor interbedded siltstone and mudstone.
- SILURIAN**
- Smst Mudstone, siltstone and minor sandstone
 - Sss White quartz rich chromite bearing sandstone
- ORDOVICIAN**
- Olst Impure limestone and micritic limestone (Gordon Limestone)
 - Oss Grey quartz sandstone minor conglomerate and chromite layers (Pioneer Beds)
 - Ocg Undifferentiated Conglomerate and sandstones (Owen Conglomerate)
- CAMBRIAN**
- Clvl Felsic lapilli volcanoclastic
 - Cltm Sandstone and Mudstone
 - Cltl Quartz, lithic fragment rich lapilli volcanoclastic
 - Clbv Breccia volcanoclastic (Quartz, Hematite rich)
 - Clvb Polymict Basaltic lapilli volcanoclastic
 - Clab Andesitic - Basaltic lavas & lava breccias and minor dacitic lava indicated.
 - Cvdl Dominantly Dacitic lapilli volcanoclastic & Dacitic lavas with minor felsic porphyries and and Andesitic lava (Cvva) indicated.
 - Cvss Black mudstone, siltstone and micaceous sandstone
 - Cvcp Intrusive and extrusive quartz feldspar porphyry
 - Cwql Quartz rich lapilli volcanoclastic
 - Cwlv Dominantly black shale, siltstone, sandstone & lapilli volcanoclastics with some units dominantly lapilli volcanoclastic (Cwlv) indicated.
 - Cmrs Quartz rich sandstone (Miners Ridge Sandstone)
 - Cmrb Tholeiitic Basalt (Miners Ridge Basalt)



5 cm

90-3152.

Aberfoyle Resources Limited 467216
EXPLORATION DIVISION

NORTH WEST TASMANIA
LYNCHFORD E.L. 47/83-CRA J.V.
INTERPRETIVE GEOLOGY

REVISIONS			
Rev.	Date	By	Notes
1	28-1-90	JMS	Issue
2	2-2-90	JMS	Revised
3	2-2-90	JMS	Revised

Location Code: _____ Scale: 1:10,000 Date: February 1990 Plate No: LYN 38

Compiled: DJN
Drawn: JMS
Traced: JLR
Checked: _____

3533

378 800 E

379 200 E

379 600 E

380 000 E

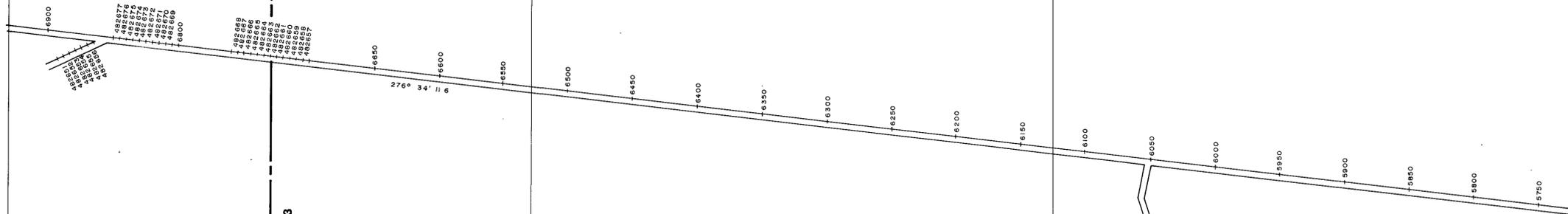
533200N

533160N

533120N

E.L.47/83

276° 34' 11.6



5 cm

90-3152.

Aberfoyle Resources Limited				467217
EXPLORATION DIVISION				
NORTH WEST TASMANIA				Compiled DJN
LYNCHFORD E.L.47/83				Drawn JLR
KING RIVER POWER SCHEME - Development Tunnel				Traced JMS
CHANNEL SAMPLE LOCATIONS				Checked
Location Code	Scale 1:2000	Date February 1990	Plate No LYN 39	

9567

378 800 E

379 200 E

379 600 E

380 000 E

533200N

5331600N

5331200N

E.L.47/83

276° 34' 11.6

6650

6600

6550

6500

6450

6400

6350

6300

6250

6200

6150

6100

6050

6000

5950

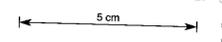
5900

5850

5800

5750

PORTAL TUNNEL



+ Cu, Pb, Zn, Ag, Au, Bi, As

90-3152.1

Aberfoyle Resources Limited 467218
EXPLORATION DIVISION

REVISIONS				Completed	
Init	Date	Init	Date	By	Date
				D J N	
				J L R	
				J M S	

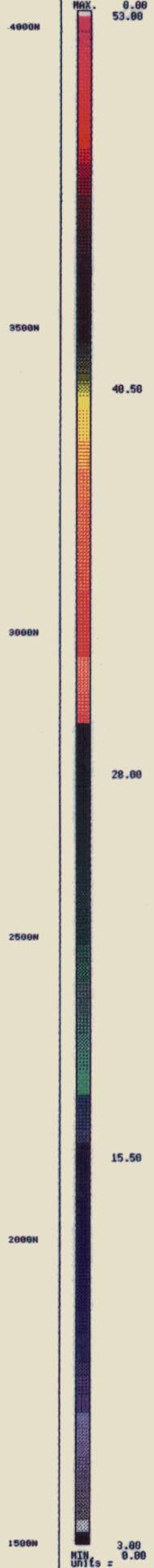
NORTH WEST TASMANIA
LYNCHFORD E L 47/83
KING RIVER POWER SCHEME- Development Tunnel
CHANNEL SAMPLE RESULTS

Location Code: Scale: 1:2000 Date: FEBRUARY 1990 Plate No: LYN 41

Aberfoyle Resources Limited
EXPLORATION DIVISION

5575

90-3152.



Lynchford Soil Geochemistry
Ti/Zr
Scale 1:10000 ; 6-6-90 ; rnp

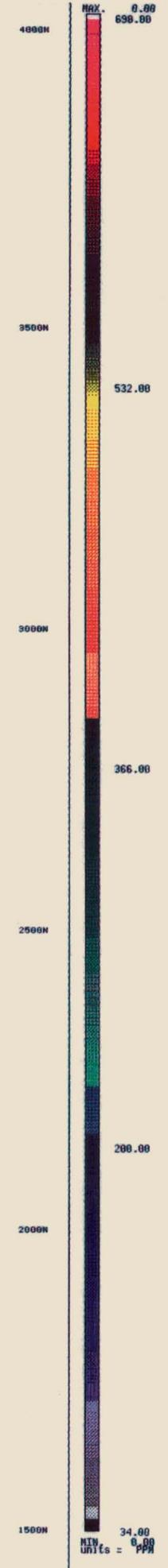
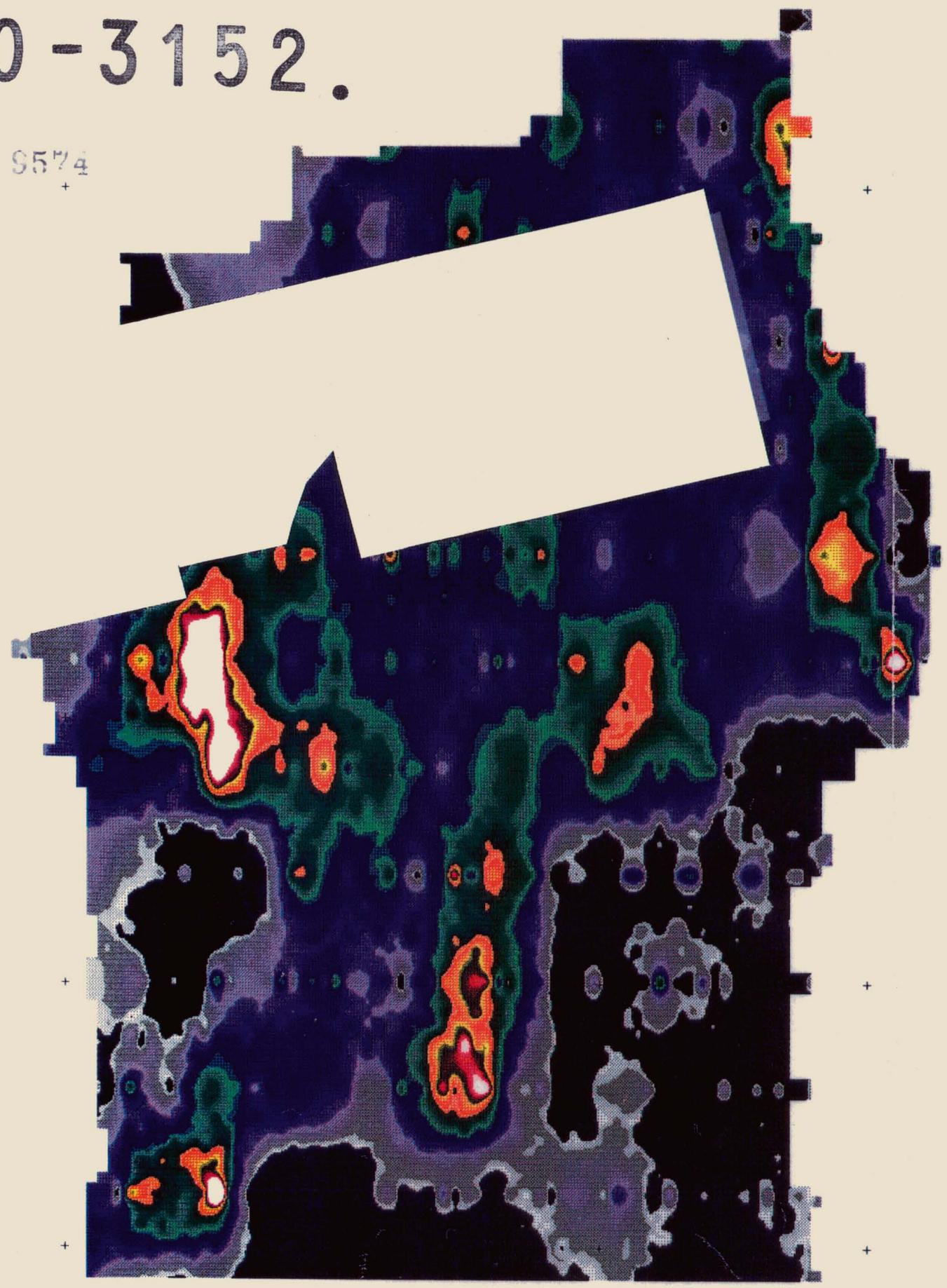
Plate No. LYN 42H

437219

5 cm

90-3152.

S574



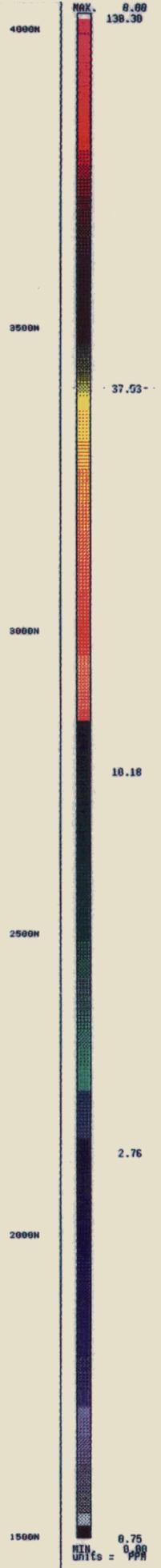
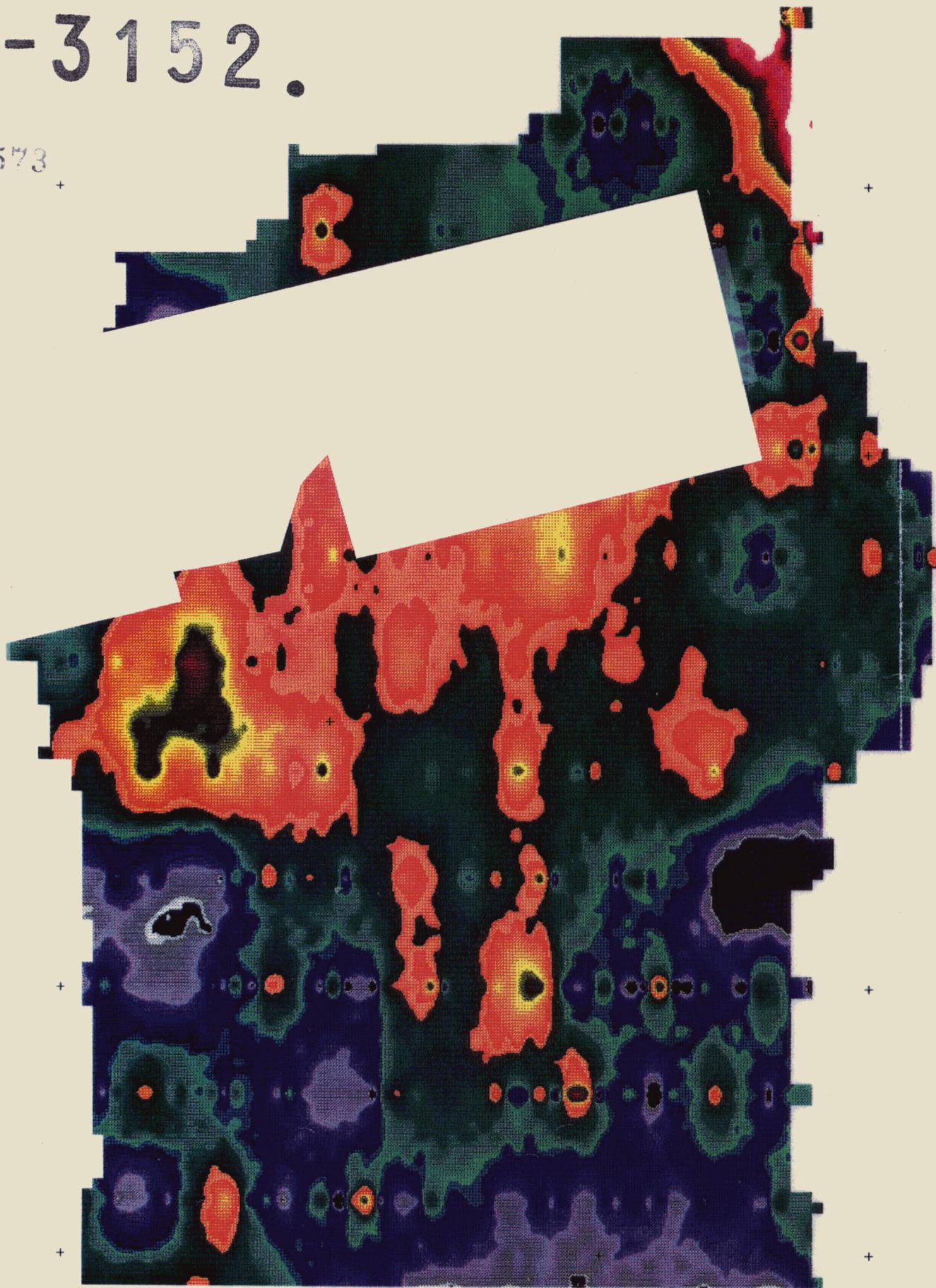
Lynchford Soil Geochemistry
Cr
Scale 1:10000 - 0.0000

Plate No LYN 42G
437220

5 cm

90-3152.

0573



Lynchford Soil Geochemistry
As
Scale 1:10000 ; 6-6-90 ; rnp

Plate No. LYN 42F
467221

5 cm

1000E

1500E

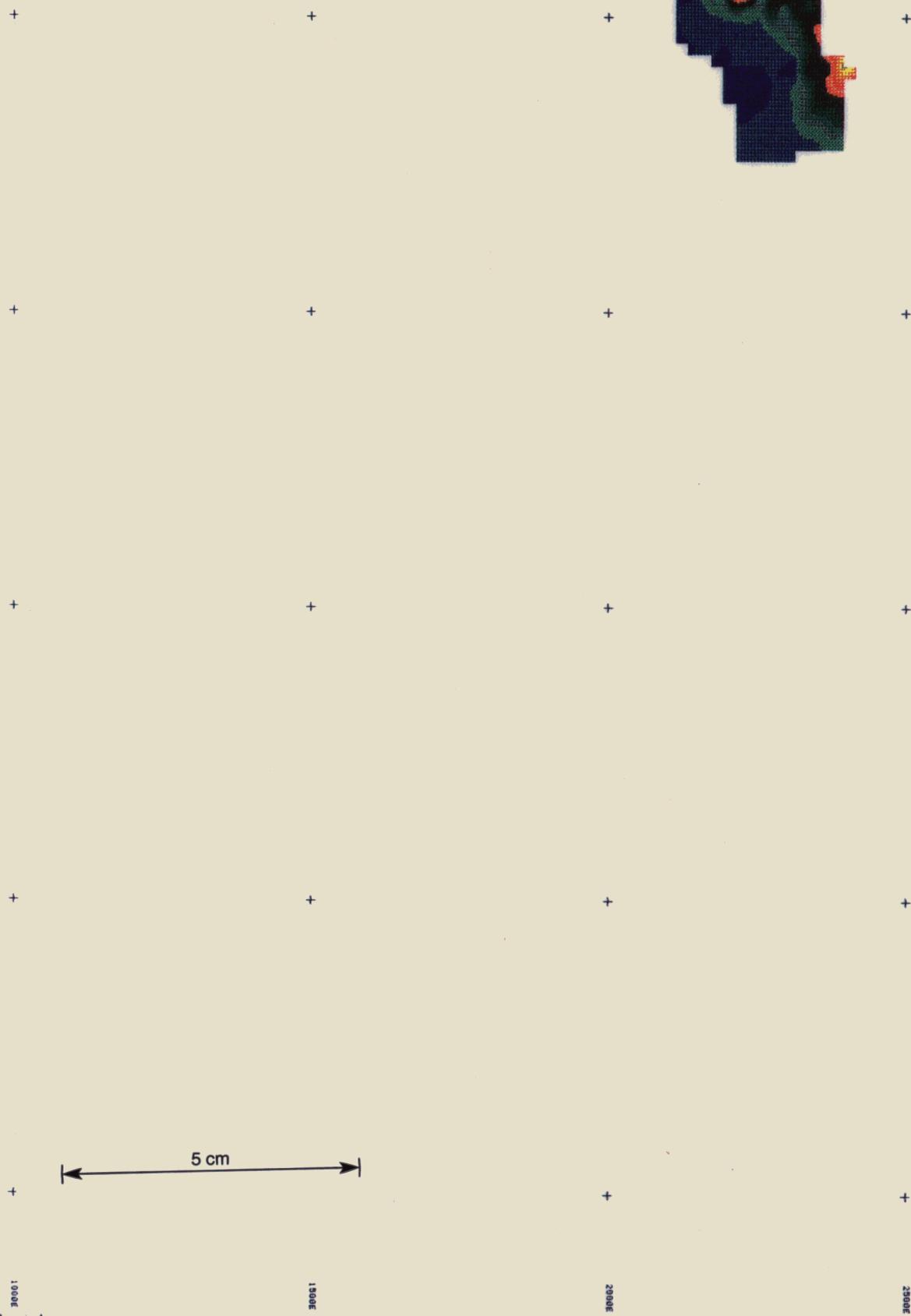
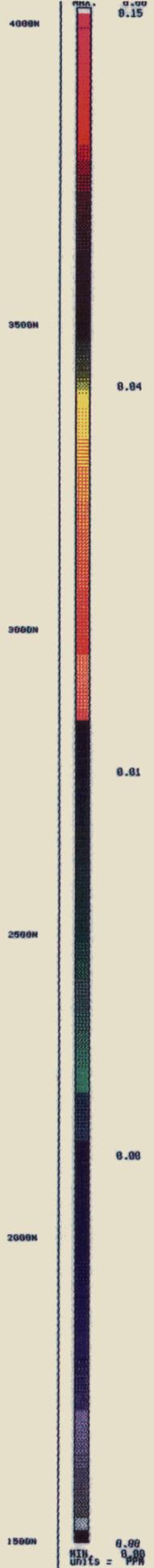
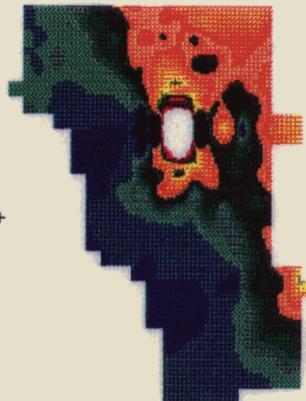
2000E

2500E

Aberfoyle Resources Limited
EXPLORATION DIVISION

8572

90-3152.



5 cm

Lynchford Soil Geochemistry
Au

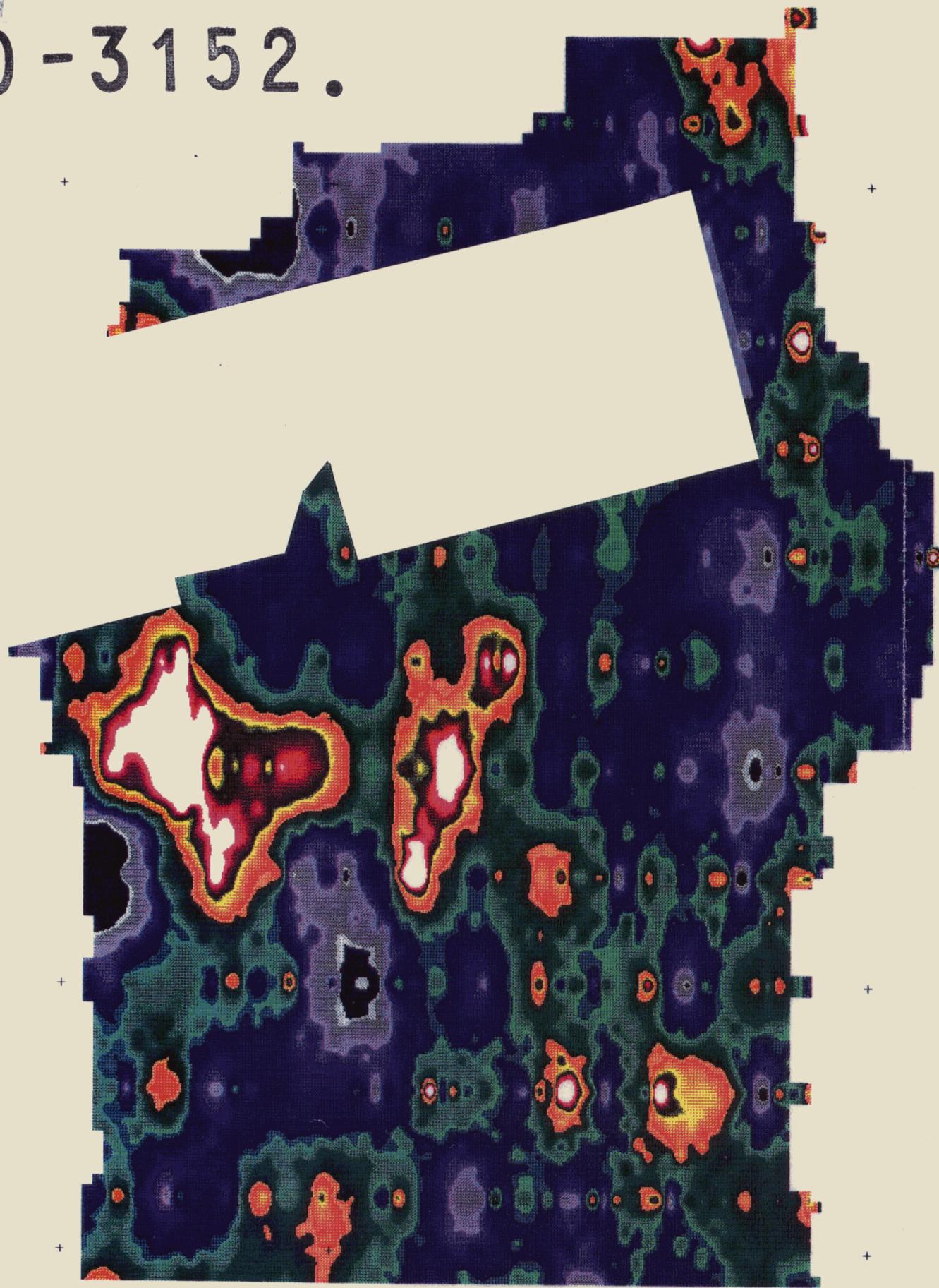
Plate No. LYN 42F

467222

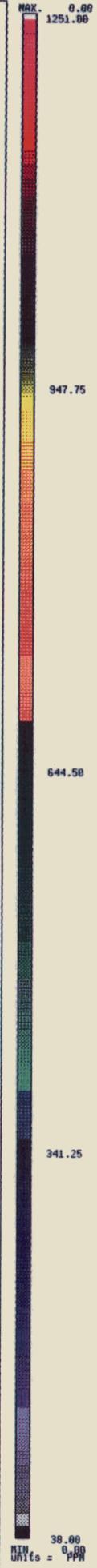
Aberfoyle Resources Limited
EXPLORATION DIVISION

8571

90-3152.



4000N
3500N
3000N
2500N
2000N
1500N



Lynchford Soil Geochemistry
Ba
Scale 1:10000 ; 6-6-90 ; rnp

Plate No. LYN 42D
467223

5 cm

1000E

1500E

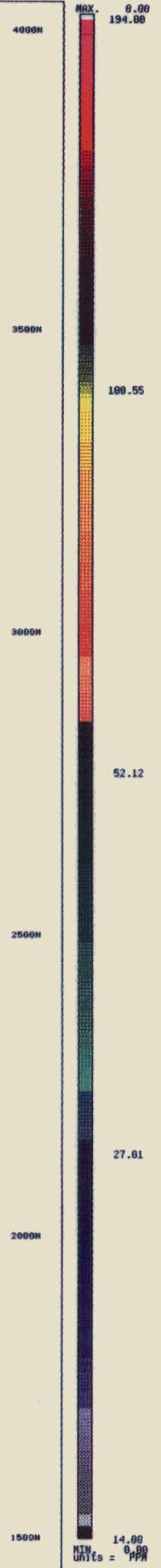
2000E

2500E

Aberfoyle Resources Limited
EXPLORATION DIVISION

9570

90-3152.



Lynchford Soil Geochemistry
Zn
Scale 1:10000 · 6-6-90 · mm

Plate No. LYN 42C
467224

5 cm

1000E

1500E

2000E

2500E

1500N

2000N

2500N

3000N

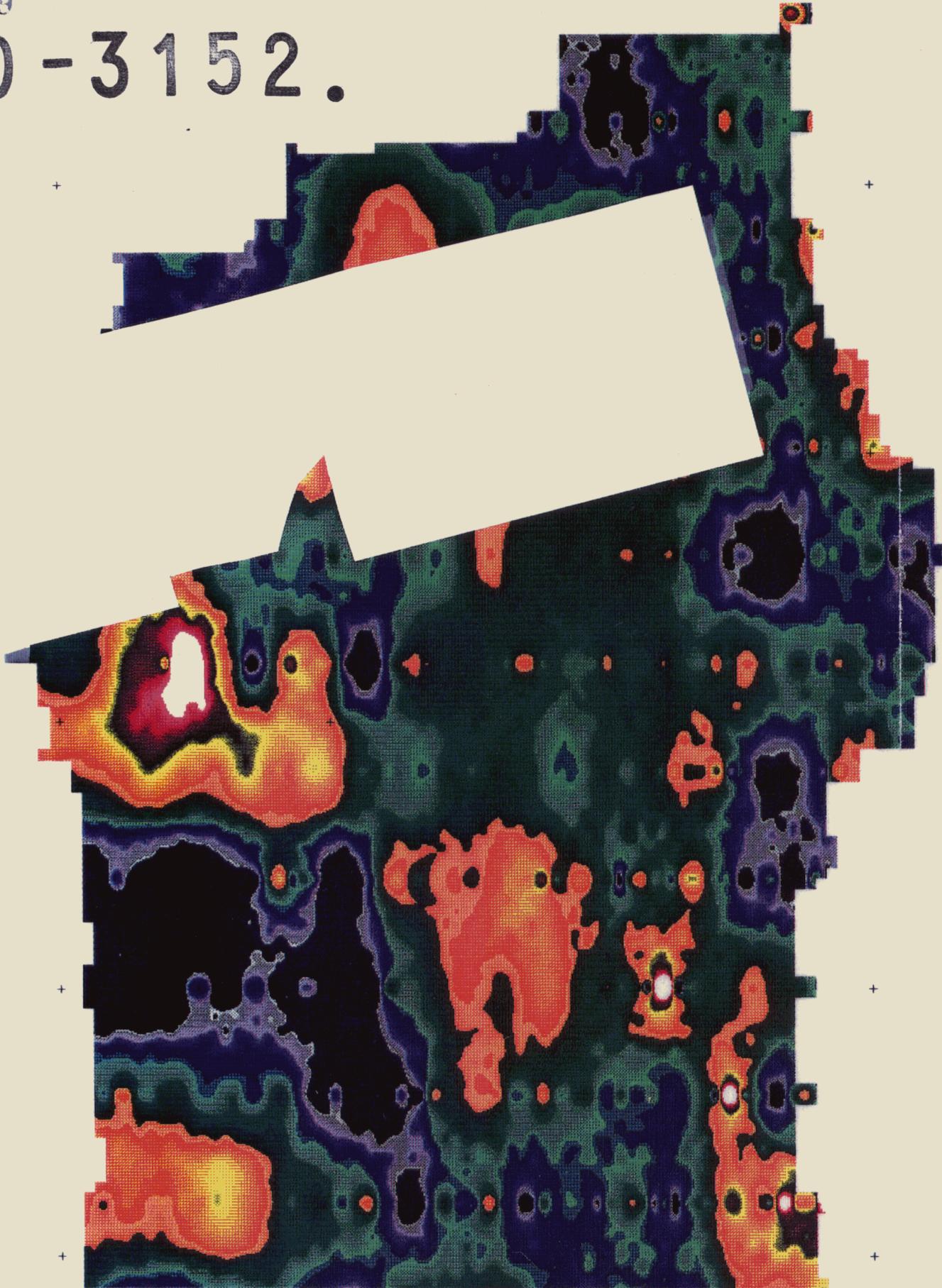
3500N

4000N

Aberfoyle Resources Limited
EXPLORATION DIVISION

8569

90-3152.



Lynchford Soil Geochemistry
Pb

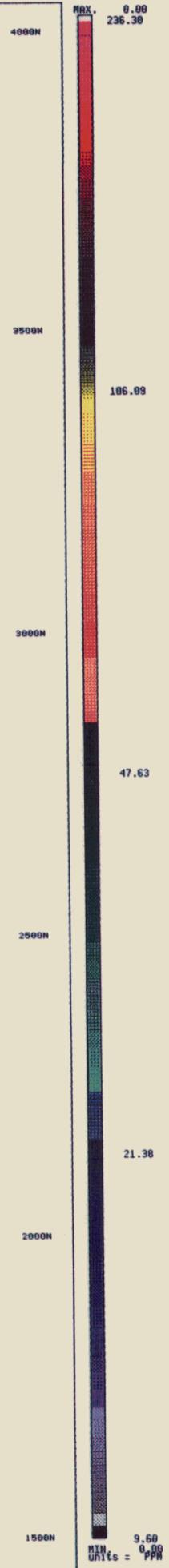
Plate No. JVN 12R
467225

5 cm

Aberfoyle Resources Limited
EXPLORATION DIVISION

9568

90-3152.



Lynchford Soil Geochemistry
Cu
Scale 1:10000 ; 6-6-90 ; rnp

Plate No. LYN 42A

467226

5 cm