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CRA EXPLORATION PTY. LIMITEDEXPLORATION IN THE VICINITY OF THE DOLCOATH GRANITE EL 7/73SHEFFIELD - NORTHERN TASMANIA

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1. SUMMARY

In the south-west section of EL 7/73 the Dolcoath Granite has been intruded into rocks of the Ordovician Moina Sandstone. Numerous small mines and prospects have been developed in the district and geochemical sampling by Asarco outlined a number of strongly anomalous streams draining the area. A dighem survey carried out by CRA Exploration in February 1981 located several discrete magnetic anomalies, along the granite contact, and some of them also show coincident EM response.

A major grid was established to allow detailed investigation of the area which included, geological mapping, soil and rock chip geochemistry, ground magnetic and VLF/EM surveys. A UTEM survey was also conducted over specific target areas.

Two diamond drill holes were sited to test the Moina sandstone and nearby calc silicate beds for basemetal and tin - tungsten mineralisation while a third hole was developed to test a greisen zone on the granite contact. The drillhole results were dissappointing and have severely downgraded the potential of the area, although several small targets still remain to be tested.

2. INTRODUCTION

This report details exploration work during 1981 - 82 in the vicinity of Dolcoath Hill and Tin Spur some 25km south-west of Sheffield. The area lies within EL 7/73 in the subject of a joint venture agreement between CRA Exploration Pty. Limited and Carpentaria Exploration Co.

The Licence was originally applied for by Asarco (Australia) Pty. Limited on March 15th 1973. It occupied an area of 743 square kilometres and covered most of the Cambrian Volcanics (Mt. Read equivalents) in Northern Tasmania. The area was reduced to 429 square kilometres in March 1974. CRAE entered the Joint Venture on 12th July, 1976 and title was transferred to CRAE on 29th December, 1977. In August 1979

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the licence was reduced to the current 199 square kilometres and Asarco transferred its interest in the Venture to Carpentaria Exploration Co. Pty. Limited on 11th June, 1980.

The area described in this report is on the east and west sides of Lake Cethana approximately twenty-five kilometres south-west of Sheffield. The exploration target was mineralisation within sandstones and limestones of the Ordovician sequence which have been metamorphosed by the intrusion of the Devonian Dolcoath Granite. Approximately one kilometre to the west of the Dolcoath Grid is the Moina Fluorite - Tin - Tungsten skarn deposit (26 million Tonnes @ 18% CaF_2 , 0.1% Tin, 0.1% Tungsten) which is developed in a downfaulted block of Gordon limestone. Aeromagnetic data shows similar magnetic anomalies occur over the Moina deposit and in the area of the Dolcoath Granite margin and in February 1981 the licence area was flown under contract with a Multicoil II frequency domain E.M. system (Flis 1982) which positioned the aeromagnetic anomalies more accurately and also located several conductors in the vicinity of the Higgs Gold Mine.

A major grid was established and the area was soil sampled ('C' horizon where possible), mapped, rock sampled and ground magnetics, V.L.F./E.M. surveys were completed over the most mineralised area. Old prospects and mines were located, mapped and sampled. The Dolcoath Granite was found to be extensively greisenised and mineralised. It held potential for economic quantities of tungsten, molybdenum with minor bismuth and tin and the grid was extended further east to test this target.

By the end of 1981 several zones showed highly encouraging results and three drillholes were proposed to test the targets. The first two holes were sited to test a calc-silicate/skarn zone for base-metal mineralisation. The third hole was sited to test the greisen zone within the granite for downward continuation of anomalous soil/rock geochemical values obtained at surface.

3. CONCLUSIONS

Two drillholes developed in the vicinity of the Higgs Gold Mine have adequately tested the calc-silicate/skarn zone for tin mineralisation. Individual tin-tungsten values are very low and the surface anomaly is explained by scattered quartz veining with minor tin - tungsten - molybdenum mineralisation.

Sections of the Moina sandstone are strongly pyritic but any associated basemetal mineralisation is thin and generally low grade. The best section which is not associated with any surface workings is from 94.5 to 98.2 metres in hole DD82 DG1. This 3.7 metre section assayed 1.2% lead, 1.25% zinc, 18 ppm silver and 0.27 ppm gold.

The drillhole within the greisen zone of the Dolcoath Granite returned only trace amounts of tin - tungsten and molybdenum and this zone has no further potential as a bulk low grade target.

The only untested areas within the Dolcoath area are:-

1. Mineralisation east of Higgs Gold Mine.
2. Magnetite skarn at 6400E to 6500E north of the Baseline.
3. Mineralisation at Dolcoath Mine on the southern margin of the granite.

4. RECOMMENDATIONS

1. No further work be done on the skarn/calc-silicate zone north of the Higgs Gold Mine. The eastward extensions of this zone as a magnetic skarn contains anomalous tin values in soils and rocks but the strike length is limited.
2. The base-metal mineralisation with the Higgs Gold Mine (15% Pb-Zn) has not been fully tested by the first drillhole. V.L.F. - E.M. and U.T.E.M. surveys outlined a weak conductor extending upto 400 metres east of the drillhole intersect and Flis (1981)

recommended a limited I.P. survey to test this zone. Depth limitations due to the presence of the Dolcoath Granite may be a problem.

3. Some significant rock and soil results were obtained in the vicinity of the Dolcoath Mine (southern edge of the Dolcoath Granite). This mineralisation was not adequately located during recent exploration.
4. The Dolcoath Granite is only partly unroofed and the granite/Moina Sandstone contact should be mapped in detail for the presence of stockwork mineralisation.

5. GEOLOGY

Plan No. TASH 110 shows the regional geology of the Dolcoath Area. Various authors such as Gee (1966), Burns (1961), Collins (1981) and Jennings (1979) have produced maps which have been incorporated into this plan.

5.1 Cambrian

The oldest rocks in the area are the Cambrian Bull Creek Volcanics which outcrop on the southern slope of the Dolcoath Hill. Burns (1961) divided the volcanics into three units, the Upper Porphyry Member (240m) the Geales Bridge Member (180m) and the Lower Porphyry Member (100m). Both porphyry sequences consist of quartz-feldspar porphyries with minor cherts and chert clasts. The Geales Bridge Member consists of greywacke sandstones, conglomerate and siltstone interbedded with quartz porphyries. This formation is not known to contain any prospects or economic mineralisation although pyrite with trace chalcopyrite within a chert-porphyry was mapped in the regional programme some 1000 metres south of the Dolcoath Hill on the Bull Creek Track.

5.2 Ordovician

The Ordovician rocks were deposited within restricted graben like structures - unconformably on the Cambrian Volcanics. A fault contact between the Bull Creek Volcanics and the Roland Conglomerate can be seen along the Bull Creek Track within mineral lease 6M/72 south of line 6200E. The Roland Conglomerate is fairly thin within the prospect area - just 50 metres along the Bull Creek track thickening to 200 metres on Tin Spur. This unit consists of well rounded cobbles and boulders of quartzites cemented in a slightly ferruginous - siliceous groundmass. The Roland Conglomerate is overlain by the Moina Sandstone a thick sequence of quartz sandstone - quartzites folded into a number of north-westerly trending synclines and anticlines. The Moina Sandstone contains minor argillite units and conglomerate beds. Drilling on the prospect has shown that there are calcareous intercalations within this unit (upto 19 metres in DD82 DG2). The Moina Sandstone has been mapped in detail within the Dolcoath Grid and the following units are recognisable:-

- A. Moina Sandstone - fairly poorly sorted sandstone some zones slightly argillaceous. Often called Tubicular Sandstone after worm casts. Sandstone generally pyritic.
- B. Moina Quartzite - metamorphosed sandstones - worm casts obliterated - well jointed - not as leached as the sandstone.
- C. Moina Quartzite - veined; similar to above but zones show numerous quartz veins - no mineralisation observed apart from pyrite.
- D. Moina Hornfels - very dark grey - dense - maybe contact metamorphosed silty sandstones.
- E. Moina Skarn - Hedenbergite, diopside, actinolite, magnetite minor pyrrhotite dark green, dense, compact rocks.
- F. Moina Calc-Silicate - only one outcrop within the Moina Sandstone/quartzite sequence. Pale green and white finely laminated outcrop grades along strike into Moina Skarn.

The upper most Ordovician unit is the Gordon Limestone which does not outcrop in the vicinity of the grid. Gee (1966) mapped Gordon Limestone in the bed of the Forth River (now under Lake Cethana). The H.E.C. intersected Gordon Limestone in drillholes DH 4573, DH 4571 just to the north-west of the Dolcoath Grid (Patterson 1961 - 1965).

5.3 Devonian

The Dolcoath Granite outcrops over the eastern side of the grid and onto Tin Spur. The granite stock outcrops as a fairly circular feature (1.5km diameter) but it is thought a lobe exists extending to the west where it has been intersected in drillholes at about 200 metres depth at Moina (McKibben 1971). The Granite has been described by Gee (1966) as consisting of potash feldspar 40% quartz 35%, plagioclase feldspar 20%, biotite 5% and accessories.

Gee in his regional mapping noted aplite dykes in the Forth River bed and Greisen zones consisting of granular quartz, fine white mica lathes with cassiterite, sulphides and some wolframite. Fluorite, topaz, beryl and zircon are accessory minerals in the greisen zones.

Quartz - feldspar porphyry dykes genetically associated with the Devonian granite have been mapped in a fairly restricted zone between 50 and 200 metres north of the baseline. Thin section description (refer Appendix 3) show the dykes are extensively - greisenised and tourmanilised but tin values are not anomalous.

5.4 Tertiary

Greybilly and iron cemented river gravels occur as minor outliers on the Dolcoath Grid. The clasts are either Moina grits or Roland Conglomerate cemented by an iron rich siliceous cement. Previous authors believe these grits were formed under Tertiary basalts which have subsequently been eroded away.

Remnants of Tertiary basalt cap many of the lower hills, but it does not occur on the Dolcoath Grid.

6. EXPLORATION

6.1 Regional Mapping and Sampling

Roads and Tracks surrounding the Dolcoath Grid and the Lorinna Road were mapped and sampled to provide background rock values and regional trends and structures. The results can be found on plans TASH 110, 111.

The Moina Sandstone in a regional sense is extremely pyritic as can be seen in most road cuttings. Anomalous values for lead and zinc were recorded at several localities the best being 3.1% Pb at the gate on the Wilmot Tunnel Road.

On the East Side of Lake Cethana (Olivers Hill Road or Lorinna Road) an earlier sample in highly sulphidic acid volcanics (sample 987167) returned a Sn assay of 0.45%. Followup sampling could not find the original sulphidic zone (10-15m wide) but found a thin fault zone (2-3 metres wide) which returned a Sn value of 1020 ppm.

6.2 Dolcoath Grid

The grid was commenced in May 1981. The base line was cut at 110⁰m with crosslines every 100 metres. The grid was mapped and soil samples were collected every twenty-five metres. A hand auger was used to penetrate upto 1.2 metres to obtain a 'C' horizon soil sample. These were dried and sieved to -80 mesh. Interesting rocks were collected where they were thought necessary. Results of soil and rock samples can be seen on sample ledgers in Appendix Two.

Mapping and sampling of old prospects and mines in the eastern portion of the grid revealed that much of the wolframite - molybdenite mineralisation was associated with greisen zones. The grid was extended eastwards for another 400 metres to cover this zone.

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An area between lines 5600E and 6100E had 50 metre spaced infill lines cut from 5200N to 4800N. This area was mapped and sampled in detail (refer to plans TASH 823, 825 - 827).

Dips and strikes from the Moina sequence were very difficult to obtain (excepting in road cuttings) due to the strong development of joint planes. From road and track mapping there is an inferred syncline in the region of the Narrawa Reward Gold Mine (refer plan TASH 110).

6.3 Geochemical Results

The 'C' horizon soil samples were dried and sieved to -80 mesh. They were analysed by AAS for Cu, Pb, Zn, Ag, As, Mo, Bi and for W and Sn by X.R.F. The results have been plotted for Copper (Soils and Rocks), Lead (Soils and Rocks), Tin (Soils and Rocks), Tungsten (Soils), Molybdenum (Soils).

There are two distinct regimes of values; the Moina Sandstone/quartzite unit and the Dolcoath Granite. This was especially noticeable for Tungsten and Molybdenum.

A total of 433 samples were used to calculate means and standard deviations. Cumulative frequency plots were prepared to determine break points and hence populations.

Statistical values obtained have been tabulated in Table 1.

TABLE 1

Geostatistical Parameters Of Geochemical Sample

Element	No. Of Samples	Mean (ppm)	s.d. (ppm)	Comments
Sn (ROCK)	225	55	174	(all samples)
Sn (ROCK)	206	25	25	(minus all rocks > 100ppm)
Sn (SOIL)	433	59	80	(all samples)
Sn (SOIL)	400	41	31	(minus all soil > 150ppm)
Cu (ROCK)	226	45	173	(all samples)
Cu (ROCK)	217	19	18	(minus all rocks > 100ppm)
Cu (SOIL)	433	14	26	(all samples)

Cumulative Frequency Plots

- Sn (SOILS) break points 15, 30, 50, 110 ppm (250?)
- Sn (ROCKS) break points 27, 47, 66, 110 ppm
- Pb (SOILS) break points 12, 26, 64, 100 ppm
- Pb (ROCKS) break points 10, 26, 45, 74, 100, 300 ppm
- Cu (SOILS) break points 11, 29, 58, 80, 92 ppm
- Cu (ROCKS) break points 11, 35, 80, 100 ppm

6.3.1 Tin

A total of 225 rock samples and 433 soil samples were used in the geostatistical calculations for mean and standard deviations. Assay results were plotted on Cumulative frequency graphs and break points obtained. The tin soil values have been plotted on plan TASH 56 and tin rock value on TASH 57.

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The tin soil plan values have been contoured using the Cumulative frequency plot break points of 15, 30, 50 and 110 ppm. The pattern which emerged shows a major strong linear +110 ppm trend parallel to and just north of the baseline with the highest values being recorded in the vicinity of the hedenbergite - magnetite skarn rock outcropping north of the Higgs Gold Mine around 5800 - 5900E. The grid had 50 metre infill lines cut in this area and tin values are plotted on plan TASH 827. These values confirmed the anomalous tin values were on the contact between a hornfels zone and the underlying Moina Sandstone.

The Quartz-feldspar porphyry dykes show some slight elevation in tin values but one intersected in DD82 DG1 was not anomalous. Several other anomalous tin zones can be seen on plan TASH 57 where contouring has shown a continuation east from the hedenbergite skarn. At 6300E and 6400E a coincident magnetic/tin anomaly occurs on this trend.

Other tin anomalies occur to the south of the baseline and these probably reflect minor quartz veining with cassiterite in the Moina Sandstone although the anomaly on 6200E 4700N has a minor magnetic - bulls eye anomaly associated with it. The two short anomalies south of the baseline on lines 5400 - 5700E may reflect minor mineralisation associated with the fault which is postulated along the Narrawa Creek.

The anomaly 5 - 600 metres north of the baseline on lines 5900 - 6000E is associated with a calc-silicate/skarn zone which may be the northerly continuation of the skarn mapped just north of Narrawa Creek near Higgs Gold Mine.

Tin anomalies in rocks on the Dolcoath Grid correspond to the elevated soil zones but values in general tend to be an order of magnitude higher. The calc-silicate/skarn zone north of Narrawa Creek has soils upto 230 ppm but rocks range upto 1800 ppm.

6.3.2 Copper

A total of 225 rocks and 433 soil sample values were used in determining the means and standard deviations presented in Table 1. Cumulative Frequency plots were prepared and breakpoints obtained. Copper soil values have been plotted on plan TASH 58 and rocks on TASH 59. The values were not contoured. The results reflect trends as seen on the tin plot.

6.3.3 Lead

Lead soil and rock sample results have also been plotted (refer plans TASH 60 and 61). The results differ from tin - copper plots in that the Moina Sandstone sequence is anomalous in lead-zinc where it is sulphidic. Many of the old gougings especially ones for gold were developed on highly pyritic Moina sandstone which contains elevated lead-zinc values. The gold which accompanies the sulphide values has been enriched by weathering above the water table.

Blake (1937), Keid (1947) mapped three lead lodes associated with the gold workings at the Higgs Gold Mine. The major lode was located outcropping in a creek just east of the upper workings where assays showed a combined lead-zinc value of 15%. Some 150 metres to the north lead-zinc values upto 5% combined lead and zinc were found on Narrawa Reward Gold Mine. Significant lead mineralisation within the Moina sandstone sequence has been found at two other localities within the Sheffield licence area, at the Washington Silver Mine and the Round Mountain Mine.

During mapping of the Dolcoath Grid and surrounds several other anomalous lead values were recorded. The Moina sequence is lead rich at the start of the road south to the Wilmot Tunnel (3.1% Lead, refer section 6.1). The sampling at Packetts Workings (plan TASH 837) revealed the Moina Sandstone contained upto 1400 ppm lead.

6.3.4 Zinc

The zinc results have not been plotted on plans but are listed in Appendix Three. The zinc values although more variable tend to follow anomalous lead values. The best assays recorded were from Narrawa Reward and Higgs Gold Mines where values up to 4.35% and 6.5% respectively were recorded.

6.3.5 Tungsten

The soil results have been plotted on plan TASH 113. This shows clearly the extremely low values obtained in the western portion of the grid away from the granite margin. In this area values were less than 25 ppm even in the hornfels/calc-silicate zones. As the granite is approached the values rise significantly giving an average greater than 150 ppm.

One spot high (analytical error?) occurs on 5000E line at 4950N but the zone did not extend east into the licence area.

6.3.6 Molybdenum

The soil results have been plotted on plan TASH 112. They mirror the tungsten results in that they show the Dolcoath granite is highly anomalous in molybdenum when compared to the surrounding Moina Sandstone. Values were rarely found to be greater than 2 ppm within the sandstone but granite soils returned values up to 380 ppm. Some rock samples (visable molybdenite) returned extremely high values.

7. MINES AND PROSPECTS

Many old working and mines exist adjacent to, and on the edges of the Dolcoath Granite. Most of the Dolcoath Granite and Tin Spur Mines have been extensively reported in two Department of Mines Bulletins. The 'Middlesex and Mount Claude Mining Field' by W.H. Twelvetrees Bulletin 14 (1913), and Bulletin 29 (1919). 'The Mining Fields of Moina, Mt. Claude and Lorinna' by McIntosh Reid. Many of the Dolcoath and Tin Spur

Mines have also been subsequently reported in Mines Department Unpublished Reports. A list can be found in the References Section.

All accessible Mines in the area were entered, mapped and sampled. Old goungings were located and mullock heaps examined for mineralisation.

7.1 Dolcoath Mine

Difficulty was experienced in locating this adit although the 6500E line when extended south passed only some 15 metres to the west of the adit. The plan of this adit TASH 832 was copied from a report by Keid (1943), no further development work has been done. The rocks are almost completely greisenised granites and rhyolites (Bull Creek Volcanics). Several quartz veins were exposed in the adit but sampling showed they were not very well mineralised. Surface workings have been found extending from the adit to the 6600E line where very high bismuth, molybdenum, and tungsten values were recorded in rocks taken from an old gounging at 4460N.

7.2 Squib Mine

This is the largest mine on the Dolcoath Hill. The plan TASH 838 has been modified from Dickinson (Unpublished Map Mines Department Of Tasmania No. 9 - 852). The Lower or Main workings were very unsafe but chip samples were taken over a zone of limonitic Moina sandstone (samples 972401 - 405). Several samples, (935568 - 572), were collected off the Mullock dump - which contained visible wolframite and molybdenite. In the Upper Workings 'Sparks Drive' is only accessible to the first raise. The drive south from the top of the Open-cut was channel sampled to determine tungsten and molybdenum values close to the Granite/Moina Sandstone boundary. Encouraging values were found. Tungsten values averaged 652 ppm over 20 metres and molybdenum averaged 123 ppm over 20 metres. Several greisen samples assayed up to 0.7% tungsten and 400 ppm molybdenum.

7.3 Packetts Workings

The workings are located at 4700N on line 6100E. The Moina Sandstone here is very pyritic and contains minor disseminated galena. Twelvetrees (1914) indicates that auriferous pyrite in the area was worked for gold around the turn of the century but recent sampling showed anomalous tungsten and minor tin values associated with thin quartz stringers.

A series of shallow trenches were traced some two hundred metres west of Packetts workings and although one shaft was found no adits were located. Spoil heaps from the trenches were examined but no mineralisation was seen. A sketch plan of the workings is given in plan TASH 837.

7.4 Higgs Gold Mine

This was first described by Twelvetrees (1914). It has had a variety of names including Gurr's Mine (Twelvetrees 1914), Sunrise Mine (Keid 1947), Squib Mine (Keid 1943) and Higgs Gold Mine. Jennings (1979) refers to previous papers when he described the mine as being located on the southern limb of a small syncline. He described the workings as being confined to three subparallel north-west trending shear zones. The major zone was crushed giving a favorable site for the deposition of pyrite, minor galena, arsenopyrite. Gold was contained in the pyrite which has been oxidized allowing concentrations of the gold.

However recent examination showed the galena-sphalerite lode to be non-sheared and stratabound within very pyritic Moina Sandstone/quartzite sequence.

Jennings said mineralization was in a shear zone - this doesn't mean it has to be sheared

The mine was mapped and sampled in detail by Keid (1947). He located three distinct lead lodes, but the southern one (major) is the only one where development has taken place. The lode was stopped out over a distance of 50 metres. From mapping in a small creek just east of the upper workings samples were collected which

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showed values upto 15% lead-zinc.

Mapping shows the lead lode as finishing about 4910E and this was confirmed in the first drillhole where a 0.5 metre band averaged only 0.8% lead-zinc at a downdip distance of 130 metres. However there is an indication by the ground geophysical surveys that this zone may extend further to the east.

7.5 Narrawa Reward Mine

This mine was found some 200 metres north of the Higgs Gold Mine. It was described as having been long since abandoned by Twelve-trees in Bulletin 14 (1914). He commented on the fact that the ore was a dark grey quartzite carrying disseminated pyrite and arsenopyrite and a little copper pyrites (chalcopyrite).

Mapping of the adit (TASh 833) confirmed the 'ore' is a quartzite with disseminated pyrite, minor chalcopyrite, and arsenopyrite but dump and chip samples also showed galena (upto 3.34%) and zinc (upto 4.35%). The highest gold values were found associated with the best lead-zinc values. The Narrawa Reward adit has a Devonian Quartz porphyry dyke parallel to the adit about 10 metres to the south of the entrance. This dyke may have caused the anomalous (upto 4770 ppm) tin values around these workings. However when DD82 DG1 intersected the dyke only low values of tin were found.

7.6 Other Workings

Occasional pits and gougings were found on the grid. At the eastern end of the grid Blacks workings were located. In this area Povey's workings and Sayers workings were also found but they are all worked on narrow quartz veins and greisen zones within the Dolcoath Granite and were not exploration targets themselves. The Dolcoath Granite was tested by one drillhole to determine if a disseminated molybdenum, tungsten zone was a viable target (refer section 9.3).

8. GEOPHYSICAL SURVEYS

A detailed report of the geophysical surveys completed on the Dolcoath Grid may be found in CRAE Report No. 11269 by Flis (1982). A brief summary of some of the points is included here.

8.1 Dighem Airborne E.M. and Magnetic Survey

The survey was conducted over the entire licence area in February 1981. Two minor anomalies 19 I and 20 XR were detected on the northern margin of the Dolcoath Granite in an isolated area of depressed resistivities and adjacent to a moderately strong magnetic gradient.

8.2 Ground Magnetics

The Dolcoath Grid was covered by ground magnetics using a Geometrics G816 proton magnetometer with a pole mounted sensor (2.5 metres high). The total magnetic intensity contour plot was prepared (TASh 237). This showed a large high on the western side of the grid and a band of intensely disturbed magnetics striking diagonally across the grid to the north-east. These disturbed magnetics are interpreted as being a zone of complex faulting or shearing, with associated near surface mineralisation. Both north-easterly and east-west structures are present.

On lines 6400E and 6500E small, intense magnetic highs are associated with magnetite skarns.

8.3 V.L.F. Survey

A V.L.F. survey was completed over the grid using a Phoenix 2 receiver. The results recorded at 25m intervals are on plan TASh 536 which showed three broad sections. The northern most anomaly trend is dominated by a topographic ridge and is probably a terrain induced anomaly. The central zone is a low order diffuse anomaly which is possibly associated with lithological contacts. The southern zone is a series of narrow well defined linear anomalies which are associated with and are along strike from the three prospects containing significant sulphide mineralisation (Narrawa,

Higgs and Packetts). The Dighem anomaly 19 I plots on the Higgs Mine line of anomalies - slightly east of the adit workings. Packetts workings are associated with Dighem anomaly 20 XR and an associated V.L.F. anomaly.

8.4 U.T.E.M. Survey

The U.T.E.M. transient E.M. system was used to survey selected lines. Only poor conductors were detected, however, crossover anomalies with a short time constant response are present on all lines and show a series of zones which correspond to the V.L.F. anomalies and are along strike from the known sulphide outcrops.

8.5 Discussion

From the surveys there is a very good correlation between the U.T.E.M. and V.L.F. surveys. The U.T.E.M. surveys revealed that all the anomalies recorded were poor quality conductors. The disseminated 'ore' from the Higgs and Narrawa Mines would be classified as poor conductors even when lead, zinc grades reached 14% combined metal. The U.T.E.M. and V.L.F. responses indicate that the Higgs mineralisation may have a strike length of 400 metres whilst the Narrawa Reward mineralisation maybe upto 500 metres in length.

9. DIAMOND DRILLING

Three diamond drillholes were developed within the Dolcoath Grid area.

9.1 DD82 DG1 was sited at 5095N 5900E and depressed minus 46⁰ to 200⁰ magnetic. (Grid south) There were several targets:-

1. The mineralised Moina quartzite (upto 5% Pb-Zn) beneath the Narrawa Reward Mine which was also coincident with a U.T.E.M. anomaly.

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2. Devonian quartz - porphyry dyke at the Narrawa Reward which may be associated with significant tin mineralisation.
 3. Down dip extensions to the mineralised zone at the Higgs Gold Mine. Adit development had stopped due to lack of mineralisation this far west although the U.T.E.M. survey indicated that a weak conductor persisted west onto this line.

The hole was completed at 216.5 metres in basal Moina Sandstones, and the results were generally disappointing. The drillhole log can be found in Appendix One and a drillhole section is drawn on TASH 836.

Only one bed of mineralised Moina quartzite returned any significant values. This 3.7 metre section from 94.5 to 98.2 metres averaged 1.2% lead, 1.25% zinc with 18 grams silver and 0.27 grams gold per tonne. Several quartz veins contained minor molybdenum and wolframite. The best section 166.5 - 167.0 (0.5m) contained 0.12% Mo and 1.26% W. The Moina quartzite failed to contain significant thickness of base-metal mineralisation.

- 9.2 DD82 DG2 was collared at 5127N 5800E and drilled at minus 46° to 200° magnetic (grid south). The hole was sited to test the greatest thickness of the hornfels/skarn/calc-silicate zone outcropping at surface. This zone had strongly anomalous tin (upto 1800 ppm Sn) and a coincident U.T.E.M. anomaly.

The drillhole log can be found in Appendix One and the section is drawn on plan TASH 834. The hole was completed at 113.5 metres after intersecting a sequence of quartzites and calc-silicate-hornfels. The hornfels/calc-silicate sequence did not contain any significant mineralisation. From the drillhole log it can be noted that ground samples (using a diamond impregnated grinding wheel) are anomalous in tungsten and copper. This was especially so in sample 972644. On cutting this section the tungsten value averaged approximately 15ppm as against the 1840 ppm from the original ground sample.

021

9.3 The third and final hole DD82 DG3 was sited on the Dolcoath Granite and drilled under the best tungsten - molybdenum soil geochemistry. The hole was collared at 5190N 6600E and depressed at minus 46⁰ to 020⁰ magnetic (grid north).

The hole was logged in detail (refer Appendix One) and is shown on plan TASH 835. The upper portion of the hole was greisenised (16% greisen) and the lower portion was more fractured. Each sample was logged as either greisen or granite, the number of greisen zones within the sample, the number of fractures in the sample length, and the number of veins.

Molybdenum results were very low and apart from the occasional wolframite blade within veins the tungsten values were also very low. The greisen zones decreased with depth but major lines of lode (i.e. Blacks Lower Workings) showed that greisenisation persisted to depth in the granite. This drillhole failed to intersect any mineralisation that would be encouraging for a low grade, large tonnage mining operation.

10. TIN SPUR

10.1 Tin

The Dolcoath Granite extends east beneath Lake Cethana and out-crops on the steep hill known as Tin Spur (refer plan TASH ¹¹⁰~~837~~). Several small mines have been developed there and have been described in detail by many Department of Mines Unpublished Reports (refer Section 11).

Jennings (1979) briefly reviewed the mines. The rocks consist of Moira Sandstone overlain by Roland Conglomerate. A large fault known locally as the Tin Spur Creek Fault is thought to have influence the deposition of cassiterite by allowing the concentration of fine grained tin in lag type deposits on the downthrow or northern side. It is unknown whether the fault itself is the loci for tin bearing fluids as all the old mines are inaccessible. Several samples (refer plan TASH ¹¹¹~~839~~) were taken near the old mines and although arsenic values were high no other results showed anything of interest.

022

10.2 Molybdenum, Tungsten

The old mines within the Dolcoath Granite were located (Hidden Treasure, Premier). They consisted of some trenching which has been extended by bulldozing (very old) no significant mineralisation was located and no samples were taken.

023

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12. KEYWORDS

Lead-zinc-tungsten-molybdenum-tin-skarns-Moina Sandstones - Dolcoath Granite - diamond drillhole - geophysics - dighem - U.T.E.M. - V.L.F. - E.M. - ground magnetics.

13. LOCATION

Burnie SK 55 - 3 1:250,000 Sheet, Tasmania.

14. LIST OF PLANS

<u>Plan No.</u>	<u>Title</u>	<u>Scale</u>
TASh 1116 •	Dolcoath Grid Location Plan	1 : 500 000 ✓
TASh 110 •	Dolcoath Granite Area Geology,	1 : 5000 ✓

028

TASh 111	Regional Rock Chip Geochemistry	1 : 5000	✓
TASh 55	Sample Location Plan	1 : 5000	✓
TASh 56	Soil Geochemistry - Tin	1 : 5000	✓
TASh 57	Rock Geochemistry - Tin	1 : 5000	✓
TASh 58	Soil Geochemistry - Copper	1 : 5000	✓
TASh 59	Rock Geochemistry - Copper	1 : 5000	✓
TASh 60	Soil Geochemistry - Lead	1 : 5000	✓
TASh 61	Rock Geochemistry - Lead	1 : 5000	✓
TASh 112	Soil Geochemistry - Molybdenum	1 : 5000	✓
TASh 113	Soil Geochemistry - Tungsten	1 : 5000	Unavailable
TASh 832	Dolcoath Grid - Squibb Works	~ 1 : 5000	✓
TASh 823	Narrawa Reward-Higgs Au Mine Area Geology Plan	1 : 1000	✓
TASh 825	Sample Locations	1 : 1000	✓
TASh 826	Geochemical Results Cu, Pb, Zn	1 : 1000	✓
TASh 827	Geochemical Results Bi, W, Sn	1 : 1000	✓
TASh 832	Dolcoath Grid, Dolcoath Adit	1 : 1000	✓
TASh 833	Dolcoath Grid, Narrawa Reward Gold Mine	1 : 1000	✓
TASh 834	Dolcoath Grid, Drillhole Section DD82 DG2	1 : 1000	✓

029

TASh 835	ⓐ ·	Dolcoath Grid, Drillhole Section DD82 DG3	1 : 1000	✓
TASh 836	ⓑ ·	Dolcoath Grid, Drillhole Section DD82 DG1	1 : 1000	✓
TASh 837	ⓒ ·	Dolcoath Grid, Sketch Plan of Packetts Workings	1 : 1000	✓
TASh 536	·	Dolcoath Grid, Normalised V.L.F. - E.M. Dips N.W. Cape Transmitter	1 : 2500	✓
TASh 237	·	Dolcoath Grid, Ground Magnetic Survey	1 : 2500	✓

15. LIST OF APPENDICIES

- Appendix 1 Drillhole Logs
 - DD82 DG1
 - DD82 DG2
 - DD82 DG3
- Appendix 2 Geochemical Ledger Sheets
- Appendix 3 Petrological Descriptions

APPENDIX 1

DRILLHOLE LOGS

- DD82 DG1
- DD82 DG2
- DD82 DG3

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 1 of 1
TENEMENT NAME SHEFFIELD EL. No. 7.73
PLAN - MAP REFERENCE DOLKATH GRID
DEPTH 216.5 metres HOLE No. DD8226
CASING LEFT 15 m NO. DPO No(s) 3004

CO-ORDINATES S900E S095W AZIMUTH 200° DRILLERS PARRY COMMENCED 11.05.82
RL COLLAR INCLINATION -46° DRILL TYPE BOYLES COMPLETED 29.05.82

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by FOMARS)										
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Mo	W	Sr	A		
0	4.5	-			NO CORE - TRICONES																
4.5	18.0	11.65	NQ		QUARTZITE																
18.0	24.3	6.3	BQ		Med-ht gy m-c.g. Matrix qtzite int. L 53° at 6.5m. Generally fairly pure orthoquartzite but pyrite occ. thin bands of slightly more argillaceous material. This section shows the development of arsenite, muscovite and garnets in well baked large bed qtzite.	Med fractured, py in joints/fractures White med weathered - Fe oxides - pitting Pyrite forms dendritic patterns upto 12% of core. In other places py forms blobs - aggregation (10%) Highly pyritic 72-8.3m.	972 S01*	4.5	6.0	1.5	65	35	90	X	50	2	-	-	-		
							S02*	6.0	9.0	2.9	85	20	160	X	X	4	-	-	-		
							S03*	9.0	12.0	2.3	175	110	210	X	100	2	-	-	X		
							S04*	12.0	15.0	2.0	190	40	120	0.5	50	X	-	-	-		
							S05*	15.0	18.0	2.95	105	30	120	X	X	2	-	-	-		
							S06*	18.0	21.0	3.0	345	85	235	0.5	50	2	-	-	-		
							S07*	21.0	24.3	3.3	190	80	275	0.5	50	4	-	-	-		
24.3	24.7	0.4	BQ		METAMORPHOSSED SLTSTONE Creamy white, rather v.f.g. horizon Thin section - Palitic Hornfels.	Med. fractured, non weathered, well baked (mm).	S08	24.3	24.7	0.4	10	80	80	X	50	4	24	32	-		
24.7	33.0	7.37	BQ		ARGILLACEOUS QUARTZITE Med-ht gy sh. more argillaceous qtzite upto 20% py, becoming more argill. change 30-33m. Thin section 27m Paeonopolite Hornfels	Gen. 20% py. Med fractured with occ. thin qtz-illite veins 26.8-27.5m 1% gn 1% Zn Cp 0.2% py + 10% Py dendritic and aggregation 29-30.1m Ep+Zn - 2% Minn 7mm qtz-illite vein at 32m int L 18°	S09	24.7	26.2	1.2	55	210	2600	1.0	X	6	X	38	-		
							S10	26.2	26.8	0.6	105	945	200	2.5	50	4	X	167	-		
							S11	26.8	27.5	0.7	95	3600	7700	13.0	X	4	X	59	-		
							S12	27.5	29.0	1.25	110	300	175	1.0	50	4	7	21	-		
							S13	29.0	30.1	1.05	105	110	1500	0.5	50	6	X	81	X		
							S14	30.1	31.0	0.65	50	110	100	0.5	50	4	X	21	X		
							S15	31.0	31.8	0.77	110	120	360	1.5	X	4	X	190	0.07		
							S16	31.8	33.0	1.15	75	55	1600	0.5	X	6	X	119	X		
33.0	38.8	4.95	BQ		QUARTZITE Med gy m-c.g. qtzite upto 15% py Thin vein visible W min ² at 35m med fractured.		S17*	33.0	35.0	1.90	110	55	135	X	50	2	-	-	-		
							S18*	35.0	37.5	1.75	70	280	205	1.0	50	X	-	-	-		

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 2 of 7
TENEMENT NAME SHEFFIELD No. 7/73

CO-ORDINATES 5900E 5085N AZIMUTH 200° DRILLERS PARRY COMMENCED 11.05.82 DEPTH 216.5 metres HOLE No. DD82261
RL COLLAR INCLINATION -46° DRILL TYPE ROYLES COMPLETED 29.05.82 CASING LEFT 15m NG DPO No(s) 30044

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by AMRS)							
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Mo	W	Sr
38.8	41.3	3.1	BQ		<u>QUARTZITE AND ARGILLITE</u> lt gy - creamy silty intercalations less py interbedded with py qtzite bt L 40°	Mod. fractured esp. in qtzite bands	522	38.8	40.0	1.20	55	215	285	15	X	X	-	-
							521	40.0	41.0	1.0	115	685	730	20	50	X	X	101
							522	41.0	41.3	0.3	115	130	130	20	50	X	12	214
41.3	50.0	7.85	BQ		<u>QUARTZ PORPHYRY</u> Dolo gy qtz, mica cleaving bt L top contact 45° 47-47.5m creamy white dense silty layers - alt? dyke, lent 0.3m mag qtzite. Thin Sect - Metachalite	min veinlets - fluorite rich? occ Sn? dk qtz crystals	523	41.3	43.5	1.4	50	1000	630	3.5	50	6	X	139
							524	43.5	45.0	1.5	20	890	1050	1.0	X	4	5	40
							525	45.0	46.5	1.5	35	1650	840	2.5	50	2	X	53
							526	46.5	48.0	1.5	70	20	30	0.5	50	2	10	115
							527	48.0	49.0	1.0	260	5	25	X	X	4	13	104
							528	49.0	50.0	0.95	65	10	80	0.5	X	12	X	87
50.0	54.3	4.2	BQ		<u>QUARTZITE</u> Dk qtz for first 0.4m (paleoproteroid) then med. qtz m.c. qtz sil py 15-20% in bands, creating fractures. S3-S4.3 course of less sil. porous qtzite	Mod. fractured - sil. Min. qtz, Sn mic. Diff to determine Cu from py	529	50.0	51.0	1.0	465	10	50	0.5	X	2	16	123
							530*	51.0	52.5	1.5	395	10	65	0.5	X	2	46	221
							531*	52.5	54.0	1.4	1150	5	185	0.5	X	4	206	179
54.3	58.0	4.63	BQ		<u>QUARTZITE</u> lt qtz dense f. mag sil. less py = 5%	mod fractured	532*	54.0	56.0	1.85	125	X	100	0.5	50	4	184	11
							533*	56.0	58.0	1.78	275	X	45	0.5	X	X	10	15
58.0	60.0	0.85	BQ		<u>SILTSTONE</u> lt med qtz py. opt 10% silty at L 35°	Well bedded	534*	58.0	61.0	2.6	160	10	120	0.5	X	X	20	54
61.0	67.0	6.65	BQ		<u>QUARTZITE - SL. ARGILLACEOUS</u> Med qtz occ dk qtz zone along fractures - chlorite alt. Qtzite m.c. qtz upto 15% py Thin section - Silicified pyromorphite	Mod fractured and veined. veins along alt halos (bleaching) line U. broken 65.5-67 - chlorite-epidote? alt along fractures	535*	61.0	64.0	2.35	85	20	205	X	X	2	6	14
							536*	64.0	67.0	3.0	150	15	65	X	X	2	15	22

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 3 of 7

TENEMENT NAME SHEFFIELD EL No. 7/75

PLAN - MAP REFERENCE DALCOATH GRID

CO-ORDINATES S 300E S 355W AZIMUTH 200m DRILLERS PARRY COMMENCED 11.05.82 DEPTH 216.5 metres HOLE No. DD82DG1
 RL COLLAR INCLINATION -46° DRILL TYPE BOYLES COMPLETED 29.05.82 CASING LEFT 15m No. DPO No(s) 30044

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALABS)									
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Mo	W	Sn	Au	
70	74.8	77	8Q		<u>QUARTZITE</u> Med. gr. py up to 15% m-c.g. but 72-73m v.c.g. - gritty - leached Some thin silica bands at 74m.	mod. fractured. Leached 72-73m Min. Cp min ² at 74m. 0.4m leached broken 74.4-74.8m.	972537* 538* 539* 540* 541* 542* 543*	67.0 68.5 69.5 70.5 71.5 72.5 73.5	68.5 69.5 70.5 71.5 72.5 73.5 74.5	1.5 1.0 1.0 1.0 0.3 1.0 1.0	115 75 65 105 70 295 210	10 5 x x 10 5	35 45 30 35 50 65 55	0.5 0.5 0.5 0.5 x x x	x x 2 2 x 2 x	27 6 12 x 36 89 13	112 28 25 35 28 50 82	- - - - - - -		
48	77.0	22	8Q		<u>HORNFELS</u> V. dk gr. banded f.g. on rock Thin Section - Porphyritic Hornfels.	Mo? on joint face 76.4m Highly altered rock.	544* 545* 546*	74.5 75.5 76.0	75.5 76.0 77.0	1.0 0.5 1.0	110 75 25	10 75 75	270 780 200	0.5 0.5 0.5	100 50 x	6 2 2	21 48 x	93 52 31	- - -	
10	86.5	92	8Q		<u>QUARTZITE</u> Med. grained py up to 6% light yellow epidote alt. At 83.5 more compact less fractured py only 1-2% except joint places.	Gen. med - well fractured until 83.5m Epidote? alt to 83.5m.	547* 548* 549* 550* 551*	77.0 79.0 81.0 83.0 84.2	79.0 81.0 83.0 84.2 85.5	1.9 1.8 2.0 1.2 1.3	45 55 60 65 45	40 115 90 65 130	70 100 125 155 250	x 0.5 0.5 0.5 1.5	x 100 100 x 100	54 4 2 x 4	68 33 52 44 45	41 13 - 16 -	- - - - -	
5	98.2	114	8Q		<u>QUARTZITE</u> Med-dk gr. c-v.c.g. of leached in coarse green py up to 5% some Cp min ² . At 90.7m lt gr. compact. At 93.3m dk gr. c.g. - v.c.g. well washed grains - min ² . Int L 60° at 94.7m.	leached in coarse green. Sl. Cp min ² Med. highly fractured - brown clay after calcite? in joints alt. leached and P ₂ > Pb > Zn > As > Cp	552* 553* 554* 555* 556* 557* 558* 559* 560*	85.5 88.5 89.5 92.5 93.5 94.5 95.5 96.5 97.5	88.5 89.5 92.5 93.5 94.5 95.5 96.5 97.5 98.2	3.0 0.7 3.0 1.0 1.0 1.0 1.0 1.0 0.7	95 110 15 70 70 225 75 100 40	1600 45 70 25 235 6100 119% 200	835 170 x 175 755 102% 150 150	1.5 1.0 x 1.0 1.0 1.0 1.0 1.0 1.0	200 350 50 50 150 100 200 200	10 4 66 2 4 x x x	27 14 18 51 43 63 30 32 42	119 136 12 75 128 63 172 107 74	- - - - 0.02 0.01 0.02 0.01 0.03	

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 4 of 7
TENEMENT NAME SHEFFIELD EL. No. 7/73
PLAN - MAP REFERENCE DOLCOATH GRID

CO-ORDINATES 5300E 5096N AZIMUTH 200°m DRILLERS PARRY COMMENCED 11.05.82 DEPTH 216.5 metres HOLE No. DD82 DG
RL COLLAR INCLINATION -46° DRILL TYPE ROYLES COMPLETED 29.05.82 CASING LEFT 15m NR DPO No(s) 30044

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALABS)							
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Mo	W	Sr
98.2	101.5	3.3	BQ		ARGILLACEOUS QUARTZITE - HORNFELS F.g. dense py along joints Tabase - serpentinite dev. at 99.5m-F	Mod jointed, v. banded 99.5-99.7m	572561	98.2	100.5	2.3	105	4600	4850	8.5	100	x	79	16
							562	100.5	101.5	1.0	80	75	235	1.0	x	x	48	95
101.5	103.7	1.5	BQ		CALC-SILICATE Dk gr. dense banded py+po? meta 10% - Thin section - actinolite rock	Original calcareous sediment altered to actinolite	563	101.5	102.5	0.9	225	40	160	1.0	100	2	102	148
							564	102.5	103.7	1.0	180	20	120	0.5	x	2	145	193
103.7	106.0	2.3	BQ		ARGILLITE - HORNFELS Dk gy dense rock banded with qtzite at L 55° at 105.5m. Thin section pelitic Hornfels	Highly iron silty qtzite Mo+W in vein at 103.9m	565	103.7	103.9	0.2	185	30	105	0.5	x	2	67	63
							566	103.9	104.2	0.2	65	25	145	1.0	x	320	120	13
							567	104.2	104.8	0.7	45	15	100	0.5	x	136	59	15
							568	104.8	105.7	0.9	30	20	60	0.5	50	20	43	7
106.0	110.3	4.0	BQ		QUARTZITE Med gy - m-c.g. well banded	mod. fractured	569	105.7	107.0	1.3	25	10	65	0.5	50	6	57	28
							570	107.0	108.4	2.1	20	5	140	1.0	x	32	34	11
							571	108.4	110.3	0.9	40	10	255	0.5	x	8	76	14
110.3	111.7	1.4	BQ		QUARTZ PORPHYRY lt gr. gy altered qtz altered porphyry Thin section - metabasaltite	Well altered secondary epidote developed	572	110.3	111.7	1.4	30	195	430	x	50	4	19	23
111.7	113.6	1.75	BQ		QUARTZITE med gy well banded Zn? rich some epidote alt ⁿ .	Epidote alt. well banded mod. fractured.	573	111.7	112.7	0.85	85	25	50	0.5	100	6	33	16
							574	112.7	113.6	0.90	50	10	45	x	50	12	17	15

611036

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 5 of 7

TENEMENT NAME SHEFFIELD EL. No. 713.

PLAN - MAP REFERENCE DOLCOATH GRID

CO-ORDINATES S800E S95SN AZIMUTH 200m DRILLERS PARKY COMMENCED 11.05.82 DEPTH 216.5 metres HOLE No. DD82.DG
RL COLLAR INCLINATION -46° DRILL TYPE BOYLES COMPLETED 28.05.82 CASING LEFT 15m NA DPO No(s) 30044

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....)									
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Mo	W	Sr	A	
113.6	116.5	2.46	BQ		QUARTZ PORPHYRY Sl yellow-gn altered	Epitaxial rich dyke 115.2 - 116.3 F vein at 40° SSW	575 576 577	113.6 114.5 115.5	114.5 115.5 116.5	0.3 0.76 1.0	30 25 35	60 40 160	160 50 45	0.5 X 1.0	50 100 50	4 70 42	19 1010 20	83 57 48	- - -	
116.5	141.3	24.73	BQ		QUARTZITE Med-dk grey m-c.g. well baked white - altered F-rich. Occ thin lenticled zones	Med jointed well altered. Veins 116.5 - 117.3 qtz + Mo. Joint prevalent often filled with yellow-brown secondary calcite? often almost // to core	578 579* 580 581 582 583* 584* 585* 586 587 588 589 590 591 592 593 594 595 596	116.5 117.3 118.5 119.4 120.4 121.5 124.5 127.5 129.5 129.7 129.9 131.5 131.5 132.5 133.5 135.0 136.5 138.0 139.6 140.7	117.3 118.5 119.4 120.4 121.5 124.5 127.5 129.5 129.7 129.9 131.5 132.5 133.5 135.0 136.5 138.0 139.6 140.7	0.8 1.2 0.9 1.0 1.0 3.0 2.38 1.7 0.2 0.2 1.45 1.0 1.0 1.5 1.5 1.6 1.0 1.2	10 30 15 40 50 35 70 45 15 20 40 50 110 50 25 45 50 50 80 165 80	60 20 5 X X 15 5 25 X 10 5 10 45 10 15 16 165 105	25 55 55 55 X 65 65 95 X X 65 65 X X X X X X X X X	0.5 X	50 50 50 50 50 50 100 16 2700 50 50 50 150 12 52 12 16 50 10 32	4800 40 32 530 52 32 20 16 X X X 18 20 4 4 16 38 55	174 34 16 33 24 27 30 46 X X X X 13 13 11 X X X X X X X X	7 13 39 64 50 14 13 X X X X 23 11 X 21 13 36 19 40	X - - X -	
143	143.5	1.6	BQ		QUARTZ PORPHYRY Med grey - qtz - feldspar phenocrysts	Non altered only ab. altered.	597	141.3	143.5	1.6	50	1250	1600	3.0	50	70	16	64	-	

* GRIND SAMPLES

611037

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 6 of 7

TENEMENT NAME SHEPHERD EL No 7/73

PLAN - MAP REFERENCE DOLGOATH GRID

CO-ORDINATES S300E S055N AZIMUTH 200m DRILLERS PARRY COMMENCED 11:05:52 DEPTH 216.5 metres HOLE No. DD82 DG
RL COLLAR INCLINATION -46° DRILL TYPE BOYLES COMPLETED 29:05:52 CASING LEFT 15m NO DPO No(s) 30044

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by AMALABS)									
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Mo	W	Sr	A	
143.5	148.0	4.5	BQ		<u>QUARTZITE</u> Dk grey banded qtzite banding due to min ² . May have some coarse dyke material - very altered.	Sl-mod altered Pb > 2m min ² mod fractured. Mo vein at 147.5 - mod - highly altered	972538 593 600	143.5 145.0 146.5	145.0 146.5 148.0	1.5 1.5 1.5	115 115 40	1750 3050 850	1700 5300 1500	3.5 11.0 0.5	200 100 100	12 8 1560	15 7 19	30 33 34	- - -	
148.0	157.9	9.76	BQ		<u>QUARTZ PORPHYRY</u> Yellowish br altered altered.	V. altered - altered epidote?	601 602 603 604 605 606 607	148.0 149.5 151.0 152.5 154.0 155.5 157.0	149.5 151.0 152.5 154.0 155.5 157.0 157.9	1.5 1.4 1.46 1.5 1.5 1.5 0.9	40 x 20 10 5 45 35	415 110 60 50 65 20 15	300 75 145 200 180 45 70	6.0 x x x x x x	50 x 50 50 50 x 50	30 26 260 4 6 2 22	20 30 24 13 5 15 35	71 67 68 54 48 51 42	- - - - - - -	
157.9	158.5	0.6	BQ		<u>HORNFEELS</u> Dk grey hornfelsed qtzite more massive than py in core	Contact mm by vein? - hornfelsing the qtzite	608	157.9	158.6	0.6	45	5	30	x	150	8	13	11	-	
58.5	157.0	37.87	BQ		<u>QUARTZITE</u> Dk grey mod grey generally coarsely banded zone. Occ. coarse? qtz veins with dev. of biotite - yellow pite in veins. Some coarse massive bands m-g against C-UC-g. bands - leached. More intercalation with bands 181-137. py gen. less than 5%.	Generally pinky massive, coarse? veins biotite - yellow pite developed py gen < 5% Fault at 153.4 at L 15. 0.5 m vein at 166.5 Mo+W min ² .	609 610 611 612 613 614* 615* 616* 617* 618*	158.6 161.0 163.5 165.0 166.5 167.0 167.0 170.0 173.0 176.0 178.0	161.0 163.5 165.0 166.5 167.0 170.0 173.0 176.0 178.0 182.0	2.5 2.5 1.5 1.5 0.5 2.77 3.0 2.9 3.0 3.0	25 5 35 15 25 20 5 125 110 45	10 65 40 10 5 15 5 100 80 60	85 x 0.5 x x x x x x x	50 50 50 x 50 x 50 50 100 x	8 108 14 76 1130 28 20 2 2	8 17 11 17 12670 243 72 88 46 x	x 3 13 23 18 22 6 5 11 x	- - - - - - - - - -		

* GRIND SAMPLES

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611038 SHEET No. 7 of 7

C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

TENEMENT NAME SHEFFIELD EL. No. 7/173
PLAN - MAP REFERENCE DOLKETH GRID

CO-ORDINATES 5800E 5095N AZIMUTH 200° DRILLERS PARRY COMMENCED 11:05:82 DEPTH 216.5 metres HOLE No. DD82 DG
RL COLLAR INCLINATION -46° DRILL TYPE BOYLES COMPLETED 29:05:82 CASING LEFT 15 m NO DPO No(s) 30044

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALAB)																												
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Mo	W	Sn	A																				
					Becomes light grey - orthoquartzite at 190m. - more pyritic blebs and concretions to 197m		372619*	182.0	185.0	3.0		45	5	40	x	100	2	19	8	-																			
							620*	185.0	188.0	2.8		20	10	45	x	100	2	23	3	-																			
							621*	188.0	191.0	2.9		30	10	50	x	50	x	19	12	-																			
							622*	19.0	194.0	3.0		45	x	40	x	x	x	23	137	-																			
							623*	194.0	197.0	3.0		40	10	45	x	150	8	40	28	-																			
197.0	204.5	7.5	BQ	QUARTZITE																																			
					Lt grey orthoquartzite c-u.c.g. with occ white well rounded quartz grains throughout. V. sh. py. Occ quartz sized hematitic pieces	V. sh. py.	624*	197.0	200.0	3.0		40	x	30	x	150	2	25	121	-																			
							625*	200.0	203.0	3.0		25	x	20	x	100	x	20	28	-																			
							626*	203.0	206.0	3.0		25	x	40	x	50	x	28	44	-																			
204.5	216.5	10.25	BQ	QUARTZITE																																			
					Lt-med grey orthoquartzite occ quartz sized particles. Thin creamy br silty intercalations at 211.8 - 212m.	Sh. py. F. at 207.5m int L 60° 203.8 - 20m wide of vein with W. blades int L 50° mod well fractured.	627*	206.0	208.0	2.75		60	x	55	x	x	2	89	7	-																			
							628*	208.0	212.0	3.0		75	x	30	x	100	24	58	20	-																			
							629*	212.0	215.0	3.0		20	x	20	x	50	x	28	17	-																			
							630*	215.0	216.5	1.5		30	x	30	x	100	x	44	x	-																			
End. 216.5m																																							
											EASTMAN'S CAMERA SURVEYS																												
											<table border="1"> <thead> <tr> <th>DEPTH</th> <th>AZIMUTH</th> <th>DECLINATION</th> </tr> </thead> <tbody> <tr> <td>0m</td> <td>200°</td> <td>-46°</td> </tr> <tr> <td>75m</td> <td>204°</td> <td>-38°</td> </tr> <tr> <td>135m</td> <td>204°</td> <td>-38°</td> </tr> <tr> <td>206m</td> <td>206°</td> <td>-36°</td> </tr> <tr> <td>215m</td> <td>?</td> <td>-35°</td> </tr> </tbody> </table>											DEPTH	AZIMUTH	DECLINATION	0m	200°	-46°	75m	204°	-38°	135m	204°	-38°	206m	206°	-36°	215m	?	-35°
DEPTH	AZIMUTH	DECLINATION																																					
0m	200°	-46°																																					
75m	204°	-38°																																					
135m	204°	-38°																																					
206m	206°	-36°																																					
215m	?	-35°																																					

* GRIND SAMPLES.

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 1 of 3

TENEMENT NAME SHEPHERD Pt No. 7/73

PLAN - MAP REFERENCE DOLCOATH GRID

CO-ORDINATES SPOE SRTN AZIMUTH 200° DRILLERS PARRY COMMENCED 30.04.82 DEPTH 113.5 metres HOLE No. DDB22

RL COLLAR INCLINATION -46° DRILL TYPE BOYLES COMPLETED 08.05.82 CASING LEFT Nil DPO No(s) 30046

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALABS)										
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Mo	W	Sn	A		
0	12.9	824	NQ		<u>QUARTZITE</u> Lt-med gr, red-brown py loc oxidized in bleached zones. Some worm burrows infilled with py. of site Occ silty lt gr-gy intercalations	Occ. banded, weathered horizons, py upto 10% in unbleached zones. Mod fractured, py min ² both dendritic and in accumulations - blebbly	972631*	0.0	6.0	2.12	140	X	115	X	59	X	X	213	29	-	
							632*	6.0	9.5	3.12	245	5	145	1.0	100	X	X	323	22	-	
							633*	9.5	12.9	3.0	75	35	45	X	50	X	X	174	X	-	
12.9	14.5	0.5	BQ		<u>QUARTZ VEIN - SILTY QUARTZITE</u> Qtz vein material and ol. chloritoid silty quartz	V. fractured - large conc. low Fe oxidized fracture after py.	634	12.9	14.5	0.5	40	5	10	0.5	100	X	X	8	14	-	
4.5	47.6	303	BQ		<u>QUARTZITE</u> Med gr py (upto 15%) fractured py dendritic on a coating on joint faces occ blebbly. At 18m alc more py also epidote? (ol. yellow) alt ⁿ along joint planes Intercalated silty bands 23-23.4m - after worm burrows? Int L 70° at 29.5m Large conc low 20.4-22m	Med-well fractured - bleached along large fractures red-brown py staining along fractures. Epidote alt ⁿ along joint planes around 18m. Fault at 18m - mica + secondary quartz + py (limonite) on fault. Two intersecting joint faces at 17.7m 1° at 10° to core 2° at 27° 31.9m 10cm bleached zone Fault? int L 10° 40.7m 10cm qtz vein py + W int L 80° 37.25-37.75m more feldspathic band ol. pinky and dk grey fine grained zone - altered?	635 ^F 636 ^F 637 ^F 638 ^F 639 ^F 640 ^F 641 ^F 642 ^F 643 ^F 644 ^F 645 ^F 646 ^F	14.5	17.5	2.8	405	10	250	X	X	X	X	X	555	X	-
							635 ^F	17.5	20.0	2.42	345	10	260	X	100	X	X	722	12	-	
							637 ^F	20.0	23.0	2.08	205	20	305	X	50	X	X	388	13	-	
							638 ^F	23.0	26.5	3.0	30	25	30	X	50	X	2	X	X	-	
							639 ^F	26.5	30.0	3.0	205	25	220	X	100	X	X	403	X	-	
							640 ^F	30.0	33.0	3.0	150	15	105	0.5	100	X	2	252	20	-	
							641 ^F	33.0	36.0	2.97	115	10	X	X	X	X	X	185	5	-	
							642 ^F	36.0	37.25	1.23	55	5	100	X	100	X	4	X	265	-	
							643 ^F	37.25	37.75	0.44	20	5	50	X	50	X	X	X	370	-	
							644 ^F	37.75	42.0	4.17	1550	20	100	X	100	X	X	1140	70	-	
							645 ^F	42.0	45.0	2.67	1100	X	150	X	100	X	X	1230	46	-	
							646 ^F	45.0	47.6	2.6	970	15	50	X	50	X	2	1080	56	-	
							868	37.75	39.0	1.20								8	56	-	
							869	39.0	39.35	0.35								12	49	-	
							870	39.35	40.90	1.52								18	242	-	
							871	40.90	42.0	1.1								11	39	-	

GRIND SAMPLE 644 CUT INTO FOUR

* GRIND SAMPLES

C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

611040 SHEET No. 2 of 4

TENEMENT NAME SHEFFIELD EL. No. 773

PLAN - MAP REFERENCE DOLCOATH GRID

CO-ORDINATES S800E 5127N AZIMUTH 200° DRILLERS PARRY COMMENCED 30.04.82 DEPTH 113.5 metres HOLE No. DD82 DG

RL COLLAR INCLINATION -46° DRILL TYPE BOYLES COMPLETED 08.05.82 CASING LEFT Nil DPO No(s) 30046

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALABS)									
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Bi	Mo	W	Sn	A
47.6	48.5	0.9	80		ARGILLITE Dk grey argillaceous zone py +20% Thin grit zone 48.2-48.5 still dk grey argillaceous cementing.	V. pyritic ore jointed	572647	47.6	48.5	0.9	235	5	140	x	50/x	x	x	127	-	
48.5	52.2	3.67	80		QUARTZITE Med-dk grey py qtzite py dendritic and blebby - coating joints	Pyritic - moderate jointing	648*	48.5	52.2	3.67	700	30	585	x	50/x	x	889	58	-	
52.2	59.8	7.33	80		QUARTZITE Med grey banded quartzite with qtz veins for first 3m int L 80° then red-dk grey - al more argillaceous. Albite-epidote alt ⁿ on joint faces at 57m m-c. graind becomes c-u.g. at 58m generally more alt ⁿ - albite and epidote.	Med jointed albite-epidote alt becomes stronger at 58m. Sweet out a vein qtz for first 3m. Py min ² in vein and qtzite up to 20%	649	52.2	55.0	2.73	85	50	110	x	50/x	x	6	25	22	x
							650	55.0	58.0	3.0	35	20	70	x	50/x	x	8	17	-	
							651	58.0	59.8	1.6	50	x	45	x	50/x	x	13	96	-	
						Thin Sect: Metamorphosed Quartzite														
59.8	68.0	8.02	80		HORNfels AND QUARTZITES Dk grey and v. dk grey banded sections. Silt zone 60.4-60.7m upto 3mm well rounded. At 65.5m thin silty bands intercalated also some thin qtz veins Py accumulation to 15%	Dk albite-epidote alt ⁿ zones esp. along larger joint planes. Min Cu + Pb (Mo?) for last 2m. Main qtz veins ± py + Pb.	652	59.8	61.5	1.70	55	15	65	x	50/x	x	8	167	59	-
							653	61.5	63.0	1.50	45	5	55	x	50/x	x	2	12	46	-
							654	63.0	64.5	1.32	40	25	75	x	50/x	x	8	13	26	-
							655	64.5	66.0	1.50	50	20	110	x	50/x	x	6	12	22	0.06
							656	66.0	67.5	1.50	30	375	470	1.5	50/x	x	8	7	5	x
							657	67.5	68.0	0.5	80	710	530	4.0	50/10	x	6	11	65	x
						Thin Sect: Metamorphosed Quartzite and Metamorphosed Siltst.														

* GRIND SAMPLES

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 3 of 4
E.L. No. 713

TENEMENT NAME... SHEFFIELD...
PLAN - MAP REFERENCE... DOLCOATH GRID

CO-ORDINATES SP06 5127N AZIMUTH 200° DRILLERS PARRY COMMENCED 30.04.82 DEPTH 113.6 metres HOLE No. DD82 DG
RL COLLAR..... INCLINATION -46° DRILL TYPE BOYLES COMPLETED 08.05.82 CASING LEFT Nil DPO No(s) 30046

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by <u>ANALABS</u>)									
From (M)	To (M)										Cu	Pb	Zn	Ag	As	Bi	Mo	W	Sr	A
68.0	83.1	15.03	8Q		<u>QUARTZITE - GRIT</u> Med-dk grey pyritic upto 20% 10% of core is quartz bands particles well rounded upto 4mm. Min ps at 7.8m (ms. 0.6 cgs units) 77.3-79.0 silty intercalation Lt L50° Min magnetite 81-82.5m 82.5-82.9 v.f.g. normally mm qtzite py along joints and fractures not so much disseminated.	med jointed throughout more py in upper section.	972658	68.0	69.76	175	40	355	120	1.5	X/10	6	X	17	-	
							663	69.76	72.0	224	35	20	50	1.0	X/10	10	X	30	-	
							660	72.0	73.50	15	60	20	35	0.5	X/10	6	S	39	-	
							661	73.5	75.0	148	190	10	45	0.5	X/10	2	26	65	-	
							662	75.0	76.0	150	220	15	35	X	50/10	4	29	33	-	
							663	76.0	78.0	146	80	15	35	0.5	X/10	6	12	30	-	
							664	78.0	79.5	150	125	10	60	0.5	X/10	X	15	42	-	
							665	79.5	81.0	150	90	20	70	1.0	X/10	4	54	11	-	
							666	81.0	82.0	1.0	50	40	80	1.0	X/10	2	X	8	-	
							667	82.0	83.1	1.1	95	65	390	X	X/10	6	5	16	-	
83.1	84.4	1.3	8Q		<u>QUARTZ PORPHYRY</u> Med grey gn. al. altered gn. fresh sub-cuboidal feldspars and qtz eyes by restricted to minor fracturing	First 0.4m feldspars also alt ⁿ to a clean honey colour. py only on joint faces.	668	83.1	84.4	1.3	35	85	70	0.5	X/10	8	X	84	-	
4.4	89.3	4.7	8Q		<u>QUARTZITE</u> Med-dk grey c-v.c.g. py upto 15% gn. 10% - blabby especially at 87.1m. Min calc-silicate intercalations low. Lt grey cherty band at 87.6-88.5m.	Gen. py 10-15% - med fractured	669	84.4	85.6	1.14	55	25	295	0.5	50/10	2	79	20	-	
							670	85.6	86.9	1.23	125	60	220	0.5	X/10	2	56	52	-	
							671	86.9	87.6	0.70	355	25	45	X	X/10	2	14	152	X	
							672	87.6	88.5	0.83	35	110	20	0.5	X/10	X	X	X	-	
							673	88.5	89.75	1.25	350	60	60	0.5	100/10	X	21	80	-	
9.3	91.35	1.90	8Q		<u>CHERTY QUARTZITE</u> V. Lt grey cherty horizon - highly fractured qtzite. mica developed on joint faces - secondary silicification	Highly fractured, secondary silicification Thin section: Metagranite	674	89.75	91.30	1.55	30	30	30	0.5	100/10	2	13	8	-	

C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

611042 SHEET No. 4 of 4

TENEMENT NAME SHEFFIELD EL. No. 773

PLAN - MAP REFERENCE DOLCATH GRID

CO-ORDINATES S800E S127N AZIMUTH 200m DRILLERS PARRY COMMENCED 30-04-82 DEPTH 113.5 metres HOLE No. DD 82 DG 2

RL COLLAR INCLINATION -46° DRILL TYPE BOYLES COMPLETED 08-05-82 CASING LEFT Nil DPO No(s) 30046

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALABS)									
om (M)	To (M)										Ca	Pb	Zn	Ag	As	Bi	Mo	W	Sr	Au
11.35	110.5	18.87	8Q		<p><u>CALC-SILICATE SKARN</u> Dk grey sharn/hornfels zone py-pa upto 20% disseminated py-pa upto 20% in patches - sulphides disseminated as blabby -one banded texture. Occ bands of c.g. gylite (green) in the sharn sequence.</p>	<p>py-pa upto 20% disseminated of vein 20cm wide at 97m.</p>	972675	91.30	93.0	170	55	35	60	1.0	150	x	x	41	-	
							676	93.0	94.5	146	50	35	75	1.0	50	x	x	6	58	
							677	94.5	96.0	15	20	35	90	0.5	100	x	x	32	-	
							678	96.0	97.5	15	20	25	75	0.5	150	x	x	54	-	
							679	97.5	99.0	15	25	45	85	1.5	200	x	x	123	-	
							680	99.0	100.5	15	30	40	65	0.5	150	x	12	323	71	
							681	100.5	102.0	15	65	60	90	0.5	150	x	8	9	188	
							682	102.0	103.5	15	105	70	65	0.5	150	x	4	18	95	
							683	103.5	105.0	15	20	40	55	0.5	150	x	12	8	28	
							684	105.0	105.7	0.66	25	15	30	1.0	150	x	16	x	x	
							685	105.7	106.55	0.75	10	20	15	0.5	150	x	2	5	5	
							686	106.55	108.0	1.45	65	25	30	0.5	50	x	70	120	35	
							687	108.0	109.5	1.40	30	15	25	x	100	x	14	7	x	
							688	109.5	111.0	1.40	45	25	30	x	150	x	8	x	6	
110.5	113.5	2.70	8Q		<p><u>QUARTZITE - HORNFELS.</u> med-H grey dense, med fractured quartzite interbedded with dk grey hornfels (porphyritic) zones. py upto 8% in both horizons.</p>	<p>py upto 8%</p>	689	111.0	113.5	2.30	35	20	160	x	200	x	10	5	9	
					E.O.H.	EASTMAN CAMERA SURVEY														
						DEPTH	AZIMUTH	DECLINATION												
						0m	200m	-46°												
						30m	201m	-45°												
						65m	202m	-44°												
						95m	202m	-42°												

041

040

611044

SHEET No. 2 of 3
No. 7/73

C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

TENEMENT NAME SHEFFIELD

CO-ORDINATES 6606 510N AZIMUTH 20° DRILLERS PARRY COMMENCED 10.06.82 DEPTH 191.0 metres HOLE No. DG 3
RL COLLAR INCLINATION -46° DRILL TYPE BOYLES COMPLETED 25.06.82 CASING LEFT Nil DPO No(s) 30048 30251

PLAN - MAP REFERENCE DOLCATTI GRID

DEPTH		Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization					Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALABS)									
From (M)	To (M)					Grainite Fracture	No. of Grain Zones	Length Fracture (cm)	Fracture	Notes					Cu	Pb	Zn	Ag/Au	Bi	As	Mo	W	S	
					TS. 37m - BIOTITE MICROGRANITE	Grainite	2	40	-	-	972711	40.9	43.05	2.10	25	15	35	x	30	50	20	51	2	
						Grainite	1	37	-	1	712	43.05	43.44	0.37	40	55	60	20	870	300	48	1040	55	
						Grainite	2	16	7	-	713	43.44	45.44	2.0	10	5	25	x	50	x	36	146	9	
						Grainite	2	13	4	-	714	45.44	47.80	2.36	5	5	20	x	50	x	14	67	7	
						Grainite	1	43	-	4	cp 715	47.80	48.23	0.43	380	35	145	0.5	200	x	46	561	47	
						Grainite	5	17	23	1	716	48.23	50.70	2.47	5	10	20	0.5	90	x	46	342	5	
						Grainite	3	15	10	-	717	50.70	52.70	2.0	10	10	20	x	80	x	34	234	10	
						Grainite	5	30	16	2	718	52.70	54.05	1.35	10	10	20	x	80	50	12	102	9	
						Grainite	2	6	5	2	719	54.05	55.40	1.35	15	15	25	x	40	50	12	209	6	
						Grainite	3	43	2	-	720	55.40	56.20	0.80	35	15	40	x	40	50	2	51	39	
						Grainite	-	-	5	-	721	56.20	57.15	0.95	5	10	25	x	10	50	20	36	x	
						Grainite	4	40	-	6	722	57.15	58.55	1.40	20	5	35	x	10	x	16	339	20	
						Grainite	-	-	4	-	723	58.55	59.38	0.83	5	5	20	x	10	x	46	92	x	
						Grainite	7	48	2	2	724	59.38	61.00	1.56	35	5	30	x	50	50	62	387	28	
						Grainite	6	35	2	4	5 725	61.00	63.00	2.0	55	40	45	0.5	120	x	340	999	22	
						Grainite	4	20	6	-	726	63.00	65.00	2.0	5	5	25	x	70	x	14	29	9	
						Grainite	2	7	14	-	727	65.00	66.88	1.88	5	20	20	x	20	x	30	67	4	
T.O	84.0	1672	BQ		GRANITE																			
					White - lt grey - grey yellow equigranular granite composed of Qtz, feldspar, minor epidote alt ⁿ	Grainite	2	40	-	1	728	66.88	67.44	0.96	70	20	95	x	70	x	24	19	45	
					The gneisses gone and fractures mica/hornblende not as prevalent. Occ. rich veins as at 77.5m.	Grainite	2	9	30	1	729	67.44	69.44	2.0	10	10	20	x	30	x	46	101	7	
						Grainite	2	3	27	-	730	69.44	71.10	1.66	15	15	25	x	30	x	11	104	5	
						Grainite	4	46	2	1	731	71.10	72.00	0.90	25	10	65	x	200	50	92	869	30	
						Grainite	2	18	18	1	732	72.00	74.50	2.40	10	10	30	x	80	x	20	154	21	
						Grainite	5	31	10	3	733	74.50	76.35	1.85	60	15	60	0.5	130	x	28	164	53	
					TS. 74m - BIOTITE MICROGRANITE	Grainite	3	9	19	-	734	76.35	77.45	1.1	10	10	30	x	40	x	66	416	x	
						Grainite	1	55	-	1	735	77.45	78.06	0.6	1250	30	100	0.5	5500	100	58	791	80	

* GROUND CORE

APPENDIX TWO

GEOCHEMICAL SAMPLING LEDGERS

C.R.A. (PLORATION . GEOCHEMICAL SAMPLE DGER

Tenement name SHEFFIELD EL 7/73 No. 935001 - 935019 Sample numbers 935001 - 935019 Collected by G.B.W. Sheet no. ONE
 Area / Prospect JAGGATH GRANITE Date 23/5/81
 Map / Photo reference A 02143 Analysed by ANALABS (CODEE) DPO no. 30005

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W.	Sn.			
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
		s sample type ****																			
935001	S	PIT	15cm	B				5	19	156	0.2	0.5			X	X	4	4600N	Dk. gy. frags wh.-cream Moira SS 30%		
935002	F	gs.						10	20	X	0.5	X			S	X	8	4605N	Bleached gy, purple staining Med.-coarse grained (upto 1mm) Moira SS - no visible sulphides.		
935003	F	gs.						70	25	20	X	7.5			X	10	5	4615N	Dk red gossanous Quartzite (Moira) V. coarse gr.		
935004	S	PIT	15cm	B				3	12	104	0.1	1.0			X	X	10	4625N	Pale cream, bleached Moira SS. frags 30%		
935005	S	PIT	10cm	B				5	32	87	0.2	2.5			X	X	8	4650N	Dk. gy. sandy frags Moira SS. 50%		
935006	S	PIT	15cm	B				4	25	159	0.2	1.0			X	X	7	4675N	Pale creamy bn. frags weathered Moira SS 60%		
935007	S	PIT	10cm	B				3	107	31	0.2	1.5			X	X	30	4700N	Med. gy clayey soil. 40% frags Moira SS.		
935008	S	PIT	10cm	B				3	37	91	0.1	1.0			X	X	15	4725N	Dk. gy. clayey sand. pale gy. frags Moira SS 60%		
935009	S	PIT	15cm	B				2	47	29	0.1	0.5			X	X	5	4750N	Med. gy-bn clayey soil ss frags 50%		
935010	S	PIT	15cm	B				4	32	55	0.2	2.0			X	X	7	4775N	Med. gy-bn clayey soil. ss frags 50%		
935011	F	gs.						10	90	5	X	7.5			X	X	5	4790N	Wh.-cream bleached med.-coarse gr. SS (upto 1mm) containing dk. bn. spots.		
935012	S	PIT	20cm	B				3	47	27	0.2	1.0			X	X	5	4800N	Med. gy clayey soil. 20% Moira SS frags.		
935013	S	PIT	10cm	B				4	29	130	0.1	1.5			X	X	8	4825N	Med. gy. clayey soil frags SS 60%		
935014	S	PIT	10cm	B				7	17	93	0.1	2.0			X	X	5	4850N	Med. dk. gy soil frags 20% bleached Moira SS.		
935015	S	PIT	10cm	B				6	29	115	0.2	1.0			X	X	8	4875N	med-dk gy-bn. frags lt. cream-ss Moira SS.		
935016	F	gs.						25	5	15	X	2.5			S	X	9	4885N	Yellow + red-bn SS showing Liesegang banding. Rock med. gr. pale gn. gy quartzite.		
935017	S	PIT	10cm	B				19	42	111	0.2	1.0			X	X	100	4900N	Med. bn. frags 40% Au? - hornfels?		
935018	S	PIT	10cm	B				12	25	144	0.1	1.0			X	X	20	4925N	Med. dk. gy frags Moira SS and hornfels.		
935019	F	gs.						2050	5	750	2.0	5.0			X	10	90	4945N	Dk. gy. v. dense fine grained rock containing malachite stains		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. (PLORATION) GEOCHEMICAL SAMPLE DGER
 Tenement name... SHEFFIELD EL 7/13 No. Sample numbers... 935020 - 935042 Collected by... G.B.W. Sheet no. TWO
 Area / Prospect... DOLGORTH GRANITE Date... 23/5/81
 Map / Photo reference... .. Analysed by... ANALABS (COOE) DPO no. 30005
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
935020	S	PIT	10cm	B					305	44	350	0.3	X				X	590	150	4950N	Red-bn gossanous zone. Frags hornfels.
935021	F	qs.							1050	20	1450	3.0	7.5				X	X	110	4950N	Dkgy. v. fine grained. sulphidic hornfels.
935022	S	PIT	10cm	B					25	20	76	0.2	1.0				X	20	20	4975N	Dk. red. bn. fine soil. Frags 20% - hornfels
935023	S	PIT	15cm	B					59	15	171	0.3	X				X	65	45	5000N	Dk. bn. Frags 50% fine gr. dense hornfels.
935024	F	qs.							35	X	35	0.5	7.5				X	X	25	5010N	V. dk. gy. fresh sulphidic fine grained glassy hornfels.
935025	S	PIT	10cm	B					83	48	265	0.2	0.5				X	30	100	5025N	Dk. bn. Frags 40% hornfels rock.
935026	S	PIT	15cm	B					80	35	92	0.3	X				X	60	90	5050N	Red-bn Frags 30% fine gr. glassy hornfels rock.
935027	S	PIT	15cm	B					41	33	95	0.2	X				X	X	40	5075N	Red-bn Frags 30% fine gr. hornfels rock.
935028	S	PIT	20cm	B					59	38	86	0.4	X				X	X	25	5100N	Deep rd-bn. Frags 10% - Rhyolite
935029	F	qs.							45	15	45	0.5	2.5				5	X	65	5103N	Dk. gy-gr fresh Rhyolite
935030	F	qs.							85	105	15	0.6	2.5				X	X	3	5110N	Pink-rd. gossanous tuffaceous rock. Manganese infilling.
935031	F	qs.							10	X	15	X	5.0				X	X	9	5110N	Med. gy. Sil. stained tuffaceous ss?
935032	S	PIT	20cm	B					64	40	89	0.4	X				X	15	45	5125N	Red-bn Frags 10% tuffs?
935033	S	PIT	20cm	B					46	40	120	0.5	0.5				X	X	30	5150N	Dk. yellow bn. Frags 20% Moine SS.
935034	S	PIT	20cm	B					62	35	91	0.5	X				X	15	40	5175N	Deep red-bn Frags 10% Moine SS.
935035	F	qs.							50	X	10	X	7.5				15	X	20	5185N	Fe + Mn stained coarse gn. Moine SS - gossanous float.
935036	S	PIT	10cm	B					43	32	104	0.5	0.5				X	X	35	5200N	Red bn Frags 10%
935037	S	PIT	10cm	B					64	37	107	0.4	0.5				2	15	35	5225N	Red-bn Frags 5% Moine SS.
935038	S	PIT	15cm	B					22	28	141	0.6	0.5				5	X	45	5250N	Dk. gy-bn. Particles 40%
935039	S	PIT	10cm	B					16	18	163	0.6	0.5				7	15	40	5275N	Dk. reddish bn. Frags 30% Moine SS + Grits.
935040	S	PIT	10cm	B					7	8	120	0.3	0.5				4	10	40	5300N	Med bn. Float Moine grits.
935041	S	PIT	15cm	B				✓	8	6	100	0.3	1.0				X	10	40	5325N	Bl. - dk. gy Frags 5% w/ bleached ss.
935042	S	PIT	15cm	B				✓	6	15	71	0.4	1.0				X	X	30	5350N	Bl. soil carbonaceous. Frags 10% ss and st.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = ch...

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE DGER

Tenement name SHEFFIELD F.L. No. 73 Sample numbers 935401-935421 Collected by L.M. CLARKESON Sheet no. Four
 Area / Prospect DALCOATH GRANITE GARD. + 935431, 935432 Date.....
 Map / Photo reference LIME SLOPE 5000N-5275N. (N. of Bore) Analysed by ANALABS (COORC) DPO no.....
 A 02143

Sample No.	Type	ss channel **							Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss*	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		oc	a/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
		f	s sample type ****							✓	✓	✓	✓	✓			✓	✓	✓			
935401	S	0.60	C						46	43	53	0.3	X			2	25	50	500E 5000N	Ochre-yellow. Qz-arenite clasts.		
935402	F	gs							35	20	25	X	2.5			5	X	X	5020E 5020N	Fresh cong., clasts to fem, qz detrital. Tr. py. Sheared		
935403	S	0.80	o/c						88	43	80	0.3	X			3	30	130	5100E 5025N	Ochre.		
935404	S	0.60	o/c						81	44	66	0.3	0.5			2	15	70	5030N	Red-ochre. Bottomed on ? bedrock - qz-arenite frags.		
935405	F	gs							10	30	20	X	X			X	10	6	5030N	Pale grey, med gr. weathered qz-arenite. no v. sulph.		
935406	oc	gs							10	20	35	X	X			X	X	10	5060N	Mid grey, fine gr. qz-arenite/qzite. NW.M.		
935407	S	0.70	C						78	50	65	0.2	0.5			2	15	45	5075N	Ochre-brown. Highly weathered qz-arenite frags.		
935408	S	0.80	C						48	50	58	0.3	0.5			1	15	60	5100N	Ochre.		
935409	F	gs							15	30	40	X	2.5			X	X	100	5100N	Highly weath. qz-arenite buff-light grey.		
935431	SS	0.2	0.70	70%	30%				20	30	40	X	X			X	15	35	5115N	Qz-arenite float dominant. Little organic material.		
935432	oc	gs							35	30	15	0.5	7.5			10	X	9	5115N	Highly weathered, buff qz-arenite.		
935410	S	0.90	C						6	19	25	0.1	0.5			1	X	15	5125N	Profile full of large clasts - qz-arenite.		
935411	F	gs							10	25	5	X	5.0			10	X	10	5125N	Close to dc. Lt grey qz-arenite, poorly sorted? Tr. py.		
935412	o/c	gs							10	20	5	X	5.0			10	X	3	5140N	Mid grey qz-arenite.		
935413	S	0.85	o/c						5	26	28	0.2	0.5			2	10	20	5160N	Grey, sandy.		
935414	oc	gs							10	30	5	X	5.0			5	X	6	5180N	Grey qz-arenite. Distinct sulphide smell when break.		
935415	S	0.40	B						6	13	30	0.2	2.0			X	X	20	5175N	Grey sandy with qz-arenite fragments.		
935416	S	0.40	B						7	9	100	0.1	X			1	X	X	5200N	Grey, sandy.		
935417	F	gs							5	15	X	X	X			X	X	6	5200N	Close to dc. Qz veins, buff qz-arenite.		
935418	S	0.90	C						14	32	21	0.2	1.0			2	X	40	5225N	Grey, sandy.		
935419	S	0.90	C						9	52	32	0.1	0.5			17	25	220	5250N	Grey, sandy.		
935420	S	0.80	o/c						13	24	30	0.3	0.5			15	15	85	5275N 5100E	Sandy.		
935421	F	gs							10	30	X	X	X			X	15	20	5275N	Close to dc beach. 11. 1.1. 5.1. 1.1. 1.1.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = (luvi-)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD F.L. No. 773 Sample numbers 935422-935430 Collected by I.M. CLEMENTSON Sheet no. FIVE
 Area / Prospect DALCOATH GRANITE Date

Map / Photo reference LINE S100E / S300N - 3415N (N. of Road) Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		oc	o/c sample type ***						✓	✓	✓	✓	✓		✓	✓	✓				
		f	s sample type ****																		
935422	S	avg	0.40	A/B					11	9	26	0.2	10			4	15	15	S100E / S300N	Gray, sandy soil. Qz-arenite float.	
935423	S	..	0.40	A/B					6	14	21	x	25			5	20	15	S325N	Gray, sandy soil. C-horizon not developed.	
935424	F	gs							15	15	5	x	75			x	x	5	S305N	Clasts of? Poorly sorted qz-arenite. Fe oxide	
935425	S	avg	0.40	B					5	14	28	0.1	10			x	x	15	S330N	No C-horizon developed. Sandy soil. Gray	
935426	oc	gs							15	25	x	x	5.0			5	x	x	S350N	Pale grey-white qz-arenite. Strong "S" smell when struck. No Mn. V. hard.	
935427	S	avg	0.40	B/C					6	6	18	0.1	15			1	10	15	S375N	Gray, very sandy.	
935428	F	gs							15	30	5	x	75			10	x	5	S385N	Must be close to dc. Med gr., gray qz-arenite. Pink Mn staining. V. compact.	
935429	S	avg	0.30	B					6	9	29	0.1	20			2	10	15	S400N	Abundant qz-arenite float & fragments in soil.	
935430	oc	gs							10	15	15	x	25			10	x	10	S415N	Light-gray / buff qz-arenite. V. poorly sorted. Qzitic in irregular patches (2ndary silicification) Dip 20° W. Strike 200° N. (Associated are a few small fragments of? qz-arenite float). <u>N. END OF LINE S100E</u>	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEEPFIELD F.L. No. 773 Sample numbers 935433-935453 Collected by I. A. CLEMENTSON Sheet no. SIX
 Area / Prospect DALCAATH GRANITE Date.....
 Map / Photo reference LINE SLOPE (4975N-4600N) (S of 3000) Analysed by..... DPO no.....
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		oc	o/c sample type ***						✓	✓	✓	✓	/			✓	✓	✓			
		f	s sample type ****																		
935433	S	avg	1.10	C					94	52	60	0.2	X		0.090	1	25	35	4975N	Sandy, qz-arenite frags.	
935434	S	avg	1.10	C					40	44	73	0.2	0.5			X	35	15	4950N		
935435	F	gs							45	15	15	X	2.5			10	X	15	4950N	Highly ferruginous (hem. lin) brecciated b. effaceous material. Def: natly volc-clast	
935436	S	avg	1.20	B					22	72	32	0.4	1.5			4	25	20	4925N	V. deep soil development. Leached sandy soil in 3	
935437	S	avg	0.70	B/C					18	87	53	0.5	1.0			4	10	15	4900N		
935438	S	avg	0.50	B/C					9	113	19	0.3	0.5			6	X	20	4875N	Water table at 45cm.	
935439	S	avg	0.35	B/C					10	147	69	0.4	0.5			4	15	45	4850N		
935440	S	avg	0.40	B/C					9	101	76	0.3	0.5			8	25	45	4825N	Qz-arenite frags	
935441	F	gs							5	15	X	X	X			X	10	3	4825N	Pale grey sauctaroidal qz-arenite. S. small when streaks. No Vio min.	
935442	S	avg	0.80	C					7	98	46	0.3	X			4	15	20	4800N	Sandy, grey Qz-arenite frags.	
935443	S	avg	0.70	C					6	57	33	0.2	0.5			5	15	25	4775N	Qz-arenite fragments.	
935444	S	avg	0.35	B					3	19	30	0.2	1.0			2	15	15	4750N		
935445	F	gs							X	40	5	X	X			5	X	7	4750N	lt grey qz-arenite. Close to d/c?	
935446	S	avg	0.30	B/C					4	6	16	0.2	2.0			X	15	X	4725N	Silted in grey qz-arenite.	
935447	S	avg	0.25	B					4	84	19	0.1	1.0			2	15	15	4700N	No C. developed. Grey, leached, sand.	
935448	F	gs							X	50	X	X	X			X	X	3	4700N	lt grey qz-arenite. Prob. close to d/c.	
935449	S	avg	0.30	B					3	33	18	0.1	1.5			1	X	15	4675N	Pale grey qz-arenite frags.	
935450	S	avg	0.30	B					2	53	62	0.2	0.5			1	10	20	4650N	" " " " " "	
935451	S	avg	0.50	B					4	42	19	0.1	0.5			3	X	50	4625N	" " " " " " , plus br. qz-arenite frags	
935452	S	avg	0.30	B					2	17	32	0.1	0.5			X	X	X	4600N	Sand, qz-arenite clasts.	
935453	F	gs							20	15	X	X	50			10	X	4	4600N	Ferruginous qz-arenite. Altered appearance	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream used

C.R.A. (PLORATION . GEOCHEMICAL SAMPLE DGER

Tenement name SHEFFIELD EL 7/73 No. Sample numbers 935067 - 935 Collected by GNW Sheet no. SEVEN
 Area / Prospect DALCATH GRANITE Date 23-5-81
 Map / Photo reference Analysed by ANALABS (COOEE) DPO no. 30005
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		o/c sample type ***							/	/	/	/	/			/	/	/			
		s sample type ****																			
935067	S	A	100cm	B				15	52	170	0.5	X			3	X	20	4950N	Med. bn. frags 30% Quartzite?		
935068	S	PIT	20cm	B				13	31	57	0.4	0.5			2	X	20	4925N	Med. bn. frags 20% weathered quartzite.		
935069	S	PIT	40cm	B				22	43	62	0.5	X			1	X	25	4900N	Dk. bn. no frags.		
935070	S	PIT	10cm	B				15	52	61	0.5	X			5	X	30	4875N	Dk. bn. frags 10% one piece float sugary Qtzite		
935071	S	PIT	15cm	B				12	30	92	0.5	1.5			7	X	30	4850N	Dk. gy-bl. frags 10%		
935072	S	PIT	20cm	B				5	17	63	0.3	1.5			X	X	15	4825N	Dk. gy. frags 30%		
935073	S	PIT	20cm	B				4	12	44	0.3	1.0			X	X	20	4800N	Med.-lt. gy leached frags 40% wh. sugary Quartzite.		
935074	S	PIT	25cm	B				3	10	18	0.1	0.5			2	X	15	4775N	Med. gy. frags 40% sugary Qtzite.		
935075	F	gs						20	25	15	X	200			5	15	10	4755N	Wh. sugary Qtzite ± red-purple staining on bedding pl		
935076	S	PIT	20cm	B				3	12	115	0.2	0.5			1	X	15	4750N	Med.-dk. gy soil. frags 30% Qtzite.		
935077	S	PIT	30cm	B				12	16	74	0.6	X			X	X	30	4725N	Med. gy. frags 30%		
935078	S	PIT	20cm	B				3	15	145	0.3	1.0			3	X	20	4700N	Med.-dk. gy. frags 20%		
935079	S	PIT	10cm	B				4	5	81	0.2	1.0			X	X	40	4675N	Med.-gy. frags 40%		
935080	S	PIT	10cm	B				3	5	120	0.3	1.0			X	X	20	4650N	Pale gy-bl. frags 60% sugary Qtzite.		
935081	S	PIT	20cm	B				4	8	50	0.2	2.0			X	X	30	4625N	Lt. bn-gy. frags 50% leached sugary Qtzite.		
935082	S	PIT	20cm	B				6	12	230	0.3	1.0			3	X	20	4600N	Lt. bn-gy frags 50% as above		
935083	SS	✓	1m	✓			2km ²	57	33	95	0.3	X			X	X	20	4575N	float f.g. Qtzite (A.V.?) rock Mn stained on joint planes		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEPHERD EL 7/73 No. 935045 - 935066 Sample numbers 935045 - 935066 Collected by G. BAO Sheet no. EIGHT
 Area / Prospect DALGOATH GRANITE Date 23/05/81
 Map / Photo reference A 02143 Analysed by ANALABS (COSEE) DPO no. 30005

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓		
		s sample type ****																		
935045	S	PIT	10cm	B			✓	5	X	145	0.3	1.0			X	X	20	5400N	Dk gy. sandy frags 20% Moine ss. + grits.	
935046	S	PIT	10cm	B			✓	4	5	61	0.2	0.5			4	X	20	5375N	Dk gy sandy soil. frags 30% coarse-v. coarse ss.	
935047	S	PIT	15cm	B			✓	5	X	90	0.3	1.0			X	X	20	5350N	Dk gy-black. frags 30% Moine ss.	
935048	F	gs.						10	X	5	X	2.5			X	25	40	5325N	Med-coarse ss containing bands of reddish-bn material.	
935049	S	A	25cm	B				5	X	60	0.3	1.0			2	20	110	5325N	Dk gy sandy soil. frags 30% ss.	
935050	S	A	20cm	B				7	X	65	0.3	1.5			X	X	65	5300N	Dk gy-bl. soil. frags 20% Moine ss.	
935051	S	A	15cm	B			✓	6	X	71	0.3	1.0			6	15	45	5275N	Dk gy-bl soil frags 30% med gn. Moine ss.	
935052	S	A	40cm	C				3	28	79	0.2	1.0			X	X	35	5250N	Med bn-gy sandy soil. frags 20%	
935053	S	A	35cm	B				6	23	116	0.3	1.0			3	X	20	5225N	Med. dk gy sandy soil. frags 20% leached ss.	
935054	S	A	25cm	B			✓	6	12	63	0.3	1.5			X	X	25	5200N	Dk gy. frags 30% leached Moine quartzite.	
935055	S	A	20cm	B				6	14	82	0.5	2.0			10	X	10	5175N	Dk gy-bn. frags 30% Moine grit.	
935056	S	A	25cm	B				36	1640	520	8.5	1.5			1	X	15	5150N	Med gy. frags 30% bleached ss.	
935057	S	A	70cm	C				14	51	250	0.4	X			7	X	25	5125N	Dk red-bn. frags 60%	
935058	F	gs.						10	25	X	X	5.0			X	X	8	5120N	lt. gy hornfelsed quartzite, yellow stains on joint faces.	
935059	F/o.c	gs.						10	X	5	X	5.0			5	X	20	5110N	yellow-gy bleached. py vugs volcanic tuff?	
935060	S	A	60cm	B				8	18	71	0.4	1.0			1	X	20	5100N	Dk bn-gy. frags 30%	
935061	S	A	40cm	B				30	740	410	3.7	0.5			14	X	30	5075N	Dk gy-bn. frags 20% no o.c. here	
935062	F	gs.						60	20	10	X	7.5			70	20	45	5070N	Dk red silicified quartzose rock-veined-gossanous in part with veins?	
935063	S	A	50cm	B/C				26	111	66	0.5	0.5			1	X	25	5050N	med. bn - weathered volcanic? float hornfels.	
935064	S	A	50cm	B/C				154	78	170	0.3	X			X	X	130	5025N	Med-bn frags v. weathered volcanic? 30%	
935065	S	A	5cm	B				15	14	53	0.3	2.0			3	X	10	5000N	Dk gy. frags 40% ss?	
935066	S	A	100cm	C				46	86	136	0.7	0.5			2	X	15	4975N	Med. yellow-bn. frags 20% - weathered	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

611057

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEPHERD E.L. No. 773 Sample numbers 935454-935473 Collected by Ian M. CLEMENTSON Sheet no. N/A
 Area / Prospect DALSOUTH GRANITE (enc. 935470). Date.....
 Map / Photo reference LINE S300E / 8000N - 4675N (5.2 of base) Analysed by..... DPO no.....
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		oc	o/c sample type ***																		
		f	s sample type ****																		
								✓	✓	✓	✓	✓			✓	✓	✓	5300E			
935454	S	avg	0.50	B/C				25	36	86	0.4	0.5			3	15	55	5000N	Fine frings, mainly qz. Brownish-red soil		
935455	S	avg	0.50	C				26	56	64	0.5	0.5			3	15	40	4975N			
935456	SS	0.2	0.5	50%	50%			30	55	15	x	x		x	x	MS. SAMPLE	MS. SAMPLE	4970N	20% organic. Qz-arenite - major clast type.		
935457	S	avg	0.80	C				31	49	41	0.5	x			3	25	20	4950N	Ochre-yellow. Qz fragments.		
935458	S	avg	0.85	C				5	17	20	0.2	x			4	x	15	4925N			
935459	S	avg	0.50	B/C				5	22	38	0.2	x			3	x	15	4900N	V. highly weath. qz-arenite frings & float.		
935460	S	avg	0.50	B/C				4	20	42	0.2	15			x	35	15	4875N	Qz-arenite clasts, bottomed in same.		
935461	S	avg	0.25	B				8	16	32	0.2	4.0			2	15	15	4850N	Bottomed in qz-arenite. V. sandy soil.		
935462	F	gs						10	95	5	0.5	2.5			x	x	3	4835N	Lt grey-white qz-arenite. Tr. x millim. qz fr.		
935463	S	avg	0.65	B/C				5	16	29	0.1	1.5			3	20	25	4825N	Coarse qz-arenite float clasts.		
935464	S	avg	0.70	B/C				6	20	33	0.2	0.5			7	15	25	4800N	Grey, v. sandy.		
935465	F	gs						15	20	5	x	5.0			x	x	20	4800N	Qz-porphyr / qz-epitaxial (?) N.Y.M.		
935466	S	avg	0.30	B/C				8	4	39	0.2	1.5			4	x	15	4775N	Grey, sandy. Few frings, all qz-arenite		
935467	S	avg	0.80	B/C				4	4	57	0.1	1.0			5	25	100	4750N			
935468	o/c	rc						20	10	5	x	10.0			x	x	45	4750N	Chip over 50cm vertical light grey-white fine-med gr. qz-arenite / qz:ls. V. compact. Dip 20° SW / 280° M.		
935469	S	avg	0.35	B				5	4	20	0.1	2.5			1	x	x	4725N	Grey sandy soil.		
935470								# NOT USED.													
935471	S	avg	0.80	B				7	9	45	0.2	1.5			4	x	15	4700N	Grey, sandy.		
935472	F	gs						10	10	5	x	2.5			x	x	10	4700N	Must be close to dc. Qz-arenite with streakwork of qz veination. Mn staining.		
935473	S	avg	0.35	B				2	5	51	0.2	1.0			2	10	10	4675N	Grey, very sandy.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

Tenement name: SHEFFIELD FL. 7/73 No. 935474-935492 Sample numbers: 935474-935492 Collected by: I.M. CLEMENTSON Sheet no. TEN
 Area / Prospect: DALCOATH GRANITE Date:
 Map / Photo reference: LINE 5300E / 4650N - 5015N - 5300N Analysed by: DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		o/c sample type ***							/	/	/	/	/			/	/	/		
		s sample type ****																		
935474	S	avg	0.35	B				3	27	24	0.1	0.5			x	x	20	4650N	Gray, very sandy.	
935475	F	gs						15	5	10	x	x			x	x	8	4650N	Fe stained qz-arenite. Possibly tufaceous.	
935476	S	avg	0.35	B				3	13	87	0.1	1.5			1	15	15	4625N	Gray, sandy soil. Qz, qz-arenite frags.	
935477	S	avg	0.15	B				3	9	24	0.1	1.5			1	x	15	4600N	Ballston in qz-arenite frags.	
S. END OF LINE																				
935478	F	gs						10	15	60	x	x			5	x	50	5015N	Dk grey-brown ? hornfelsic arenite or cherty tufl. N.Y.M.	
935479	S	avg	0.30	B/c				17	22	73	0.1	x			5	10	120	5025N	dk-brown. Minor qz frags	
935480	S	avg	0.60	B/c				6	12	37	0.1	1.0			1	10	30	5050N	Gray, sandy.	
935481	S	avg	0.80	B/c				23	18	64	0.2	0.5			8	20	180	5075N	Brown-grey, sandy. Qz, qz-arenite frags.	
935482	S	avg	0.30	B				3	10	16	x	x			3	10	40	5100N	Gray, sandy.	
935483	S	avg	0.30	B				2	16	19	0.1	1.0			x	15	35	5125N	Dk grey, sandy.	
935484	F	gs						10	10	10	x	2.5			x	x	10	5125N	Light grey, fine gr. qz-arenite. N.Y.M.	
935485	S	avg	0.70	C				3	4	14	0.1	1.0			1	10	10	5150N	V. sandy.	
935486	S	avg	0.65	B/c				3	11	100	0.1	1.5			1	x	x	5175N	lt grey, sandy. Qz-arenite. Flak & frags.	
935487	S	avg	0.65	B/c				63	5	16	0.1	0.5			1	x	10	5200N	" " " " " "	
935488	S	avg	0.60	B				11	8	59	0.1	0.5			x	10	x	5225N	" " " " " "	
935489	F	gs						10	25	5	x	2.5			5	x	4	5225N	lt grey, md gr, poorly sorted qz-arenite. Possibly tufaceous. N.Y.M.	
935490	S	avg	0.50	C				50	29	29	0.1	1.5			x	x	30	5250N	lt grey, very sandy.	
935491	S	avg	0.50	C				7	52	19	0.1	0.5			2	x	50	5275N	" " " " " " abundant qz-arenite flak	
935492	S	avg	0.45	B				6	19	19	x	0.5			1	x	60	5300N	lt grey, md gr, poorly sorted. Leached, s.s., sandy.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

611059

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE RIDGER

Tenement name SHEFFIELD E.L. 7/73 No. Sample numbers 935493 - 935498 Collected by I.M. Clementson Sheet no. ELEVEN
 Area / Prospect DALCOATH GRANITE Date.....
 Map / Photo reference LINE 5300E / 5325N - 5400N Analysed by..... DPO no.....
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		oc	o/c sample type ***						✓	✓	✓	✓	✓			✓	✓	✓			
		f	s sample type ****																		
935493	S	avg	1.10	B					19	9	73	0.1	0.5			x	15	35	5300E		
935494	oc	gs							15	5	5	x	2.5			x	x	20	5325N	Lt grey, sandy leached.	
935495	S	avg	0.80	B					4	1	15	0.1	0.5			x	10	30	5350N	Lt grey. Sandy. Abundant qz-arenite float continuous between of cat 5325N and end of line at 5400N.	
935496	S	avg	0.80	B					7	2	30	0.1	1.0			2	x	20	5375N	Lt grey, very sandy.	
935497	S	avg	0.80	B					6	1	15	0.1	0.5			x	x	25	5400N		
935498	f	gs							10	15	5	x	2.5			x	x	4	5400N	Must be close to etc. Lt grey, v. coarse, gritty arenite. Distinct qz clasts. Could be a qz-eye tuff but rather looks definitely non-volcanic.	
																				N.B. Sample #'s 935499 and 935500 NOT USED.	
																				<u>END OF LINE</u>	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

Tenement name SHEFFIELD EL 773 No. 935084 - 935102 Sample numbers 935084 - 935102 Collector by GMW Sheet no. TWELVE
 Area / Prospect DALCATH GRANITE Date 23-05-80
 Map / Photo reference A 02143 Analysed by ANALYSIS (COOEE) DPO no. 30005

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		o/c sample type ***																			
		s sample type ****																			
935084	S	A	20cm	B-C				5	25	26	0.2	0.5			3	X	40	4400N	Med gy leached soil. frags 30% f.g. Qtzite.		
935085	%	gs						10	70	125	0.5	5.0			5	X	10	4380N	Dk gy-gr epidote-chlorite rich 5-10% py		
935086	S	A	1m	B-C				15	32	153	0.2	0.5			13	10	320	4425N	Yellow-bn. frags 40% Qtzite		
935087	%	gs						65	335	25	X	2.5			5	X	25	4440N	Pale gr-gy bleached but some bands epititic yellow-bn - sampled. ST. 330m Dip 66 S.E.		
935088	S	A	30cm	B-C				6	29	126	0.1	1.5			67	70	50	4450N	Med-dk yellow bn. frags 20% weathered ss.		
935089	S	A	25cm	B				3	6	39	0.1	0.5			1	X	35	4475N	Med gy-bn. frags 20%		
935090	F	gs						15	10	25	X	7.5			X	X	10	4485N	Dk gy f.g. hornfels E large blks py + ?		
935091	F	gs						10	X	15	X	5.0			15	X	5	4495N	Dk gr-gy highly pyritic f.g. Qtzite.		
935092	SS	0.1	15m	✓	✓			10	25	5	X	10.0			95	380	60	4500N	float 60% fresh/ weathered pale cream - dk Qtzite 40% dense dk gy pyritic Qtzite.		
935093	SS	0.06	0.6m	✓	✓			10	X	X	X	2.5			X	X	15	4525N	float 80% bleached Qtzite + 20% py. Qtzite or A.V.?		
935094	S	A	15cm	B				2	3	65	0.1	1.5			1	X	15	4550N	Pale creamy-gy. frags 20% - V. steep scree slope consisting of leached-bleached sugary Qtzite.		
935095	S	A	10cm	B ₁			✓	3	1	38	0.2	0.5			X	X	50	4575N	Dk-gy-black frags 30% bleached Qtzite.		
935096	S	A	10cm	B				6	4	65	0.1	1.0			1	20	40	4600N	Med-dk bn. frags 10% bleached wh. Qtzites		
935097	S	A	20cm	B				3	13	129	0.1	0.5			1	X	40	4625N	Med gy bleached sugary Qtzite float 30%		
935098	S	A	20cm	B				2	7	77	0.1	X			1	15	250	4650N	V. dk gy - leached frags 30% bleached wh. sugary Qtzite		
935099	S	A	10cm	B			✓	3	5	99	X	X			3	X	35	4675N	V. dk gy-bl frags 20% bleached wh. sugary occ. veined Qtzite.		
935100	S	A	15cm	B				4	10	98	0.2	0.5			2	20	35	4700N	V. dk gy. frags 20% bleached wh. sugary Qtzite.		
935101	F	gs						10	X	X	X	5.0			X	X	50	4705N	Dk gy-gr Qtzite showing Mn + Sphalerite.		
935102	S	A	25cm	B				3	3	133	0.1	X			1	X	35	4725N	Dk gy. frags 30% Qtzite + grit (upto 15mm)		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

611061

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEPHERD EL 7/73 No. 935103 - 125 Sample numbers 935103 - 125 Collected by CBW Sheet no. THIRTEEN
 Area / Prospect JALCOATH GRANITE Date 23-05-81
 Map / Photo reference A 02143 Analysed by ANALABS DPO no. 30005

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W			Sn
		oc	o/c sample type ***						/	/	/	/	/	/	/	/	/	/			
		f	s sample type ****						/	/	/	/	/	/	/	/	/	/			
935104	S	A	20cm	B					3	1	122	0.3	0.5			X	X	25	4775N	Med gy. leached frags 40% Grtite.	
935105	S	A	30cm	B					4	18	157	0.3	0.5			3	X	30	4800N	Yellow-bn frags 50% Moina Qtzite + grit.	
935106	S	A	20cm	B					4	4	114	0.2	1.0			X	X	20	4825N	Dk gy. frags 50% bleached Moina ss + grit.	
935107	S	A	20cm	B					2	1	27	0.1	0.5			X	X	20	4850N	Lt. gy sandy. frags 20% bleached Moina ss + grit.	
935108	S	A	70cm	B-C					4	22	47	0.2	0.5			2	45	65	4875N	Pale creamy bn. frags 30% wh leached ss.	
935109	S	A	50cm	B-C					11	62	32	0.1	0.5			10	10	60	4900N	Yellow bn. frags 10% - Qtz vein.	
935110	S	A	50cm	B-C					5	27	37	X	0.5			2	X	25	4925N	yellow-red bn. frags 50% f.g. Qtzites.	
935111	S	A	40cm	B					24	152	172	0.8	0.5			3	15	25	4950N	Yellow-bn. frags 30% - ss.	
935112	S	A	20cm	B					19	79	114	0.2	1.0			4	15	25	4975N	Gy cherty soil frags 30% Moina ss.	
935113	F	gs							15	30	15	X	7.5			X	X	15	4990N	Gy-yellow Moina ss - some pitting after? py.	
935114	S	A	1m	B-C					24	72	62	0.3	X			3	20	45	5000N	Yellow bn. frags Moina ss.	
935115	S	A	80cm	B-C					21	42	155	0.3	0.5			5	10	50	5025N	Yellow-bn frags - vol.?	
935116	F	gs							640	55	95	10	10.0			X	X	60	5040N	Blue-gy fresh f.g. cherty rock py 5% PET.	
935117	S	A	40cm	B					5	35	76	0.1	1.0			3	X	50	5050N	Med bn. frags 20%. float f.g. AN? in chert on Qtzite.	
935118	S	A	40cm	B					7	28	67	0.3	0.5			12	X	50	5075N	Mod. dk-bn. frags 40%	
935119	S	A	35cm	B					3	6	38	0.1	0.5			X	X	20	5100N	Gy-bn. float hornfels or chert.	
935120	S	A	80cm	B					5	28	37	0.2	1.0			6	X	40	5125N	Med-dk gy. frags 20%	
935121	S	A	30cm	B					3	X	80	0.1	1.0			X	X	20	5150N	Med gy. frags 60% bleached wh. Qtzite.	
935122	S	A	50cm	B					4	11	16	0.1	X			3	X	50	5175N	Med bn. gy frags 60% bleached wh. sandy Qtzite float Moina grit.	
935123	S	A	70cm	B					4	13	80	0.1	1.0			X	X	40	5200N	Lt. gy-bn. frags 20% float Moina ss + grit.	
935124	S	A	25cm	B					8	10	30	0.1	1.0			5	10	40	5225N	Med gy. bn. frags 20% quartzite bleached.	
935125	S	A	40cm	B					3	19	57	0.2	1.0			12	15	50	5250N	Med bn-gy frags 20% bleached wh. Qtzite	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEPHERD EL 7/73 No. 935126 - 935131 Collected by G.B.W. Sheet no. FOURTEEN
 Area / Prospect DOLCOMB GRANITE Date 23-05-81
 Map / Photo reference A 02143 Analysed by ANALABS (COOEE) DPO no. 30005

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %							Grid ref	Geological Observations			
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au			Bi	W	Sn
		o/c sample type ***							s sample type ****											
935126	S	A	20cm	B				/	/	/	/	/			/	/	/	5400E	Dk gy - Pink particles 60% - white qtzite frags.	
935127	S	A	15cm	B				4	10	84	0.2	1.5			X	X	40	5275N	Dk gy - bl. frags 40%. float wh. bleached qtzite.	
935128	S	A	10cm	B			✓	5	X	46	0.2	2.0			2	X	25	5325N	Dk gy - bl frags 20%. float bleached moina ss.	
935129	S	A	20cm	B				6	1	235	0.2	2.0			X	X	15	5350N	Dk gy - bl. frags 40%	
935130	S	A	25cm	B				5	15	75	0.1	2.0			X	X	15	5375N	Med-dk gy frags 40%	
935131	S	A	60cm	Bc				3	8	52	0.3	1.5			X	10	20	5400N	Med br-gy frags 30% moina ss.	
935157	F	gs						5	X	X	X	2.5			X	X	15	4825N	Pale cream - wh bleached moina ss. Mo? flakes obs. on joint faces.	
935103	S	A	20cm	B				3	5	210	X	X			X	X	10	4750N	V. dk gy frags 50% Gritty moina.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD 7/73 No. Sample numbers 935901-935913 Collected by J.M. CLEMENTSON Sheet no. FIFTEEN
 Area / Prospect DALGORTH GRANITE Date.....
 Map / Photo reference LINE 5500 E / 5000 N - 5145 N Analysed by..... DPO no.....
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations	
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		oc	o/c sample type ***																			
		f	s sample type ****																			
935901	S	avg	100	C					41	60	49	0.1	0.5			20	30	250	5000N	Brown-ochre. Qz-arenite Frogs. Minor lt grey qz-arenite float at o.c.		
935902	S	avg	0.70	C					150	110	120	0.5	1.5			6	X	85	5025N	Ochre. Few clasts of qz-arenite/qz.		
935903	oc	gs							10	700	45	X	X			X	X	X	5025N	V. Fine grained, very compact, qz-arenite. Mid grey, almost cherty. No Vis. Min.		
935904	F	gs							15	50	55	0.5	2.5			10	X	4	5025N	DK grey, very fine gr, v. compact? horn bl. Silvery, metallic mineral dispersion, possibly amorphous.		
935905	oc	gs							5	10	100	X	X			10	X	9	5025N	DK grey-brown horn bl. as above but N.V.M.		
935906	S	avg	0.50	8C					24	17	35	0.1	1.0			X	X	20	5025N	Bottomed in grey sandy soil, sub qz-arenite block		
935907	S	avg	0.15	B					7	44	26	0.2	0.5			5	10	15	5025N	Lt grey v. sandy. Qz-arenite Frogs.		
935908	oc	gs							5	5	10	X	5			X	X	10	5025N	Lt grey fine gr qz-arenite. Irregularly Fe stained. No Vis. Min.		
935909	S	avg	0.15	B					6	12	60	0.1	0.5			X	X	15	5100N	Lt grey sandy.		
935910	oc	gs							25	5	5	X	2.5			X	X	10	5100N	Qz-arenite (continuous from 5025N) - worn casts obvious Med. gr., often Fe stained.		
935911	S	avg	0.60	8C					18	16	137	0.1	0.5			1	15	15	5125N	Lt grey sandy.		
935912	oc	gs							10	10	10	X	X			X	X	X	5125N	As previous etc.		
935913	F	gs							10	10	5	X	X			X	X	10	5145N	Amongst etc of qz-arenite, a fragment (float) of an intensely siliceous rock with med. cherty clasts to 1cm. Probably a meta-sandstone/grit/cong. Possibly calc-clastic - but matrix is v. fine.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE RIDGER

Tenement name SHEFFIELD F.L. 7/73 No. Sample numbers 93 - 935927 Collected by Van M. Clementson Sheet no. SIXTEEN
 Area / Prospect DALCOATH GRANITE Date.....
 Map / Photo reference LINE STAKE / 5150N - 5400N Analysed by..... DPO no.....
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		oc	o/c sample type ***						/	/	/	/	/			/	/	/			
		f	s sample type ****																		
935914	S	aug	0.20	B					8	10	94	0.1	0.5			2	X	15	5150N	Grey, sandy. o/c and float of grey qz-arenite.	
935915	F	gs							15	15	5	X	2.5			X	X	6	5160N	Red, silicified, fine grained qz arenite with irregular lenses of coarser gr. material forming S well when struck. Tuffaceous??	
935916	S	aug	0.30	B/C					5	5	10	X	X			10	15	20	5175N	Lt-grey, sandy. lg grey qz-arenite float.	
935917	F	gs							X	X	10	0.5	X			X	X	40	5185N	Qz eye rhyolite. No. Vio. Min.	
935918	S	aug	0.30	A/B					7	21	33	0.1	0.5			5	X	15	5200N	lg grey, sandy. Minor qz-arenite float.	
935919	S	aug	0.35	B					5	12	103	X	0.5			X	X	15	5225N	" " " " " "	
935920	S	aug	0.30	B/C					11	15	144	0.1	1.0			1	15	20	5250N	" " " " " "	
935921	S	aug	0.50	B					7	21	98	0.2	0.5			25	X	25	5275N	" " " " " "	
935922	oc	gs							20	10	5	X	2.5			X	X	X	5285N	Fe stained qz-arenite.	
935923	S	aug	0.20	B/C					12	11	90	0.1	0.5			2	X	10	5300N	Float (? of) qz-arenite around site. Soil sandy.	
935924	oc	gs							10	15	5	X	2.5			X	X	X	5325N	lt grey-buff qz-arenite. Med gr, well sorted.	
935925	oc	gs							10	35	5	X	X			X	X	X	5350N	Turbid. (woolworts) well developed in buff/grey qz-arenite. Med gr, well sorted. Spec. hem. vis in core from Fe stained portion.	
935926	S	aug	0.70	B/C					15	50	91	0.1	0.5			X	X	50	5375N	Grey brown, quite sandy.	
935927	S	aug	0.75	B/C					5	59	112	X	1.5			1	X	20	5400N	Grey brown, fairly sandy. lt grey qz-arenite dusts o float.	
																				<u>N. END OF LINE</u>	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name: SHEFFIELD EL. 7/73 No. 935928-935947 Sample numbers: 935928-935947 Collected by: L.M. CLEMENTSON Sheet no. SEVENTEEN
 Area / Prospect: DALCOATH GRANITE Date:
 Map / Photo reference: LINE S500E/4975N-4600N Analysed by: DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sr			
		o/c sample type ***																			
		s sample type ****																			
935928	oc	gs							30	45	20	x	2.5				x	x	8	4975N	Lt grey-buff qz-arenite. Abundant Fe staining
935929	ss	0.1	0.3	50%	50%				10	75	30	x	x				x	x	40	4955N	Qz-arenite w major clast type.
935930	f	gs							35	5	10	x	2.5				x	x	x	4955N	Prob. clast of c. Fe stained qz-arenite.
935931	s	avg	0.50	B/c					31	104	58	1.5	0.5				7	15	60	4950N	Brown grey, sandy.
935932	s	avg	0.60	C					13	40	33	0.4	x				5	25	35	4925N	Brown-ochre. Minor qz-arenite float.
935933	s	avg	0.15	B					4	4	36	0.1	0.5				x	10	30	4900N	Lt grey, sandy. Qz-arenite float.
935934	s	avg	0.10	A/B					12	4	14	0.2	0.5				x	x	25	4875N	Prob. bottomed on qz-arenite.
935935	s	avg	0.25	B					5	4	14	0.1	1.0				x	15	55	4850N	Lt grey, sandy.
935936	s	avg	0.30	B					5	2	22	0.1	0.5				x	x	25	4825N	Lt grey, qz and qz-arenite clasts.
935937	f	gs							10	x	5	x	2.5				x	x	10	4825N	V. coarse gr. t. Qz grains well rounded. Pale grey.
935938	s	avg	0.25	A/B					7	1	13	0.1	0.5				x	x	20	4800N	Lt grey.
935939	s	avg	0.55	B/c					7	23	22	0.2	0.5				x	15	15	4775N	Yellow-ochre soil. Traces qz-arenite float.
935940	s	avg	0.20	A/B					21	3	22	0.1	1.0				x	20	50	4750N	Sandy. Few frags of weath. qz-arenite.
935941	s	avg	0.25	A/B					25	24	87	0.1	1.0				2	25	30	4725N	Lt grey, sandy
935942	o/c	gs							10	15	5	x	2.5				x	x	6	4725N	Lt grey-buff, v. light, compact siliceous qz-arenite (qzite). Med. gr., well sorted.
935943	f	gs							10	x	20	x	5.0				x	x	30	4700N	Soil. c. fixed, qz weined, fine gr. qz-arenite.
935944	s	avg	0.25	A/B					7	27	70	0.2	0.5				x	15	20	4700N	Lt grey, sandy
935945	oc	gs							5	10	5	x	x				x	x	10	4675N	V. coarse gr. t. Qz grains well rounded. Fe staining.
935946	ss	1.0	1.0	90%	10%				x	45	10	x	2.5	0.224	165	220	55	55	55	4600N	Main clast = qz-arenite.
935947	oc	gs							20	10	35	x	10.0				x	x	x	4600N	Dk grey, porphy. horn feld(?) Extremely hard. Fine plates of silvery metallic mineral. Probably arsenic (?) (2.1.1.1.1.1)

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m?/100 u =

Tenement name SHEFFIELD EL 7/73 No. 935147 - 935166 Sample numbers 935147 - 935166 Collected by GBW Sheet no. NINETEEN
 Area / Prospect DALCOATH GRANITE Date 23-05-81
 Map / Photo reference A 02143 Analysed by ANALABS. (CODEE) DPO no. 30005

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
935147	F	gs							10	x	x	x	x				x	x	S	5600E	Sm. W of line. med gy qtzite, stained red v.f.gr. qtzite. mod Mn staining on joints.
935148	F	gs							15	25	20	0.5	25				10	10	30	5155N	Rhyolite? red staining after sulphides PET.
935149	F	gs							15	10	x	x	25				80	10	20	5157N	Weathered rhyolite Mn staining gossanous boxworks
935150	S	A	30cm	B					5	13	61	0.3	1.5				2	x	15	5150N	Dk gy. frags 20% float v.f.gr. cherty rock.
935151	S	A	30cm	B					3	25	135	0.5	1.5				x	x	20	5125N	Pale-med gy. frags 40%
935152	S	A	35cm	B					5	21	164	0.4	1.5				x	x	20	5100N	Dk gy-bn frags 20% float Moina qtzite or qtz.
935153	S	A	20cm	B					3	15	115	0.3	1.5				x	x	15	5075N	Med-dk bn frags 40%
935154	S	A	80cm	B					15	79	75	0.4	1.0				9	x	110	5050N	Red-yellow bn clayey frags 30% - Volc? float volcanic?
935155	S	A	1m	B-C					9	19	71	0.3	3.0				x	15	35	5025N	Red-yellow bn. frags 30% weathered Au?
935156	S	A	25cm	B					28	56	65	0.3	1.0				10	30	75	5000N	Dk gy-bl. frags 30% float cherty qtzites.
935158	S	A	50cm	B					18	465	148	3.0	1.0				10	15	30	4975N	V. dk bn. frags 10% weathered lt gy + red qtzite. float contains some evidence of qtz veining.
935159	S	A	60cm	B					18	61	30	1.1	0.5				11	15	50	4850N	Yellow-gy-bn clay. frags 10% gritty ss.
935160	SS	o2	1m	✓	✓				12	94	63	1.1	0.5	0.016			2	x	40	4943N	100% cream-pink bleached Moina ss ± qtz veining
935161	F	gs							15	15	20	x	x				x	x	25	4928N	Lt gy v.f.gr hornfelsed? qtzite. py+? on joints also py. diss through rock. some qtz veins also red staining
935162	S	A	50cm	B					4	93	37	0.7	0.5				3	x	50	4925N	Lt gy clay. frags 50% hornfelsed qtzite.
935163	S	A	30cm	C					2	5	11	0.1	x				5	x	35	4900N	Med-dk gy-bn. v.f.gr sandy clay. frags 30% wh. f.g. qtzite
935164	F	gs							35	10	5	x	x				x	x	110	4890N	Wh-lt yellow. jointed. py 5%.
935165	S	A	80cm	C					2	60	27	0.4	1.0				5	x	55	4875N	Sl. yellow-bn clayey sand. frags 5% weathered qtzite.
935166	S	A	40cm	B					2	16	14	0.1	x				3	x	20	4850N	Med gy. sandy frags 30% weathered qtzite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream section

067

611068

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name... SHEFFIELD EL 7/73

No. ... Sample numbers... 935167 - 935182

Collect by... GBL

Sheet no. TWENTY

Area / Prospect... DALCOUTH GRANITE

Date... 03-06-81

Map / Photo reference.....

Analysed by..... DPO no.....

A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		oc	o/c sample type ***						/	/	/	/	/			/	/	/			
		f	s sample type ****																		
935167	S	A	50cm	B				1	46	9	0.1	0.5			3	x	15	4825N	Med. gy. sandy float 30% weathered qtzite.		
935168	S	A	20cm	B ₁				2	34	30	0.3	0.5			2	x	15	4800N	Med-dk. gy. frags 30% bleached Moina SS. float poorly sorted feldspathic Moina SS.		
935169	S	A	40cm	B				4	50	95	0.6	1.0			7	20	180	4775N	Lt. gy. frags 30% weathered bleached Moina float impure argillaceous poorly sorted Moina SS.		
935170	F	gs						40	70	5	x	2.5			x	x	70	4770N	Qtzite containing Mn+Fe stained pitted & gossan material		
935171	S	A	50cm	B				2	57	20	0.4	0.5			4	20	25	4750N	Lt. gy. frags 30% clean Moina SS. - poorly sorted.		
935172	F	gs						30	x	5	x	x			x	x	35	4735N	large Qtzite % highly cleaved Fe staining joint planes		
935173	S	A	30cm	B				5	46	68	0.7	1.5			6	35	55	4725N	Med-dk. bn. frags 40% qtzite.		
935174	F	gs						x	x	20	0.5	x			x	x	9	4705N	Qtz + argillite banded rock. PET.		
935175	S	A	30cm	B				14	280	167	2.2	4.0			72	30	70	4700N	Yellow-red bn clayey frags 10% Moina SS. float shows presence of much argillaceous material.		
935176	F	gs						35	15	5	x	x			x	x	15	4695N	Reddish, highly fractured argillaceous SS.		
935177	oc.	g.s.						60	x	5	x	x			x	x	500	4680N	Pale lt. gy qtzite containing yellow pits-Fe. rock shows contorted patterns.		
935178	oc.	gs.						5	x	x	x	x			x	x	70	4680N	Pale gy. highly fractured qtzite. Where fresh lt. greenish tinge.		
935179	α	gs						10	5	x	x	x			x	10	25	4680N	Lt. gy qtzite highly Mn stained.		
935180	S	A	15cm	B ₁				✓ 8	3	50	0.3	9.0			3	20	240	4675N	Black. % extensive. Qtzites argillaceous, highly fractured. red stains common - st. gossanous.		
935181	f	gs.						5	x	20	x	x			x	x	10	4657N	WATERFALL FLOAT - highly contorted qtzite py. v.f.g. 4%.		
935182	F	gs						x	5	35	x	x			x	x	25	4657N	WATERFALL FLOAT V.dk. gy hornfelsed qtzite py 1%		

* Sample type ss = stream sediment oc = outcrop f = float s = nil

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LOGGER

Tenement name SHEFFIELD EL 7/73 No. 935183 - 935201 Collect by G.B.W. Sheet no. TWENTY-ONE
 Area / Prospect DOLCOATH GRANITE Date 03-06-81
 Map / Photo reference..... Analysed by ANALABS (UNEE) DPO no.....
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sr			
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
		s sample type ****																			
935183	F	gs							20	30	70	x	x		x	x	95	4657N	WATERFALL FLOAT. Highly Mn stained qtzite.		
935184	S	A	25cm	B				9	24	23	0.5	1.5		3	x	100	4450N	Brown-red. frags 30% + 5% py. Moina SS.			
935185	F	gs						10	1040	117	2.6	4.0		6	x	x	4630N	Dk gy. + 5% py + ? f. q. Qtzite.			
935186	S	A	40cm	B				8	9	10	0.3	2.5		4	x	25	4625N	Dk gy. frags 20% E + 5% py - Moina SS.			
935187	S	A	50cm	C				19	74	90	1.5	10		7	x	20	4600N	Yellow-bn. frags 10% weathered bleached yellow-wh. sugary qtzite.			
935188	S	A	30cm	B				3	24	102	0.4	2.0		3	15	15	4575N	Pale gy-med. bn. frags leached qtzite.			
935189	SS	20cm	5m	✓				5	19	16	0.5	4.0	x	3	35	30	4555N	100% bleached creamy-wh Moina SS. depth 15cm			
935190	S	A	50cm	B			✓	15	350	95	2.5	5.0		8	25	30	4550N	Deep bn. frags nil. Sample prob. only humous soil.			
935191	S	A	1m	B				13	63	200	1.9	2.0		5	x	10	4525N	Deep yellow-bn. frags v. little. float dense f.g. dk. gy. qtzite.			
935192	S	A	70cm	B				4	20	87	0.9	0.5		6	15	35	4500N	Gy-bn. occ yellow bn bits. frags 10% weathered leached Moina SS. - wet sample.			
935193	S	A	60cm	B				4	18	50	0.5	1.0		6	20	35	4475N	Med. dk bn-gy. frags nil. float occ. leached moina SS.			
935194	S	A	80cm	B				3	13	11	0.3	1.5		5	x	20	4450N	Med. bn-gy. frags v. few. float bleached yell. qtzite			
935195	S	A	50cm	B				1	13	22	0.3	1.0		5	10	20	4425N	Med gy-bn. frags few moina ss.			
935196	S	A	12m	C				4	46	17	0.9	0.5		5	30	60	4400N	yellow bn clay. frags nil.			
935197	S	A	60cm	B				7	47	65	1.6	1.5		18	45	65	4375N	Dk gy + yellow bn clay. frags nil. float moina SS.			
935198	S	A	60cm	B				1	x	55	0.2	1.0		4	50	30	4350N	W gy - yellow patches. frags weathered sugary SS.			
935199	S	A	70cm	B				3	55	68	0.9	0.5		7	45	55	4325N	Dk gy-bn. frags 10% weathered moina ss.			
935200	S	P	20cm	B				3	10	99	0.2	1.0		5	15	55	4300N	frags 50% Dk gy-bl. sugary leached moina ss.			
935201	S	A	30cm	B				1	x	7	0.1	2.0		5	35	15	4275N	Med-dk gy. frags 10% sugary weathered Moina SS. float ditto			

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed

Tenement name SHEFFIELD EL/76 No. 972266 - 278 Sample numbers 972266 - 278 Collected by GBW Sheet no. 23
 Area / Prospect DOLGOATH GRID Date 12-01-92
 Map / Photo reference A 02143 Analysed by ANALABS (COSEE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As			W	Sn
		o/c sample type ***																		
		s sample type ****																		
972266	S	A-B	60cm					5	15	20	X					1	X	20	S100N	lt gy - much mica qtzite float leached but v. hard - N of S100N - ss.
972267	F	gs.						10	15	15	X					15	X	X	S193N	main ss qtzite. dk red outside yellowish gr-gy with pyrite, balls up to 0.5mm.
972268	S	A2	30cm					10	15	15	X					X	15	40	S175N	lt-med gy sandy soil float main ss.
972269	F	gs.						5	5	30	X					X	15	100	S165N	lt d gr-gy weathered float of thypolite one thin micaceous vein with Sn?
972270	S	A2	30cm					5	15	20	X					1	15	35	S150N	Med gy float main ss.
972271	S	A2	25cm					30	10	45	X					1	X	20	S125N	dk gy float + frags main ss.
972272	S	A2	30cm					10	5	25	X					1	X	20	S100N	Med gy float + frags fractured main qtzite
972273	F	gs.						20	10	25	X					37	X	X	SLADE S100N	Old diggings qtzite well leached fractured with Mn + Fe gossanous zones.
972274	S	B	50cm					60	10	55	X					1	X	20	S075N	Med bn - med luvver material.
972275	S	A2	10cm					10	25	20	X					2	X	40	S050N	Med bn gy fractured qtzite float-veined
972276	S	A-B	60cm					15	X	15	X					X	X	30	S025N	lt gy float + frags wh-t gy qtzites, fractured veined Fe staining.
972277	S	A-B	60cm					10	X	15	X					4	15	50	S000N	med-lt gy frags qtzite.
972278	S	A-B	20cm					10	X	15	X					2	15	30	4950N	lt gy. frags + float qtzite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sediment

071

611072

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

24

Tenement name SHEFFIELD E.L. 7/73 No. Sample numbers 935969-935973 Collected by I. M. CLEMENTSON Sheet no.
 Area / Prospect DALCOATH GRANITE + 935338-935347 Date.....
 Map / Photo reference LINE 5700E/4625N-4400N. Analysed by..... DPO no.....
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn.			
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
		s sample type ****																			
935969	S	avg	0.70	C				19	42	51	0.2	0.5			3	X	70	4625N	DK brown. No recog. clasts.		
935970	o/c	gs						30	35	55	X	X			X	X	45	4625N	DK grey, pyritic (? arsenopyrite) arenite, somewhat baked - hornfels like, yet definitely int bed between small bed qz-arenite		
935971	F	gs						20	40	50	X	X			X	X	15	4600N	DK grey hornfels with qtz (?). Qz-arenite		
+ 935347	F	gs						20	55	40	X	2.5			X	X	20	4600N	As above, prob. v. close to ec.		
935972	S	avg	1.00	C				13	23	165	0.5	50			4	X	150	4575N	DK brown.		
+ 935346	F	gs						20	220	40	0.5	50			10	X	20	4575N	Hornfels.		
935973	S	avg	0.70	B/C				1	1	36	X	X			1	X	25	4550N	Grey sandy soil		
NEW NO SEQUENCE																					
935338	S	avg	1.00	B/C				8	62	79	0.1	X			7	30	100	4525N	Ochre soil. Qz arenite. Frags.		
935339	S	avg	0.60	A/B				3	11	10	0.3	X			3	15	15	4500N	DK grey-black. Qz frags.		
935340	S	avg	0.90	A/B				4	20	23	0.2	10			5	20	30	4475N, organic rich.		
935341	S	avg	0.70	B/C				4	20	24	0.1	2.0			11	35	30	4450N	DK brown.		
935342	SS	1.0	0.2	80%	20%			X	10	15	X	X		X	X	10	25	4450N	V. organic rich soil		
935343	S	avg	0.70	B				7	7	11	X	2.5			3	25	35	4425N	Grey, sandy.		
935344	oc	gs						X	20	10	X	X			5	10	65	4425N	Weathered, white lute. form qz-arenite		
935345	S	avg	0.40	B/C				4	30	19	0.1	10			3	20	50	4400N	Reddish brown. Qz-arenite clasts in soil and as float at site.		
<u>S. END OF LINE</u>																					

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. Sample numbers 935948-935968 Collected by L.M. CLEMENTSON Sheet no.
 Area / Prospect DALGOATH GRANITE + 935348 Date
 Map / Photo reference LINE 5700E / 4950N - 4650N Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		oc	o/c sample type ***						/	/	/	/	/		/	/	/				
		f	s sample type ****																		
935948	S	avg	0.70	A/B					13	41	40	0.2	2.0			1	X	55	4950N	Brownish soil.	
935949	SS	0.5	0.5	80%	20%				5	35	10	X	X		0.040	X	X	30	4930N	Qz-arenite = dominant clast.	
935950	S	avg	0.80	B/C					72	128	127	0.6	1.0			4	15	90	4925N	Dk brown - ochre. No recog. clasts.	
935951	S	avg	0.50	B/C					3	4	51	0.1	1.0			X	X	20	4900N	Grey, sandy soil.	
935952	F	gs							5	X	X	0.5	X			X	X	10	4900N	Pale grey qz arenite. Mod gr. Minor Fe staining.	
935953	S	avg	0.60	B/C					4	14	32	0.2	0.5			X	10	30	4875N	Grey, sandy.	
935954	S	avg	0.40	B/C					3	2	7	X	0.5			X	X	50	4850N		
935955	F	gs							5	X	5	X	2.5			X	X	X	4850N	Qz-arenite. BuPP. Trace sp. c.	
935956	S	avg	0.30	B					8	168	12	0.1	4.0			9	15	460	4825N	Grey, sandy. Qz-arenite clasts.	
935957	oc	gs							10	X	5	X	X			5	X	8	4825N	Qz-arenite. Minor Fe staining.	
935958	S	avg	0.50	C					5	72	13	0.1	4.5			9	15	95	4800N	Brown-ochre. Qz-arenite clasts.	
935959	S	avg	0.40	B					3	63	16	0.1	2.0			4	35	100	4775N	Grey, sandy.	
935960	oc	gs							20	125	5	X	X			X	10	15	4750N	White qz-arenite. Trace lim. ex-pyrite.	
935961	SS	1.0	0.8	80%	20%				X	50	15	X	X		0.008	100	530	60	4730N	10% organic. Qz-arenite dominant clast type.	
935962	oc	gs							5	470	5	X	X			X	10	6	4730N	Qz-arenite. White. lim. speckling - ex py?	
935963	S	avg	0.90	C					36	30	55	0.2	1.0			4	X	100	4725N	Brown, ochre. Few qz-arenite clasts.	
935964	S	avg	1.10	C					18	18	45	0.1	1.5			10	10	75	4700N	Dk brown. Qz-arenite clasts.	
935965	F	gs							5	25	10	X	5.0			5	X	9	4700N	Multicoloured qz-arenite. Fine gr.	
935966	S	avg	0.50	C					23	32	102	0.2	2.0			10	10	50	4675N	Dk brown, qz-arenite clasts, float.	
935967	F	gs							10	5	10	X	X			X	X	X	4675N	Dk red, light, recrystallized qz-arenite.	
935348	oc	gs							5	20	20	X	10			X	X	X	4665N	Good ex in cliff - dk grey horn feld - no vis min.	
935968	oc	gs							20	25	15	X	X			10	X	55	4650N	BuPP qzite. Dip 20°S / 120°M	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = aluvial co = ...

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name: SHEPHERD EL 7/73 No. Sample numbers: 935974 - 935992 Collected by: M. CLEMENTSON Sheet no.
 Area / Prospect: DALEBATH GRANITE Date:
 Map / Photo reference: LINE STOOE / 4975N - 5225N Analysed by: DPO no:
 A 02143

Sample No.	Type	ss channel **							Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		oc	o/c sample type ***							/	/	/	/	/	/	/	/	/	/			
		f	s sample type ****							/	/	/	/	/	/	/	/	/				
935974	S	avg	0.40	B/C					43	163	146	0.6	X			17	15	140	4975N	Dk brown lochre. Qz-arenite frag.		
935975	F	gs							5	15	10	X	X			X	X	10	4975N	Prob. close to dc. Buff qz-arenite.		
935976	S	avg	0.20	B/C					24	70	24	0.3	X			9	X	80	5000N	Red-brown. Abundant qz-ar. float & frag.		
935977	F	gs							5	140	60	X	2.5			X	X	X	5000N	Dk gray, fine gr. hornfels. Strong S smell when struck.		
935978	S	avg	0.60	C					113	130	94	0.3	X			30	10	220	5025N	Red brown. Qz-ar. float at site.		
935979	F	gs							10	30	100	X	X			X	X	50	5025N	Dk gray, but ferruginous, hornfels.		
935980	F	gs							10	15	5	X	2.5			X	X	50	5030N	(close to dc?). Vein qz. Milky. Suggest Au.		
935981	oc	gs							10	10	X	X	5.0			X	X	5	5030N	Qz-arenite. Pink Fe/Machining. Small.		
935982	S	avg	0.20	A/B					4	11	41	X	0.5			2	X	10	5075N	Sandy. Abundant qz-ar. float and? dc.		
935983	F	gs							5	10	X	X	5.0			X	X	7	5100N	V. qz, milky. Tr. py. Suggest Au assay.		
935984	oc?	gs							15	60	10	X	2.5			X	X	15	5100N	Highly weathered qz-arenite. Buff.		
935985	oc	gs							5	20	5	X	X			X	X	3	5105N	Strongly qz-mined qz-arenite. (Assay)		
935986	S	avg	0.50	A/B					3	16	20	0.1	0.5			3	X	15	5125N	Dk brown		
935987	oc?	gs							5	15	15	X	2.5			X	X	25	5125N	Dk gray arenitic matrix but with conspicuous qz clasts (? porphyroblasts)		
935988	S	avg	0.40	B/C					3	23	85	0.1	X			4	X	10	5150N	Gray, sandy. Abund. qz-ar. float at all		
935989	S	avg	0.40	A/B					6	45	27	0.1	0.5			3	10	30	5175N	Black sand. Wealth qz-ar. float.		
935990	oc	gs							10	10	5	X	5.0			X	X	20	5185N	Highly silicified and qz mined white qz-arenite.		
935991	S	avg	0.30	A/B					11	17	120	0.1	2.0			2	X	15	5200N	Poor sand, organic. Qz-arenite float abundant		
935992	F	gs							10	5	5	X	7.5			X	X	7	5225N	Prob. close to dc. Strongly silicified, multi-colored qz-arenite / qz-ite.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = calcareous pH = ...

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD 7/73 No. Sample numbers 935993-93600 Collected by I. N. C. CLEMENTSON Sheet no.

Area / Prospect DALCOMITH GRANITE + 935301 - 935309 Date.....

Map / Photo reference LINE 5700E/5225N-5300N Analysed by..... DPO no.....

A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W			Sn
		oc	o/c sample type ***						✓	✓	✓	✓	✓			✓	✓	✓			
		f	s sample type ****																		
935993	S	ang	0.30	AB					4	9	12	x	x			4	x	15	5700E		
935994	F	gs							5	20	x	x	50			x	x	3	5225N	Coarse gr. t, silicified.	
935995	S	ang	0.50	AB					6	22	90	x	10			5	15	15	5250N	Grey-black, sandy with qz-ar. clasts.	
935996	S	ang	0.40	B					5	9	34	0.1	10			x	x	x	5275N	Grey, sandy. Qz-ar float.	
935997	oc	gs							10	25	x	x	25			x	x	x	5300N	Qz-ar. Med gr. Buff. Slightly ferruginous	
935998	S	ang	0.25	AB					4	16	16	x	0.5			7	x	40	5300N	Grey, sandy.	
935999	S	ang	0.30	AB					3	6	16	x	10			1	x	15	5325N		
936000	F	gs							10	5	5	x	50			x	x	4	5325N	Lt grey qz-arenite.	
New N° SEQUENCE																					
935301	S	ang	0.45	OC					7	27	24	0.3	2.5			x	x	15	5350N	Grey, sandy. Qz-ar. float (tubi form) on site	
935302	oc	gs							10	10	5	x	2.5			5	x	6	5375N	Extensive oc tubi form qz-ar. Med gr, well sorted	
935303	S	ang	0.20	B					7	50	44	0.4	20			x	x	20	5375N	Grey, sandy.	
935304	oc	gs							10	20	5	x	75			x	x	5	5400N	Qz-arenite, tubi form in parts.	
935305	S	ang	0.40	AB					6	21	72	0.2	20			2	x	10	5425N	Grey sandy soil, float of qz-arenite.	
935306	oc	gs							10	20	10	0.5	50			5	x	8	5450N	Slightly ferruginous, qz-arenite. Tubi form	
935307	S	ang	0.20	AB					4	28	24	0.3	0.5			x	20	15	5450N	Grey, sandy	
935308	S	ang	0.30	B					9	10	20	0.1	10			1	x	10	5475N	Grey, sandy. Float and oc qz-arenite.	
935309	oc	gs							5	10	5	40	2.5			5	x	x	5500N	Lt grey, med gr. qz-arenite. Tubi form qz-arenite interbedded.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name SHEPHERD EL 7/73 No. 97258 - 265 Collected by GRW Sheet no. 28
 Area / Prospect DOLCATH GRID Date 12/01/82
 Map / Photo reference A 02143 Analysed by ANALABS (COOEE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As	W	Sn			
		o/c sample type ***																			
		s sample type ****																			
97258	S	A	50m	B				5	50	25	x						13	x	70	5000N	Green bn soil float qtzite Frag. ril.
97259	S	A	20m	A ₂				5	10	20	x						2	15	40	4975N	Med. gy sandy F.g. soil Frag + float well fractured Moira SS - qtzite.
97260	F	gs?						25	5	25	x						28	10	190	4967N	Pink-red sl. gss. Moira SS. %?
97261	F	gs?						145	325	35	x						90	10	130	4944N	Dk red banded gossorous ss - qtzite Mn vugs + lt yellow Fe gossorous areas.
97262	S	A ₂	30m					10	x	20	x						2	20	50	4950N	lt gy sandy F.g. soil Frag + float fractured qtzite.
97263	S	B	10m					10	35	30	x						10	25	60	4925N	Med. bn clay float argill. qtzite.
97264	S	A ₂ B	10m					20	135	35	2.5						40	20	80	4900N	V. dk gy clay + dk bn clay. Frag ril. float qtzite.
97265	gc	gs.						95	1450	15	0.5						460	30	30	4875N	Qtzite + SS. Qtzite micaceous brown sl. gossorous after S ²⁺ m-c.g. poorly sorted Moira SS. - well jointed
																					E. O. TRAVERSE

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 972215 - 972257 Collected by GRW Sheet no. 29
 Area / Prospect DALCOATH GRID Date 26.11.81
 Map / Photo reference A 02143 Analysed by ANALASS (WOOE) DPO no. 12.01.82

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations				
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As			W	Sn		
		o/c sample type ***																				
		s sample type ****																				
972215	S	A	40cm	A ₂ -B				10	20	10	X							2	10	10	5750E	Dk gy bn float wk - lt gy baked qtzite med-well fractured occ pale red Fe stains 2 nd qtz veins. evident occ Moira grit zones.
972216	S	P	30cm	B				5	15	15	X							2	20	20	5175N	lt gy clayey soil. float Moira qtzite fractured occ. qtz veins sl Fe stains m-c.g. well rounded clm qtzite.
972217	F	gs						35	120	15	0.5							13	X	25	5160N	3m W. lt gy qtzite - hornfelsed well fractured some Fe, Mn staining along fractures close contact rock to Qtz porphyry dyke.
972218	F	gs						10	10	15	X							26	15	25	5163N	Dk gn gy sl ventral Qtz - feldspar porphyry
972219	S	A	40cm	B-C				10	65	15	X							6	X	30	5150N	lt bn, float poorly sorted sub-angular - well rounded Moira grit (up to 2mm) lt bn - well baked.
972220	F	gs						10	10	15	X							10	10	10	5150N	Fe red stained Moira qtzite orig. lt gy now yellow + red stained
972221	S	A	40cm	A ₂ -B				10	21	15	X							2	X	40	5125N	lt-med gy sandy soil. float as above.
972222	F	gs						15	5	10	X							31	10	6	5747E 5118N	Moira qtzite banded lt purple gy + red Fe zones sl Mn stains. highly fractured large pieces.
972223	S	A	30cm	A ₂				5	20	15	X							3	25	30	5100E	lt-med gy sandy soil. float ditto.
972254	S	A	70cm	B-C				45	20	50	X							4	X	50	5075N	Yellow bn fraggy ss
972255	S	A	70cm	B				20	20	30	X							10	15	10	5050N	Med. yellow bn fraggy + float qtzite occ red S ²⁺ staining
972256	S	A	30cm	A ₂				10	20	30	X							5	10	85	5025N	Grey-bn fg soil float + fraggy qtzite.
972257	F	gs						15	80	105	X							3	X	85	5010N	lt gy outside - dk gn actinolite obsn. S ²⁺ 2-5% po > py. ms = 0.1,

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = fl/m³/sec wi = width m

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SHEFFIELD EL 7/73 No. 935255 - 935265 Collected by GBW Sheet no. THIRTY
 Area / Prospect DOLGARTH GRANITE Date 17.06.81
 Map / Photo reference A 02143 Analysed by ANALABS (CODEE) DPO no. _____

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
		s sample type ****																			
935255	S	A	30cm	B					20	63	25	0.5	1.5			8	x	70	5325N	Dip red bn - frags weathered red-bn qtzites. 30%. float leached lt. gy. qtzites and grits.	
935256	S	A	1.2m	C					7	27	19	0.2	1.0			3	x	30	5350N	Med yellow decomposed qtzites. overlain by lt gy-bn sandy soil - leached.	
935257	S	P	20cm	B					4	4	12	0.1	1.0			x	x	x	5375N	lt gy - sandy. frags 40% lt gy qtzite.	
935258	S	P	20cm	B					8	9	12	0.2	1.0			x	x	65	5400N	lt gy leached. frags of Moine ss.	
935259	S	P	60cm	B					3	16	23	x	1.0			2	x	60	5425N	lt gy-bn sandy. frags 60% wk leached Moine ss.	
935260	S	A	70cm	B					3	15	21	0.2	1.0			4	x	55	5475N	lt gy bn. frags 40% leached qtzite.	
935261	S	A	50cm	B					2	35	13	0.1	0.5			10	x	45	5500N	lt gy leached. frags 40% leached qtzite. float qtzite + grit fractured iron stained on cleavage planes.	
935262	S	A	30cm	AB				✓	5	151	21	0.2	1.0			16	10	30	5525N	lt. dk. gy. frags 40% leached ss.	
935263	S	A	50cm	A-B					3	655	15	x	1.0			3	x	45	5550N	Med-dk gy clayey. frags 30% leached Moine ss. float fractured iron stained planes in qtzite.	
935264	S	A	40cm	A-B					2	315	27	x	0.5			2	x	35	5575N	Dk gy clay A-B. frags few leached qtzite.	
935265	S	A	1.2m	B-C					8	565	100	2.7	1.0			x	x	70	5600N	lt gy - yellow weathered frags. 10%. NO SAMPLE AT 5450N.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %												Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sr				
		o/c sample type ***																				
		s sample type ****																				
935238	S	A	20cm	'B'?				4	24	20	0.1	1.5					X	X	580	5050N	V. pale gy. frags 20% wh. qtz. float. Fe stained. ss.	
935239	S	A	70cm	B				19	72	51	0.4	0.5					7	X	200	5075N	Deep red-bn. No frags float argill. qtzite.	
935240	S	A	60cm	B.				2	15	23	0.1	1.5					1	X	50	5100N	Yellow + gy bn. frags 10% ss float Fe stained ss.	
935241	SS	<0.1	0.5m	✓	✓		✓	25	340	45	1.5	X		X	X	20	45			5122N	Dk gy mud + sl. yellow weathered rocks.	
935242	F	gs.						5	5	10	X	50					X	X	15	5127N	W. reef qtz material containing contorted black argillaceous centre.	
935243	F	gs.						30	10	5	X	2.5		X	X	10	35			5133N	More cleaved rock than 935242.	
935244	S	A	50cm	B.				14	45	36	0.3	0.5					18	X	45	5150N	Deep bn. yellow particles. Frags 30% qtzite + qtz vein. float qtz - qtzite + A. Volc.	
935245	F	gs.						10	5	15	X	50					X	20	50	5170N	Mn+Fe stained A. Volc.	
935246	S	P	30cm	'B'?				5	6	27	0.1	0.5					5	X	25	5175N	Lt gy - leached float 80% highly fractured, qtz veined ss.	
935247	R	gs.						15	15	15	X	2.5					X	X	X	5175N	TmE. V. large boulder of Acid Volcanic - zones heavily fractured, gaseous in part.	
935248	S	A	70cm	'C'				19	32	36	0.2	1.5					17	X	45	5200N	Yellow-bn frags 30% weathered qtzite	
935249	S	A	60cm	'C'				4	14	24	0.1	1.0					19	X	20	5225N	Yellow-bn frags 40% weathered qtzite + qtz vein. float qtzite + grits.	
935250	S	A	50cm	B.				4	15	24	0.2	1.0					9	X	35	5250N	Mod gy clay frags 20% qtzite float ditto.	
935251	F	gs.						50	X	5	X	5.0					X	30	15	5265N	poorly sorted grit containing bands of Fe stained sl. gaseous material.	
935252	S	P	20cm	B'?				4	18	26	0.1	1.0					9	X	X	5275N	Mod-dk gy-bn. Frags 30% sugary + gritty, qtz veined.	
935253	S	A	20cm	B-C'				2	15	20	X	1.0					3	X	10	5300N	Mod gy-bn frags v. broken qtzites white gy. frags v.f.g. v. broken w. qtzites.	
935254	SS	-	3m	✓	✓			45	610	100	3.0	X		X	15	15	25			5310N	Mod. bn. 20cm deep.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial

611079

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SHEFFIELD EL 7/73 No. sample numbers 935219 - 935237 Collected by GRW Sheet no.
 Area / Prospect DOLGOATH GRANITE Date 16.06.81
 Map / Photo reference Analysed by ANALABS (LSE) DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations			
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sr					
		o/c sample type ***							s sample type ****														
935219	F	gs.							10	70	10	x	50					x	15	20	5800E	4733N	lt gy. 5% sulphides v.f.g. py + pos. Bi + cp? joint faces lt yellow gr oxidized py + mica.
935220	S	A	30cm	'A'					4	4	12	0.1	25					1	x	35	4750N	4750N	Dk gy-bl. frags leached moira float sugary qtzite.
935221	S	A	50cm	B					2	3	9	0.1	30					2	15	30	4775N	4775N	Med-lt gy clayey soil. frags 10% leached ss float-sugary s
935222	S	P	10cm	'A'					5	6	11	0.2	25					3	10	15	4800N	4800N	Bl. frags leached ss float ditto.
935223	S	A	1m	B					1	8	11	0.2	30					2	x	30	4830N	4830N	lt gy-br leached B - frags 10% qtzite.
935224	S	A	60cm	B					1	8	10	0.1	25					2	x	20	4850N	4850N	Med-lt gy clayey soil. frags 10% leached moira ss.
935225	F	gs.							75	1750	65	x	2.5					x	30	210	4875N	4875N	Rock % in cutting beneath peg.
935226	F	gs.							20	90	10	x	2.5					x	25	30	4875N	4875N	lt gy highly fractured f-m.g. qtzite at peg.
935227	F	gs.							140	2550	575	4.0	2.5					x	30	25	4875N	4875N	On mullock heap 30m Bl.w. of peg. Dk gy-gy shows disseminated py+? sulphides 5-10%.
935228	F	gs.							15	50	50	x	75					x	30	15	4900N	4900N	lt gy. highly fractured qtzite veining in qtzite.
935229	S	P	30cm	B'					27	99	72	0.6	15					12	95	160	4925N	4925N	Yellow-br frags weathered qtzite float ditto.
935230	S	A	45cm	B					37	94	79	0.4	10					18	60	230	4950N	4950N	Yellow-gy frags 20% qtzites float v.lk gy. f.g. limonite and pale yellow gy qtzites.
935231	F	gs.							5	50	135	x	x					x	80	1800	4955N	4955N	Dk gy. c.g. qtzite heavily Fe and Mn stained.
935232	S	A	1m	B					25	159	100	0.6	6.0					14	x	180	4975N	4975N	Yellow br. frags weathered qtzite. float heavily Fe stained m-c.g. qtzite.
935233	F	gs.							20	30	95	x	75					x	75	65	4985N	4985N	Highly limonitic stained m-c.g. qtzite.
935234	S	A	20cm	B.					13	105	60	0.1	2.0					17	20	150	5000N	5000N	Yellow br. frags 30% weathered ss. float ditto.
935235	F	gs.							60	230	240	x	17.5					x	25	60	5015N	5015N	Fe + Mn stained qtzite.
935236	S	A	70cm	B-c					27	191	65	0.4	0.5					9	35	480	5030N	5030N	Deep red-br. frags 10% moira ss. float nil.
935237	F	gs.							65	460	10	0.5	2.5					5	40	90	5050N	5050N	Red br. f.g. Fe stained moira ss.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluv

C.R.A. EXPLORATION, GEOCHEMICAL SAMPLE REGISTER

Tenement name... SHEPHERD EL 7/73 No. ... Sample numbers... 935205 - 935218 Collected by... G.B.W. Sheet no. ...

Area / Prospect... DOLSOATH GRANITE Date... 16.06.81

Map / Photo reference... Analysed by... ANNAEBS (COOEE) DPO no. ...

A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
s sample type ****																					
935205	S	A	1m	C'				10	28	22	0.4	35			12	x	140	4600N	Dk yellow-red. Frags 5% lt. ggy. main ss float - w/ bleached ss & qtz using tension gashes.		
935206	F	gs.						10	5	15	x	2.5			x	70	x	4605N	Qtz-mica-schist + py. PETROLOGY.		
935207	oc.	gs.						75	25	15	x	2.5			x	250	15	4625N	No soil sample. Rock % - limonitic zone in weathered quartzite. - many qtz veined.		
935208	F	gs.						20	10	5	x	7.5			x	50	x	4635N	lt ggy + red-bn. weathered ss. slightly gossanous. py? ca?		
935209	F	gs.						10	x	10	x	2.5			x	40	45	4640N	lt ggy heavily qtz veined, f.g. quartzite - containing red-bn. vugs after py +? - rock very contorted.		
935210	F	gs.						10	20	5	x	2.5			x	50	20	4648N	lt ggy. v.f.g. quartzite. upto 8% py in yellow - deep red gossanous zone. Green Malachite specks Native Cu + py.		
935211	S	F	10m	B				12	34	51	0.4	4.5			16	35	35	4650N	Deep red-bn soil - very steep		
935212	%	gs.						25	25	15	x	100			x	35	55	4650N	5m W. Quartzite containing green Malachite stains.		
935213	F	gs.						10	15	5	x	150			x	55	x	4650N	lt ggy when fresh. But containing dk red Fe + Mn staining + vugs py +? f.g. mineralised quartzite.		
935214	F	gs.						40	30	40	x	20.0			x	35	75	4670N	Dk ggy argillaceous banded schist. jointed. qtz + py cleft		
935215	S	A	60m	B				16	19	22	0.1	2.0			18	35	20	4675N	Dk red-bl. Frags 10% Moins ss. float argillaceous schist		
935216	S	A	1m	B'				15	19	22	0.1	4.0			13	15	40	4700N	Dk. red-bn. Frags 10% w/ leached Moins ss. float lt ggy mod. Fe stained some gossanous zones.		
935217	%	gs.						75	20	40	x	17.5			x	25	20	4700N	Yellow bn - deep red spots - gossanous zones. Orig. med lt. ggy f.g. quartzite which has been heavily sheared.		
935218	S	A	1m	B'C'				4	16	28	0.2	3.0			5	x	40	4725N	Med ggy bn - fairly leached. Frags 5% leached Moins ss. float lt. ggy. sugary Moins ss qtz using, jointing prevalent		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluv

Tenement name SHEFFIELD EL 7/73 No. 935886 - 897 sample numbers 935886 - 897 Collector by CBW Sheet no. 34
 Area / Prospect DOLCOATH GRID Date 25.11.81
 Map / Photo reference A 02143 Analysed by ANGLASS (COEE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As			W	Sn
		o/c sample type ***																		
		s sample type ****																		
935886	F	gs						x	90	35	x				4	x	10	4970N	Lt gy hornfels 4.9 S ² - pyromorphite? some Cp.	
935887	F	gs						x	25	85	x				6	x	15	5838E 4960N	Banded black argillite and lt creamy gy sil carbond - green actinolite calc silicate minor S ²	
935888	F	gs						x	50	150	x				7	x	85	5845E 4958N	Green volc? or epibite rich gfaite poorly sorted. - rock associated with calc silicate bands.	
935889	S	A	40cm	B				40	95	120	x				63	170	160	4950N	Mod bn float ggy skarn.	
935890	S	A	40cm	B-C				5	45	40	x				17	55	80	4825N	Mod-bn ferricrete? + dk gy hornfels.	
935891	F	gs						6	140	310	x				770	25	15	4925N	Fe dk ferricrete - Tertiary? from hole frags.	
935892	S	P	13m	B-C				5	80	20	x				9	110	140	4900N	Yellow-bn from old workings float moira gfaite.	
935893	S	A	60cm	B				x	35	15	x				x	35	80	4875N	Lt-med gy float - gfaites.	
935894	S	A	30cm	B-C				10	1150	65	x				96	100	320	4850N	Dk-med bn frags gfaites float nil.	
935895	S	A	1m	B				x	175	10	x				x	30	60	4825N	Mod dk gy float f.g. sl micaceous fractured pale cream to lt gy sl. Fe staining gfaites.	
935896	F	gs						50	110	120	x				23	30	390	4815N	float as above from trending here.	
935897	S	A	30cm	A-B				x	x	15	x				x	20	45	4800N	Lt creamy gy float lt gy gfaite.	
972253	F	gs						5	10	45	x				2	20	55	4953N	mod gy banded moira gfaite with tubular casts On fracture face grey metallic mineral Sn?	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluv

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935869-885 sample numbers 885 Collected by GBW Sheet no. 35
 Area / Prospect DOLGOATH GRID Date 24.11.81
 Map / Photo reference A 02143 Analysed by ANALABS (CODEE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As	W	Sn			
		o/c sample type ***																			
s sample type ****																					
935869	S	A	1m	C'				10	45	15	x					26	50	180	S100N	Bright yellow + mod bn float lt. gy - yellow med. - f.g. gtaite.	
935870	F	gs.						5	x	10	x					1	15	55	S065N	lt creamy white gummy type of gtaite - ss brown blebs upto 3mm diam stains?	
935871	S	A	50cm	B-C				10	120	25	x					80	45	190	S075N	Bright orange-bn soil float lt. gy gtaites well fractured sl. Fe yell + red staining.	
935872	F	gs.						250	1350	85	x					60	15	210	S055E S065N	V. Fe stained gtaite	
935873	F	gs.						160	605	65	1.0					3	20	660	S055E S065N	Fe stained gtaite purple - dk. gy-bn yellow oxid zoned occ. dk red specks	
935874	S	A	60cm	B				45	700	45	x					140	40	220	S050N	Mod yellow-bn float lt. gy fract. gtaites.	
935875	F	gs.						50	15	40	x					54	55	70	S045N	Gossanous gtaite porous Fe red stained banded	
935876	F	gs.						50	100	30	x					24	40	55	S045N	Gtaite c-v.c.g = grit. dk red-bn Fe stained.	
935877	S	A	60cm	B															S025N	Mod-bn float: weathered gtaites.	
935878	F	gs.						30	150	25	0.5					320	x	25	S008N	Gtaite - pale cream - yellow sl red staining mod. fractured.	
935879	F	gs.						100	x	40	x					93	90	65	S008N	Fe gossanous gtaite	
935880	S	A	1.2m	B-C				25	105	80	x					100	25	120	S000N	Mod bn soil float lt. gy hornfelsed gtaite v. baked	
935881	F	gs.						35	105	200	x					140	x	95	S045E A190N	lt pale yellow + bn v.f.g. rock - volc? extremely fractured, bn staining on fract. planes	
935882	F	gs.						5	20	120	x					2	10	15	4980N	Dk. gy-gy skarn sl 5" py > po.	
935883	F	gs.						5	60	55	x					x	x	30	4980N	lt. gn-gy hornfelsed gtaite - calcareous?	
935884	S	A	50cm	B				15	60	70	x					43	50	100	4975N	Mod bn float dk. gy hornfels - skarn?	
935885	F	gs.						25	20	95	x					84	x	70	4975N	Dk. gn-gy skarn - actinolite ± 5% po. MS=0.1	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km?

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 773

No. 935859 - 868 Sample numbers

Collected by GLW

Sheet no. 36

Area / Prospect DOLGOATH GRID

Date 24.11.81

Map / Photo reference A 02143

Analysed by ANALABS (LONDON)

DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	F	Au	As	W			Sn
		oc	o/c sample type ***																		
		f	s sample type ****																		
935859	S	A	40cm	A ₂ -B					15	30	30	X					5	30	40	5850N	Dk gy + deep yellow bn frags + float lt gy baked plates red-bn staining on joint/fracture faces.
935860	F	gs.						55	80	65	X						16	X	15	5188N	Dk gn gy hornblende gneiss - barren? Fe stained rock. 5-10% py, po. v. sl. mag MS = 0.1.
935861	F/%	gs.						5	45	55	X		739			2	X	15	5200N	Dk gy gtz feldspar porphyry some 35m NW of 5200N - ess unaltered N.V.M.	
935862	F/%	gs.						25	10	10	X					4	10	70	5200N	Next to dyke Maria gneiss foliated highly fractured lt red + yellow Fe staining sl. gossorous in some parts.	
935863	%	gs.						X	20	10	X		2035			X	X	35	5185N	lt gy gtz feldspar porphyry mod. fractured with dk gy mica? on fracture planes.	
935864	S	A	60cm	A ₂ -B				10	25	25	X					4	30	35	5175N	Dk yellow bn float wh- lt gy baked ecc. sl sugary sl. Fe stained lt red or yellow.	
935865	S	A	90cm	B				10	50	45	X					5	40	65	5850N	Mod yellow bn + dk gy bn soil. float gneiss lt gy often sl. red + yellow Fe staining mod-st fractured - gtz veined. MS = 0.0.	
935866	S	A	80cm	B				20	60	40	X					15	50	120	5125N	Mod-dk yellow - mod bn. float ditto.	
935867	F	gs.						5	10	10	X					56	15	20	5110N	Maria ss-grit. c-v.c.g ss-grit lt purple-red - leiseegang type Fe oxidation rings.	
935868	F	gs.						X	5	X	X					59	15	10	5003N	In diggings gneiss sl. pink-red. fractured dk red on fracture planes. red specks through the rock.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample type: ss = stream sediment, oc = outcrop, f = float, s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 713 No. 935689 - 693 Sample numbers 66W Collected by ANALABS (CODEE) Sheet no. 15-09-81
 Area / Prospect DOLWATH GRANITE Date 15-09-81
 Map / Photo reference A 02143 Analysed by ANALABS (CODEE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As	W	Sn			
		o/c sample type ***																			
s sample type ****																					
935689	S	P	20cm	A ₂				2	54	10	0.3						2	15	40	5900E	Dk-bn gy clayey soil. float leached Maina SS, qtz veined, sl. fractured
935690	F	gs						21	23	10	0.2			X	3	20	30		5525N	No soil rock %. Wh-lt gy sugary Maina SS leached, med grained qtz veined occ sl. yellow-red staining	
935691	S	A	60cm	A ₂				6	440	18	0.3						35	X	20	5550N	Bl-dk gy clayey soil. float & gy leached sugary Maina SS.
935692	S	P	20cm	A ₂				5	1030	13	0.3						9	10	10	5575N	Bl-dk gy bn clayey soil. float qtz veined bleached Maina SS.
935693	S	A	30cm	A ₂				3	19	12	0.3						1	X	15	5600N	Dk gy sandy soil. float white-lt gy leached sugary Maina SS. tubicolite casts seen.
																					END OF LINE.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m³/sec wi = width m

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73

No. 935677-688 Sample numbers

Collected by GBW

Sheet no.

Area / Prospect DOLGARTH GRANITE

Date 15-09-81

Map / Photo reference A 02143

Analysed by ANLABS (CODEE)

DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As			W	Sn
		o/c sample type ***																		
		s sample type ****																		
935731	F	qs						8	14	6	x			x	15	30	10	5248N	Light well qtz veined c dk gy mylonitised shaley zones.	
935732	S	A	1.1m	B				6	21	15	0.1				12	45	30	5250N	Mod. bn sandy soil. float dk gy horn-felded qtzites	
935679	SS	col	2m	✓	✓			10	58	15	0.4			x	26	15	50	5272N	90% white qtzites c vein qtz (primary) also some 2 nd qtz veining 10% sheared qtzites c shaley partings.	
935680	S	A	50m	B				34	159	27	1.0				100	x	55	5275N	Red bn. float well fractured Fe stained qtzite c some lt-med gy impure qtzite bands.	
935681	F	qs						8	23	6	0.3			x	5	x	10	5300N	Rock scree slope no soil. W. - U. lt gy Moine qtzite + cong. occ lt red staining - qtz veining	
935682	S	A	80m	A ₂				13	91	16	1.5				8	10	55	5325N	Dk red bn fragmentary soil. V. diff sample to gel float lt gy qtzites some chloritic occ. shaley	
935683	S	A	40m	A ₂				4	47	11	0.3				4	10	40	5350N	lt gy - bn. float lt gy qtzites and grits trending towards SS.	
935684	S	P	30m	C				2	57	10	x				1	x	25	5375N	lt gy bn weathered qtzite - top end of scree slope. float lt gy qtzites.	
935685	S	A	60m	C				2	50	9	0.2				1	x	20	5400N	lt gy bn weathered qtzites. float lt gy sl. red stained Moine qtzite -> SS.	
935686	S	A	60m	A ₂				2	13	8	x			x	x	x	20	5425N	Mod dk gy soil. float lt gy SS. V. c. gy poorly sorted feldspathic SS - well leached.	
935687	S	A	90m	B.				2	54	9	0.1				1	x	20	5450N	Mod gy bn clumpy sand. float mod gy SS occ qtz veins	
935688	S	A	60m	B-c				2	64	10	x				1	15	110	5475N	Mod - lt gy bn. float ditto.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description fl = flow m3/sec wi = width m il = vial co = colluv. l = ...

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C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

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Tenement name SHEFFIELD EL 7/73 No. 935606 - 935676 Sample numbers GCW Collected by GCW Sheet no.
 Area / Prospect DOLCOATH GRANITE Date 5/8/80
 Map / Photo reference Analysed by ANALABS (COOEE) DPO no. 30020
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	As	Au	Bi	W	Sr		
		o/c sample type ***							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
s sample type ****						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
935606	S	A	1m	B				15	45	45	0.5	4.5			4	9	153	5900E	Med yellow bn - float Rhyolite.	
935607	F	gs.						430	85	50	X	5.0			130	23	1120	5070N	10cm wide purple - sulphidic zone within a boulder.	
935608	S	A	70cm	B				10	90	25	0.5	1.5		X	25	274	5075N	Med gy sandy clay beneath yellow bn zone float moira qtzite some ss.		
935609	F	gs.						145	55	55	X	5.5		X	X	355	5083N	lt gr chloritic baked kyanite qtzite + 2% barite		
935610	S	A	1m	B.				5	35	25	0.5	2.5		2	8	62	5100N	Yellowy gy float creamy gy bleached moira.		
935611	F	gs.						45	5	X	X	X		X	X	X	5110N	lt. gy qtzite finely fractured sh. lt bn colouration giving mottled appearance.		
935612	S	A	60cm	B.				15	65	45	0.5	3.5		1	7	54	5125N	Yellow-bn. float lt gy bleached baked moira		
935613	F	gs.						25	20	10	0.5	3.0		4	4	47	5129N	Purple-gy yellowish striations. vugs after pyroclasts - sh. argillaceous.		
935614	F	gs.						5	5	5	X	3.0		1	X	7	5140N	Baked med-gy qtzite. med Fe staining v. fractured. Zone of vein qtz.		
935615	F	gs.						X	15	5	0.5	2.0		X	X	7	5150N	lt gy - very fractured red stains along fracture planes		
935616	S	A	30cm	A ₂				5	5	25	0.5	1.5		6	6	19	5150N	lt - med gy sandy. float as above frags 20%		
935617	F	gs.						35	5	5	X	2.0		X	7	205	5175N	lt gy med qtzite. Mn + Fe staining prevalent. mica developed on fracture planes - highly fractured		
935618	S	A	70cm	C				20	135	15	0.5	2.5		X	19	326	5200N	Yellow bn weathered rock. frags bleached moira ss.		
935723	F	gs						9	47	43	0.4		74	0008		120	10	5209N	lt gr gy glassy skarn + 3% arpy + py lt gy weathered skin to rock -> m. gy qtzite	
935730	S	A	30cm	A ₂				3	8	16	X		2		50	15		5225N	lt gy bleached sandy soil. float med. gy clean qtzite - some chlorite on fracture faces med frnt	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = cl

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C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name: SHEFFIELD E.L. 7/73 No. Sample numbers: 935310-935329 Collected by: I.M. CLEMENTSON Sheet no.:
 Area / Prospect: DALBOATH GRANITE Date:
 Map / Photo reference: LINE 5900E/4600N-4875N Analysed by: DPO no.:

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sr		
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓		
		s sample type ****																		
935310	S	ang	0.30	C				4	8	10	0.1	1.0			x	20	20	4600N	Grey, sandy soil.	
935311	S	ang	1.00	C				7	14	18	0.1	0.5			6	20	35	4625N	Dk br-grey-ochre, sandy.	
935312	S	smg	0.40	C				5	15	16	x	0.5			7	30	25	4650N	Grey, sandy.	
935313	oc	gs						5	20	5	0.5	2.5			x	x	25	4674N	TRENCH - exposed highly weathered, fine-grained, pale qz-arenite. N.V.M.	
935314	S	ang	0.80	C				4	16	14	0.1	6.0			28	150	140	4675N	Grey, sandy.	
935315	oc	cs						5	50	20	x	5.0			40	200	330	4675N	E-W TRENCH. Highly weathered qz-arenite v. soft. 3m horizontal channel sample.	
935316	P	gs																4690N	Sugary texture, qz-veined qz-arenite.	
935317	S	ang	0.50	B/C				3	13	9	0.1	1.0			4	x	50	4700N	Sandy, grey.	
935318	oc	gs						20	10	5	x	2.5			x	x	8	4700N	Weath. med gr. stannic qz-arenite.	
935319	S	ang	0.90	C				3	27	19	0.1	1.5			4	40	55	4725N	Grey-brown, sandy.	
935320	S	ang	1.20	C				7	21	15	x	1.0			9	35	65	4730N	Bi-ochre, slightly sandy. qz/qz-or frag.	
935321	S	ang	0.35	A/B				9	4	9	x	0.5			5	20	25	4775N	Dk grey, sandy.	
935322	S	ang	0.60	B/C				3	6	6	0.1	x			2	20	20	4800N	Brownish grey, sandy.	
935323	oc	gs						5	25	15	x	x			x	x	7	4825N	Lt buff, med gr, slightly ferruginous qz-arenite.	
935324	S	ang	0.60	B				3	5	9	0.1	0.5			x	10	30	4825N	Grey, sandy.	
935325	S	ang	0.50	A/B				2	4	9	0.1	0.5			3	10	25	4850N	Black.	
935326	oc?	gs						x	15	10	x	2.5			x	x	15	4850N	Soft, weath. qz-arenite.	
935327	P	gs						30	55	35	10	x			x	x	50	4875N	Dump material at entrance to adit - weathers hornfels, etc. py.	
935328	oc	gs						35	155	135	x	2.5			x	x	25	4875N	Mouth of adit. Dk grey hornfels N.V.M. (earlight)	
935329	oc	gs						85	185	130	1.5	x			5	x	65	4875N	Apparent dip 65°N, strike 115°M.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluv

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name... SHEFFIELD EL 7/73 No. sample numbers... 935898 - 900 Collected by... (GSL) Sheet no. 43
 Area / Prospect... DALCOATH GRID 972201 - 211 Date... 25.11.81
 Map / Photo reference... A 02143 Analysed by... ANALABS (COSEE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As	W	Sn		
		o/c sample type ***							/	/	/	/	.		/					
		s sample type ****																		
935898	S	A	1.1	'c'				X	30	15	X				4	45	140	5175N	Med. yell-brn +lt gy. Float lt gy. Mainly fates sl. yellow stained.	
935899	F	gs.						X	20	10	X				X	10	25	5175N	lt gy fates some yellowst red Fe staining, well fractured - Fe stains along fractures.	
935900	S	A	1m	'c'				10	40	25	X				7	90	100	5150N	Med. yell-brn soil. Float as above.	
972201	S	A	30cm	B-C				15	25	25	X				16	90	75	5125N	Med-brn float lt gy fract. sl Fe stained fates.	
972202	S	A	1m	B-C				35	80	35	1.5				17	70	75	5100N	Med. yellowish clayey soil. Just N of old W workings referred to in old reports. - vein of v.m. seen.	
972203	F	gs.						25	10	15	X				4	10	50	5096N	White baked v. fractured fates, red Fe stains along fractures.	
972204	S	A	30cm	B-C				35	1350	40	1.0				570	30	390	5050N	Yellow-brn clayey. float fates gy baked fract.	
972205	F	gs.						95	465	25	7.5				3700	15	75	5046N	Highly Fe dk br fractured fates. gossamer layers	
972206	S	A	30cm	A ₂ -B				15	65	30	1.0				46	40	265	5025N	8m W of ck - top of bank, med gy br. float fates as above - baked lt gy - fractured.	
972207	S	A	30cm	B				30	40	35	X				7	25	65	4975N	Med-dk br soil. - maybe bulldozed material.	
972208	S	A	1.1m	B				10	15	20	X				3	35	65	4950N	Dk gy br sandy soil. float prob. fates.	
972209	S	A	30cm	B				15	25	35	X				4	50	65	4925N	Med-dk gy br sand soil. in area of old workings + buildings.	
972210	S	A	1.1m	A ₂ -B				185	360	65	1.0				13	25	80	4900N	dk gy A ₂ -B. just E. of drive on 3 rd galena lode -	
972211	S	A	70cm	A ₂ -B				10	30	15	X				2	30	35	4875N	5m up hill from major drive - slope. float lt gy fates.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = conc

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

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Tenement name SHEFFIELD EL 7/73 No. 935354 - 364 Collec. by GSW Sheet no.
 Area / Prospect DJOCATH GRANITE Date 09.07.81
 Map / Photo reference Analysed by ANALABS (COOEE) DPO no. 3001
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
ss + oc + f + s	s sample type ****																				
935354	o/c	gs.							145	10	10	0.5	9.0		X	X	X	15	4800N	Reef gtz. E py, po. - sl. sandy. Cp? Au? py often along joints + fractures. Vein 15cm wide.	
935355	S	A	50cm	A ₂					X	X	X	0.5	X				X	7	35	4775N	Pale gy. leached moina ss frags + float.
935356	S	A	1m	A ₂ -B					5	25	60	0.5	X				10	22	87	4750N	Chocolate bn + dk gy. frags + float leached moina ss.
935357	F	gs							10	20	25	1.0	2.5				1	X	12	4733N	Lt gy bleached well jointed moina ss.
935358	S	A	60cm	A ₂					X	20	60	0.5	X				X	8	55	4725N	V. dk gy-bn. frags + float leached moina ss.
935359	S	A	1m	A ₂ -B					10	285	160	0.5	2.5				56	67	544	4700N	Dk gy-bn + med-bn (clay) No frags or float.
935360	S	A	12m	B-C					X	40	35	1.0	0.5				11	99	398	4675N	Deep yellow bn. soil. No float or frags.
935361	S	A	30cm	A ₂					X	10	60	0.5	X				X	9	35	4650N	Lt gy + med-dk gy. float leached moina.
935362	S	A	50cm	A ₂					X	10	75	0.5	0.5				X	X	18	4625N	Dk + lt. gy leached soil over leached moina.
935363	S	A	20cm	A ₂					10	10	25	X	4.0				X	5	19	4600N	V. dk gy - black. frags + float leached moina.
935364	F	gs.							X	15	130	0.5	1.0				X	5	28	4585N	N edge of Th. moina ss well fractured cont. gtz veins E uggss.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed s impl...

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name: SHEFFIELD EL 7/73 No. 935285-353 Sample numbers: 935285-353 Collec. by: GSW Sheet no. 630781 (55035)
 Area / Prospect: DOLGOATH GRANITE Date: 30.06.81
 Map / Photo reference: Analysed by: ANALABS (COOEE) DPO no. 30017
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
s sample type ****																					
935285	F	qs.							45	x	5	x	1.0			x	12	117	5203N	Mn+Fe stained highly fractured granite.	
935286	S	A	20cm	A ₂ -B					x	x	10	0.5	x			x	8	36	5200N	V. pale gy-yellow. Frags + float bleached Moina ss.	
935287	S	A	50cm	B-C					15	10	25	0.5	x			3	24	102	5175N	Dk yellow-bn. Frags 20%. float 20% wh. - red Fe stained qtz veined granite.	
935288	F	qs.							25	65	15	x	1.0			43	47	84	5165N	V. dk. red Fe stained qtz veined granite. - gaseous - woggy - qtz veined.	
935289	S	A	11m	C					15	45	30	0.5	x			5	25	172	5150N	Dk. yellow bn. Frags weathered Moina. float weathered Moina often yellow iron stained - red gaseous in part.	
935290	S	A	70cm	A ₁			✓		30	95	305	35	1.5			x	11	83	5125N	V. dk gy-black soil. humus. float leached Moina ss.	
935291	S	A	11m	A ₂					25	45	120	1.0	3.5			19	18	46	5075N	V. dk bn clay. No float or frags.	
935292	S	A	1.2m	A ₁					5	10	10	0.5	2.0			8	17	48	5050N	Dk gy. bottom of outside bank of track running beside Narrawa Ck. No frags or float.	
935293	S	A	1m	B-C					40	30	45	x	2.0			6	13	59	5025N	mod yellow-bn hard. float little leached Moina ss.	
935294	S	A	80cm	A ₂					30	75	35	0.5	2.0			2	10	83	5000N	V. dk gy-bn Frags 20% Moina ss.	
935296	S	A	60cm	A ₂					x	20	25	0.5	x			x	3	67	4975N	Pale gy soil and weathered Moina frags.	
935297	S	A	70cm	B-A ₁					10	110	45	1.0	3.5			3	11	69	4950N	yellow-gy + dk gy soil. frags weathered Moina ss.	
935294	ss	<0.1	0.5m	✓					x	15	50	0.5	2.0			1	8	142	4840N	Dk gy. silt and sand. 0.5m deep in gully.	
935298	S	A	1m	B					x	20	20	0.5	x			x	20	146	4925N	Pale yellow gy. frags 20% leached Moina.	
935299	S	A	11m	B					10	50	65	x	x			29	18	601	4900N	Dk bn + orange yellow soil. frags 10% Moina.	
935300	S	A	60cm	C					x	x	25	x	x			x	10	58	4875N	Whitish weathered Moina ss.	
935351	S	P	30cm	A ₂					x	x	5	0.5	x			x	10	36	4850N	Dk gy. float pale gy leached sugary Moina ss.	
935352	S	P	30cm	A ₂					x	5	20	1.0	x			3	8	40	4825N	V. dk. gy-bn. frags + float sugary Moina ss.	
935353	S	P	10cm	A ₂					45	1500	35	1.5	7.0			32	37	308	4800N	From bank on ck. side. Dk. gy. float sugary Moina ss.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description fl = fl w m3/sec wi = width m al = 11

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935266 - 284 Collec. by GDW Sheet no. 46
 Area / Prospect DOLCOATH GRANITE Date 30.06.81
 Map / Photo reference A 02143 Analysed by ANLABS (6005E) DPO no. 30017

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		oc	o/c sample type ***						✓	✓	✓	✓	✓			✓	✓	✓			
		f	s sample type ****																		
935266	S	A	40cm	B					30	35	60	0.5	x			74	10	215	5600N	Deep yellow-bn. frags 20%. float gy-gn. Moins ss c-v.c.g. some red iron staining in fractures.	
935267	S	A	80cm	B					115	65	155	1.0	x			48	6	610	5575N	Yellow-bn frags 40% v. weathered Moins. float med gy more baked than at 5600N + less fractured.	
935268	F	gs.							20	10	x	0.5	7.0			2	x	14	5572N	Moins Grit - well sorted. qtz vein 2cm wide dk bn staining after sulphides?	
935269	F	gs.							15	5	15	0.5	3.5			12	x	235	5565N	Moins Grit yellowst deep red. orig. color grey. sl. gneiss	
935270	S	A	1m	C					55	60	95	1.5	x			7	x	104	5550N	Dk yellow bn. part. weathered Moins	
935271	S	A	1m	A ₂ B					55	185	110	1.5	x			76	13	240	5525N	Clayey dk gy-bn + yellow frags. float Moins qtzite.	
935272	F	gs.							20	5	5	0.5	5.0			2	x	30	5510N	Qtz vein - veggy Fe + Mn stained 1/2 cm wide.	
935273	S	P	20cm	A ₁				✓	x	45	10	0.5	x			6	11	71	5500N	Dk gy-bl. float pink stained Moins qtz veining prevalent	
935274	S	A	40cm	A ₂					x	5	110	0.5	x			4	x	49	5475N	Dk gy-bl + gy frags 20% float Moins ss + grit.	
935275	S	P	30cm	A ₁				✓	5	25	175	1.0	x			1	19	x	5450N	Dk gy-bl. frags white bleached Moins qtz veins.	
935276	S	A	30cm	A ₁				✓	x	10	140	0.5	x			2	4	46	5425N	Lt gy m.c.g. Moins qtzite + dk gy. humus.	
935277	S	A	50cm	A ₂					x	5	45	0.5	x			2	5	41	5400N	Med gy - sandy - leached Moins ss particles.	
935278	S	P	20cm	A ₁				✓	x	5	55	x	x			2	x	18	5375N	Dk gy. - leached Moins ss frags.	
935279	F	gs							10	x	5	0.5	x			4	x	25	5355N	leached Moins - very qtz. veined - highly fractured	
935280	S	A	80cm	B-C					x	5	175	0.5	2.0			1	x	30	5350N	Lt. creamy gy weathered Moins frags 50%. qtz veining.	
935281	S	A	60cm	A ₂ B					x	10	70	x	x			7	6	73	5325N	Med gy + yellow weathered Moins frags 20% leached Moins	
935282	S	A	30cm	A ₂					x	x	70	0.5	x			4	9	25	5300N	Lt gy leached zone. float leached Moins ss.	
935283	S	P	20cm	B					x	x	50	0.5	x			1	11	33	5275N	Pale gy mainly leached Moins ss.	
935284	SS	K0.1	5m	✓	✓				5	60	35	1.0	x			6	10	83	5230N	Dk gy-bn soil 30cm depth bottom of dk.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SHEFFIELD 7/73 No. 972279 Sample numbers 972279 Collected by CBW Sheet no. 47
 Area / Prospect DALHOATH GRID Date 12-01-82
 Map / Photo reference A 02143 Analysed by ANALABS (COSEE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	As	W	Sn		
		oc	o/c sample type ***						/	/	/	/				/	/	/			
		f	s sample type ****																		
972279	S		A;B;1-2m						10	5	10	X				13	65	90	6050E	Dk grey gr clay - sl yll clay. Fraggs quartzite.	
972280	F		qs						15	X	40	X				1	X	35	605E 5000N	Dk grey hornfelsed quartzite.	
972281	S		B 70m						5	15	10	X				8	110	95	5025N	Dk tan-br clay.	
972282	S		B 1m						X	5	20	X				3	75	55	5050N	Dk gr br clay.	
972283	S		B 1m																5075N	Dk gr gy clay float spotted hornfelsed quartzite. Fe-stained.	
972284	F		qs						15	10	75	X				12	X	10	5075	Spotted hornfels 1/2 gy with dk gy spots.	
972285	S		B 1m						35	235	260	0.5				79	50	55	5100	Med red br clayey soil float hornfelsed Fe staining on fracture planes.	
972286	S		B 1m						20	85	55	X				57	40	65	5025N	Yellow br + dk red br clayey soil fraggs + float Rhyolite + quartzite + hornfels.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = illuvial co = concn

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LOGGER

Tenement name SHEFFIELD EL 7/73 No. 935517-935533 Collect by GBW Sheet no. 48
 Area / Prospect Date 17.7.81
 Map / Photo reference Analysed by ANALABS. (COOE) DPO no. 30018
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
		s sample type ****																			
935517	S	A	40cm	A ₂				100	195	45	1.5	1.5			19	4	88	5300N	Red bn in small ck. float dk gn-gy hornfelsic		
935518	S	A	40cm	A ₂				5	20	35	x	0.5			4	6	88	5325N	Pale gy leached soil. float iron stained leached Moira ss.		
935519	S	A	30cm	A ₂				10	80	40	x	0.5			12	13	146	5350N	Mod gy bn float lt gy Moira ss iron stained occ py observed.		
935520	S	P	12m	B				55	95	90	x	0.5			56	9	190	5375N	Mod yellow soil - from bottom of old tree frags + float fractured ss iron stained sl. gritty		
935521	F	gs.						65	10	25	x	3.0			3	5	70	5380N	Highly fractured iron stained Moira grit zone.		
935522	S	A	60cm	A ₂				15	60	30	x	0.5			22	42	110	5400N	Dk. bn-gy float + frags as above.		
935523	F	gs.						10	20	10	0.5	5.0			x	x	4	5420N	Qtz vein vuggy infilled with Fe + Mn - gossanous.		
935524	S	A	50cm	A ₂				5	20	20	x	1.0			2	20	76	5425N	Pale lt bn-gy sandy float Moira quartzite.		
935525	F	gs.						30	x	5	x	2.0			4	4	105	5450N	lt yellow + red stained quartzite.		
935526	S	P/A	50cm	A ₂				70	55	70	0.5	1.0			15	4	66	5475N	Deep gy-bn frags + float med gy pyritic Moira ss - stained red-ox. sulphides.		
935527	F	gs.						10	x	20	x	4.0			6	4	62	5496N	v. red iron stained pale gy quartzite.		
935528	S	A	40cm	A ₁				15	35	50	x	1.0			11	9	30	5500N	Bl-dk gy soil on scree slope frags + float ditto		
935529	S	A	40cm	A ₂				15	30	60	x	x			32	4	61	5525N	Mod bn. frags yellowish bn weathered Moira.		
935530	S	A	1m	A ₂				10	25	25	x	0.5			18	8	69	5550N	Dk gy-bn frags + float min ² Moira quartzites.		
935531	S	A	40cm	A ₁				35	60	60	0.5	1.0			86	6	42	5575N	Black. float & fractured gy. f.g. quartzites contain v.f.g. sulphides - iron stained.		
935532	S	A	50cm	A ₂				x	10	20	0.5	1.0			x	8	18	5600N	Mod lt gy bn. frags + float ditto.		
935533	F	gs.						5	15	20	x	2.5			x	x	17	5533N	Dk gy min ² Moira quartzite.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream bed

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 773 No. 935503 - 935516 Sample numbers GSW Collec. by ANALABS (COOEE) Sheet no.

Area / Prospect Date 17. 7. 81.

Map / Photo reference Analysed by ANALABS (COOEE) DPO no.

A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	sl	co	cs	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		o/c sample type ***							/	/	/	/	/			/	/	/		
		s sample type ****																		
935503	S	A	12m	B.				15	110	60	0.5	4.0			8	27	55	5100N	Mod. bn float dk gy highly cleaved argill. ss no frags.	
935504	S	A	50cm	B				15	170	40	1.0	3.5			5	13	52	5125N	Mod bn frags nil float sulphidic weathers too yellow - red bn leached Moina SS.	
935505	F	gs.						55	90	10	x	11.5			2	x	30	5139N	Rock bulldozed from Hk along Narrawa Cr. highly fractured qtz veined f.g. baked SS. qtz veins heavily iron stained.	
935506	S	A	60cm	B				15	125	105	x	5.0			4	14	41	5175N	Mod bn float mm. argillaceous Moina qtz veined.	
935507	F	gs.						25	20	5	x	3.0			2	4	79	5178N	lt gy leached iron stained qtz veined Moina.	
935508	SS	01	1m	✓	✓			20	85	20	0.5	1.0			7	7	62	5185N	10cm deep in pool. 2m upstream from line.	
935509	S	A	1m	B				40	95	15	x	4.5			4	23	124	5200N	Mod. yellow bn. frags yellow leached Moina float highly fractured stockwork type qtz veins. lt gy occ yellow staining.	
935510	F	gs.						40	75	5	x	1.0			x	x	15	5205N	lt. gy mm. Moina SS - banded effect by weathering sulphides? dk red gossanous in part.	
935511	S	A	1m	A ₂ -B				35	120	40	x	2.0			5	21	98	5225N	Dk gy occ yellow blebs. frags + float bleached Moina	
935512	F	gs.						10	25	10	x	6.0			4	11	70	5230N	faintly sulphidic? green stained gossanous in part metamorphosed Moina SS.	
935513	S	A	40cm	A ₂				5	30	25	x	1.5			x	21	119	5250N	Dk gy-bn float f.g. mm Moina well fractured qtz veined.	
935514	S	A	80cm	B				15	95	40	x	2.0			9	22	144	5275N	lt yellow + mod yellow. frags weathered Moina.	
935515	F	gs.						70	30	30	x	1.0			7	12	46	5280N	Pits + iron staining in med gy Moina SS.	
935516	F	gs.						15	45	85	x	4.0			1	x	27	5295N	v. dk. gy-gr sulphidic hornfelsic qtzite. Sulphide blebs upto 0.5mm Sulphides upto 5%	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LOGGER

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Tenement name SHEFFIELD EL 7/73 No. 935381 - 935502 Collected by (GHW) Sheet no.
 Area / Prospect DOLCATH GRANITE Date 16.7.81/17.7.81
 Map / Photo reference Analysed by ANALABS (COSEE) DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓		
		s sample type ****																		
935381	S	A	90cm	A ₂				X	X	20	0.5	1.0			X	8	4.9	4825N	Dk. bn clayey sand. float occ. Moina ss.	
935382	S	A	30cm	B				X	X	15	X	0.5			X	6	22	4850N	Pale creamy gy. sandy. float leached sugary c.g. x-bedded Moina ss.	
935383	S	A	50cm	B				X	15	10	X	0.5			X	4	34	4875N	Pale creamy gy. v. wet clayey sand. float leached ss.	
935384	F	gs.						10	20	10	0.5	4.5			2	5	22	4875N	Leached and jointed Moina. yellow + red-brown iron stains. staining along joints + mica.	
935385	S	A	30cm	B				X	X	15	0.5	1.5			X	13	33	4900N	V. pale creamy soil from leached Moina.	
935386	S	A	40cm	A ₂				X	X	15	X	4.5			X	7	40	4925N	V. dk. gy. bn slippy. float Moina ss - leached.	
935387	F	gs.						X	X	10	0.5	3.5			X	7	4.9	4930N	Wh. - lt. gy. v. thin qtz veins. mod. strongly jointed occ. pale yellow - orange staining - hornfelsed gtzite.	
935388	F	gs.						15	25	15	X	11.0			X	7	62	4950N	V. porous lt. gy. vuggy leached Moina ss.	
935389	S	A	1.1m	A ₂				X	40	10	0.5	0.5			4	8	88	4950N	Med. gy. sandy. few frags float as above.	
935390	F	gs.						30	40	10	X	11.0			X	X	39	4955N	V. veined gtz. contained iron stained vugs within Moina.	
935391	SS	col.	0.4m	✓				X	X	15	0.5	2.5			X	7	55	4975N	0.1m deep on S side of stream. stream contains white sand from Gunstember tk.	
935392	S	A	70cm	B				10	25	30	0.5	1.0			13	10	64	5000N	Med. yellow float dk. gy. hornfels. yellow + gn. stains on joint faces.	
935393	F	gs.						10	5	4.5	X	3.5			X	X	17	5000N	Dk. gy. hornfelsed gtzite yellow + gn. stains on joint faces.	
935394	S	A	60cm	B				X	10	10	0.5	1.0			1	50	70	5025N	Dk. yellowish bn. float leached Moina sl. hornfelsed.	
935400	S	A	50cm	B				20	30	60	0.5	9.0			1	15	37	5050N	Mod. yellow sandy soil. frags 10% pale gy. bleached Moina.	
935501	S	A	50cm	B				X	15	25	X	6.0			14	62	34	5075N	Orange - yellow - bn. clayey sand. float occ. dk. gy. sl. argillaceous. mm. Moina ss.	
935502	F	gs.						X	10	55	0.5	2.0			X	13	61	5080N	Dk. gy. + lt. gy. - argillaceous iron stains on joints. highly devalued.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LOG

Tenement name SHEFFIELD EL 7/73 No. 935365 - 380 Collec. by GSW Sheet no. SI
 Area / Prospect DOLGOATH GRANITE Date 16.7.81
 Map / Photo reference A 02143 Analysed by ANALABS (CODEE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W.	Sn					
935365	S	A	60cm	A ₂					x	5	10	x	0.5					2	5	45	4600N	Med dk gy-br wet frags weathered moirna.	
935366	S	A	30cm	A ₂					x	10	20	0.5	1.0					x	17	44	4625N	Dk gy br, bleached frags float moirna ss - qtz veined	
935367	S	A	11m	A ₂					x	10	30	x	1.0					4	7	90	4650N	Pale gy-br float moirna ss fairly poorly sorted.	
935368	F	gs							x	15	15	0.5	1.5					2	45	53	4650N	Lign-pale gy moirna ss bleached sl. yellow staining	
935369	S	A	11	B-C					x	35	35	x	3.0					4	60	135	4675N	Pale-med yellow ore lt gy tabular clayey f.g. sand No frags on float.	
935370	F	gs							10	50	35	x	4.0					7	4	25	4675N	Moirna ss with med gy shaly sections - well jointed	
935371	S	A	60cm	A ₂					x	25	20	0.5	1.5					x	32	44	4700N	Med gy-br wet frags float rubicolar moirna ss.	
935372	F	gs							270	1400	15	28.5	39.0					94	18	86	4720N	Approx 40m W of track. Unusual ss showing liesegang oxidation rings. - Many old workings in this area. - rock sulphidic.	
935373	F	gs							65	715	10	19.5	34.5					x	24	18	97	4720N	Similar rock contains more sulphides.
935374	F	gs							30	155	35	1.0	20					2	x	37	4700N	About 20m E of 4700N. W side of old trench - collapsed pit. Med gy ecc orange specks - sulphidic v.f.g. - 5% highly cleaved and 2 nd qtz veining.	
935375	S	A	80cm	A ₂					x	55	30	0.5	1.5					3	24	92	4725N	Dk br wet clayey sand frags float moirna ss.	
935376	F	gs							x	5	10	0.5	1.5					1	x	16	4730N	leached pale gy v. sl. yellow sugary moirna	
935377	S	P	60cm	B-C					x	x	20	0.5	3.0					7	18	63	4750N	From side of old bulldozed trench. Yellow br Some 10m W of 4750N.	
935378	S	A	60cm	B					x	15	50	x	1.0					11	25	72	4750N	Med yellow float moirna ss.	
935379	S	A	60cm	A ₂					x	x	30	0.5	x					3	21	92	4775N	V. dk br. frags 20% moirna ss. float ditto.	
935380	S	A	30cm	A ₂					x	15	35	x	1.5					3	16	112	4800N	Med-dk au clayey sand float moirna ss	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

53

Tenement name SHEPHERD EL 7/73 No. 935568-935582 Sample numbers 935568-935582 Collector GOV Sheet no. 53Area / Prospect DOLCATH GRANITE Date 22/7/81Map / Photo reference A 02143 Analysed by ANALABS (COSEE) DPO no. 30018/

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations		
		ss*	oc	f	s	ft	wi		al	co	ca	pH	Cu	Pb	Zn	Ag	Mo	Mn			Au	Bi
		o/c sample type ***						s sample type ****														
935568	F	gs.							75	225	50	x	55					x	5880	43	5065N	Qtz vein upto 3cm wide ± W crystals acc. Mo slugs rock 2cm wide.
935569	F	gs.							25	50	25	x	60					x	28	35	5065N	Qtz vein. Many large MoS ₂ slugs on rock. pyritic upto 3cm wide.
935570	F	gs.							25	100	50	x	1650					300	445	49	5065N	Qtz vein ± crystals Cp? py with Qtz crystals
935571	F	gs.							25	400	475	2	20					x	11	14	5065N	V. sulphidic + 15% py weathered leached Moina.
935572	F	gs.							200	300	50	2	2500					490	194	x	5065N	Large Qtz vein 3cm wide slot through with MoS ₂ + W. - high grade sample.
935573	S	P	15m	B					5	20	40	x	16					23	78	217	5050N	From side of Trench. Pale brownish gy. float v. mineralised py.
935574	S	A	80cm	A ₂					x	5	10	x	3.5					1	18	63	5025N	Med gy - sandy. float pale pink gy leached sugary Moina
935575	F	gs.							5	x	10	x	4.5					34	5	16	5025N	Pale pink gy leached sugary Moina ss.
935576	S	A	80cm	A ₂					5	x	25	x	5.5					7	15	54	5000N	Dk gy - bn wet soil.
935577	S	A	1m	A ₂					x	x	25	x	2.5					x	12	67	4975N	V. dk brgy - bl. few frags float nil.
935578	S	A	60cm	A ₁					x	x	30	x	3.5					x	10	78	4950N	Bl. frags 20% sugary Moina float nil.
935579	F	gs.							10	25	25	x	4.5					1	7	23	4935N	Mullock heap. Dk gy sulphidic Qtzite.
935580	F	gs.							10	15	45	x	9.0					x	5	66	4935N	Banded sulphidic Qtzite from dump fractures infilled with py. po, cp? sulphides disseminated but some bands richer.
935581	F	gs.							20	15	25	x	9.5					1	x	13	4935N	Sulphidic Qtzite MoS ₂ ? on joint faces.
935582	S	A	50cm	A ₂					x	5	55	x	2.5					x	9	47	4925N	Dk br - gy - black. float pale gy pink leached sugary Moina ss. frags ditto

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description ft = flow m³/sec wi = width m al = alluvial co = -

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

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Tenement name SHEFFIELD EL 7/73 No. 935534 - 935551 Sample numbers 935534 - 935551 Collected by GLW Sheet no.
 Area / Prospect DOLCATH GRANITE Date 17.07.81
 Map / Photo reference Analysed by ANALABS (CODEE) DPO no. 30018
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
		oc	o/c sample type ***																		
		f	s sample type ****																		
935534	S	A	30cm	A ₁					15	25	30	0.5	0.5				9	11	22	5600N	Black frags + float Moira gtzite.
935535	S	A	1m	A ₂					5	10	35	x	x				9	5	70	5575N	mod. bn. frags + float Moira gtzites.
935536	S	A	60cm	A ₂					5	15	105	0.5	1.5				26	INSUFF. SAMPLE	INSUFF. SAMPLE	5550N	V. dk. bn. float dk. gy sl. ? argillaceous gtzite.
935537	f	gs.							5	x	40	0.5	3.0				x	x	7	5535N	Dk. gr-gy hornfelsic rock red staining on joint planes.
935538	F	gs.							5	15	5	0.5	2.0				10	5	24	5530N	Well foliated gtzite v. sl. argillaceous.
935539	S	P	20cm	A ₁					15	70	35	x	1.5				13	4	x	5525N	Black soil. frags + float sl. argillaceous Moira ss. iron staining prevalent.
935540	F	gs.							5	25	15	x	3.0				2	x	8	5520N	Wk - lg gy Moira gtzites some Mn staining.
935541	F	gs.							35	25	85	x	x				x	x	120	5495N	Dk. gy gtzite - foliated - hematitic blebs of gossorous material after sulphides?
935542	S	A	10cm	A ₂					15	35	20	0.5	1.5				48	28	43	5475N	Dk. bn. frags + float Moira well foliated - py present.
935543	S	A	10cm	A ₂					70	40	75	x	1.5				15	13	120	5450N	Mod. bn. foliated py Moira gtzites.
935544	F	gs.							35	20	110	x	2.5				3	10	144	5425N	Red iron stained v. dk. gy hornfelsic gtzite + gtz veining.
935545	F	gs.							25	20	145	x	2.0				1	x	41	5420N	V. dk. gr-agg hornfelsed gtzite containing sulphides.
935546	S	A	10cm	B					65	65	105	0.5	1.5				26	10	152	5400N	Mod. bn. frags + float hornfelsed gtzite.
935547	F	gs.							10	15	10	x	11.5				2	6	118	5355N	Med. gy rock some iron staining + gtz veining.
935548	S	A	10cm	A ₂					55	35	30	x	11.0				77	4.1	223	5350N	Probably in scree slope. Mod. dk. bn. frags + float as above.
935549	S	A	30cm	A ₂					20	35	45	x	7.0				33	26	148	5300N	Mod. bn. frags + float sulphidic hornfelsed gtzite.
935550	F	gs.							50	800	50	x	x				x	7	39	5280N	Massive magnetite boulder on N bank of Narrawa Ck. Tk. not in situ.
935551	S	P	12m	C					150	325	50	x	3.0				x	19	109	5275N	From S bank of Tk. yellow bn soil. frags and float v. min. Moira ss - hornfelsed.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km?

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 987270-987290 Collected by J. M. Clementson Sheet no. 57
 Area / Prospect DOLGOATH Date 29 April 82
 Map / Photo reference LINE 6300E Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn		
		o/c sample type ***							s sample type ****											
987270	gs								6	X	20	X	6			X	18	43	4975N	o/c of fresh, sugary. Moina Qz:ke in road next to old workings.
987271	S	Aug	0.25	C					4	X	11	X	6			50	30	28	4955N	Grey sand above clear qz:ke zone.
987272	S	Aug	0.40	C					2	X	8	X	2			X	12	43	4925N	- - - -
987273	S	Aug	0.50	C					4	X	6	X	2			X	39	31	4900N	Humic grey sand.
987275	S	Aug	0.40	C					3	X	8	X	2			X	25	43	4855N	" - -
987276	S	Aug	0.30	C					2	X	8	0.1	2			X	21	30	4830N	" - -
987277	S	Aug	0.30	C					2	X	10	0.1	2			X	36	67	4825N	" - -
987278	gs								18	1	11	0.1	4			X	X	X	4825N	White Moina qz:ke with irregular Fe staining.
987279	S	Aug	0.70	B2C					8	27	12	0.2	10			X	89	73	4800N	Yellow-brown soil with gassy fragments
987280	F								23	2	4	0.3	12			50	8	X	4800N	Vein qz
987281	F								18	2	17	X	6			50	4	36	4800N	Red ferruginous sandstone
987282	S	Aug	0.40	B2C					3	6	10	0.1	6			50	51	71	4775N	Humic dk grey sandy soil.
987283	S	Aug	0.30	C					2	10	10	0.1	4			50	113	114	4750N	Grey sand

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluv - = catchment km2

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name: SHEFFIELD EL 7/73 No. 972437 - sample numbers 600 Collected by GOU Sheet no. 58
 Area / Prospect: DOLCOATH GRID Map / Photo reference: A 02143 Analysed by: ANALABS (CODEE) DPO no. 28.04.82

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations		
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W			Sn	
		oc	o/c sample type ***																			
		f	s sample type ****																			
972437	S	A	30cm	A ₂					6	2	15	0.2	14				X	74	22	5000N	Med-gy float Moira med. wh. sugary	
972438	S	A	20cm	A ₂ -C					3	X	14	0.2	4				X	39	23	5025N	Med-gy float saccaroidal Moira ss.	
972439	S	A	90cm	B					3	X	10	0.1	2				X	50	25	5050N	Wh-# gy. sl. leached Moira.	
972440	S	A	50cm	B-C					3	1	15	X	8				X	61	51	5075N	H+Med-gy float Moira ss well fractured qtz veined - leached.	
972441	S	P	1.5m	B-C					3	1	14	X	4				X	108	75	5100N	(N side of New Tk) yellow-white c.-v.c.g sands and clay.	
972442	S	A	50cm	A ₂ -C					6	5	12	X	6				X	123	39	5125N	Dk gy bn organic soil float Moira ss.	
972443	S	A	70cm	B'					5	23	13	0.1	10				X	157	66	5150N	Med bn clayey soil float weathered ss.	
972444	S	A	80cm	B					13	89	72	0.2	4				X	55	56	5175N	Yellow-bn clayey soil float weathered Moira.	
972445	S	A	90cm	B					9	44	15	0.2	4				X	89	79	5200N	Dk bn gy clayey soil float Moira ss.	
972446	S	A	50cm	B-C					40	56	40	0.2	64					50	171	5225N	Yellow-bn soil - Moira qtzites occur here	
972447	S	A	50cm	B					22	28	23	0.2	46				X	209	81	5250N	Red-bn soil float Moira qtzite.	
972448	S	A	50cm	B					135	220	39	0.7	84				X	207	42	5275N	Red-bn soil. V. rocky % Moira qtzites.	
972449	F	gs							185	99	710	0.2	16				X	103	95	5275N	some Moira-magnetite-minor abnorm.	
972450	F	oc	gs						65	15	43	X	10				X	29	26	5275N	Skarn-banded calc silicate - dipping S ^W ? at 60°?	
972451	S	A	40cm	B					55	50	78	0.4	50				X	424	274	5300N	Red-bn soil float qtzites and abnorm with upto 3% po.	
972452	S	A	40cm	B					41	55	91	0.9	6					100	343	235	5325N	Red-bn soil float white Moira qtzites well baked often fractured + qtz may 3cm qtz veins dipping S ^W .
972453	F	gs							36	54	84	0.4	10				X	78	607	5330N	Red-bn highly mag-magnetite abnorm.	
972454	S	A	1.1m	B					62	53	83	0.5	76					50	345	220	5350N	Red-bn. float Moira qtzite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD SL 7/73 No. 972418 - 430 Collected by GAW Sheet no. 60
 Area / Prospect DOLCOATH GRID
 Map / Photo reference Analysed by ANALABS (COOR) Date 27.04.82
 A 02143 DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W			Sn
		oc	o/c sample type ***																		
		f	s sample type ****																		
972418	S	A	80cm	'B'					40	45	19	0.2	40				X	189	50	5275N	Yellow-red-br sil. sandy clay float Moira SS - leached - yellow n br on red Fe staining on fractures or joint faces.
972419	S	A	60cm	B.					18	28	34	0.1	66				X	202	43	5300N	Red-br soil just below % Moira E many qtz veins dipping 35° S into hill MS = 0.1.
972420	S	A	12m	B.					17	32	35	0.1	168				50	289	105	5325N	Dk red-br. Moira qtzites - dk qtz baked - qtz void
972421	S	A	60cm	B.					125	31	77	0.1	106				100	197	83	5350N	v. dk br clayey float Moira qtzites. Moira M.S.
972422	F	gs.							4	14	114	x	20				2050	708	1230	5354N	Banded pink, white, black - metallic - magnetic MS = 6.2 - magnetite sharn - wuzelite texture
972423	S	A	60cm	B.					45	35	64	0.1	160				50	252	107	5375N	Dk red br clayey soil. float Moira qtzites.
972424	S	A	60cm	B					92	54	87	0.2	230				650	163	149	5400N	Med yellow br clayey soil. float Moira qtzites - dk qtz often red stained - well baked.
972425	S	P	10cm	A ₁ -A ₂					52	96	89	0.1	160				450	163	83	5425N	Dk br qtz many roots Moira qtzite - % dk + med qtz well baked.
972426	F	gs							12	28	165	0.1	10				100	23	28	5440N	v. weathered yellow qtzite with Sn?nw? a biotite crystals/flakes.
972427	S	A	10cm	A ₂					39	47	41	0.4	30				50	76	36	5450N	Dk qtz soil w/between dk gr p ₂ + po min ² sharn N ⁺ bank Navarra th.
972428	F	gs							260	13	57	x	6				x	9	25	5450N	Dk qtz baked qtzite some py po. with central hedenburgite sharn gr + wsh. banded up to 20% po.
972429	S	A	80cm	'B'					43	28	27	x	8				100	87	62	6475N	Yellow br, float - aaree Moira qtzite.
972430	F	gs.							9	24	36	x	x				x	12	41	5500N	Scree slope dk qtz speckled - mm. qtzite N.V.M.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m³/sec

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEPHERD EL 7/73 No. 372406 - 417 Sample numbers 372406 - 417 Collected by CBW Sheet no. 61
 Area / Prospect DOLCOATH GRID Date 27.04.82
 Map / Photo reference A 02143 Analysed by ANALABS (COOKE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn			
		o/c sample type ***																			
		s sample type ****																			
372406	S	A	1m	A ₂ -B				S	2	11	0.1	6					X	41	50	5000N	V.l. gy. leached - becomes sl. br. gy. c - v.c.g. sands little clay fraction. float Moira SS - wall fract. etc veined.
372407	F	gs.						81	4	7	1.0	64					X	456	12	(10m W) 5023N	Granite - central red zone sl. w. min.
372408	S	A	1m	A ₂ -B																5025N	lt pink gy + dk gy sands - prob. derived from granite. float - Moira SS - sauceroidal v.c.g. + etc veined.
372409	S	A	1m	B				7	7	19	0.2	18					X	706	78	5050N	Yellow clay with grit particles - weathered gran.
372410	S	A	1m	B-c				12	7	16	0.2	26								(10m W) 5075N	On W. side of o/c. Dk red-brn gy sand then mod. bright yellow float gneiss or granite with W. crystals.
372411	S	A	1.2m	A ₂				14	1	17	0.1	18					X	125	62	5100N	Mod. gy sandy horizon float Moira SS + granite
372412	S	A	1m	B.				4	4	14	0.2	14					X	421	129	5125N	Mod. br. gy. sandy Moira. float Granite + Moira - just below % workings.
372413	S	A	80-1m	B-c				3	X	14	0.1	2								5150N	Yellow-br soil - Moira SS. float Gran + Moira
372414	S	A	1.1m	B.				60	13	8	0.2	16								5175N	Dk gy br clayey soil. Occ. float of Moira SS - white to pale cream leached.
372415	S	P	20m	B-c				20	24	114	0.1	20								5194N	Dug out top bank of road yellow weathered rock. Rock Moira gneiss + lots of veining.
372416	S	A	50m	B.				12	14	20	0.2	28					X	169	80	5225N	Dk red-br soil - little float.
372417	S	A	50m	B.				57	50	18	0.2	95								5250N	Red-br clay some sand float Moira SS much c.g. dk gy ss. fract. + joints infilled with limonite - occ. sl. gneissous bands.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m²/hr wi = wt. h. r. = w. c. = c. = c.

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL7173 No. Sample numbers 987238 - 987269 Collected by J. M. CLEMENTSON Sheet no. ... 62
 Area / Prospect DALSODATM Date 29 Apr. 1982
 Map / Photo reference LINS. 6400E Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn			
		o/c sample type ***																			
		s sample type ****																			
987264	S	Aug	0.40	c				2	x	8	x	4				x	58	36	4825N	Weathered grey quartzite/sandstone.	
987265	S	Aug	0.30	Alc				3	x	12	x	4				x	29	115	4875N	Grey sand, humic.	
987266	S	Aug	0.30	Alc				4	2	11	x	4				x	7	46	4900N	-	
987267	S	Aug	0.50	c				2	x	9	0.1	6				x	40	93	4925N	-	
987268	S	Aug	0.30	c				2	x	10	x	x				x	36	29	4950N	-	
987269	S	Aug	0.30	c				3	x	10	x	4				x	10	4	4975N	-	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = c...
 *** o/c sample type **** s sample type

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name... S... .. No. Sample numbers 987238-987269 Coll. by J.M. Clementson Sheet no. 63
 Area / Prospect... DOLGORTS Date 29 Apr. 1982
 Map / Photo reference... LIME GHOPE A 02143 Analysed by..... DPO no.....

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn			
		o/c sample type ***																			
		s sample type ****																			
987251	S	Aug 0.35	B-G					16	44	17	0.1	16				x	x	x	4475N	Dk brown silty soil a magnetite-bearing some of qz:ke a ? hornblende qz:ke.	
987252	F							15	17	14	x	24				x	81	30	4500N	qz-eye buff, possibly foliated rhyolite	
987253	F							7	4	7	x	10			50	x	10	4500N	Vein qz + chlorite/mica segregations.		
987254	F							27	310	19	x	56				x	25	22	4825N	Slightly brecciated, ferruginous buff-ochre qz:ke.	
987255	F							5	8	4	0.1	4				x	8	31	4600N	White qz:ke with qz veining and minor chlorite/mica clots.	
987256	F																		4625N	Foliated a.v. Lo PP.	
987257	F							19	11	13	x	12				x	5	19	4625N	Pinkish-grey qz:ke. N.V.M.	
987258	F							4	2	8	x	6				x	22	9	4700N	White qz:ke plus hematite staining.	
987259	F							59	9	31	x	14				x	31	9	4725N	Small trench 40cm x 4m. float wint. quartzite.	
987260	S	Aug 0.30	c					7	18	46	0.1	2				x	x	x	4750N	Grey sand - basically rotten qz:ke.	
987261	S	Aug 0.50	c					3	1	9	0.1	6				x	51	70	4775N	" " " "	
987262	F							48	5	62	x	16				x	16	103	4800N	Dk red hematitic sandstone. Soft.	
987263	S	Aug 0.30	A/c					7	7	12	0.2	16				x	213	61	4800N	Momic grey sand.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km?

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name Sheridan EL 713 No. 987233 - 987249 Sample numbers 987233 - 987249 Collected by L.M. CLEMENTSON Sheet no. 64
 Area / Prospect DALCOATH Date 29 April 1982
 Map / Photo reference LINE 6405 Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn		
		o/c sample type ***																		
		s sample type ****																		
987239	S	Aug	0.60	B ₂				17	14	22	X	54				50	313	68	4175N	Rich red brown soil
987240	S	Aug	0.70	B ₂				16	45	68	X	82			X	X	X		4200N	Lt brown clay rich soil. Float of angular qz:ke and conglomerate
987241	S	Aug	0.60	B ₂				11	40	62	X	134			X	X	X		4225N	Rich brown silty clay
987242	S	Aug	0.30	B ₁ B ₂				16	146	57	0.1	62			X	175	X		4250N	Brown sandy clay
987243	F							18	540	90	X	10			X	57	12		4250N	Dark reddish-gray, fine grained? buff
987244	S	Aug	0.65	B ₂				25	26	50	0.1	40			X	43	4		4275N	Dark brown - mottled ochre silty soil
987245	S	Aug	0.20	B ₁ B ₂				12	20	35	X	25			X	55	19		4300N	Mucic brown soil on buried scree.
987246	S	Aug	0.40	B ₂				22	26	55	0.1	36			X	X	X		4325N	Mid brown silty clay. Qz:ke float.
987247	S	Aug	0.70	B ₁ B ₂				12	30	23	X	28			X	136	38		4320N	Brown-grey sandy clay. Wh:ke qz:ke float, plus? some a.v. buff.
987248	S	Aug	0.25	B ₁				10	32	26	0.1	12			X	55	25		4375N	Grey leached sandy soil on top of buried qz:ke scree.
987249	S	Aug	0.30	B ₁ B ₂				7	52	13	X	2			X	111	39		4400N	Grey-brown sandy clay on top of buried qz:ke scree.
987250	F							14	3	8	X	26			50	43	4		4425N	Pale buff-white qz:ke, ferruginous patches. Possibly slightly calcareous. N.V.M.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km²

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL7/73 No. 987169-987203 Sample numbers 987169-987203 Collt by I.M. CLEMENTSON Sheet no. 65
 Area / Prospect DALCOATH Date 27-4-82
 Map / Photo reference LINE 6500E Analysed by _____ DPO no. _____
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn			
		o/c sample type ***																			
		s sample type ****																			
987201	S	Aug	0.70	0-0%				6	21	18	0.2	68			50	49	20	6500E 4276N	Yellow ochre sandy soil.		
987202	SS	1.5	0.4	5%	60%			14	39	15	0.1	34			150	192	49	6510E 4265N	Stream sample upstream (mouth) of Dalcoath Mine adit.		
987203	rc	3m						47	24	36	0.1	102			350	55	73		V. weathered, ferruginous, yellow-ochre weathered quartzite or gneiss from mouth of adit. Dip (?) appears to be 40°/210° N		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description fl = flow m/l w = wt al = % co = % ca = % pH =

C.R.A. EXPLORATION, GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. Sample numbers Collected by I.M. CLEMENTSON Sheet no. 67
 Area / Prospect DALSOATH GRID Date 27.4.82
 Map / Photo reference LINE 6500E Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn			
		o/c sample type ***																			
		s sample type ****																			
987181	F								5	X	9	X	8				X	27	22	6500E	Dk grey-brown ?? metamorphosed buff. Fine grained, well sorted. Foliated; minor Fe staining.
987182	S	Aug	0.20	A/B				12	2	12	0.1	8					X	50	24	4650N	Organic rich sandy.
987183	F	Aug						5	8	23	X	X					50	X	7	4650N	Fine grained slightly banded/foliated & sparsely micaceous meta-buff?
987184	S	Aug	0.35	A/R				6	7	14	0.1	8					X	56	11	4600N	Sandy humic soil with abundant rounded qzite
987185	S	Aug	0.70	A-C				19	41	31	X	54					X	110	14	4575N	Lt brown sandy clay Coarse meta-grit float at site
987186	F							44	60	68	X	8					50	42	63	4560N	Weathered qz-porphyr. Qz-eyes in weathered sandy matrix. Some mica.
987187	S	Aug	0.50	B				43	119	37	X	120					50	256	31	4550N	Brown sandy soil. Qz:ka & qz-porphyr float at site
987188	S	Aug	0.60	B				56	70	47	X	60					100	85	8	4525N	Ochre-brown sandy clay.
987189	F							28	1440	96	0.6	12					X	24	28	4520N	Micaceous mottled red-yellow-black 'qz:ka' 1/2-1% pyrite. ??? gosean.
987190	S	Aug	0.60	B				49	90	88	X	34					X	85	X	4475N	Lt yellow-brown sandy soil. Float and ??? of pale buff-white slightly micaceous ? qzite. (? gosean) fine grained

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEPHERD EL7/73 No. 987169-987203 Sample numbers 987169-987203 Collected by I.M. CLEMENTSON Sheet no. 68
 Area / Prospect DOLCOATH GRID Date 27 APRIL 82
 Map / Photo reference LINE 6500G, No SOUTH OF BASELINE Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As			W	Sn
		o/c sample type ***																		
		s sample type ****																		
987169	S	Aug 0.20 B						32	20	20	x	160			50	756	51	4975N	Lt brown sandy clay, qzite fragments	
987170	F							7	2	14	x	58			x	17	28	4950N	Qzite: slightly ferruginous buff-cream. Well sorted, medium grained. Thin qz veins.	
987171	gs							12	4	24	x	36			50	22	19	4935N	Micaceous (sparingly) reddish, medium grained qzite. Bedding 45°/280°M.	
987172	rc	1 1/2 m at 20cm intervals perp. anticlinal bedding						9	2	20	x	58			50	66	19	4900N	As described above.	
987173	s	Aug 0.26 ABC						7	6	18	x	30			100	159	59	4875N	Red brown sandy soil averaged heavy qzite conc.	
987174	gs							16	2	26	x	12			x	4	110	4850N	Med grained, compact, slightly ferruginous qzite. Buff, well sorted	
987175	F							8	2	20	x	6			x	10	35	4825N	Pale, sugary qzite from extensive conc.	
987176	S	Aug 0.30 A/C						7	1	14	0.1	8			50	x	110	4800N	Gray-brown sandy soil plus humus	
987177	F							32	1	5	x	32			50	69	846	4800N	Vein qz, very ferruginous from black of qzite in conc.	
987178	gs							11	10	6	x	50			50	175	11	4775N	Clay conc zone of thin (10cm) qz veins within pale buff qzite. Total approx 50cms wide.	
987179	F							6	4	7	x	14			x	56	24	4725N	Qzite, fresh buff, slightly Fe stained.	
987180	F							5	1	7	x	4			x	23	26	4700N	Fine gr, midgray qzite. 1mm qz inlets.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name... SHEFFIELD EL 7/73 No. Sample numbers... 935751 - 935761 Collected by... GSW Sheet no. 69
 Area / Prospect... DOLCOATH GRANITE GRID Date... 12-10-81
 Map / Photo reference... Analysed by... ANALABS (COOE) DPO no. 30029
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	As	Au	Bi/mo	W	Sn		
		o/c sample type ***																		
		s sample type ****																		
935751	S	A	1m	B				5	20	15	X		3		2/30	310%	45	5000N	Med bn-gy c-v.c.g sl gritty moira/granite junction. qtz veining prevalent N.V.M. Moira ss - v. weathered.	
935752	S	A	11m	B				20	30	25	X		56		200/65	1260%	110	5025N	Mod-bn soil. float mainly qtz veined moira but subsurface granite	
935753	S	A	40m	A2				5	20	20	X		5		6/3.5	300%	50	5050N	Mod. gy qtz grit-sand granitic. float qtz veins - visible W. in some.	
935754	F	gs.						55	20	15	X		68		970/30	2880%	35	5070N	Qtz veins in granite beside workings. sl. greisenised.	
935755	S	A	20m	A1				10	15	40	X		4		X/9.5	270%	40	5075N	Dk gy granite soil	
935756	S	A	90m	C				50	25	35	X		31		200/73	1860%	80	5100N	Mod-dk bn becoming bright yellow-bn Fe rich granite - greisen area. float granite + W min ² .	
935757	F	gs.						65	35	180	0.5		26		2/200	35	65	5123N	Qtz vein - greisen - chloritic sand dk red + yellow Fe staining.	
935758	S	A	60m	B				20	35	25	X		13		58/13.0	400%	80	5125N	Deep red-bn soil float W gy moira qtzites well qtz veined + v. fractured.	
935759	S	A	30m	B				85	60	60	X		65		154/20	290%	240	5150N	float qtz porphyry and moira qtzite soil deep red-bn soil.	
935760	F	gs						20	30	35	X		120		X/385	1370	120	5178N	Qtz vein W min ² in gn qtz fresh qtz porphyry	
935761	F	gs						55	20	20	X		29		38/104	30	60	5149N	Weathered yellow-red gossamer qtz porphyry well weathered.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935762 - 935776 Sample numbers. 60W Collected by GOW Sheet no. 70
 Area / Prospect DOLCOATH GRANITE GRID Date 12-10-81
 Map / Photo reference..... Analysed by ANNA LABS (COFFE) DPO no. 30029
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations							
		ss*	ft	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	As	Au	Bi/mo	W			Sn						
																						o/c sample type ***					
																						s sample type ****					
935762	F	gs.						45	20	15	x		6		48/7	x	100	5175N	Greisen - dk g gys micaceous greisen								
935763	S	A	30cm	B				50	35	70	x		33		32/102	160	130	5175N	Med bn soil float greisen of polygen + mica qtzite - of veining prevalent.								
935764	S	A	30cm	B				20	20	50	x		22		144/355	120	150	5200N	Red-bn soil. float greisen of polygen + well fractured of veined mica qtzite.								
935765	S	P	5cm	A ₂				20	30	30	x		16		28/25	100	80	5225N	Med-bn soil mica qtzite % - of veined.								
935766	F	gs.						420	15	15	x		75		10/51	160	300	5243N	Fe gossanous parts in yellow-gy mica qtzite - well fractured some mm staining.								
935767	S	A	40cm	B				25	35	55	x		39		52/25	95	100	5250N	Red-bn soil. qtzite - hornfels % - greisen float.								
935768	S	P	12m	B				100	40	75	x		170		52/20	180	140	5275N	Red-bn. qtzite - hornfels %. float greisen very micaceous.								
935769	S	A	70cm	B				60	35	35	x		46		34/100	110	60	5300N	Red-bn float qtzite - hornfels								
935770	S	A	50cm	B				75	35	60	x		32		20/125	160	65	5325N	Red-bn float 1/2 gys qtzite some mica alteration along numerous fracture planes.								
935771	S	A	50cm	B				30	50	50	x		21		8/355	150	65	5350N	Red-bn. float qtzite some of veining = 50cm wide								
935772	S	A	35cm	A ₂				35	20	60	x		25		28/665	140	65	5375N	Dk red-bn soil. float mainly dk gys hornfels - one piece of greisen - see 935773.								
935773	F	gs						10	10	25	x		5		14/6	280%	220	5375N	Dk g gys greisen.								
935774	S	A	80cm	B				80	95	65	x		1400		24/146	140	100	5400N	Red-bn soil float mica hornfels well fractured - of veined.								
935775	S	A	90cm	B				60	85	100	x		530		22/19	120	90	5425N	Red-bn. mica of well bedded - fractured.								
935776	S	A	11m	B				60	100	70	x		370		24/80	130	95	5450N	Red-bn float qtzite - hornfels mica on fracture planes. Fe abundant sl gossanous.								

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE SHEET

Tenement name SHEFFIELD 7/73 E.L. No. 935777 Sample numbers 935777 Collected by GWJ Sheet no. 71
 Area / Prospect DOLCOATH GRANITE GRID Date 12-10-81
 Map / Photo reference A 02143 Analysed by ANALABS (COOEE) DPO no. 30020

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	As	Au	B/mo	W	Sn		
935777	F	gs							20	30	50	x		14		6/49	3630%	65	5472N	Qzite + qtz vein 1.5cm wide W+? sl yellow and m.g.	
935778	S	A	60cm	B'					55	50	40	x		180		28/735	130	85	5475N	Red-bn float qzite dk gy sugary ss. well fractured Fe stains along fractures + mica.	
935779	S	A	80cm	B					185	40	70	x		160		48/720	180	220	5500N	Red-bn float hornfels dk gy - mag?	
935780	F	gs							40	x	305	x		6		7/35	45	140	5490N	Dk gy hornfels mod. magnetic.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = ...

Tenement name SHEFFIELD EL 7/73 No. 935840 Sample numbers 935840 Collected by GSW Sheet no. 72
 Area / Prospect DOLGOATH GRANITE GRID
 Map / Photo reference A 02143 Analysed by ANALABS (CODEE) Date 20-10-81
 DPO no. _____

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations	
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn				
		o/c sample type ***																				
		s sample type ****																				
935840	F	gs.												96.8				4300	1.0%	35	4460N	High grade vein w+ Bi min in greisen.
935841	F	gs.												48.8				5300	1.68%	21	4460N	Greisen sample + vein with W, Bi, Mo min.
935842	F	gs.												322.0				1320	0.065%	45	4460N	On tk. greisen with Bi min.
935843	S	A	1m	B										130				26	170	35	4450N	Mod br soil. Float greisen + Bull Gk Fr.
935844	S	A	60cm	B										131.0				38	240	35	4475N	Mod br soil Float Bull Gk Fr
935845	S	A	30cm	B										76.0				60	180	45	4400N	Yellow br + mod br. Float granite + greisen.
935846	S	A	10m	B.										50.5				32	100	35	4375N	Mod yellow br clayey soil - float granite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchmen k1 ?

C.R.F. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935812 - 825 Sample numbers 935812 - 825 Collected by GSW Sheet no. 74
 Area / Prospect DOLCOATH GRID Date 20-10-81
 Map / Photo reference A 02143 Analysed by ANALABS (COCEE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations					
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn							
		o/c sample type ***							s sample type ****																
935812	S	A	1.2m	A ₂ -B																			4950N	Dk gy-bn + yellowish soil. Float mica of granite - sl. greisenised - gte veined.	
935813	S	A	70cm	A ₂																				4925N	On top of large granite? Dk gy sandy soil.
935814	F	gs																						4955N	Greisen? sample ± 10% Bismuthinite
935815	F	gs																						4900N	Mica of showing evidence of assimilation ± dk gy sandy blebs + specks through it.
935816	S	A	50cm	A ₂																				4900N	V. dk gy soil - granite? 1m 5"
935817	F	gs																						4875N	sl greisenised granite Fe staining - orange-red colour - gen. fresh med gy granite
935818	S	A	80cm	B-C																				4850N	Dk red-bn soil float gtzite but mainly granite - close to contact.
935819	F	gs																						4835N	Mica - wh gtzite 1.5cm vein ± W
935820	S	A	60cm	B																				4825N	Dk gy + mod bn clayey soil. float gtzite + granite
935821	S	A	11m	B																				4800N	Mod yell bn sandy soil. float hornfelsed gtzite ll gy v. baked. + granite.
935822	F	gs																						4785N	Dk gy - yellow white streaked hornfelsed gtzite? Bi min ²⁺ - very baked.
935823	S	A	30cm	B																				4775N	Dk yellow bn clayey soil - float as for 822.
935824	S	A	50cm	B																				4750N	Yellow-bn clayey soil. float granite + gtzite.
935825	S	A	50cm	B																				4725N	Yellow-bn clayey soil. float white crystalline mica gtzite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R. EXPLORATION . GEOCHEMICAL SAMPLE RIDGER

Tenement name... SHEFFIELD EL 773 No. Sample numbers... 935798 - 935811 Collected by... GGL Sheet no. 75
 Area / Prospect... DOLFOATH GRID Date... 19-10-81
 Map / Photo reference... A 02143 Analysed by... ANALABS (ROOEE) DPO no...

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn		
935798	F	gs									46.0				1260	1.51%	10	6600E	5125N	High grade greisen zone E W min ² - specularite - v. fe stained. pale yellow min ² - Bi?
935797	F	gs									370				380	0.19%	45	5125N	Non veined greisen v. fe stained - v. dk red coloration.	
935796	S	A	50cm	B							160				30	330	55	5125N	Yellow-gy soil - workings E. of peg greisen float.	
935795	S	A	80cm	B							58.5				370	830	55	5100N	Med yellow-br m-v.c.g. sandy clay float greisen.	
935794	F	gs									20.0				60	50	150	5075N	Dk gy fresh greisen pyrite blebs + specularite.	
935793	S	A	1.2m	B							30.5				124	530	110	5075N	Pale yellow gy + med yellow clayey m-c.g. sand. float granite + greisen.	
935792	S	A	60cm	B							20.0				82	280	70	5050N	Med gy-yellow c-v.c.g. granitic soil float greisen + granite.	
935791	9c	gs									50				36	220	180	5025N	No soil - 9c greisen - 1/2 pyrite, epidote mica - weathered + 1cm vein E W min ² .	
935790	F	gs									2.5				1240	0.78%	20	5005N	Dk red greisen non-mag. - 1cm wide qtz vein E specularite + W?	
935858	S	A	60cm	A/B							20.5				64	360	70	5000N	V. dk br, float greisen, hornblende biotite, qtz + feldspar greisen E pyrite.	
935811	S	A	60cm	B/C							29.0				56	530	60	4875N	Med gy + yellow gy sl clayey m-c.g. sand float sl. greisen granite.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample descr. in n. fl = flow m³/hr

Tenement name SHEFFIELD EL 7/73 No. 935810 - 935799 Sample numbers 935810 - 935799 Collected by GOW Sheet no. 76
 Area / Prospect DOLCORTH GRID Date 13-10-81
 Map / Photo reference A 02143 Analysed by ANALABS (COOEE) DPO no. _____

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W			Sn
		oc	o/c sample type ***																		
		f	s sample type ****																		
935810	S	A	12m	B-C								12.0				26	350	30	600E	5350N	Med-yellow gy clayey soil. Black shafts dca w 15-20m. float greisen
935808	S	A	1.2m	C								55.5				110	310	50		5325N	Lt yellow-med yell-br clayey soil - weathered granite. float greisen + granite
935808	S	A	60cm	B								62.0				240	0.073%	45		5300N	dk orange br clayey soil. float greisen granite.
935807	S	A	30cm	B-C								81.0				240	420	70		5275N	Med-yellow br clayey soil - float granite and greisen float all t. mineralised veined WO ₃ veins.
935806	S	P	10cm	'C'								12.0				38	190	35		5250N	Yellow-br clayey m.-c.g. granitic soil
935805	F	gs.										9.5				42	60	170		5228N	Fresh dk gr-gy greisen - yellow Fe staining in 0.4m trench 12m long.
935804	S	A	30cm	A ₂								17.0				60	220	30		5225	Bl + v. dk br clayey soil m.-c.g. float greisen.
935803	S	A	11m	'B'								67.0				240	700	85		5200N	At Black Upper shaft - 5m E. med yellow br clayey soil. float greisen.
935802	F	gs.										7.5				20	200	90		5200N	15m W. dk gy glassy vein material (greisen?) within granite
935801	S	A	50cm	B								27.0				34	270	50		5175N	Yellow-br clayey soil. float greisen.
935800	S	A	10cm	B								116.0				180	780	85		5150N	Med br clayey soil. float greisen.
935799	F	gs.										66.0				3000	1.35%	30		5125N	Greisen containing thin + thick qtz veins min. with W - upto 5% - Sn?

* Sample type ss = stream sediment oc = outcrop f = float s = soil

Tenement name SHEFFIELD 7/73 No. Sample numbers Collected by I.M. Clementson Sheet no. 17
 Area / Prospect DALCOATH GRID Date 26-Apr-82
 Map / Photo reference LINE 6600E Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations			
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Bi	Au			As	W	Sn
		oc	o/c sample type ***																		
		f	s sample type ****																		
987152	S	avg	0.40	A/B								86	6		150	26	43	5600N	Red brown, sandy soil. Fragments of qz:ke float and? of gangue, and grain, well sorted qz:ke.		
987153	S	avg	0.20	A/C								110	6		150	67	42	5575N	Abundant buff-yellow qz:ke float.		
987154	S	avg	0.20	A/C								94	8		250	67	54	5530N	Soil above of buff, hard, fresh qz:ke: apparent dip 50°/190°m.		
987155	S	avg	0.40	B/C								56	6		400	64	82	5525N	Red sandy soil. Abundant qz:ke float		
987156	S	avg	0.80	B/B/C								56	16		350	82	72	5500N	" " " "		
987157	F											30	8		300	X	218	5485N	Highly ferruginous qz:ke - abundant specular hematite.		
987158	S	avg	0.30	B/C								60	38		1500	93	208	5475N	Red-brown sandy soil.		
987159	F											8	28		2000	8	75	5475N	Horstalic (? alkali) dk brownish grey qz:ke with goseany patches and thin qz-spec veinlets		
987160	S	avg	1.0	B								102	34		50	159	63	5450N	Rich red silty soil. Abundant float at site of brownish red baked (hornblastic) qz:ke.		
987161	S	avg	1.0	B								170	50		X	216	43	5425N	Red-brown silty clay		
987162	S	avg	0.35	B								170	72		150	355	114	5400N	" " " " Abundant qz:ke and? hornblastic float.		
987163	S	avg	0.20	B								36	36		X	442	26	5375N	Red silty clay.		
987164	S	avg	1.10	B								69	76		X	356	35	5350N	" " " " + float of porphyritic granite		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = in l

Tenement name SHEFFIELD EL7/F3 EL474 No. 98203- C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER Collect. by L.M. CLEMENTSON Sheet no. 78
 Area / Prospect DOLCOATH Dated 28-4-82
 Map / Photo reference LINE STOOE A 02143 Analysed by..... DPO no.....

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As			W	Sn
		o/c sample type ***																		
		s sample type ****																		
987233	S	Aug	0.70	c							230	46		X	269	X	5475N	Weathered, unaltered granite.		
987234	P										160	72		X	158	188	5475N	Greisen associated granite (dominant) float.		
987235	S	Aug	1.20	c							240	20		50	484	X	5450N	Weathered granite.		
987236	S	Aug	0.40	B ₂							160	50		X	310	54	5425N	Brown, silty soil		
987237	S	Aug	0.50	B ₂							380	144		100	1010	26	5400N	"		
987238	S	Aug	0.40	c							32	X		50	38	X	5375N	Weathered granite.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

C.R.A. EXPLORATION - GEOCHEMICAL SAMPLE REGISTER

Tenement name: SHEFFIELD EL7173 No. 987203 - Sample numbers 987203 - Collected by J.M. Clementson Sheet no. 73
 Area / Prospect: DORRATH Date: 20-4-82
 Map / Photo reference: LINE 6700E Analysed by: _____ DPO no. _____
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	cs	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn		
No Sample																		6700E		
																		5600N	q/c of Moine qz:ite fine grained, well sorted, slightly ferruginous	
987224	gs										40	X		650	16	7	5575N	Qz:ite - ferruginous zone along joint in rock well sorted Moine qz:ite		
987225	S	Aug	0.35	B ₂							170	30		50	55	X	5585N	LT sandy soil. Yellow-brown.		
987226	S	Aug	0.40	B ₂							130	44		X	207	21	5575N	Brown sandy silty soil look of q/c		
987227	gs										32	10		X	11	X	5575N	Moine qz:ite: recrystallized but very fresh, hard, "light". White except for minor Fe staining.		
987228	F										51	6		50	50	X	5570N	Fine grained soil or siltstone. Very ferruginous. (In tree roots).		
987229	S	Aug	0.70	B ₂							190	40		X	185	X	5550N	Silty yellow brown soil.		
987230	S	Aug	1.15	B ₂							150	42		X	426	39	5525N	" " - gray "		
987231	gs										260	6		150	20	14	6680E 5525N	Moine qz:ite - reddish, hematite rich zone within q/c of white, med gr, well sorted qz:ite.		
987232	S	Aug	1.0	B ₂ K							190	44		X	X	X	5550N	Yellowish sandy soil + qz frags.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial cs = catchment km2
 *** Outcrop sample types ss = stream sample rc = rock chip (state interval & km) bl = block

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD E.L. 7/73 No. 987203- Sample numbers 987203- Collected by I.M. CLEMENTSON Sheet no. 80
 Area / Prospect DALCOATH GRID Date 28-4-82
 Map / Photo reference LINE 5700E Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn		
		o/c sample type ***																		
		s sample type ****																		
987216	gs											10	38		x	22	119	5200M	Greisen zone along joint within fresh weathered granite.	
987217	gs											18	152		100	53	314	5225N	Fresh granite with small (1cm) patches (irregular) of greisen development, principally along joints.	
987218	S	Aug	0.10	B ₂								10	6		x	x	27	5225N	Yellow-grey sand; sandy.	
987219	S	Aug	1.10	B ₂								48	500		100	297	39	5250N	Yellow, sandy. Granite fragments.	
987220	S	Aug	1.00	B ₂								172	36		50	580	62	5275N	Sandy, yellow-brown. A E look of old of red-coarse gr. Devonian granite.	
987221	S	Aug	0.20	B ₂								82	100		x	263	41	5300N	Yellow-brown sandy clay	
987222	S	Aug	1.20	B ₂								62	78		x	258	25	5325N	Ochre-brown clayey soil. Little float (granite only) at site.	
987223	S	Aug	0.20	B/C								56	68		100	382	37	5350N	Brown sandy - basically weathered granite (as exposed in road cutting at 5360.)	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL7/73 No. 987203- sample numbers 987203- Collected by I.M. CLEMENTSON Sheet no. 81
 Area / Prospect DULCOATH G.P.D. Date 28:4:82
 Map / Photo reference LINE 6700E Analysed by DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn		
987203	S	Aug	0.80	B ₂				18	6	18	x	30			50	167	30	5000N	Brown, sandy soil	
987204	F											16	38		x	32	282	5000N	Gravel? brown w/ f. m. k.	
987205	S	Aug	1.00	B ₂						64		8		x	233	53	5025N	Ochre brown silty clay amongst scree of gneiss and granite		
987206	F									12		36			100	89	189	5025N	Dr silvery greenish gneiss. Abundant flesh around site.	
987207	F									8		40			50	21	145	5025N	Coarse grained gneiss - ?? to wolf.	
987208	S	Aug	0.40	B-B ₂						14		28		x	227	64	5025N	Gray - red brown sandy soil. Abundant gneiss flesh		
987209	S	Aug	0.35	A-B						12		144		x	125	45	5075N	Muddy grey sandy soil		
987210	gs									6		134		x	29	95	5075N	Quartzite, slightly gneissified granite in zone dipping 55°/185°m.		
987211	gs									110		60		x	54	226	5025N	Slightly weathered but unaltered granite.		
987212	S	Aug	1.00	B _{1/2}						56		140		x	139	23	5125N	Grey, very sandy soil, slight brown colour. Abundant gneiss flesh		
987213	gs									10		14		x	15	20	5150N	Fresh, unaltered leucogranite.		
987214	S	Aug	0.60	B ₂						120		110		x	497	63	5175N	Rich ochre-brown clay soil amongst scree (a?ok) of fresh, coarse grained leucogranite.		
987215	S	Aug	0.40	B ₂						64		130		50	338	63	5200N	Brown soil at foot of granite etc.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SHEFFIELD EL 7/73 No. 972433 Sample numbers 972433 Collect by GBW Sheet no. 63
 Area / Prospect DOLLOATH GRID Date 28.04.82
 Map / Photo reference Analysed by ANALABS (OSSEE) DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref = 6400E 5050N	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn		
		o/c sample type ***																		
		s sample type ****																		
972433	oc	cs	1.75					68	21	17	x	70				50	300	40	Granite - well weathered from entrance to south 2 meters	
972434	oc	cs	1.60					91	18	19	x	190				100	1030	34	Granite 2-4 meters	
972435	oc	cs	1.75					65	13	18	0.1	150				50	556	28	Granite/gneiss 4-6 mts.	
972436	oc	cs	1.3					66	4	24	x	130				50	354	68	Granite/gneiss	
972311	oc	cs	2m					100	15	27	x	124	220		x	2070		84	Granite/gneiss	
972312	oc	cs	2m					110	9	26	x	170	166			50	485	57	Granite/gneiss	
972313	oc	cs	2m					120	12	27	x	300	380		x	573		27	Granite/gneiss	
972314	oc	cs	2m					100	9	28	x	130	210		x	509		46	Granite/gneiss	
972315	oc	cs	2m					70	10	31	x	56	56		x	342		35	Granite/gneiss	
972316	oc	cs	2m					62	11	29	x	18	44		x	505		39	Granite/gneiss	
972317	oc	cs	2m					32	13	19	x	28	112		x	369		17	Granite/gneiss	
972318	oc	gs						35	9	24	x	8	30		x	439		43	Gneiss from adit 50m NW of peg 316	
972319	oc	gs						100	6	27	x	210	122		x	185		64	Gneiss from adit 2m W of peg 313	
972320	oc	gs						53	15	18	x	78	162		x	6990		4	Gneiss from adit 6m W of peg 436	
972321	gs							165	23	32	0.5	400	162		100	479		469	Gneiss from adit floor at peg 433	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE EDGER

Tenement name SHEFFIELD EL 7/73 No. 935733 - 738 Sample numbers 935733 - 738 Collected by GEO Sheet no. 84
 Area / Prospect HIGGS Au MINE Date 12-10-81
 Map / Photo reference A 02143 Analysed by ANALABS (COCKE) DPO no. 30029

Sample No.	Type	ss channel **							Carbon	Metal content ppm or %										Grid ref	Geological Observations
		ss *	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As	D	Sn		
		oc	o/c sample type ***																		
		f	s sample type ****																		
935733	%	gs							925	753%	6.50%	88			281	X	30*	25		HIGGS Au MINE AREA. IN CREEK ON E. SIDE OF MAIN WORKINGS Dk gy, yellowish sulphides. % approx 3m wide in ch. some 5m east of workings.	
935734	%	gs							1250	7150	2.16%	28			0.012	3	X*	35		Very oxidised % 2m north of 733.	
935735	%	gs							725	5.08%	6.28%	53			4.59	3	X*	30		Banded massive sulphide horizon ~ 20% sulphides py > arpy > Zn > Pb > Cu.	
935736	%	gs.							70	280	160	0.5			0.012	3	X	30		Med gy fine gr. hornfelsed quartzite py on joint planes - heavily fractured Pb on larger joint planes. W. adit at Higgs = 20m in.	
935737	%	gs.							595	250	430	1.0			0.532	51	15	40		Outcrop at entrance to 22m long adit approx 25m W of Higgs Main adit. Probably of smallest sulphide horizon. med-dk gy v. pyritic	
935738	%	gs.							135	805	50	0.5			0.040	16	15	35		Sulphidic quartzite fallen from roof just inside the adit entrance.	
																					* HIGH Zn INTERFERENCE - APPROX. VALUES

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** s sam out c n p l f r f =

C.R.A. EXPLORATION, GEOCHEMICAL SAMPLE LOGGER

Tenement name SHEFFIELD EL 773 No. 935705 - 725 Sample numbers 935705 - 725 Collect. by GLW Sheet no. 87
 Area / Prospect DOLCOATH GRID - DOLCOATH MINE Date 22-07-81
 Map / Photo reference A 02143 Analysed by 30027 DPO no. 30027

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	As	Au	W	Sn			
		oc	o/c sample type ***																		
		f	s sample type ****																		
935705	F	gs							35	225	21	1.4			120	0.020		120	400		DOLCOATH MINE - REFER SKETCH MAP. Dk gr-gy greisen rock ± dk gy patches (Si?) some Fe staining - sulphidic? some Mn staining. Small vein some W + Fe
935706	F	gs.							36	200	21	0.6			91	0.012		50	200		ditto (No vein material)
935707	F	gs.							11	465	6	0.6			61	0.012		630	3950		White qtz vein ± W blades.
935708	SS	Kol	5m	✓					8	41	33	x			8	x		70	55		About 30m below workings east of adit. float small amount mainly greisen, some small granite pieces occ. qtzite + qtz vein.
935719	oc.	rc	cont.	0.75m					175	192	23	1.5			680	0.076		100	1250	end of adit	greisen no qtz veining - py
935720	oc.	rc.	cont.	3.5m					26	175	33	0.6			450	0.016		170	500		greisen - pyritic.
935721	oc.	gs.							23	102	8	0.8			2900	0.056		540	110		greisenised granite more qtz rich - qtz veined heavily iron stained.
935722	o.c.	gs.							65	123	112	0.5			580	0.020		120	170		Dk gy very hard micaceous greisen containing Cp? or Py blebs.
935723	oc	re	cont.	0.65m					128	490	26	1.5			770	0.056		75	420		Greisen channel sample across 5 th face
935724	oc	gs.							13	330	7	1.0			240	0.064		15	200		Qty vein 15cm wide occ yellow br iron staining Vugge N.V.M. ST 30m Dip 74° @ 120°.
935725	oc	gs.							92	300	33	1.8			630	0.040		210	210		Roof qtz + min ⁺ greisen along strike from 935725 ^{South} - west - 5m.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description fl = flow m3/sec wi = width m al = allow - l

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEPHERD EL 7/73 No. 795645 - 795654 Collected by G.P. Sheet no. 89
 Area / Prospect DALCOATH MARGIN Date 10-02-'81
 Map / Photo reference A 02143 Analysed by ANALABS (COSEE) DPO no. 26190

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations	
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Bi	Au	Co	Sn	W			
		oc	o/c sample type ***																			
		f	s sample type ****																			
795645	%	gs							505	105	145	R	2.0	1700	0.05	30	990	30		Falls Workings. Pale br-yl. gossanous limonite over soft pale creamy gy siltstones interbedded. Hard qtzites. Softer rocks sheared.		
795646	%	gs							20	45	40	R	1.5	X	0.008	20	100	X		TRAVERSE THROUGH BULL CK FM. Hard lt gy A-INT. V. weakly mag ⁿ 1-2% py.		
795647	%	gs	10m						35	95	100	R	2.5	134	X	10	520	25		Same loc. Bleached gossanous zone along joint in Vol ^c pale sugary qtz, mica chl. Some limonite after sulphides 10cm wide.		
795648	%	gs							THIN SECTION - PORPHYRIC RHYOLITE												V. hard massive dk gy-gn to bl. Vol ^c qtz eyes.	
795649	%	gs							125	105	145	10	3.0	X	X	35	30	X		Same loc. Vol ^c several % py-po>cp + several % mag ⁿ . Sulphides often have chlorite ass.		
795650	%	gs							135	100	75	0.5	1.5	28	X	50	290	X		Hard dk gn Vol ^c 2% mag ⁿ + 3.5% py-po>cp. Ch. det ⁿ .		
795651	%	gs							40	90	100	0.5	2.0	X	0.05	25	15	X		Hard dk gy Vol ^c 1-3% po-py.		
795652	%	gs							610	350	565	0.5	6.0	16	0.042	65	190	10		Dk gn. altered chloritic vol ^c . sev. % mag ⁿ . rock mostly chloritic - amphiboles.		
795653	%	gs							335	135	130	3.0	4.0	44	2.54	75	4500	15		Highly sulphidic zone near Vert. 10-15m wide. Sample much py. in qtzose-chloritic groundmass.		
795654	%	gs							630	220	525	X	3.0	44	0.017	45	200	15		Wet limonitic material - fault zone?		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

83A

Tenement name SHEFFIELD EL 7/73 No. 972363 - 371 Sample numbers 972363 - 371 Collected by GAU Sheet no. 07.07.82
 Area / Prospect TIN SPUR Date 07.07.82
 Map / Photo reference A 02143 Analysed by ANALABS (DOEE) DPO no.

Sample No.	Type	ss channel **							Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Bi	Au	As	W	Sn			
			o/c sample type ***																			
			s sample type ****																			
972363	oc.	gs.							10	10	25	x	2	x	-	x	19	64		TIN SPUR 100m W. FALLS MINE - ON ROAD. PALE GY and cream banded quartzite over Sn? crystals ST 289° DIP 30° @ 125°.		
972364	oc	gs.							30	15	75	x	4	x	-	200	21	77		15m further W. 10cm band sl. mag. ferruginous SS layer within unconsolidated ss.		
972365	F	gs.							45	30	25	x	10	30	-	x	17	9		Old road N from Tin Spur. - quartzite almost greisen - float.		
972366	F	gs							30	20	30	x	6	x	-	x	11	x		15m W of last sample - float from small quarry? above the Moins SS very S + Sn? minor Cp?		
972367	oc	rc	lm						70	55	20	0.5	4	x	x	200	86	10		50m W of last sample V. py. quartzite 102 S° unconsolidated ST 213° DIP 33° @ 330m.		
972368	F	gs.							430	30	45	0.5	x	55	0.047	3500	166	192		5" SIDE TIN SPUR AFTER CK. 30m below adit. Sample from collapsed adit red-yellow gossanous SS from entrance.		
972369	oc	rc	lm						4750	75	675	1.0	x	85	0.023	1050	103	544		10m along the ac. of Mn+Fe+qtz lode gossanous weathered SS lode Sn wide		
972370	oc	gs							380	20	25	7.0	4	275	0.172	55%	x	73		Gossanous Moins E Sn in Fe soil Sn past lode - part of same lode.		
972371	rc	gs							30	10	25	0.5	10	x		400	1250	21		~ 400m past top of quarry. Near S end the down. at top of the contact man rock Gneiss - biotite greiss. N.V.M.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sediment sample

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 795683 - 795687 Collected by G.P. Sheet no. 30
 Area / Prospect DALCOATH MARGIN (HIGGS MINE) Date 12-02-81
 Map / Photo reference Analysed by ANALABS (COOEE) DPO no. 26490
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Ni/Co	Au	Sn	W	Bi		
		o/c sample type ***																		
		s sample type ****																		
795683	%	qs.						145	415	20	0.5	6.5	/25	12.08			66	E. most adit 3m long. Sugary Qtzite ~15-20% coarse grained py. Some Au.		
795684	F	qs.						300	17000	6200	66.0	2.5	/10	2.70	45	X	X	From dump of above adit. Sugary bedded Qtzite ~ dolomite? 10% f. gn. py + 5% f. gn. gl disseminated throughout - not in veins.		
795685	F	qs.						210	2400	255	20.0	4.0	/30	0.57	60	X	14	Same dump. Hard pink Qtzite 20% py diss.		
795686	%	qs						815	230	15	2.5	4.5	/20	4.25	40	15	4	W most adit 30m from E adit 12m deep leached sugary Qtzite ~15% py.		
795687	SS	✓	5m					10	60	20	X	4	/5	0.463	100	770	92	Loc 100m above ^{main} workings 30m above W adit float highly sulphidic Qtzite - some impure Some calc-silicates - but gn. ~ minor py + po.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m

611141

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935626 - 935636 Sample numbers 935626 - 935636 Collec. by GBW Sheet no. 91
 Area / Prospect DOLCATH GRANITE GRID Date 18.08.81
 Map / Photo reference A 02143 Analysed by ANALABS (OOEE) DPO no. 30024

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	As	Au	Bi	W	Sn		
		o/c sample type ***																			
		s sample type ****																			
935626	F	gs.							5	95	130	x			29	x	x	x	104	5300E 50120N	Green epidote/chlorite chert - calc silicate rock - manganese.
935627	F	gs.							5	60	100	x			37	x	x	x	169	5300E 5015N	Same loc. as 935478. c-v.c.g. quartz containing sig hematite & manganese staining
935628	Fc	gs.							575	50	175	2			13	0.075	20	x	133	5300E 4960N	Black + dk. gr. gy. laminated quartzite = 15% po, cp? py - highly magnetic.
935629	F	gs.							375	350	775	x			84	0.333	60	12	148	5300E 4978N	Yellow-br. gossanous rock. Mn staining - soft puggy. 5m W of th
935630	F	gs.							100	75	550	x			300	x	x	7	68	5300E 4972N	v. heavily sulphidic - gr-gy py, po, gr? apy ~ 20% sulphides.
935631	F	gs.							600	650	100	2			7900	0.092	x	195	4770	5300E 5015N	10m W of line - red-purplish ferruginised quartzite sulphidic - gossanous in part.
935632	F	gs.							1000	334%	435%	59			67%	266	x	x	339	30m E OF TK AT 5300E 5060N.	NARRAWA REWARD MULLOCK DUMP. Massive sulphide cp, Pb, Zn ore
935633	F	gs.							100	1325	1600	2			2300	0.100	x	x	133		Narrawa Reward - 0% porphyry dyke highly altered sulphidic
935634	F	gs.							50	650	350	6			430	0.092	50	27	47		mullock dump. lt. gy. f.g. quartzite = py po + gr? - 8% sulphides
935635	F	gs.							25	325	300	x			25	0.017	20	25	191		mullock dump med. gy. foliated quartzite - 5% po, py
935636	F	gs.							575	325	350	x			2800	0.989	x	x	1290		Yellow-br. gossanous rock orig. quartzite & fractured, iron stained

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width

611142

Tenement name SHEFFIELD EL 7/73 C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER No. 972224- Collected by GBW Sheet no. 92
 Area / Prospect DOLCOATH GRID Date 2-11-81
 Map / Photo reference Analysed by ANALABS (LCCFE) DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	As	W	Sn				
		o/c sample type ***							s sample type ****													
972224	F	gs							10	25	15	X						10	20	730	5775E 4983N	CALC SILICATE - SKARN ZONE Banded Calc-Silicate very bright dk green colour some 5" from staining.
972225	F	gs							45	120	223	X						480	50	15	5785E 4983N	Ferricrete med-dk bn fe qtz rock.
972226	F	g.s.							25	95	85	X						10	X	10	5854E 4975N	ferruginous qtzite + sl. greenish calc sil. rock.
972227	F	gs							25	60	20	X						18	15	20	5825E 4955N	Pale gy sulphidic calc? qtzite med. fractured py/arpy brown fe staining.
972228	F	gs							420	45	95	X						48	10	220	5825E 4955N	9% fresh calc silicate rock on N side of Hk, dk gn-gy 5-10% py/ps fe stained on surface. 9% width 4m.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SHEFFIELD EL7/73 No. 935645 Sample numbers 935645 - Collected by (GEM) Sheet no. 93
 Area / Prospect DOLCATH GRID Date 13.08.81
 Map / Photo reference A 02143 Analysed by ANALABS (COOE) DPO no. 30024

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations							
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	As	Au	Bi	W	Sn										
		o/c sample type ***																										
		s sample type ****																										
935645	F	gs.							35	60	255	0.5			1300	0.532	40	X		159	6200E 5280N	Magnetite rock containing small blocks of green silicate rock c. 100 microns. About 5m E of 6200E line						
935646	F	gs.							65	45	135	0.5			36	0.140	10	X		245	6200E 5280N	Another magnetite boulder from bank of Nannawa Cr. Th. about 20m E of 6200E Th.						
935647	%	gs.							10	55	110	X			46	0.008	20	X		50	5700E 4360N	Banded calc. silicate - 6m W. of Th. V. dk grey quartz interbedded with coarser chloritic horizons						
935648	%	gs.							5	70	50	X			50	0.008	10	X		42	5700E 4360N	From % here - Pale grey and grey calc. silicate horizons with dk grey quartz interbeds.						
935649	F	gs.							5	10	100	X			31	X	10	X		94	5700E 4357N	Banded calcareous rock - gossanous in part - very laminated.						
935650	F	gs.							5	30	80	0.5			19	X	10	X		1270	5700E 4355N	Resample of 935231 - dk grey coarse grained quartz - chloritic sl. bedded - dense sl. gossanous.						
935651	F	gs.							5	20	155	0.5			16	0.056	20	X		734	5700E 4345N	10m further downhill - sl. fresher, dense but non magnetic.						

* Sample type ss = stream sediment oc = outcrop f = float s = soil

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935619 - 935625 Collected by GEU Sheet no. 34
 Area / Prospect DALGOATH GRANITE GRID Date 10.08.81
 Map / Photo reference A 02143 Analysed by ANALABS (COCEE) DPO no. 30021

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Ni	Co	Au	As/Bi	W	Sn		
		o/c sample type ***							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
s sample type ****																				
935619	F	gs.							40	385	100	10	65	15	0.300	2500/35	11	108	6200E 5280N	Magnetite shon rock (935550) resampled.
935620	F	gs.							35	30	65	X	165	10	0.017	100/10	24	120	6200E 5265N	Well layered green siliceous-shon rock some outcrops (935554)
935621	%	gs.							985	2000	345	60	335	25	5.28	100/25	10	136	5900E 4355N	% on top side of Narrawa Cr. Tk. (935335) Co, Pb, Zn, Sn - stibite - highly baked.
935622	F	gs.							15	35	65	X	190	5	0.400	430/50	X	153	6200E 5280N	V. dk gr gloomy-shon type rock - po? min? (935551).
935623	F	gs.							40	30	60	1.0	230	10	0.050	300/25	4	143	5900E 4355N	Dense dk gr rock - anorthosite? (935337).
935624	F	gs.							15	30	55	X	65	5	X	8/5	16	54	6100E 5100N	Sl. crystalline stibite w/o 935503.
935625	F	gs.							90	325	5	1.5	10	5	6.26	310/13%	X	12	6200E 5055N	10% ore off mullock dump analysed 4% Bi. (935572).

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km?

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 972229 - 972239 sample numbers GRW Collect. by GRW Sheet no. 95
 Area / Prospect DOLCOATH GRID Date 09-12-81
 Map / Photo reference A 02143 Analysed by ANALABS (COOFE) DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %							Grid ref	Geological Observations				
		ss *	fi	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Bi			Au	As	W	Sn
		oc	o/c sample type ***																		
		f	s sample type ****																		
972229	F	gs							15	10	10	X	30	X	X	24	X	5	5715E 5480N	Lt gy Moira ss showing leaching Fe oxid. rings lt purple, red + yellow with pyrite 'dot' upto 1mm diam. One of vein 10mm wide N.V.M.	
972230	F	gs.							55	70	15	X	3.5	X	X	52	X	10	5900E 5572N	Moira Qtzite - secondary? of vein infilled with Fe in voids - lt br Fe staining	
972231	F	gs.							405	75	315	X	0.5	2	X	16	X	75	5988E 5575N	Yellow br granular rock some Mn staining giving peach ore - limonite rich.	
972232	F	gs							260	155	325	X	10	X	X	84	40	60	5998E 5575N	Yellow br granular rock as above.	
972233	F	gs.							60	10	85	0.5	2.5	2	X	8	10	55	6015E 5570N	Lt gy Moira Qtzite. heavily Fe stained some of veins vuggy infilled with Fe.	
972234	F	gs.							30	15	25	X	3.0	X	X	3	X	5	6020E 5568N	Dk gy actinolite - hornblende - above S° = 2% v.f.g. py > po	
972235	F	gs.							55	5	40	X	4.5	4	X	12	X	25	6022E 5568N	Calc-silicate above cont. Cp + Pb. S° = 2% py > orpy > gn > cp.	
972236	F	gs							75	5	75	X	5.5	X	X	4	170	80	6050E 5560N	V. dense gn-gy coarse grained Qtzite calcareous? matrix c upto 3% py - orpy.	
972237	F	gs.							30	15	75	X	4.0	X	X	11	15	20	6075E N	Calc-silicate on top of dk purple br coarse grained hornblende Qtzite with pale gn-gy calc-silicate? green minor S°	
972238	F	gs.							105	70	135	X	4.0	X	X	8	X	240	6120E 5525N	Dk gn chlorite Qtzite + Mn staining + red + yellow Fe staining.	
972239	F	gs							25	145	45	X	1.0	X	X	6	X	25	5980E 5050N	Dk gy banded calc-silicate.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fi = flow m3/sec wi = width m al = alluvial co = c " v "

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. Sample numbers 935787 Collected by GBW Sheet no. 97
 Area / Prospect DOLCOATH GRANITE Date 21.12.81
 Map / Photo reference BULL CK TRACK Analysed by ANALABS (COFFE) DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	As	Au	Bi/mo	W	Sn			
		o/c sample type ***																			
		s sample type ****																			
935787	F	gs						12	23	31	0.1			150				15	20		BULL CK TRACK. Gossanous rock med-red colour Fe stained porphyry = 110m W of 935781-84.
935781	F	gs						60	50	90	x			6							Conglomerate/porphyry v. dk gy porphyry
935782	F	gs						25	80	115	x			2							2 clasts of quartz to 15cm diameter
935783	F	gs						50	50	110	x			2							well rounded. matrix contains Cp, py
935784	F	gs						20	40	115	x			1							orpy blebs.
935785	9c	gs						10		45	x			1	x			x	65		Pale yellowy green weathered finer grained portion of the Conglomerate/porphyry zone
935750	F	gs						30	50	115	x			2	x	2/15	20	25			Same as 935781 → 784

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description fl = flow m3/sec wi = width m

C.R.P. EXPLORATION GEOCHEMICAL SAMPLE EDGER

Tenement name SHEFFIELD EL 7/3 No. 935847 - 935856 Collected by GBD Sheet no. 98
 Area / Prospect DOLCOATH GRANITE Date 21.10.81
 Map / Photo reference BULL CK TRACK A 02143 Analysed by ANNALABS (COOE) DPO no. _____

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	As	Au	W	Sn			
		oc	o/c sample type ***																		
		f	s sample type ****																		
935847	%	gs.							32	14	62	0.2			100			30	60		BULL CK TRACK, Qtz Feldspar porphyry - well weathered - dk gy ferromags prevalent. qtz veining, well fractured
935789	%	gs.							30	20	50	x			x						11000 11001 Pale gy volc ^{NFF} rock with dk squashed porphyry/ ferromag blebs orientated 303°m dip 52° @ 232°.
935848	%	gs.							32	10	18	0.2			100			110	85		Dk gy fresh qtz porphyry. It gy alt along joint planes - Fe staining - micaceous. Qtz vein - sampled material. N.V.M. veins to 0.5 cm.
935849	%	gs.							27	48	34	0.3			100			30	40		Fe and Mn stained fault gouge material some undetermined rocks.
935850	%	gs.							82	57	105	0.2			150			20	45		Dk gy gy qtz porphyry
935851	%	gs.	4m						34	51	58	0.1			150			130	45		Dk red, bn + lt yellow 4m wide fault? or iron rich sedimentary bed
935852	%	gs.							17	26	88	0.3			100			160	35		Ironstone weep material on qtz porphyry %.
935853	%	gs.							13	7	56	0.2			100			50	30		V. dk gy fresh qtz porphyry well jointed ± Cp + Bn? on joint planes in v. thin flakes. thin fractures in rocks here have 5° on them.
935854	%	gs.							5	6	69	0.2			50			10	15		Fresh Qtz porphyry low grade py + cp on joint faces.
935855	%	gs.							24	16	82	0.1			50			15	20		Extensively jointed/fractured Qtz porphyry ± py + some Cp? min. on faces.
935856	%	gs.							112	24	89	0.2			100			x	100		Qtz vein + py - 10 cm wide - chloritic. -haematite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial cs = cobbles

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935733 - 749 Sample numbers 935733 - 749 Collected by OSW Sheet no. 99
 Area / Prospect DOLCOATH GRIP AREA Date 13-10-81
 Map / Photo reference GUNN TIMBER - BULL CK ROAD TRAVERSE Analysed by ANALABS (COOE) DPO no. 30029
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	As	Au	Bi/mo	W	Sn		
		o/c sample type ***																		
		s sample type ****																		
935733	%	qs.						10	80	25	x		x		x/	20	45		lt red-bn lode horizon - fault zone? - qtz veins upto 3cm wide N.V.M.	
935740	%	qs.						10	120	75	x		2			x	15		Qtz vein (within fault zone) 10cm wide wuggy - crystals developed & stained N.V.M.	
935741	%	qs.						5	50	25	x		x			55	70		Fault zone 20cm wide 6-7 qtz veins upto 2cm wide. N.V.M.	
935742	%	qs.						5	20	15	x		x			90	75		Qtz vein E W crystals. Qtz vein 3cm wide within pjama rock sequence	
935743	%	qs.						10	10	10	x		x	x	2/x	0.43%	25		Qtz vein E W min. 5cm wide.	
935744	%	qs.						5	25	20	x		x	x	8/25	60	30		Fault zone 10cm wide in quartzites. - some greisen present. Qtz veins with W + Sn? E ground shale.	
935745	%	qs.						5	90	85	x		1			100	25		Chloritic quartzite and Qtz eye porphyry. weathered & altered. (Hornblende veins)	
935746	%	qs.						15	30	50	x		2	x	6/55	30	40		Qtz vein E dk gy-bl mica + chlorite - greisenisation?	
935747	%	qs.						35	70	50	x		11			80	45		Dk yellow bn iron rich very weathered.	
935748	%	qs.						20	50	45	x		8			50	35		yellow bn iron stained quartzite. Qtz vein material prevalent + matrix quartzite.	
935749	%	qs.						10	20	35	x		x	x	4.5	250	280		Dk green greisenised quartzite - micaceous chloritic - dk gr-bl mineral on shear / fracture planes Sn?	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935675 - 678 Sample numbers 935675 - 678 Collec by GBW Sheet no. 100
 Area / Prospect DOLCOATH MARGIN Date 03-08-81
 Map / Photo reference A 02143 Analysed by ANALABS (LOOEE) DPO no. 30026

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations			
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au			As	W	Sn
		oc	o/c sample type ***																		
		f	s sample type ****																		
935675	F	gs.							80	30	X	1.5			0.368	8	55	15		Upper Tuncat's Workings. 10% py in Granite	
935676	F	gs.							10	20	20	X			0.048	83	15	130		Pyritised Dolcoath Granite.	
935677	F	gs.							25	35	20	X			0.008	90	30	80		Sl. gossanous Fe stained Granite.	
935678	F	gs.							105	45	X	15			6.95	27	400	10		Upper Tuncat's Workings Granite ± 5mm qtz veins ± W + Mo min.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEPHERD EL 773 No. 935386 - 935390 Sample numbers GSW Collect. by GSW Sheet no. 101
 Area / Prospect Date 16.7.81
 Map / Photo reference Analysed by ANALABS (COOSEC) DPO no.
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Bi	W	Sn			
		o/c sample type ***							✓	✓	✓	✓	✓			✓	✓	✓			
s sample type ****																					
935386	g/c	qs.							10	20	15	x	4.5				x	x	8		Approx. 25m E of 6100E 4725N. % is beside bridle tk just below (N) of Gunn timber tk. leached Moira with yellow red stains. Pitted, leached, sugary Qtzite.
935387	F	qs.							x	50	10	0.5	x				9	112	211		About 10m E. of 935386. Manganiferous wash in road gutter - developed over acid dyke?
935388	F	qs.							5	20	20	0.5	3.5				9	17	100		About 13m W along tk. Gn-gy-porous very wuggy leached zone 0.5m wide.
935389	F	qs.							x	30	20	0.5	2.5				10	65	239		Manganiferous rich wash in road gutter some 16m up road from 935387. The % Moira here is pale bn-gy very fractured many thin Qtz veins - stockwork.
935390	f/1/6	qs							15	15	20	0.5	4.5				7	5	8		Reef Qtz from side of tk. in gutter quite mineralised. 20m above 935389.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name SHEFFIELD EL 7/73 No. 935586 - 595 Sample numbers 935586 - 595 Collec by GAU Sheet no. 102
 Area / Prospect DOLCOATH MARGIN Date 02.09.81
 Map / Photo reference Analysed by ANALABS (COOKE) DPO no. 30026
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations		
		ss*	oc	f	s	fl	wi		al	co	ca	pH	Cu	Pb	Zn	Ag	Mo	Mn			Au	As
		o/c sample type ***																				
		s sample type ****																				
935586	oc.	gs.							30	45	15	x			50			19	x	35		Lt gy m.c. g feldspathic qtzite, well fractured Fe + mn stained.
935587	f	gs.							25	110	15	0.5						11	x	5		Lt gy c.g. well baked qtzite, py 3%. outside surface lt yellow gn colour py on fractures
935588	s	P	1m	C					15	30	10	x			65			29	10	15		Dk yellow-bn soil. Mn on fractures in soil profile. float gossanous. some red qtz.
935589	s	P	12m	B ₂					15	30	10	x			30			420	x	15		Hillside creep horizon — Mn + sl. Fe stained soil. overlies bleached wk-yell qtzite = Mn pellets after py?
935590	oc.	gs.							25	50	5	x						13	x	6		Qtzite 5-7% py - yellow gn stained rocks
935591	oc.	gs.							30	85	5	1.0						130	x	4		Qtzite m.c-uc.g. poorly sorted high sulphidic upto 20% py?
935592	oc.	gs.							45	1950	45	280						36	x	100		Qtzite zone within black-purple-bn shale zone highly foliated. qtzite sulphidic.
935593	%	gs.							100	720	650	40		15	?			3000	40	170		Soft yellow-red zone much Mn staining - Fault-dyke zone. Sample of Mn rich zone within fault zone. E. end.
935594	%	gs.							20	135	60	20		15				400	40	70		ditto sample 5m higher 2m W.
935595	%	gs.							15	45	5	1.0						23	x	20		Dk gy m.g. qtzite 5-10% py.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935596-662 Sample numbers 935596-662 Collected by GCW Sheet no. 103
 Area / Prospect DOLCOATH MARGIN Date 03-09-81
 Map / Photo reference Analysed by ANALABS (COOEE) DPO no. 30026
 A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	As	W			Sn
		oc	o/c sample type ***																		
935596	%	gs.							20	25	5	x				x	53	x	10		Mod. gy red stained m-c.g. highly baked qtzite py-arp. 5-10%.
935597	%	gs.							40	35	5	x				x	18	x	25		Lt-med. gy well baked py-arp. 5-10%.
935598	%	gs.							115	45	2050	x				x	12	x	20		Speckled hornfelsed qtzite. mica developed - py min.
935599	%	gs.							145	45	45	x				x	12	65	15		Fairly massive sulphide zone 10cm wide in boulder of 935598 py > arpy > Pb. - 20-30% S ²⁻
935600	%	gs.							110	30	10	2.0				x	31	x	80		10m N of 935598. 10% py in lt-med. gy.
935660	%	gs.							50	35	5	x				x	12	x	30		Vein qtz ± 30% py+arpy vein 1cm wide.
935661	%	gs.							65	40	5	x				x	12	10	20		Med. gy qtzite which hosted sulphidic vein of 935660.
935662	f	gs.							60	3.08%	1350	06					130	x	15		Dk gy sulphidic qtzite float pb min ² prob. From % sampled 795585.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description fl = flow m³/sec wi = width m al = alluvial co = cuby

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/13 No. 935654 - 655 Sample numbers 935654 - 655 Collected by GSW Sheet no. 104
 Area / Prospect DILLON GRANITE GRD Date 19-08-81
 Map / Photo reference A 02143 Analysed by ANALABS (100EE) DPO no. 30024

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations			
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	As	Au			Bi	W	Sn
		oc	o/c sample type ***																		
f	s sample type ****																				
s																					
935654	F	gs.							5	10	15	X		70	X	X	11	19	Between lines 6500E + 6400E - southern end lt gy mod. fractured al. sugary qtzite pink-red staining on fracture planes V. sl. Mn staining		
935655	F	gs.							25	30	100	X		19	X	10	5	13	Med-dk gy al. argillaceous micaceous qtzite - sl. hornfaced - sl. dev. of cleavage		
935656	F	gs.							5	10	15	X		20	X	10	X	7	Foliated migmatitic hornfaced granite? al. micaceous, banded lt gy + med. gy - dk hornblende? specks.		
935657	F	gs.							10	45	40	X		10	X	20	81	33	Lt gy porphyry like rock - light red staining in part. - micaceous		
935658	F	gs.							5	X	15	X		9	X	X	28	5	Dk gy + yellow gy qtzite - dk gy al. argillaceous - micaceous - contains large piece of med gy vein of ss on one side		
935659	F	gs.							5	5	5	X		16	X	X	7	29	St. foliated - lt gy micaceous qtzite - hornfaced - schistose qtzite.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial

C.R.A. EXPLORATION, GEOCHEMICAL SAMPLE REGISTER

Tenement name SHEFFIELD EL 7/73 No. 935663 - 674 Sample numbers 935663 - 674 Collected by GRW Sheet no. 105
 Area / Prospect DOLEATH MARGIN Date 03-09-81
 Map / Photo reference A 02143 Analysed by ANALABS (COOEE) DPO no. 30026

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations				
		ss*	oc	f	s	fl	wi		al	co	ca	pH	Cu	Pb	Zn	Ag	Mo	Mn			Au	As	W	Sn
		o/c sample type ***																						
		s sample type ****																						
935663	%	gs										10	185	20	05					4	10	20		GUM TIMBER TRACK - E. From small quarry near All Nations Mine. Vuggy Qtz vein N.V.M. within mod gy leached gtaites.
935664	%	gs.										20	95	5	X					8	X	400		Mod gy mm. Qtzite ± 5-10% py.
935665	s	P	10cm									X	40	10	X					45	100	90		Bright orange and yellow-bn weathered zone adjacent to it sampled gy leached tabular ss - little mudstone exposure on outcrop - minor py. many Qtz veins
935666	%	gs.										X	30	5	X					2	10	55		Tuffaceous rock? gn-gy in colour. 0.3m wide
935667	%	rc	0.4m	12m								5	35	25	X					4	X	25		Mn stained dk red soft zone - yellow-bn from survey peg 100 → W → 12m.
935668	%	rc	0.4m	2m								X	25	15	X					3	15	35		Similar material more rock from survey peg 100 E for 2m.
935669	%	gs.										10	30	10	X					4	X	80		Pale cream and yellow-bn Fe stained feldspathic sl. sand rock - int dyke rock? well fractured.
935670	%	gs										15	30	30	X					3	15	30		V. dk yellow bn Mn stained. same as 669. 2m N of survey peg 101.
935671	%	gs										5	40	5	X					6	X	20		% 3m wide yellow zone with limonite staining prevalent - joints + leiseegang rings.
935672	%	gs.										5	15	5	X					3	110	35		V. deep yellow soft zone 1m wide - Int. Volc?
935673	%	gs.										30	40	1650	X					56	10	35		Dk gy dense hornfelsed gtaite - blebby py. org. micaceous sl. - dk amphibole or bn?
935674	%	gs.										20	45	70	X			X		4	10	40		6m zone striated hornfelsic mudstone (shaley) + gtaite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SHEPHERD EL 7/73 No. 795582 - 795590 Collected by G.P. Sheet no. 106
 Area / Prospect DALGOATH AREA Date Oct 02 81
 Map / Photo reference A 02143 Analysed by ANALABS (CODEE) DPO no. 26490

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Ni/Co	Bi/Sn	W		
		o/c sample type ***																		
		s sample type ****																		
795582	%	rc	0.5x13cm						15	15	5	x	60		x	1/5	22/20	x	Near mouth of Wilnot River Tunnel massive, v. hard silicified quartzite ± v.f. gr. py.	
795583	%	gs.							45	15	10	0.5	15		x	1/10	3/220	x	25m S of Wilnot pipeline - Ca stained massive quartzite. Partly leached.	
795584	%	g.s.							25	105	5	6	6		x	1/30	13/20	x	Dk gy v. sulphidic 10-15% f. gr. py in hard impure Qtzite.	
795585	%	rc	0.5m x 20m						20	1450	110	6.5	3.5		x	1/10	2/110	x	V. hard brownish Qtzite ± 5-10% f. gr. py. Some bands no sulphides. Some softer impure brownish Qtzite. Most sulphides on joints.	
795586	ss	0.1	m ³ /sec	4m	wi	al		10	20	70	0.5	0.5		0.05	25/15	4/10	x	Ck beside road 30% Qtzite 5% basalt 5% R. cong.		
795587	pc.	4 sieved pans							x	x	20	0.5	x		2.08	5/10	60/100	200	" " (float - as above).	
795588	f	gs							20	55	50	1.0	x		x	1/25	2/30	x	V. hard gyt. bn + gn cherty f. gr. rock ± wh. skin 1-2% po. + py. weakly mag ⁿ .	
795589	%	gs.							20	840	340	5.0	12		x	1/20	x/30	x	V. hard Qtzite or Qtz grit - numerous sub-roded Qtz clasts 5% py + 1% gl. % S ⁿ side of Ck.	
795590	ss	0.1	m ³ /sec	4m	wi	al		x	x	25	x	10		x	10/10	10/10	30	Buzi Ck at waterfall. 100% quartzite		

* Sample type ss = stream sediment oc = outcrop f = float s = soil P.C. panned concentrate.
 ** Stream sed sample description fl = flow m3/sec wi = width m il = illuvial co = colluvial ca = catch

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GEOCHEMICAL ROCK SAMPLING LEDGER

Page No. 101
26493, 26490

TENEMENT SHEFFIELD EL 7/73

D.P.O. No.

AREA/PROSPECT DALCOATH SAMPLE No's. 795571-795581

GEOLOGIST G.P. DATE Feb 81.

PLAN REFERENCE

ANALYSED BY ANALABS

611157

Sample No.	Sample Type.	Metal Content in ppm.							Geological observations
		Pb	Zn	Cu	Ag/Au	Co/Ni	Sn/Bi	W/mo	
795571	14m chip sp	210	15	40	1.5/x	25	x/4	x/5	Massive siliceous quartzite ± 5-15% py or py.
72	15m chip sp	45	10	30	0.5/0.008	15	x/4	x/5	" " " " " " " "
795575	sp chips	15	30	125	-/x	10	65/3	x/15	Hornfelsed quartzite ± 5-7% py.
76	Float.	30	145	220	2%/0.07	40	240/22	x/12	Limonite goossan ± layering + sulphide stains.
77	Float.	110	2550	35	1%/0.017	20	180/3	x/4	Calc-silicate? Qtz-actinolite chlorite ± 5% py.
78	Float.	For thin section - see petrological results.							Ditto ± 3-5% py.
79	Float.	25	180	20	0.5/x	35	145/A	x/1500	Metamorphosed sandstone ± 3-5% Mo.
795580	Float.	25	10	175	0.5/x	15	20/x	x/18	sl. greisenous quartzite ± 10-15% py > cp > Mo.
81	Float.	For thin section - see petrological results.							
795623	1/2 chip over 15m.	840	20	10	0.5/x	15	x/x	x/35	Dk. hard quartzite, non mag. V.f. for sulphides Sample 17m W of 795572. near fault cont. with A.V. going E. towards CK.
795624	S.S. NOT FLOWING 3m wide	120	255	45	0.5/0.057	40/70	6/x	x/x	Float 98% massive weakly alt. rhyncholite lava. R. py.
795578	THIN SECT								'METASOMATISED SEDIMENT' 'Great original comp. unknown - maybe an argillaceous siltstone - show type metamorphism.'
795581	THIN SECT.								'ACTINOLITE-DIOPSIDE-QTZ HORNFELS' 'Could be called a metagranite or a hornfels - contact metamorphism. Originally an impure ss.'

APPENDIX 3

PETROLOGICAL DESCRIPTIONS

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611159

16 MAR 1981

Central Mineralogical Services



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Telephone 42 5659

Mr. J.G. Purvis
Senior Geologist
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
BURNIE / TAS. 7320

*Dalroath Margin
Rocks.*

REPORT CMS 81/3/12

YOUR REFERENCE:	D.P.O. No. 26491
DATE RECEIVED:	9th March, 1981
SAMPLE NOS.:	795 - 578, 581, 648, 688
SUBMITTED BY:	J.G. Purvis
WORK REQUESTED:	Petrology

Copy to:
The Chief Geologist
C.R.A. Exploration Pty. Ltd.
G.P.O. Box 3840
MELBOURNE / VIC. 3001

Copy & Invoice to:
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C.R.A. EXploration Pty. Ltd.
P.O. Box 93
NORTHLAND CENTRE / VIC. 3072

H.W. Fander
H.W. Fander, M. Sc.

CENTRAL MINERALOGICAL SERVICES

Date 12th March, 1981

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

Job No. CMS 81/3/12 Date Received: 9.3.1981

Reference D.P.O. No. 26491

Sample No. 795581

Nature of Sample: Hand Specimen

DESCRIPTION SECTION No. 36302

IDENTIFICATION
795 581
Actinolite-Diopside- Quartz Hornfels

a. Hand Specimen:

Grey, medium/fine-grained siliceous rock.
Very minor K-staining, in small spots.

Microscopic:

This rock can be termed a metaquartzite, on the basis of very abundant quartz, or a hornfels; in any case, it may be assigned to the hornblende-hornfels facies of contact-metamorphism because of its mineral assemblage.

The rock consists principally of small polygonal grains of clear quartz, with scattered K-feldspar grains (which may have had a clastic origin). There are small, randomly-distributed and -orientated clusters of granular diopside, intergrown with, and partly replaced by, fibrous-acicular actinolite; occasional larger, veinlike patches of matted actinolite occur. A few grains of sphene and of detrital zircon are present.

Thus, the evidence suggests that the original rock was an impure sandstone, thermally metamorphosed to a hornfels; if the actinolite is replacive and retrograde, the rock could have been a pyroxene hornfels; retrogression could have been part of the same metamorphic event.

H.W. Fander, M. Sc.

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611161

CENTRAL MINERALOGICAL SERVICES

Date 12th March, 1981

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

Job No. CMS 81/3/12 Date Received: 9.3.1981

Reference D.P.O. No. 26491

Sample No. 795648

Nature of Sample: Hand Specimen

DESCRIPTION SECTION No. 36303

IDENTIFICATION
795648
Porphyritic Rhyolite

a. Hand Specimen:

Grey, fine-grained rock with small phenocrysts.
K-stain test positive (groundmass).

Microscopic:

This is a porphyritic rhyolite and is probably intrusive, though field data may suggest otherwise; the petrographic evidence is not clear on this point.

The phenocrysts are relatively small and inconspicuous, and comprise embayed, corroded quartz, prismatic albite (incipiently argillised), and altered ?biotite. The groundmass is felsitic and consists of finely intergrown quartz and K-feldspar, with fine chlorite and scattered magnetite crystals. Parts of the groundmass consist entirely of K-feldspar, instreaks.

Limited metasomatism has occurred, with the development of small aggregates of actinolite and phlogopite, with chlorite and epidote.

The rock shows a general preferred orientation and subparallel alignment of phenocrysts, poorly developed flow-banding and some perlitic textures in places; none of these features are particularly conspicuous and thus do not prove an extrusive origin.

H.W. Fander, M. Sc.

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611162

CENTRAL MINERALOGICAL SERVICES

Date 12th March, 1981

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

Job No. CMS 81/3/12 Date Received: 9.3.1981

Reference D.P.O. No. 26491

Sample No. 795578

Nature of Sample: Hand Specimen

IDENTIFICATION
795578
Metasomatised Sediment

DESCRIPTION SECTION No. 36301

a. Hand Specimen:
Green, mottled, finely-crystalline rock with traces of sulphides (pyrite, pyrrhotite). K-stain test positive.

Microscopic:
This is a thoroughly metasomatised rock, and appears to have been a clastic sediment, though its exact original composition is not known.

The rock now consists mainly of microcrystalline K-feldspar with embedded quartz grains, and subparallel streaks of fine actinolite aggregates with associated sulphides (fine pyrrhotite, pyrite); textural relationships suggest that the actinolite partly replaced the K-feldspar. Ultrafine white leucoxene occurs throughout the rock.

The rock seems to have been thoroughly feldspathised and was perhaps an argillaceous siltstone in the first place, followed by partial replacement of feldspar by actinolite; this phase has the characteristics of skarn-type metasomatism.

The general lineation or preferred orientation of the fabric was probably inherited from the original sediment.

H.W. Fander, M. Sc.

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Central Mineralogical Services



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18th June, 1981

REPORT CMS 81/6/3

YOUR REFERENCE:	D.P.O. No. 30004
DATE RECEIVED:	1st June, 1981
SAMPLE NOS.:	10 Samples
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

Copy to:
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 G.P.O. Box 384D
 MELBOURNE / VIC. 3001

Copy & Invoice to:
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 C.R.A. Exploration Pty. Ltd.
 P.O. Box 138
 BELLERIVE / TAS. 7018


H.W. Fander, M. Sc.

REPORT CMS 81/6/3Notes:

Ten specimens were received for petrological examination and are briefly described in the attached tables. Descriptions incorporate data from stereobinocular and petrological microscopic examination of representative thin-sections and offcuts, and include interpretative and comparative comments.

Summary

This suite is representative of a rather monotonous sequence of variably argillaceous, pyritic, or locally dolomitic orthoquartzites grading locally into protoquartzite. The sediments are typically massive, although individual specimens reflect weak bedding structures and may be slumped.

Several rocks exhibit secondary contact-metasomatic features with development of diopside-hedenbergite and/or actinolite, hastingsite, phlogopite or, locally, tourmaline. Minor traces of sulphide (pyrrhotite, chalcopyrite) are associated. There is no evidence of tin mineralisation, although Sn-assays may be warranted. Patchy hornfelsing is evident, but is strictly localised confirming the metasomatic (as against strictly metamorphic) nature of the alteration.

D. Cowan, B. Sc.

				Central Mineralogical Services
Sample No.	Classification - Composition	Fabric	Accessories	Comments
935 016 (T.S. 37267)	Orthoquartzite. Framework of subangular to rounded quartz, sparse chert fragments. Overgrowth quartz/intergranular quartz-sericite matrix/cement with oxidised, very fine pyrite.	Weakly bedded, poorly to moderately well-sorted, fine to medium sandstone.	Minor detrital rutile, tourmaline, zircon. Traces metasomatic pale green schorl.	Weakly sericitic orthoquartzite with (oxidised) authigenic pyrite. Very incipient tourmalinisation as replacement of sericite aggregates, films
935 019	Metasomatised Orthoquartzite. Weakly overgrown/marginally corroded relict clastic quartz with subordinate, but variable fine-grained diopside-hedenbergite.	Relict detrital fabric similar to 935016, but with relatively high matrix/framework ratio.	Patchy ankeritic carbonate, traces grossular-andradite, phlogopite, chalcopyrite.	"skarnised" dolomitic orthoquartzite. Chalcopyrite variably replaced by Cu-sulphide (?chalcocite) and malachite.
935 021	Metasomatised Orthoquartzite. Quartz and diopside-hedenbergite in varying proportions. Patchy late tremolite (after diopside). Minor Mn-staining.	Medium-grained, hornfelsic, with vague relict sandy clastic fabric. Sporadic quartz-diopside veins.	Patchy late calcite (with tremolite). Rare pyrite. Minor traces grossular-andradite.	Similar paragenesis to 935019, but relatively recrystallized (hornfelsed), and with patchy late "retrogressive" tremolite, carbonate.
935 029	Biotite Rhyolite. Frequent phenocrysts quartz, sanidine, subordinate albite, sparse cognate xenoliths, biotite flakes in weakly sericitised microcrystalline quartzofeldspathic groundmass.	Evenly distributed, semi-flow-orientated phenocrysts. Homogeneous groundmass.	Phlogopite-muscovite aggregates (after biotite), minor blue schorl (after feldspar).	Mildly greisenized with muscovite-phlogopite-schorl assemblage. Fabric suggestive of a chilled minor intrusive (e.g. a dyke).
935 031	Sericitic Orthoquartzite. Relict framework of subangular to rounded quartz with overgrowth quartz, minor intergranular sericitic matrix. Sparse discordant quartz veins.	Relatively well-sorted, fine to medium sand with stress overprint (postdates veins).	Conspicuous oxidised, fine to ultrafine authigenic pyrite. Traces detrital schorl, zircon.	Affinities with 935016, but relatively sericitic, weakly shale parted. Stressed, but devoid of metasomatic features.
935 059	Weathered, Sericitic Protoquartzite. Relict framework of subangular to subrounded quartz, subordinate kaolinised pelite clasts, minor degraded feldspar. Quartz, kaolinised sericite matrix/cement.	Incipiently stressed. Weakly bedded, silty, medium sandy fine sandstone.	Oxidised/leucoxenised clastic opaques, rare schorl, zircon. Minor oxidised pyrite, matrix carbonate.	Affinities with 935016, 935031, but trending towards a feldspathic lithic sandstone. Finer detail obscured by weathering effects.
935 085	Metasomatised Orthoquartzite. Relict angular to subrounded quartz framework with minor phlogopitic chert, felsite clasts. Phlogopitic cherty matrix with patchy hastingsite, hedenbergite.	Poorly, trend bimodally sorted (medium sandy fine sand, silt). Locally slumped.	Semi-pervasive kaolin (after phlogopite). Rare, extremely fine pyrrhotite.	Patchy differential metasomatism (phlogopite/hastingsite/hedenbergite) apparently reflects irregular sericite/carbonate cement.
935 090	Metasomatised Orthoquartzite. Relict framework of subangular to rounded quartz, minor chert clasts. Weakly phlogopitic, cherty quartz matrix with sparse patches actinolite. Minor actinolite veins.	Closely analogous to 935085, with similarly relatively high matrix/framework ratio.	Locally conspicuous, fine to ultrafine pyrite. Traces pyrrhotite, rare diopside-hedenbergite.	Close affinities with 935085, with similarly patchy development of metasomatic Ca-silicates. Relatively high matrix/framework ratio reflects
935 142 (T.S. 37275)	Orthoquartzite. Framework of weakly overgrown quartz (subangular to rounded), minor chert fragments. Sparse intergranular quartz/variably Fe-stained sericitic matrix with oxidised pyrite.	Poorly sorted, gritty, fine to medium sand. Incipiently stressed.	Rare reworked quartzite clasts. Thinly disseminated detrital zircon, schorl, leucox. opaques.	Closely analogous to 935016, but relatively poorly sorted. No metasomatic features.

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Central Mineralogical Services



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24th July, 1981

REPORT CMS 81/6/44
REPORT CMS 81/6/45
REPORT CMS 81/6/46

YOUR REFERENCE:	D.P.O. No. 30008 D.P.O. No. 30011 D.P.O. No. 30012
DATE RECEIVED:	30th June, 1981
SAMPLE NOS.:	5 Samples 5 Samples 1 Sample
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

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H.W. Fander for
H.W. Fander, M. Sc.

REPORT CMS 81/6/44
REPORT CMS 81/6/45
REPORT CMS 81/6/46

Eleven specimens were received, in three groups, for petrological examination, and are briefly described in the attached tables. Descriptions incorporate data from stereobinocular and petrological microscopic examination of representative thin-sections and offcuts. Specimen 935335 was examined in polished section to confirm the partly oxidised sulphide assemblage.

Summary

With the exception of 935250, which is a mildly metamorphosed rhyolitic tuff with affinities to the Mount Read Volcanics, all rocks are representative of a mildly contact-metamorphosed sequence of quartzose psammopelites. These rocks grade from massive orthoquartzite to relatively pelitic intercalations of shale and quartzose siltstone. Psammites tend to be bimodally sorted, and general features are consistent with a fluviolacustrine mode of deposition.

Contact effects are of marginal character and generally marked by recrystallization with only minor mineralogical changes. Pelitic types may exhibit hornfelsic spotting (cordierite hornfelses). Similarly, rather incipient metasomatism is reflected in patchy development of Fe-Mg micas (in part replacive after cordierite) and semi-ubiquitous development of secondary (as distinct from relict detrital) schorl in minor trace amounts.

Non-penetrative stress effects postdate the contact-metamorphic features and are consistent with a subsequent low-greenschist facies regional metamorphic phase.

Specimen 935247 is a weakly garnetiferous quartzite and appears to reflect metasomatism of accessory primary carbonate. 935335 includes spongy, partly oxidised pyrite aggregates with associated marcasite representing altered pyrrhotite. The secondary pyrite is partly recrystallized consistent with the recrystallized vein-quartz paragenesis evident in thin-section. Subordinate galena and extensively degraded chalcopyrite are present and traces of cloudy scorodite suggest the former presence of traces of arsenopyrite.

D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	Comments
935 161 (T.S. 37542)	Sericitic Orthoquartzite. Framework of subangular to subround quartz, thinly disseminated chert fragments, feldspar grains. Matrix/cement of intergranular quartz, sericite films. Sporadic quartz veinlets.	Poorly to moderately sorted, weakly bedded, fine to medium sand. Irregular discontinuous veinlets.	Relict detrital zircon, rutile, tourmaline. Sporadic clots secondary muscovite, sericite.	Mildly greisenized (muscovitised) orthoquartzite with secondary mica post-dating sericitic matrix/quartz veinlets.
935 174	Sericitic Pelite. Alternating lenses/bands of biotite-stained sericitic shale, sericite-quartz-cemented, slightly sandy quartz siltstone.	Biotite-spotted, slight hornfelsic. Relict sub- to millimetric bedding, locally slumped.	Minor clastic muscovite, opaques, tourmaline, zircon. Minor traces metasomatic	Biotite clots apparently represent altered cordierite blasts (spotted hornfels); include bulk of trace-accessory metasomatic schorl.
935 176	Sericitic Quartzite. Framework of angular to subround quartz, minor chert quartzite clasts. Granular quartz cement with minor sericite films, clots. Sporadic late limonitic fractures.	Massive fine sand to bedded, poorly sorted coarse sandy, fine to medium sand.	Minor traces detrital schorl, zircon, pelite clasts, muscovite flakes (oxidised) opaques.	Moderately recrystallized (hornfelsed), but restricted to matrix and fine sand fraction. Limonite is exotic (introduced), impregnates sericite
935 181	Sericitic Quartzite. Recrystallized silt- to fine-sand-sized quartz, subordinate to minor sericite, pale phlogopite, minor sericitised feldspar. Minor concordant recrystallized quartz veins.	Weakly shale-parted/bedded siltstone, silty fine sandstone.	Traces detrital opaques, schorl, rare zircon. Rare oxidised pyrite (in vein-quartz).	Recrystallized quartzose psammopelite with affinities to 935174, but devoid of altered cordierite.
935 185 (T.S. 37546)	Sericitic Quartzite. Partly recrystallized, silt- to medium-sand-sized relict clastic quartz, sericite matrix/cement with minor metasomatic phlogopite, schorl.	Bimodally sorted, slumped. Weak hornfelsic overprint.	Traces relict detrital schorl, rutile, zircon, muscovite, oxidised opaques.	Similar to 935161, but relatively sericitic. Mild contact-metamorphic/metasomatic effects analogous to those in 935161, 174, 176, 181.
CMS 81/6/45				
935 206 (T.S. 37547)	Phlogopitic-Sericitic Quartzite. Recrystallized silt- to medium-sand-sized clastic quartz with intergranular semi-sericitic muscovite, minor pale phlogopite, sparse pale schorl.	Bimodally sorted, weakly shale-parted, slumped. Weak hornfelsic overprint.	Traces relict detrital schorl, zircon, opaques, leucoxenic semi-opaques	Similar, closely related to 935185 (CMS81/6/44). Mildly contact-metamorphosed/metasomatized (phlogopite, traces pale schorl).
935 209	Muscovite-Quartz Hornfels. Fine to semi-sericitic muscovite, subordinate to minor closely intergrown quartz. Sporadic recrystallized/contorted quartz veinlets, phlogopitised cordierite blasts.	Hornfelsic with incipient crenulated, slaty overprint.	Conspicuous relict detrital leucox. semi-opaques (replaced by rutile). Traces detrital metasomatic schorl.	Marginally hornfelsed, slightly quartzose silty shale, spotted with degraded ?cordierite. Very incipient tourmalinisation.
935 247 /	Garnetiferous Quartzite. Polygonal quartz with minor sericite, fine-grained impregnations, films of andraditic garnet.	Vague relict silty to medium sandy clastic fabric. Patchy recrystallized vein-quartz.	Thinly disseminated relict detrital schorl, zircon. Patchy oxidised pyrite films.	Hornfelsed silty orthoquartzite. Garnet appears to represent metasomatized veinlet and minor accessory matrix carbonate.

CMS 81/6/45 cont.				Central Mineralogical Services
Sample No.	Classification - Composition	Fabric	Accessories	Comments
935 249	Mica-Quartz Hornfels. Semi-sericitic muscovite with subordinate, closely intergrown quartz, pale phlogopite. Thinly disseminated metasomatic schorl.	Fine-grained hornfelsic with relict silty to pelitic sedimentary features.	clastic opaques, rare zircon, detrital schorl. Sparse biotite veinlets.	Marginally hornfelsed/incipiently metasomatised silty shale/shale, argillaceous quartzose silt intercalation.
935 250 (T.S. 37551)	Rhyolitic Tuff. Quartz, minor silicified feldspar, chloritised biotite crystals/ fragments, frequent rhyolitic lava and minor tuff clasts. Phlogopite-sericite-stained micro-crystalline quartzofeldspathic matrix.	Poorly sorted, lapilli-psammitic tuff with patchy hornfelsic recrystallization, weak tectonic overprint.	Disseminated magnetite. Traces epidote, rare pyrite, smoky apatite.	?Subaqueous lithic-crystal tuff with authigenic quartzofeldspathic cement. Vaguely polymetamorphic, but tectonic fabric is incipient only.
CMS 81/6/46				
935 335 (T.S. 37552)	Pyritic Quartzite. Polygonised quartz with subordinate, but variable intergrown chloritised phlogopite. Patchy vein-type quartz with intergranular to semi-massive pyritised pyrrhotite.	Relict, weakly shale-parted, silty fine sandy clastic fabric, recrystallized veins.	Traces fluorite, covellite, cloudy anglesite, cerussite, scorodite. Semi-pervasive limonite.	Quartz-pyrrhotite-veined metaquartzite with "retrograde" chlorite-pyrite assemblage. Secondary salts poorly resolved. Patchy relict galena, sphalerite, chalcopyrite confirmed in polished section.
	N.B.: Secondary pyrite partly recrystallized (accessory marcasite).			

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24th August, 1981

REPORT CMS 81/8/24

YOUR REFERENCE:	D.P.O. No. 30022
DATE RECEIVED:	13th August, 1981
SAMPLE NOS.:	935619 - 935624, 935516
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

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H.W. Fander for
H.W. Fander, M. Sc.

REPORT CMS 81/8/24

Seven specimens were received for petrological examination and results are summarised in the attached table. Descriptions incorporate data from stereobinocular and petrological microscopic examination of representative thin-sections and offcuts.

Summary

The bulk of this suite comprises contact-altered, fine-grained psammites "grading" from impure orthoquartzite to arkosic types. These are characterised by pervasive development of metasomatic hedenbergite (\pm actinolite, phlogopite), which appears to have replaced primary carbonate (?ankerite) cement. A few of these sediments are weakly argillaceous or shale-parted, and argillaceous components tend to be phlogopitised. Hornfelsic recrystallization is evident, but is not marked and this enhances the metasomatic (as against strictly metamorphic) nature of the alteration.

Specimen 935624 is a relatively pelitic sediment and similarly reflects marginal contact-metamorphism. Specimen 935619 is a diopside (-hastingsite-magnetite) skarn and apparently represents an altered carbonate facies.

H.W. Fander, M. SC.

				Central Mineralogical Services
Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Comments
935 619 (T.S. 38277)	Diopside Skarn. Diopside with conspicuous magnetite, subordinate to minor hastingsite, thinly disseminated pyritised pyrrhotite.	Medium-grained, crudely banded, with intergranular hastingsite.	Minor traces fluorite, grossular-andradite. Patchy, late, serpentinous chlorite alteration.	Apparently a skarnised carbonate facies, although evidence is rather negative (lack of metasomatised clastic features).
935 620	Hedenbergite "Skarn". Hedenbergite with variable proportions recrystallized clastic quartz, poorly-twinned oligoclase. Patchy poikilitic adularia, fine-grained phlogopite.	Relict, sub- to millimetric bedding, silty shale-parted clastic fabric.	Cloudy sphene (after clastic opaques). Minor hastingsite, disseminated pyrite.	Contact-metasomatised/recrystallized labile siltstone. Hedenbergite replaces banded carbonate cement with shaly partings preferentially phlogopitised.
935 621	Metaquartzite. Fine polygonal quartz with minor intergranular sideritic carbonate, chloritised phlogopite. Disseminations, veinlets pyritised pyrrhotite + chalcopyrite.	Even-grained, quartzitic, with faint relict bedding.	Disseminated relict detrital zircons, rare apatite, schorl. Traces muscovite.	Hornfelsic-recrystallized orthoquartzite. Siderite, chlorite apparently after intergranular phlogopite; contemporaneous pyritisation of pyrrhotite.
935 622	Hedenbergite "Skarn". Hedenbergite and weakly recrystallized, silt- to fine-sand-sized relict detrital quartz in varying proportions.	Relict, sub- to millimetric bedding, fine sandy silty clastic fabric.	Minor actinolite, traces sphene, arsenopyrite, pyrrhotite, pyrite.	Essentially similar to 935620; but non-feldspathic. Skarnised ?ankeritic quartzose fine sandy siltstone.
935 623	Hedenbergite "Skarn". Weakly recrystallized fine-sand- to silt-sized relict detrital quartz with subordinate/variable intergranular hedenbergite. Minor albite.	Faint relict bedding with sparse discordant hedenbergite veinlets.	Disseminated, extensively pyritised pyrrhotite. Traces arsenopyrite. Rare sphalerite.	Close affinities with, and essentially transitional between, 935620 and 935622.
935 624	Quartz-Mica Hornfels. Microgranular quartz with varying proportions semi-sericitic muscovite, minor partly degraded biotite. Sparse quartz(-muscovite-biotite) veinlets.	Hornfelsic with relict slumped pelitic bedding (shale-parted siltstone).	Rare sericitised cordierite porphyroblasts. Traces relict detrital zircon, schorl	Marginally contact-metamorphosed, shale-parted quartz siltstone. Biotite is titaniferous, possibly metasomatic.
935 516 (T.S. 38283)	Hedenbergite-Actinolite "Skarn". Weakly recrystallized relict detrital quartz with variable proportions actinolite, hedenbergite. Minor feldspar, patchy phlogopite, sericitic shale.	Relict, mildly slumped/shale-parted, fine sandy to silty clastic fabric.	Traces cloudy sphene, rare partly pyritised pyrrhotite. Rare apatite lenses.	Affinities with 935620, 622, 623; slightly lower metasomatic grade. Shale zones partly phlogopitised. Sublabile (feldspathic), weakly phosphatic.

MS

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22nd September, 1981

REPORT CMS 81/9/11

YOUR REFERENCE:	D.P.O. No. 30025
DATE RECEIVED:	28th August, 1981
SAMPLE NOS.:	10 Samples
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

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H.W. Fander
H.W. Fander, M. Sc.

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611175

REPORT CMS 81/9/11

Ten rock samples were received for thin-section preparation and petrological examination. The offcuts were potash-stained where applicable, and sulphides were studied and identified under the stereobinocular microscope. Each rock is described in the accompanying table.

Summary

Several rocks are metasomatised quartzose sediments, and a few are metasediments which were first metamorphosed, then metasomatised. Two porphyritic rhyolites occur, as well as a skarn.

The metasomatised sandstones show a gradation from low-grade (627, 630, with pumpellyite) to high-grade (647, 648, with garnet, diopside); the end-product of this process is the skarn (650).

The metaquartzites are contact-metamorphosed sediments assigned to the albite-epidote hornfels facies.

Sulphide mineralisation in all rocks (630, 632, 633, 638, 640) is epigenetic; 632 contains the greatest amount and range of sulphides, which were introduced after the rock was hornfelsed.

H.W. Fander, M. Sc.

				Central Mineralogical Services
Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Comments
935 627 (T.S. 38645)	Metasomatized Sandstone. A few grit-sized quartz grains in finer clastic quartz matrix; cement replaced by granular pumpellyite.	Clastic textures well-preserved; some bedding. Clastic quartz is stressed.	Clastic heavy-mineral grains - oxide opaques, zircon - formbands.	Replaced cement may have been a carbonate. Pumpellyite is regarded as a low-grade mineral.
935 630	Metasomatized Quartzite. Mainly small interlocking quartz grains; lenses of coarse pumpellyite, patches and veins of carbonaceous matter.	Faint relict bedding and clastic textures. Mostly fine-grained.	Microgranular sphene. Small dendritic pyrrhotite patches. K-feldspar veins.	Broadly similar to 627; relatively low-temperature metasomatic assemblage. Carbon is ?hydrothermal.
935 632	Mineralized Biotite-Metaquartzite. Microgranular quartz, small random phlogopitic biotite flakes; granular pyrite, sphalerite, galena; poikiloblastic arsenopyrite.	Generally microgranular textures; uniform fabric, faint orientation.	Galena partly oxidised to anglesite. Scattered muscovite. Detrital zircon.	Originally a hornfels (low-grade metasediment), thoroughly pervaded by sulphides. Pyrite originally pyrrhotite.
935 633	Greisenized Porphyritic Rhyolite. Corroded quartz phenocrysts; feldspars replaced by topaz, sericite, biotite, fine-grained quartz-muscovite-biotite groundmass.	Groundmass textures are altered felsitic. Faint flow-alignment.	Fine pyrite films and veinlets.	Almost certainly a minor or shallow intrusive. Greisenizing was apparently barren, but Sn/W assays recommended.
935 636	Ferruginized Metaquartzite. Dominantly interlocking small quartz grains; small irregular patches, veinlets and films of goethite.	Finely granular, uniform and featureless. Microfractured.	None detected.	Goethite introduced after fracturing, but fine sulphides (?pyrite) may have been present.
935 638	Altered Porphyritic Felsite. Corroded quartz phenocrysts set in a felsitic groundmass of fine quartz and fine sericite, with muscovite patches.	Typical felsitic textures in groundmass. Faint flow-alignment.	Fine tourmaline needles. Granular pyrite aggregates throughout.	Closely resembles 633; felsitic textures better preserved. Minimal greisenizing only.
935 640	Pyritic Metaquartzite. Finely-granular to interlocking quartz, very small sericite and phlogopite flakes; scattered fine pyrite.	Micas show some preferred orientation. Uniform, fine-grained.	Muscovite-pyrite-arsenopyrite veins.	May be related to 632 and possibly fresh equivalent of 636. Low-grade metasediment.
935 647	Metasomatized Sandstone. Bands of coarse/fine clastic quartz, interstitial and massive garnet, wollastonite, diopside; phlogopite-quartz bands.	Relict clastic textures, coarse to fine sand-size. Replicative textures.	Small ferrohastingsite crystals in phlogopite bands. Trace epidote.	Broadly similar to 627, 630, but more extensively metasomatized; distinctly banded.
935 648	Metasomatized Sandstone. Relict clastic quartz grains embedded in garnet (grossularite) and diopside; interstitial K-feldspar in places.	Fine-sand with a few coarser, rounded grains. Extensively replaced.	Patches of coarse carbonate. Microgranular sphene.	Very similar to 627, 630, 647. Garnet is Ca-Fe variety. Extensive metasomatism.

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611178

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12th November, 1981

REPORT CMS 81/10/35

YOUR REFERENCE:	D.P.O. No. 30030
DATE RECEIVED:	19th October, 1981
SAMPLE NOS.:	935 - 666, 673, 745, 750, 789
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

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H.W. Fander, M. Sc.

REPORT CMS 81/10/35

Five specimens were received for petrological examination and since all five rocks exhibit essentially similar features, brief descriptions were prepared in tabulated form. Descriptions incorporate data from stereobinocular and petrological microscopic examination of representative thin-sections and offcuts, and include interpretative comments.

Summary

Four of the five specimens can be classified as weakly polymetamorphic quartz-mica hornfelses and are characterised by white-mica-quartz-(phlogopite-biotite) assemblages. Accessories include cordierite, andalusite and garnet, consistent with mid albite-epidote hornfels facies of contact-metamorphism. Minor boron metasomatism is indicated in weak, but variable and rather ubiquitous development of fine-grained tourmaline (schorl). Post-hornfelsing tectonic slaty cleavages are evident, but are non-penetrative.

The fifth specimen is a rhyolitic tuff with weak contact-metasomatic alteration effects, but devoid of definite hornfelsing recrystallization features. This rock enhances the lithological association of argillaceous/quartzose sediments, and acid igneous facies (tuff, tuffaceous psammopelite and rhyolite-porphyry).

D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	Central Mineralogical Services Comments
935666 (T.S. 39327)	<u>Spotted Hornfels</u> . Fine to semi-sericitic white mica with minor closely intergrown quartz. Frequent extensively muscovitised cordierite, subordinate similarly altered andalusite porphyroblasts. Disseminated schorl.	Weakly sheared (slaty), spotted hornfelsic, with relict pelitic microlaminations.	Relict detrital zircon, leucox. semi-opaques. Minor semi-concordant vein-quartz.	Albite-epidote hornfels facies contact-metamorphosed shale with incipiently retrogressive slaty overprint. Pervasive fine to ultra fine metasomatic schorl.
935673	<u>Metapsammite</u> . Weakly recrystallized framework of silt- to medium sand-sized quartz. Hornfelsic, fine-grained muscovite-quartz matrix with subordinate phlogopite. Spotted hornfelsic shale partings.	Relict, locally slumped, shale-parted, silty fine to medium sandy clastic.	Rare microscopic garnets. Relict detrital zircon, leucox. semi-opaques. Traces schorl, pyritised pyrrhotite.	Shale-parted argillaceous ortho-quartzite with marginal contact effects, analogous to those in 935666. Mildly retrogressed (sericitised cordierite blasts), but
935745	<u>Hornfelsed "Rhyolite"</u> . Disseminated relict phenocrystal quartz embedded in semi-sericitic muscovite/sericite-stained quartz aggregates with disseminated sericitised ?biotite, sparse garnets (almadine, sim. 935673).	Relict, quartz-biotite-porphyrific, fine-grained, weakly banded. Hornfelsic.	Traces metasomatic schorl. Vague muscovite pseudomorphs, phenocrystal feldspar.	Relict fabric suggestive of a ^{un-sheared} "porphyry" (porphyritic microgranite-minor intrusive. Alteration closely analogous to 935673 (weakly garnetiferous, incipiently tourmal-
935750	<u>Rhyolitic Tuff</u> . Variably sericite-biotite-stained rhyolitic lava, subordinate rhyolitic tuff clasts, frequent quartz crystals/fragments with sparse, similarly altered quartzofeldspathic matrix. Disseminated magnetite, minor	Poorly sorted (agglomeratic) tuff with partly moulded clasts. Weak tectonic cleavage.	Traces secondary actinolite, ankeritic carbonate, patchy epidote. Minor late chlorite (after biotite)	Finer details ^{inised} hornfels. obscured, but fabric is consistent with subaerial lithic-crystal tuff (?Mt. Read Volcanics). Incipiently contact-metasomatised, weakly
935789 (T.S. 39331)	<u>Hornfelsed ?Tuff</u> . Disseminated "volcanic" ^{pyrite} quartz grains in semi-sericitic muscovite/microcrystalline quartz matrix with patchy pale biotite. Sparsely disseminated leucoxenic semi-opaques.	fine-grained, hornfelsic, with incipient slaty overprint. Relict banded, silty to sandy clastic pelitic.	Minor traces metasomatic schorl.	Pelitic zones exhibit vague ^{sheared} relict shardy microtextures, consistent with (?mildly reworked) subaqueous tuff/tuffaceous pelite. Alteration analogous to 935745.

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611181

(Handwritten initials)

File.

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15th January, 1982

REPORT CMS 81/12/31

YOUR REFERENCE:	D.P.O. No. 30034
DATE RECEIVED:	18th December, 1981
SAMPLE NOS.:	6 Samples
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

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H.W. Fander
H.W. Fander, M. Sc.

REPORT CMS 81/12/31Rock Samples From Dalcoath Area

Six rock samples were received for petrological examination; thin-sections were prepared and offcuts were subjected to potash stain tests.

Summary

This suite comprises two igneous rocks and four sediments; all showing varying degrees of alteration, though the quartzite (935876) is almost unaffected.

935814 is a greisenised granite but, since the feldspars are completely altered, its original composition is not precisely known; the combination of quartz and muscovite replacing feldspars suggests that these were orthoclase. 935822 shows an unusual type of alteration, as here the feldspars are replaced by andalusite.

The calc-silicate assemblages represent very selectively metasomatised reactive material, presumably carbonate, occurring as bands, lenses and very thin laminae.

All samples were checked under a short-wave UV source, but no fluorescence was detected.

H.W. Fander, M. Sc.

Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Central Mineralogical Services Comments
935 814 (T.S. 40307)	<u>Greisenised Granite.</u> Coarse anhedral quartz, subhedral feldspar replaced by muscovite-quartz intergrowths; abundant replacive arsenopyrite crystals.	Coarse intrusive fabric; weakly stressed, micro-fractured minerals.	Traces of pyrite, chalcopyrite. Fine scorodite from oxidation of arsenopyrite.	Termed "granite" in a broad sense because feldspars completely replaced, but probably originally orthoclase.
935 822	<u>Metasomatised Quartz Porphyry.</u> Euhedral phenocrysts of inverted beta quartz set in medium-granular quartz; all feldspar replaced by granular andalusite.	Typical porphyritic, medium-grained fabric; minor intrusive.	Small dendritic muscovite patches. Fine magnetite associated with andalusite.	Here, the metasomatising mineral is andalusite; unusual, but not unknown. Original composition presumably granitic.
935 888	<u>Skarn.</u> Predominantly finely granular diopside, with scattered andradite garnet crystals and patches of strongly stressed quartz.	Finely granular. Quartz inclusions all aligned and have relict clastic textures.	Ultrafine epidote. Possible trace of ?sphalerite.	Appears to have been a carbonate rock with layers of sand-size quartz with carbonate cement.
935 876	<u>Quartzite.</u> Coarse-sand size, subrounded quartz and mosaic quartz grains set in fine-sand (0.1 mm) quartz grains, with interstitial hematite and quartz.	Occasional bands of coarser grains, but generally poorly-sorted/sized.	Irregular masses of hematite. A few chert grains.	A hematitised orthoquartzite, stressed and partly re-crystallized. Featureless and of simple composition.
935 887	<u>Metasomatised Siltstone.</u> Silt-size subangular to subrounded quartz grains, interstitial ultrafine quartz, K-feldspar; lenses, bands of diopside/andradite.	Finely banded, with thin diopside laminae. Relict clastic textures.	Zoisite-epidote patches intergrown with other calc-silicates.	Very selective metasomatism on an intricate scale, presumably carbonate laminae in siltstone.
972 224 (T.S. 40312)	<u>Banded Calc-Silicate Rock.</u> Alternating bands of microgranular quartz, and granular diopside with andradite porphyroblasts.	Medium-grained textures. Banding is inherited.	A few intergranular MnO ₂ films.	Assemblage and fabric suggest a banded carbonate/sandstone, selectively metasomatised.

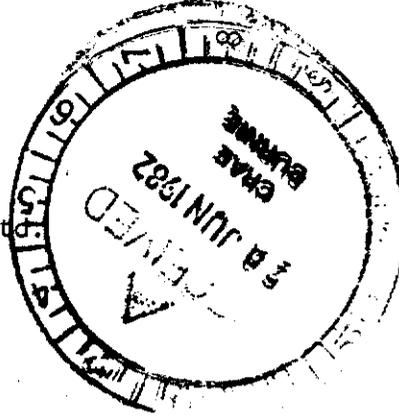
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25th June, 1982

REPORT CMS 82/5/38

YOUR REFERENCE:	D.P.O. No. 30043	DG1.
DATE RECEIVED:	27th May, 1982	
SAMPLE NOS.:	11 Samples	
SUBMITTED BY:	G.B. Weber	
WORK REQUESTED:	Petrology	

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H.W. Fander
H.W. Fander, M. Sc.

REPORT CMS 82/5/38

Eleven rock samples were received for petrological examination and, as several of the rocks are essentially similar, brief descriptions were prepared in tabulated form. These incorporate data from stereobinocular and petrological microscopic examination of representative thin-sections and offcuts, and include interpretative comments.

Summary

This suite consists entirely of contact-metamorphosed rocks, typically meta-sedimentary, but including subordinate meta-igneous types. Sediments are quartzose clastic types ranging from poorly sorted psammitic to shale-parted psammitic and pelitic. Relict sedimentary fabrics are consistent with variably slumped fluvial sedimentation. Igneous rocks are represented by two hornfelses with relict fabrics consistent with porphyritic rhyolites or minor granitic intrusives.

Metamorphic assemblages comprise quartz and muscovite \pm biotite-phlogopite, garnet, cordierite and andalusite. A few rocks exhibit greisenizing-pneumatolytic or mild metasomatic effects with disseminations and quartz vein-related concentrations of schorl, topaz, locally garnet, fluorite and beryl. Late stress and mild retrogressive effects are more or less ubiquitous and give the suite, as a whole, a certain polymetamorphic character. The hornfelsing/pneumatolysing granite is not represented in the present suite.

Fine-grained Fe-sulphides, typically pyrite, but "retrogressive" after pyrrhotite, are semi-ubiquitous in the metasediments. Relationships are confused by the late stress effects and partial mobilisation into microfractures, however, the Fe-sulphides and extremely rarely associated sphalerite are conceivably ultimately syngenetic in origin.

D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	Central Mineralogical Services Comments
795694 (T.S. 42313) 18m	<u>Psammitic Hornfels</u> . Relict detrital quartz, minor argillised feldspar grains with a semi-sericitic muscovite/microcrystalline quartz matrix. Minor phlogopite, disseminated garnet, pyrite films.	Semi-brecciated to fractured, hornfelsic. Relict slumped silty fine to medium sandy clastic.	Traces fine to ultra-fine metasomatic schorl. Rare relict detrital schorl, zircon.	Hornfelsed, subsequently fractured argillaceous orthoquartzite (trend subarkose). Pyrite is secondary after pyrrhotite, partly mobilised into fractures.
795695 24.8m	<u>Pelitic Hornfels</u> . Quartz and fine to semi-sericitic muscovite with minor fine-grained metasomatic schorl. Minor quartz(-sericite) veins.	Weakly sheared, hornfelsic, with stressed/crenulated vein-quartz. Relict bedded silty to sandy pelitic.	Conspicuous detrital leucoxenitic semi-opaques, minor zircons.	Relict framework includes sparse "volcanic" quartz grains, silicified felsitic lava clasts. Hornfelsing effects are weak in comparison to 694, predate mild stress phase.
795696 27m	<u>Psammopelitic Hornfels</u> . Quartz with subordinate/variable semi-sericitic muscovite, phlogopite, disseminated garnet, fine-grained pyrite, sericitised indeterminate feldspar.	Hornfelsic. Relict fine to medium sandy silty clastic. Semi-laminated, incipiently sheared.	Relict detrital opaques, rare zircon, schorl. Rare spongy clots of sphalerite.	Affinities with 694; relatively phlogopitic/garnetiferous. Pyrite is secondary after pyrrhotite, at least in part, sphalerite in isolated crude microlenses.
795697 44.2m	<u>"Metarhyolite"</u> . Relict quartz, phlogopite-muscovite-stained alkali feldspar phenocrysts in a similarly altered/partly recrystallized quartzofeldspathic groundmass. Sporadic topaz-quartz veins.	Hornfelsic. Relict flow-structured, porphyry-like, felsitic. Mildly stressed.	Minor leucoxenitic semi-opaques, sparse metasomatic topaz.	Hornfelsed/altered ("greisened") and subsequently mildly stressed "rhyolite porphyry". Probably a minor intrusive.
795698 64.5m	<u>Silicified Psammite</u> . Relict detrital quartz grains with fine to microcrystalline quartz/minor sericite matrix supplemented locally by films of garnet. Sporadic quartz veins, pyrite disseminations.	Relict poorly sorted, weakly bedded, medium sandy clastic. Trend quartzitic. Stressed/recrystallized veins.	Minor traces detrital zircon, schorl. Minor traces metasomatic/vein dravite, muscovite.	Quartz-veined/silicified quartzose sandstone. Garnet concentrated in narrow selvages marginal to quartz veins; metasomatic. Pyrite partly after pyrrhotite.
795699 75.4m	<u>Psammitic Hornfels</u> . Relict detrital quartz with matrix of phlogopite, microgranular quartz, minor semi-sericitic muscovite, disseminated films, clots of fine-grained pyrite.	Relict psammitic (similar to 698). Hornfelsic, recrystallized matrix. Weak late stress, fracturing.	Detrital zircons. Minor patches of late "retrogressive" chlorite (after phlogopite).	Fairly typical low-grade hornfelsed/mildly metasomatised (phlogopite) argillaceous orthoquartzite. Late stress-induced pyritisation/chloritisation.
795700 102.6m	<u>Actinolite Rock</u> . Actinolite with relatively minor quartz, sporadic foliae of talc, phlogopite; minor albite. Disseminated pyritised pyrrhotite, ankeritic carbonate.	Medium-grained, semi-banded, mildly stressed, sheared, microfractured.	Traces arsenopyrite, minor traces chalcopyrite.	Contact-metasomatic facies with disseminated vaguely banded sulphides. No real indications of primary lithology, but general "metasedimentary" characteristics.
795549 105m	<u>Pelitic Hornfels</u> . Quartz, semi-sericitic muscovite and phlogopite in varying proportions with disseminated ill-defined sericitic, degraded ?cordierite, muscovitised ?andalusite porphyroblasts.	Weakly sheared, vaguely spotted hornfelsic. Relict shale/silty shale-parted, silty pelitic.	Traces metasomatic schorl, pyritised pyrrhotite, late secondary siderite.	Weakly sheared, retrogressively sericitised/muscovitised "spotted" hornfelsic metapelite. Fe-sulphide is semi-bedded, conceivably "syngenetic".

Sample No.	Classification - Composition	Fabric	Accessories	Central Mineralogical Service- Comments
795550 III m	<u>"Metarhyolite"</u> . Relict quartz, frequent sericite-pseudomorphed feldspar phenocrysts; kaolinitic quartz-sericite groundmass. Disseminated garnets; late siderite impregnations.	Closely analogous to 795697. Weakly sheared.	Traces poikilitic fine-grained schorl, minor traces pyrite.	Close affinities with 795697, but with a quartz-sericite(-garnet) assemblage in contrast to quartz-phlogopite(-muscovite-topaz).
795836 1205 m	<u>Psammitic Hornfels</u> . Quartz with subordinate/variable proportions fine-grained muscovite, variably chloritised phlogopite, minor chloritised/sericitised andalusite. Quartz vein with disseminated beryl, biotite.	Hornfelsic, relict shale-parted, poorly sorted, sandy clastic. Very incipiently stressed.	Relict detrital zircon, titaniferous semi-opaques. Minor traces fluorite (in quartz-beryl veins).	Relatively slightly higher grade contact-metapsammite with sparse retrogressively altered andalusite. Weak late chloritisation of micas is stress-induced.
795837 (T.S. 42323) 1345	<u>Psammopelitic Hornfels</u> . Quartz with subordinate/variable proportions muscovite, biotite, extensively sericitised/kaolinised cordierite, partly muscovitised andalusite.	Hornfelsic. Relict slumped, shale-parted, medium-grained, sandy clastic. Very incipiently stressed.	Relict detrital zircon, rutile. Traces partly pyritised pyrrhotite. Rare fluorite films.	Incipiently stressed, moderately retrogressively sericitised andalusite-cordierite-bearing quartz-mica hornfels, weakly mineralised with Fe-sulphides.

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12th July, 1982

REPORT CMS 82/6/22

YOUR REFERENCE:	D.P.O. No. 30047
DATE RECEIVED:	22nd June, 1982
SAMPLE NOS.:	795838 - 795842
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

Copy to:
The Chief Geologist
C.R.A. Exploration Pty. Ltd.
G.P.O. Box 384D
MELBOURNE / VIC. 3001

Copy & Invoice to:
Administration Officer
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
BELLERIVE / TAS. 7018

H.W. Fander
H.W. Fander, M. Sc.

187

REPORT CMS 82/6/22

Dalcoath Granite Area Rocks

Five rock samples were received for petrological examination; thin-sections and three polished sections were prepared, and are briefly described in the accompanying table.

Summary

All five rocks are low-grade metasediments, with evidence of metasomatism postdating a regional metamorphic phase. The lithologies were mostly quartzose, i.e. orthoquartzites, ranging into laminated argillaceous quartzites; one was a shale and was metamorphosed to a spotted schist, with subsequent replacement of the ?cordierite spots.

Metasomatic minerals are widespread and diverse, but not abundant; they include pyrrhotite, pyrite, chalcopyrite, galena, sphalerite, ?arsenopyrite, phlogopite, fluorite, muscovite and tourmaline.

H.W. Fander, M. Sc.

Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Central Mineralogical Services Comments
795838 (T.S. 42520) 578m	<u>Metasomatized Quartzite</u> . Framework of small stressed, subrounded quartz grains; interstitial replacive chlorite, scattered epidote and sulphides.	Relict clastic textures preserved; faintly bedded. Fine-sand sizes.	Sulphides are pyrite with pyrrhotite inclusions, minor trace chalcopyrite.	Original rock was an ortho-quartzite, perhaps weakly argillaceous. Very mild but pervasive metasomatism.
795839 614m	<u>Metasomatized Quartzite</u> . Mostly small quartz grains with fine interstitial, replacive phlogopite and muscovite, with sulphides and fluorite.	Some clastic textures preserved in coarser grains. Featureless, fine-grained.	Quartz-fluorite-muscovite veins. Pyrite, pyritised pyrrhotite, ?chalcopyrite.	Broadly similar to 838, but finer-grained; more pervasively metasomatized, with younger veining.
795840 67.7m	<u>Metasomatized, Spotted Schist</u> . Ovoid spots of pale phlogopite, replacing ?cordierite, in matrix of fine matted sericite with quartz; sulphide veins, patches.	Uniform rock, with definite preferred orientation. Fine-grained.	Main sulphide is pyrite as irregular crystals with < 30 μ inclusions of galena, sphalerite, pyrrhotite.	Rock is a regionally metamorphosed shale, subsequently metasomatized. Sulphides are semi-conformable, crosscutting, and dispersed.
795841 90m	<u>Metaquartzite</u> . Dominantly composed of small interlocking, clear grains of quartz; scattered small muscovite flakes and colourless fluorite patches.	Weak preferred orientation, but otherwise featureless. No clastic textures.	Coarser fluorite patches, veins, with semi-opaque rutile. Trace fine ?molybdenite.	Original rock may have been a chert, or a fine-grained ortho-quartzite. Sn assay may be advisable.
795842 (T.S. 42524) 109m	<u>Banded Micaceous Metaquartzite</u> . Bands of quartz with interstitial sericite, phlogopite; alternating with bands of matted fine sericite, with ultrafine ?graphite.	Banding reflects primary lamination. Clastic textures in quartz.	Scattered fine pyrrhotite, pyrite, ?arsenopyrite, fluorite, tourmaline.	Rock was a laminated shale/sandstone; mildly metamorphosed, with little change in structure.

189

Central Mineralogical Services



39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. G.B. Weber
Senior Geologist
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
BURNIE / TAS. 7320

20th July, 1982

REPORT CMS 82/7/9

YOUR REFERENCE:	D.P.O. No. 30050
DATE RECEIVED:	7th July, 1982
SAMPLE NOS.:	795843 - 795849
SUBMITTED BY:	G.B. Weber
WORK REQUESTED:	Petrology

Copy to:
The Chief Geologist
C.R.A. Exploration Pty.Ltd.
G.P.O. Box 384D
MELBOURNE / VIC. 3001

Copy & Invoice to:
Administration Officer
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
BELLERIVE / TAS. 7018

H.W. Fander
H.W. Fander, M. Sc.

REPORT CMS 82/7/9

Seven drill core specimens of Dalcoath Granite were received for petrological examination, and brief descriptions with particular emphasis on contrasting intrusive types. Representative thin-sections were prepared and examined in oblique incident and transmitted light. Offcuts were stained for K-feldspar. No polished sections were prepared, although individual samples may warrant mineragraphic examination on the basis of assay data. Complex specimens (granite/greisen) are given duplex descriptions.

Summary

All six rocks can be classified as alkali biotite granites and all appear closely related. Textural variations are evident, particularly a transition from porphyries through strongly porphyritic uneven-grained, medium- to non-porphyritic uneven-grained, medium- to coarse-grained types, but compositional affinities are such that the suite, as a whole, is considered as co-magmatic and essentially contemporaneous.

Primary assemblages comprise orthoclase-perthite, quartz and albite (near-oligoclase) with subordinate dark red-brown biotite. Accessories, which are non-ubiquitous and thus poorly diagnostic, include magnetite and metamict allanite(?). Feldspars, particularly where phenocrystal and fresh, are incipiently pigmented with virtually submicroscopic Fe-oxide particles. Fresh, unaltered granites are faintly pinkish to off-white, with dark specks reflecting the distribution of biotite.

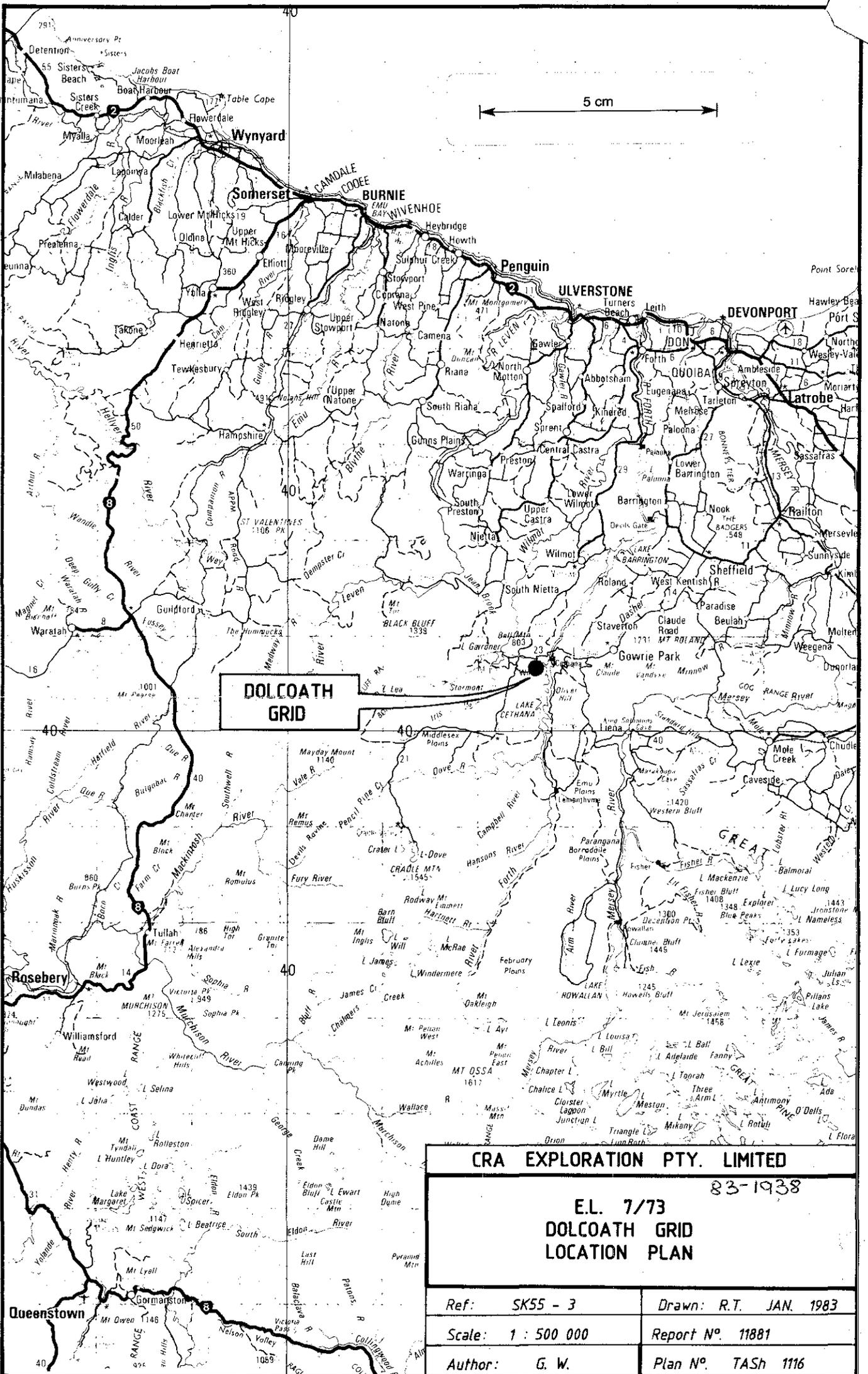
Alteration is of greisen character, with development of white mica, sideritic carbonate, and accessory fluorite, chlorite, and pyrite. In mildly altered rocks, albite and biotite are preferentially altered to sideritic sericite aggregates. This results in a subtle bleaching of the faint pinkish pigmentation. In some zones the siderite is weakly oxidised and yellowish mesoscopically. The ultrafine Fe-oxide particles producing the pinkish pigmentation are ubiquitous, particularly in orthoclase, but also in the primary albite. The pigmentation is, however, a subtle impersistent phenomenon, even in relatively fresh rocks, and within the limits imposed by compositional affinities and the variable alteration. There is little apparent benefit in delineating either "pink", "yellow-spotted", or "white" granites as potential mineralisers. Similar conclusions have been drawn in analyses of the similarly variable pink/white Heemskirk Granite.

In the present suite, Sn-Mo-W-?Bi mineralisation is related to greisen-type segregations and related veins. These features appear to represent late- rather than strictly post-magmatic assemblages, exhibit generally vague contacts with the host granite, and have undergone essentially similar pneumatolytic alteration. There are close affinities with the alteration pattern in the Sn-mineralised Blue Tier batholith.

D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	Central Mineralogical Services Comments
795843 (T.S. 42684) 214m	<u>Biotite Microgranite</u> . Frequent orthoclase-perthite, subordinate quartz, sericite-siderite-stained albite, variably sericite-quartz(-siderite)-pseudomorphed biotite phenocrysts with quartz-albite-orthoclase groundmass.	Strongly porphyritic with medium-grained (mean 125 μ) granitic groundmass.	Traces magnetite, fluorite, ultrafine pyrite in sericite-siderite-stained feldspar. Ultrafine ?hematite	Mildly sericite-siderite-quartz-altered (or greisenized) porphyritic biotite microgranite. Weak yellowish spotting reflects distribution of sideritic carbonate clots.
795844 37m	<u>Biotite Microgranite</u> . Phenocrysts orthoclase-perthite, quartz, subordinate variably sericite(+ siderite)-stained albite, weakly siderite-fluorite-stained biotite. Biotite-stained quartz-albite-orthoclase groundmass.	Closely analogous to 795843; slightly less strongly porphyritic.	Ultrafine (feldspar). Fe-oxide (?hematite) pigmentation of feldspar. Minor trace magnetite, metamict ?allanite.	Close affinities with 795843, compositionally and texturally. Slightly less altered. Fe-pigmentation of orthoclase is evident, but less marked in 795843.
795845 74m	<u>Biotite Microgranite</u> . Orthoclase-microperthite, variably siderite-sericite-stained albite, slightly subordinate quartz, disseminated sericitised/siderite-fluorite-stained biotite.	Very strongly coarsely porphyritic, with sparse medium-grained granitic groundmass.	Traces chlorite, relict biotite, minor traces magnetite, incipient Fe-pigmentation of feldspar.	Closely related to 795843, 844; only real contrasts are textural. Alteration is closely analogous to 795843. Only incipient Fe-pigmentation of orthoclase.
795846 86m	<u>Biotite Microgranite</u> . Frequent orthoclase-microperthite, quartz, subordinate sericite-siderite-stained albite, variably altered biotite phenocrysts. Quartz-albite-orthoclase groundmass, minor fluorite.	Closely analogous to 795843, 844, Very incipiently banded. Sparse muscovite veinlets.	Quartz vein with disseminated muscovite, siderite, fluorite, molybdenite and ?bismuth. Fe-pigmentation.	Typical porphyritic biotite microgranite closely related to 795843, 844, 845. Colour variations reflect the alteration pattern, particularly sericitic "bleaching" of albite.
795847 GRANITE 132.8m	<u>Biotite Microgranite</u> . Compositionally typical granite with siderite-sericite-altered biotite, sporadic muscovite veinlets, fluorite impregnations, siderite films. Vein-quartz contact with semi-continuous fluorite film.	Similar to 795845. Sharp semi-planar contact; relatively sericitic alteration selvage.	Minor traces pyrite, pyrrhotite in sericite-siderite aggregates, films.	Compositionally typical, very strongly porphyritic biotite microgranite. Relatively slightly marked greisenizing alteration; conspicuous siderite muscovite veinlets, films.
795847 GREISEN 132.8m	<u>Greisen</u> . Quartz and vaguely feldspar-pseudomorphous phlogopite aggregates with disseminated siderite-kaolin-sericite aggregates (after feldspar, biotite); minor relict biotite.	Medium-grained; vague relict granitic, porphyry-like.	Traces pyrite, fluorite, extremely rare very fine sphalerite, molybdenite.	Thoroughly greisenized (silicified-muscovitised-siderite-stained) granitoid. Contact with the biotite granite is quartz-veined, probably displaced.
795848 GRANITE 164.2m	<u>Biotite Granite</u> . Quartz, orthoclase with variably sericitised perthite lamellae, variably sericitised/muscovitised/siderite-stained albite in near-equant proportions; disseminated sericitised/sideritised biotite.	Uneven-grained, granitic.	Minor fine-grained impregnations of fluorite. Rare cassiterite. Trace pyrite.	Relatively coarse, but uneven-grained biotite granite with relatively marked greisenizing alteration. Vague gradational contact with the greisen segregation.
195848 GREISEN 164.2m	<u>Greisen</u> . Quartz with frequent aggregates of variably sericitised topaz and variably sericite-kaolin-siderite-pseudomorphed green biotite with minor associated pyrite.	Medium to coarse quartz with intergranular altered topaz-biotite aggregates.	"Primary" and "secondary" (topaz alteration-generated) fluorite; rare cassiterite.	Sericite-kaolin-siderite-altered quartz-topaz-biotite (fluorite) rock. Cassiterite as 50-500 μ poikilitic grains in granite and greisen adjacent to ill-defined contact.

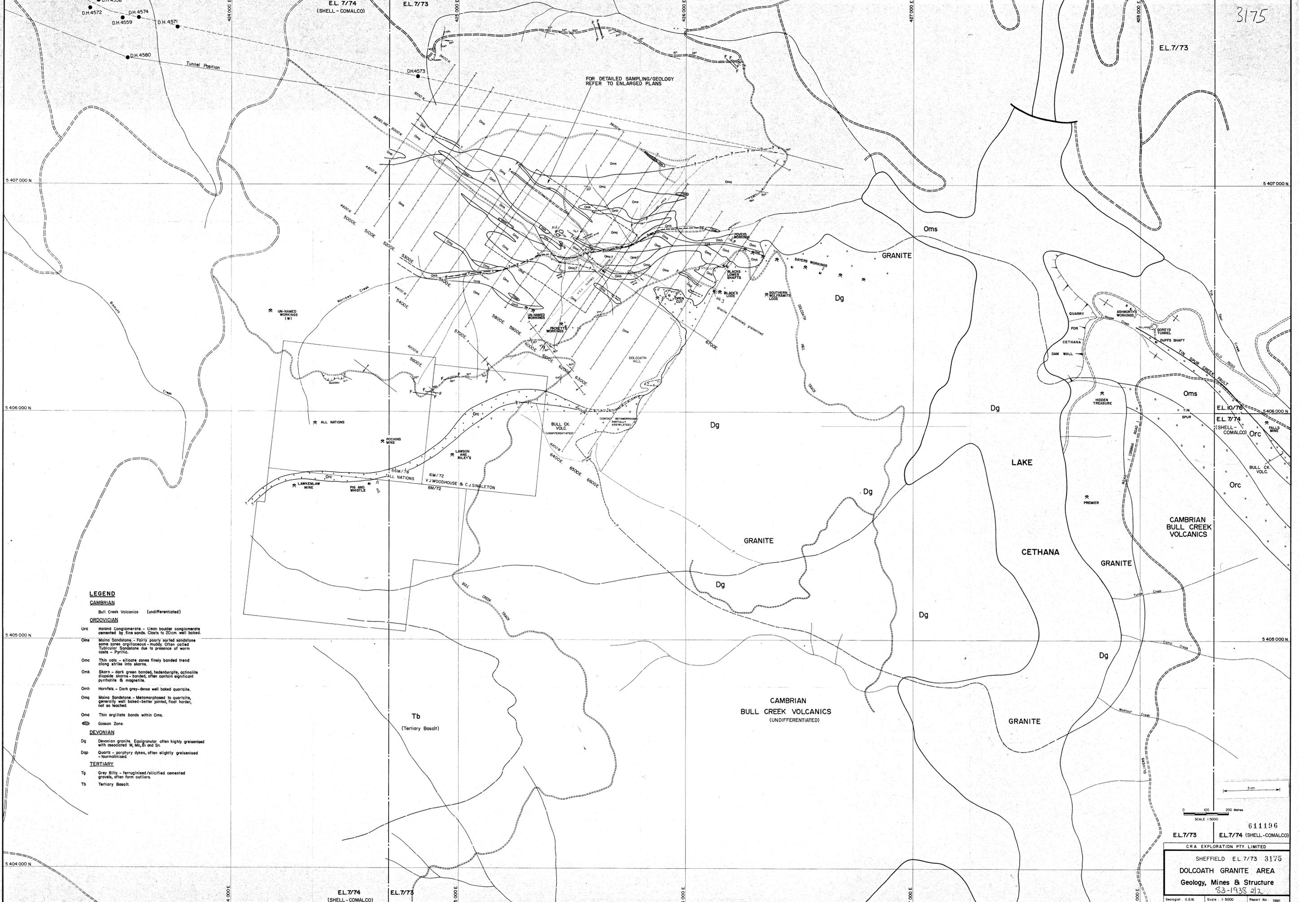
193



**DOLCOATH
GRID**

CRA EXPLORATION PTY. LIMITED	
83-1938	
E.L. 7/73 DOLCOATH GRID LOCATION PLAN	
Ref: SK55 - 3	Drawn: R.T. JAN. 1983
Scale: 1 : 500 000	Report N ^o . 11881
Author: G. W.	Plan N ^o . TASH 1116

611195



FOR DETAILED SAMPLING/GEOLOGY REFER TO ENLARGED PLANS

LEGEND

CAMBRIAN

Bull Creek Volcanics (undifferentiated)

ORDOVICIAN

- Orc Helms Conglomerate - Clean boulder conglomerate cemented by fine sands. Clasts to 20cm, well sorted.
- Oms Maino Sandstone - Fairly poorly sorted sandstone some zones argillaceous - muddy. Often called Tubular Sandstone due to presence of worm casts - Pyritic.
- Omc Thin calc - silicate zones finely banded trend along strike into skarns.
- Omk Skarn - dark green banded, hedenbergite, actinolite diopside skarns - banded, often contain significant pyrrhotite & magnetite.
- Omh Hornfels - Dark grey-dense well baked quartzite.
- Omq Maino Sandstone - Metamorphosed to quartzite, generally well baked-better jointed, float harder, not so leached.
- Omo Thin argillate bands within Oms.

DEVONIAN

- Dg Devonian granite. Equigranular often highly gneissified with associated W, Mo, Bi and Sn.
- Dqp Quartz - porphyry dykes, often slightly gneissified - tourmalinised.

TERTIARY

- Tg Grey Blity - ferruginised/silicified cemented gravels, often form outcrops.
- Tb Tertiary Basalt.

Scale 1:5000

0 100 200 Metres

611196

EL.7/73 EL.7/74 (SHELL - COMALCO)

CRA EXPLORATION PTY. LIMITED

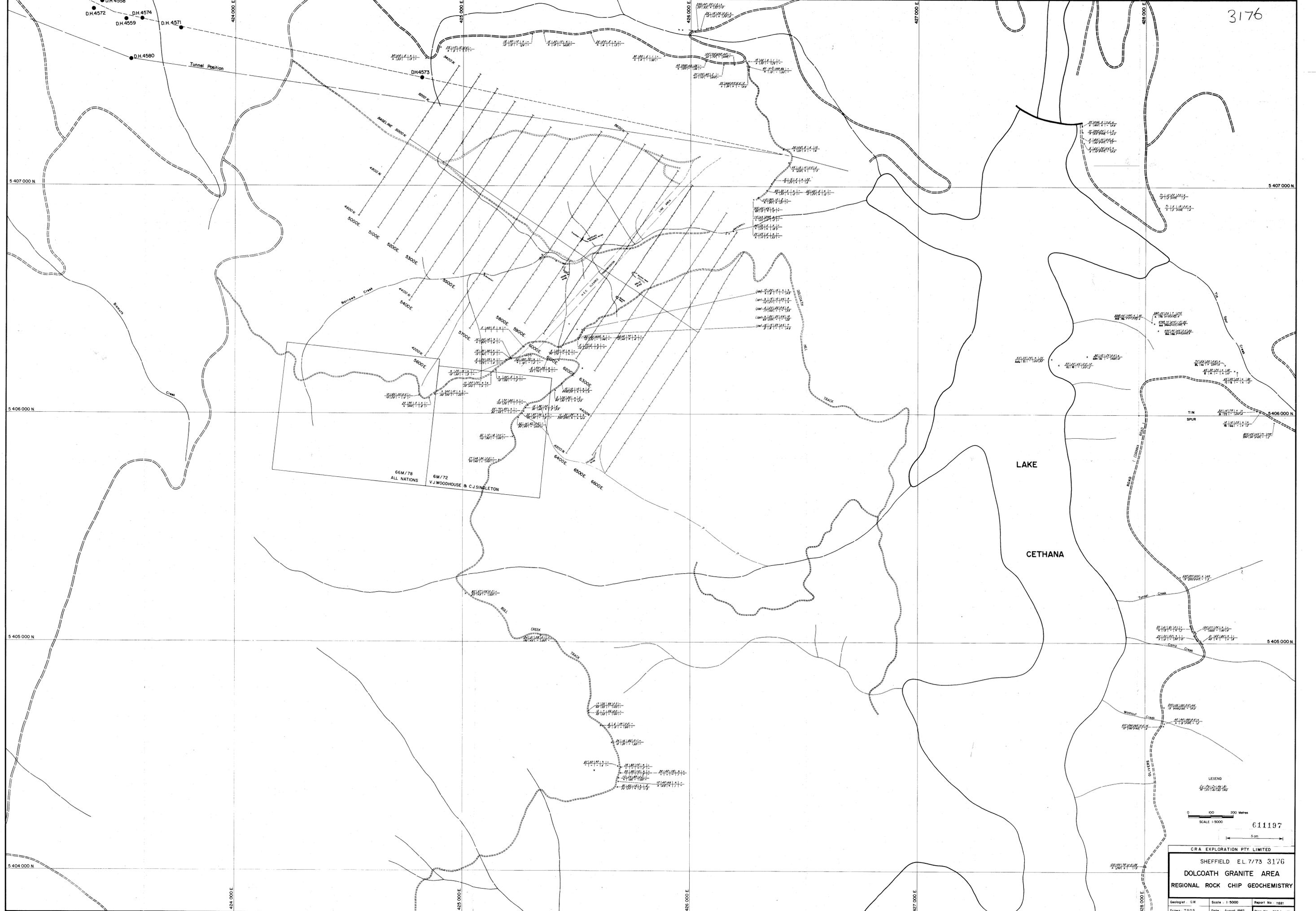
SHEFFIELD EL.7/73 3175

DOLCOATH GRANITE AREA

Geology, Mines & Structure

83-1938 2/2

Geologist: G.B.W.	Scale: 1:5000	Report No: 1981
Drawn: T.G.D.S.	Date: August, 1982	Plan No: TAS h 77



LEGEND

0 100 200 Metres
SCALE 1:5000

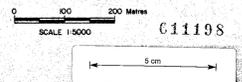
611197

5 cm

CRA EXPLORATION PTY. LIMITED
SHEFFIELD E.L. 773 3176
DOLCOATH GRANITE AREA
REGIONAL ROCK CHIP GEOCHEMISTRY

Geologist: G.W.	Scale: 1:5000	Report No: 11881
Drawn: T.G.D.S.	Date: August 1982	Plan No: 125 b 1/11

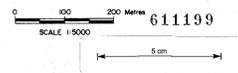
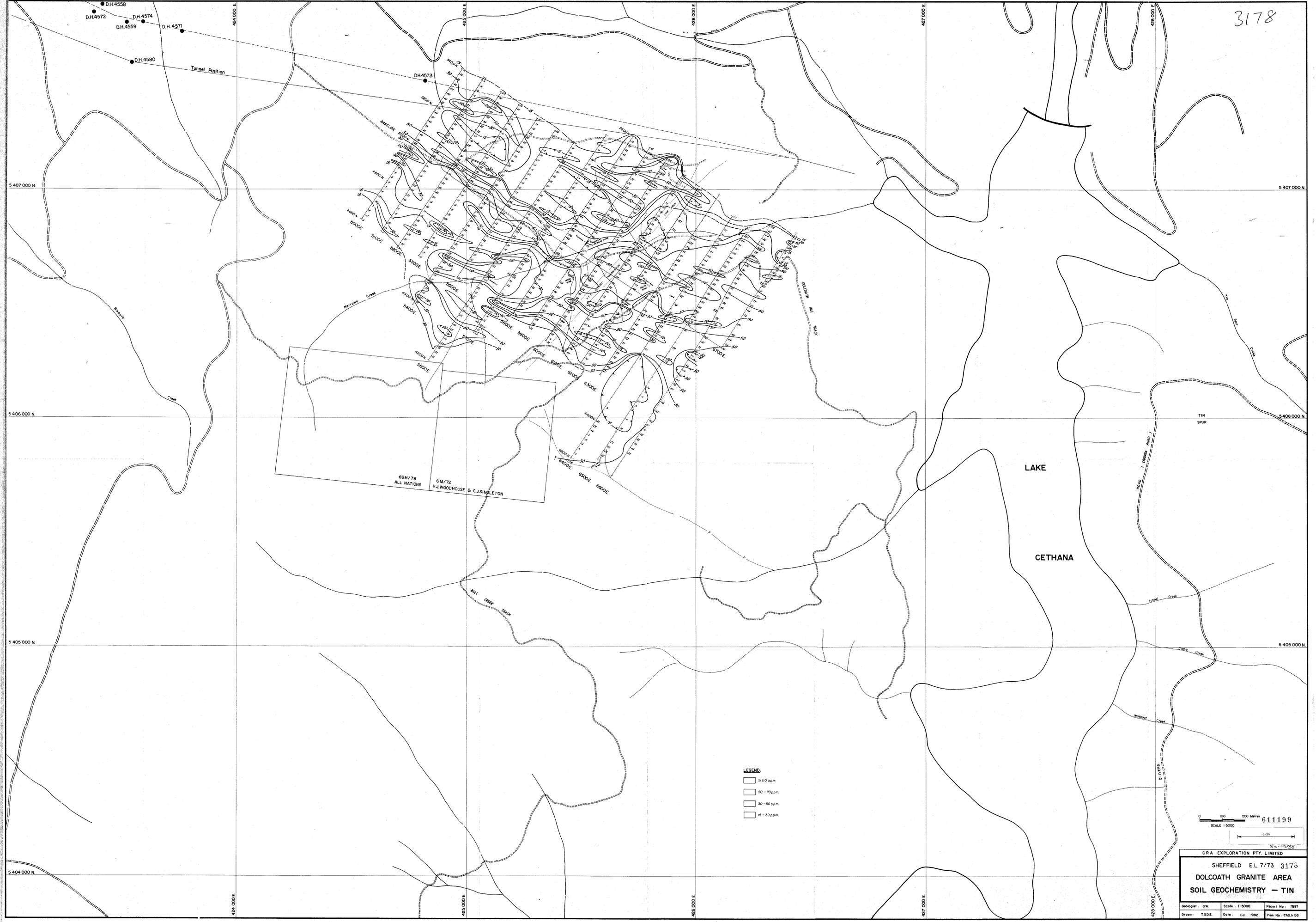
3177



CRA EXPLORATION PTY. LIMITED
 SHEFFIELD E.L. 7/73 3177
DOLCOATH GRANITE AREA
SAMPLE LOCATION PLAN

Geologist: G.R. Scale: 1:5000 Report No: 7881
 Drawn: T.G.D.S. Date: August, 1982 Plan No: TAS 455

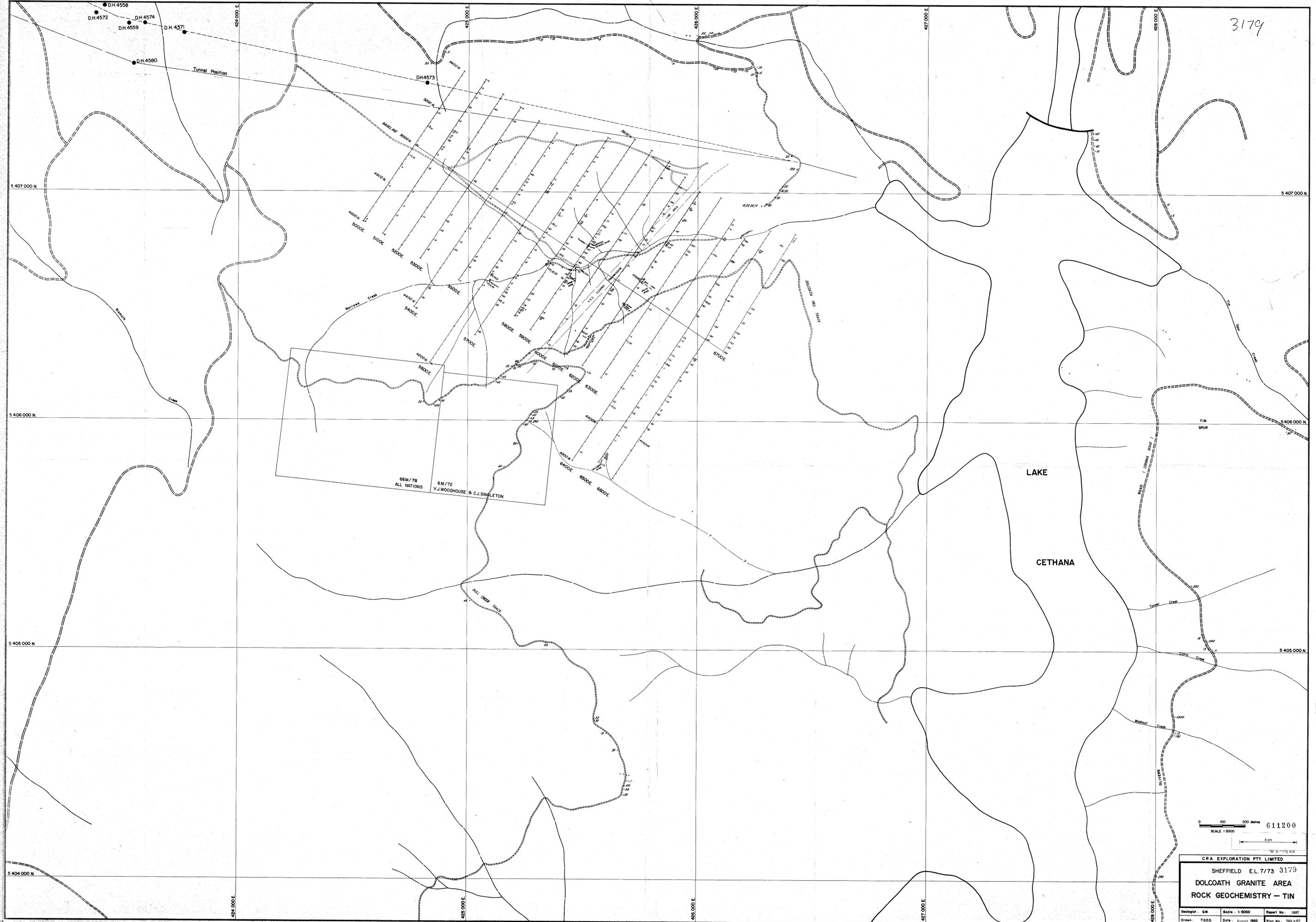
3178



CRA EXPLORATION PTY. LIMITED
SHEFFIELD E.L. 7/73 3178
DOLCOATH GRANITE AREA
SOIL GEOCHEMISTRY - TIN

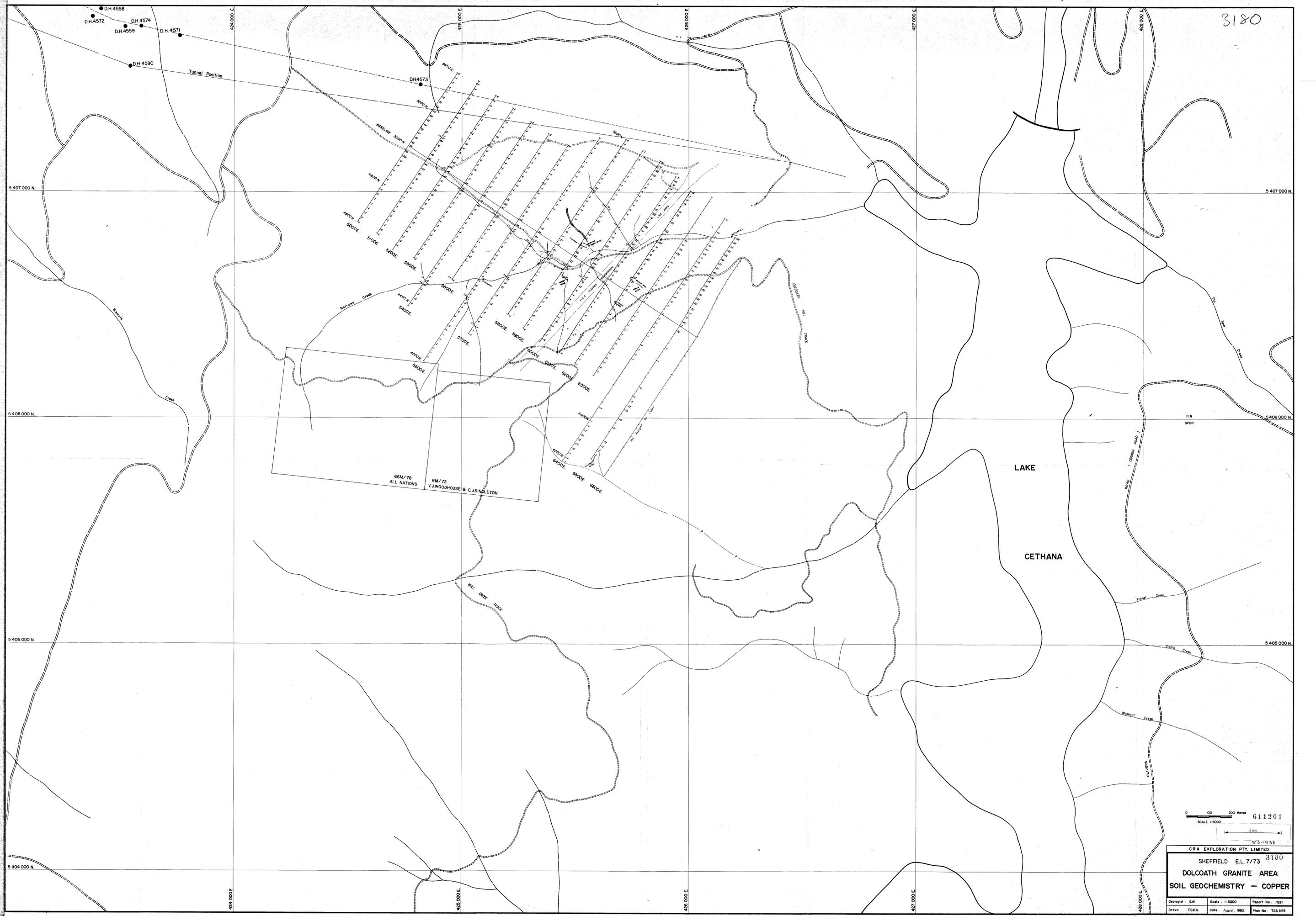
Geologist: G.W.	Scale: 1:5000	Report No: 1987
Drawn: T.G.D.E.	Date: Dec. 1982	Plan No: TAB. h. 56

3179



CRA EXPLORATION PTY. LIMITED
 SHEFFIELD E.L. 7/73 3179
 DOLCOATH GRANITE AREA
 ROCK GEOCHEMISTRY - TIN

Geologist: G.W.	Scale: 1:5000	Report No: 7887
Drawn: T.G.D.S.	Date: August 1982	Plan No: TAS. h.57



611201

SCALE 1:5000

5 cm

CRA EXPLORATION PTY. LIMITED

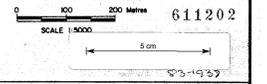
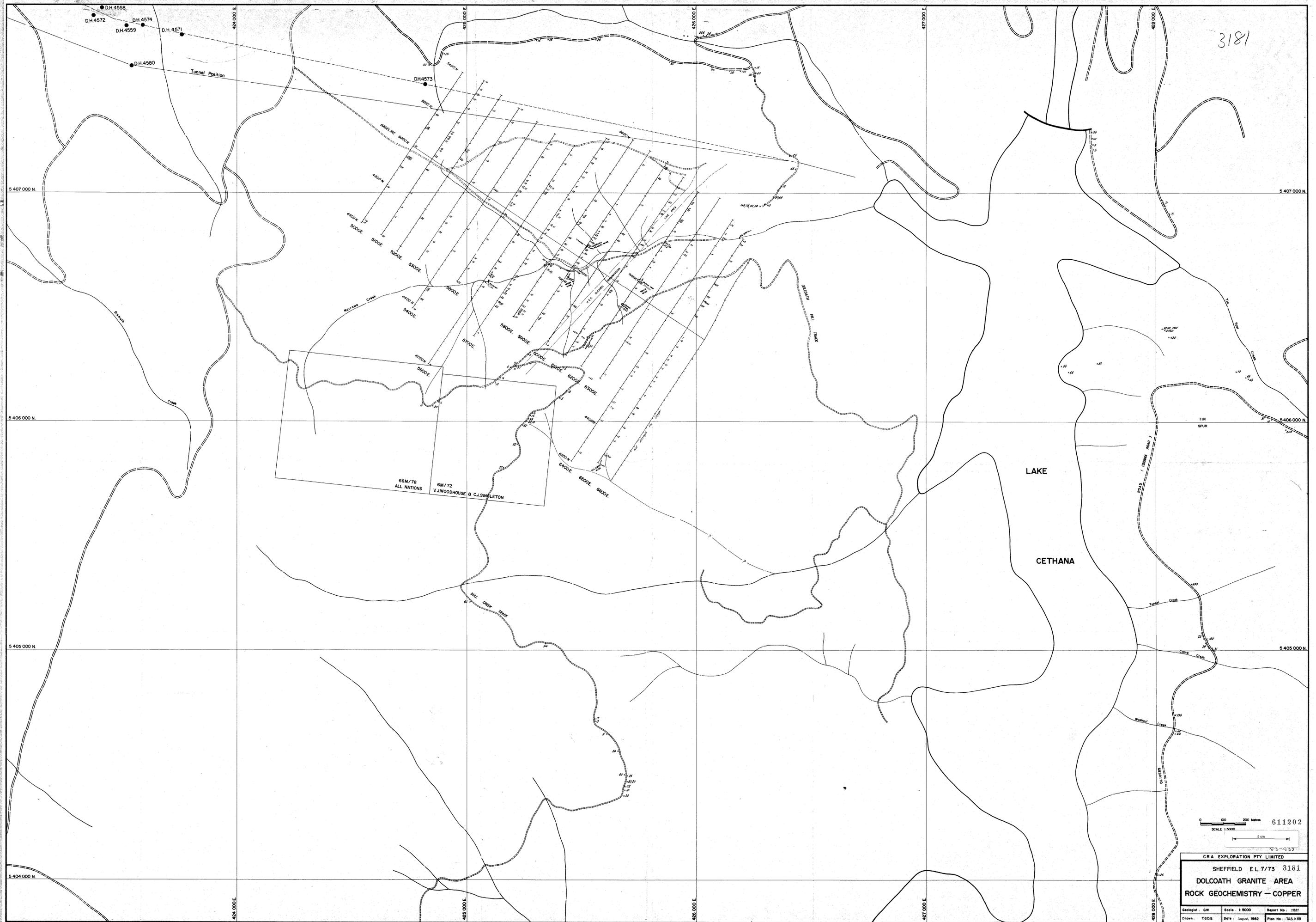
SHEFFIELD E.L. 7/73 3180

DOLCOATH GRANITE AREA

SOIL GEOCHEMISTRY - COPPER

Geologist: G.W.	Scale: 1:5000	Report No: 7587
Drawn: T.G.D.S.	Date: August, 1982	Plan No: TAS-558

3181



CRA EXPLORATION PTY. LIMITED

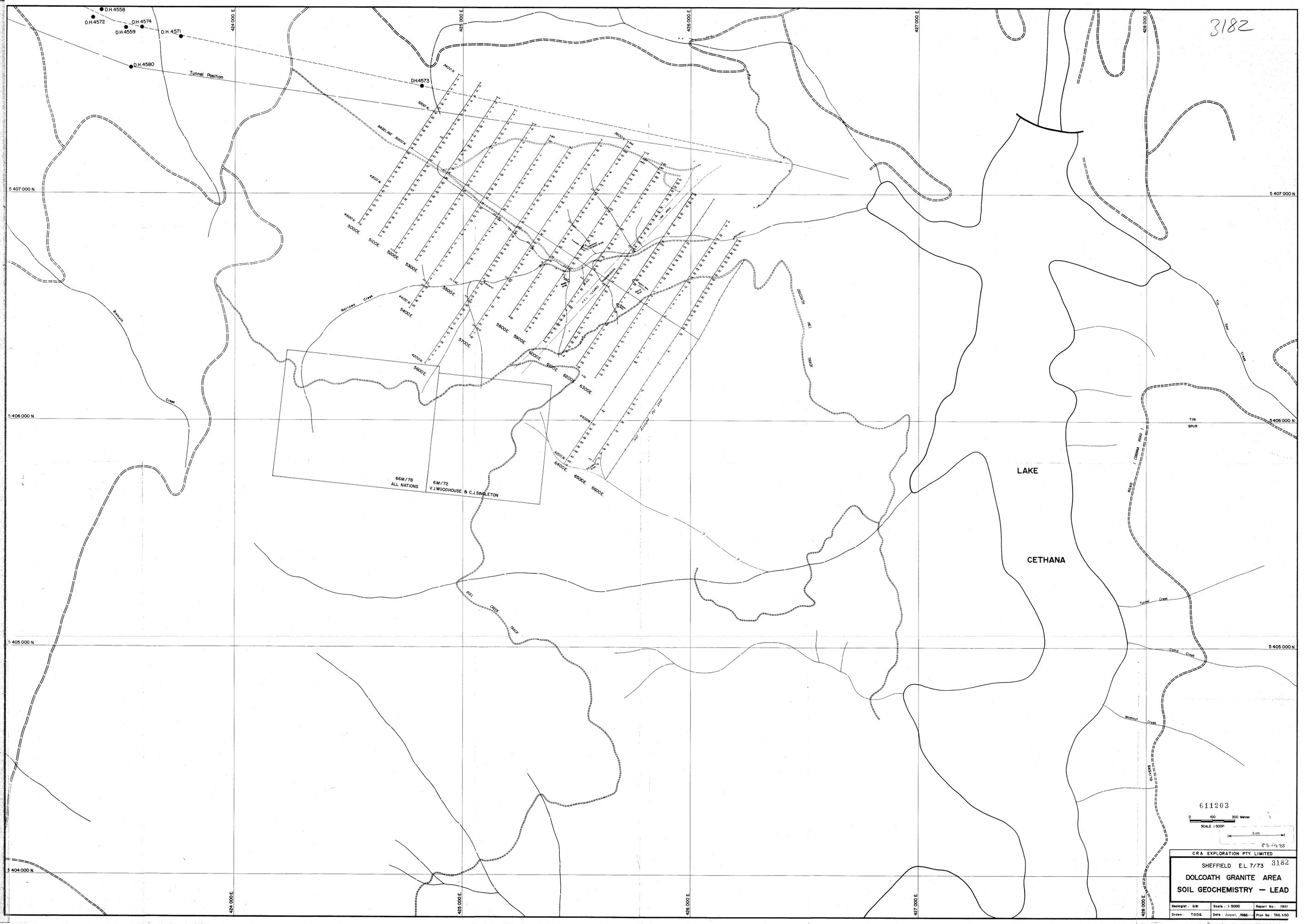
SHEFFIELD E.L. 7/73 3181

DOLCOATH GRANITE AREA

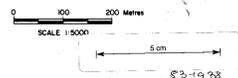
ROCK GEOCHEMISTRY - COPPER

Geologist: G.W.	Scale: 1:5000	Report No: 7887
Drawn: T.G.S.	Date: August, 1982	Plan No: TAS.859

3182

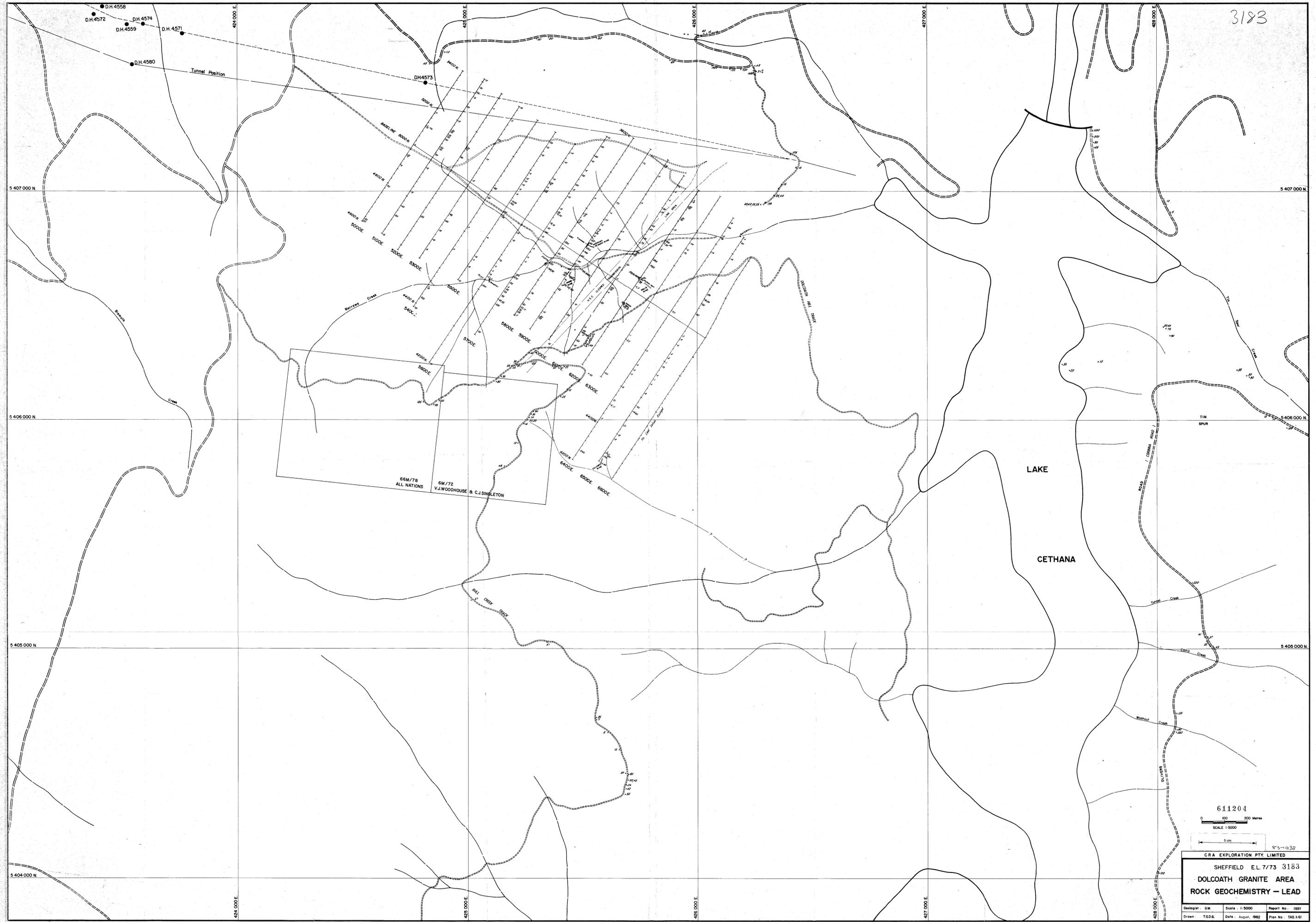


611203



CRA EXPLORATION PTY. LIMITED
SHEFFIELD E.L. 7/73 3182
DOLCOATH GRANITE AREA
SOIL GEOCHEMISTRY — LEAD

Geologist: G.W. Scale: 1:5000 Report No: 7587
Drawn: T.G.D. Date: August, 1988 Plan No: TAS. 160



611204

0 100 200 Metres

SCALE 1:5000

5 cm

CRA EXPLORATION PTY. LIMITED

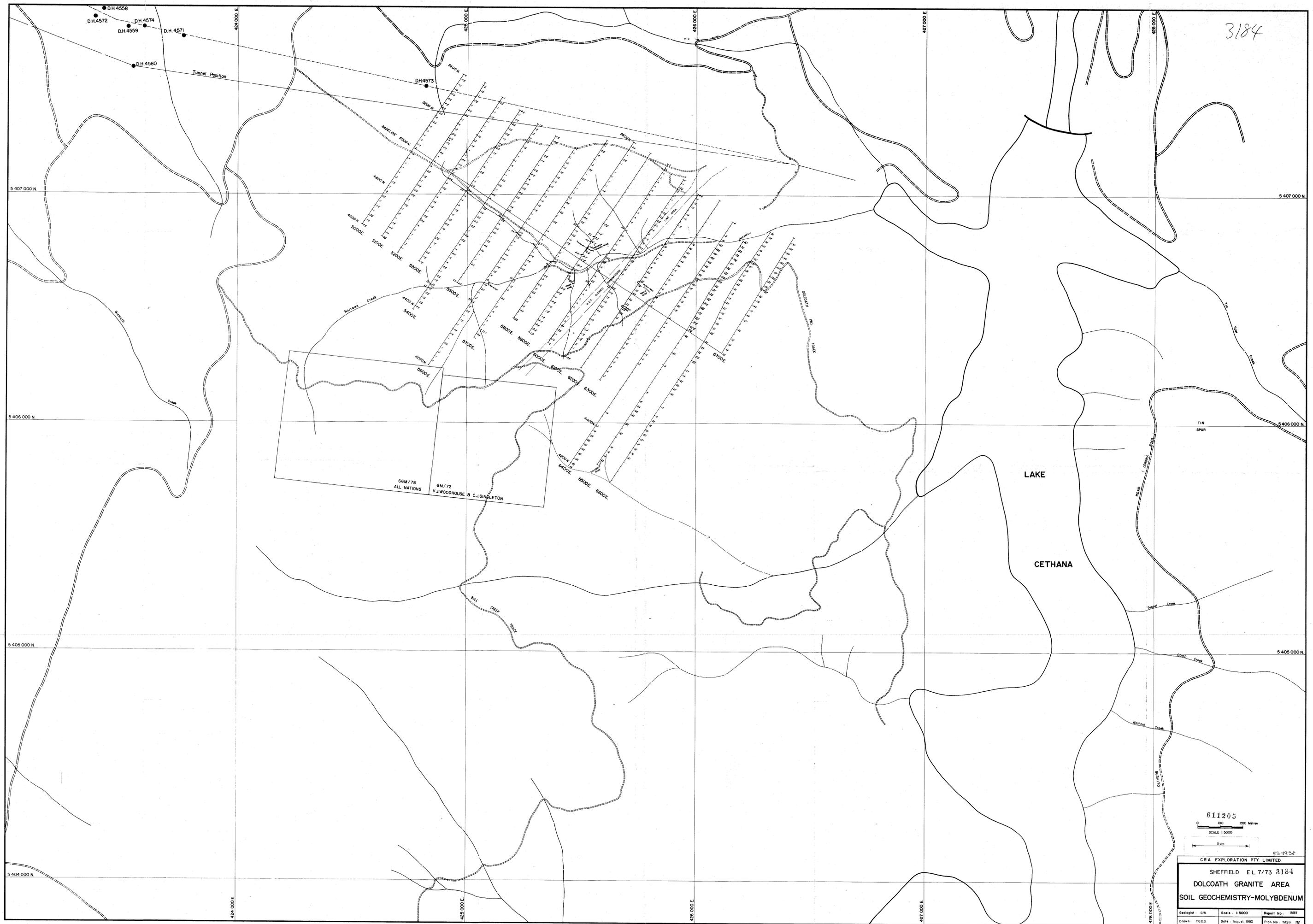
SHEFFIELD EL. 7/73 3183

DOLCOATH GRANITE AREA

ROCK GEOCHEMISTRY - LEAD

Geologist: G.W.	Scale: 1:5000	Report No: 7287
Drawn: T.G.D.S.	Date: August, 1982	Plan No: T&S.151

3184



611205

0 100 200 Metres

SCALE 1:5000

5 cm

53-1938

CRA EXPLORATION PTY. LIMITED

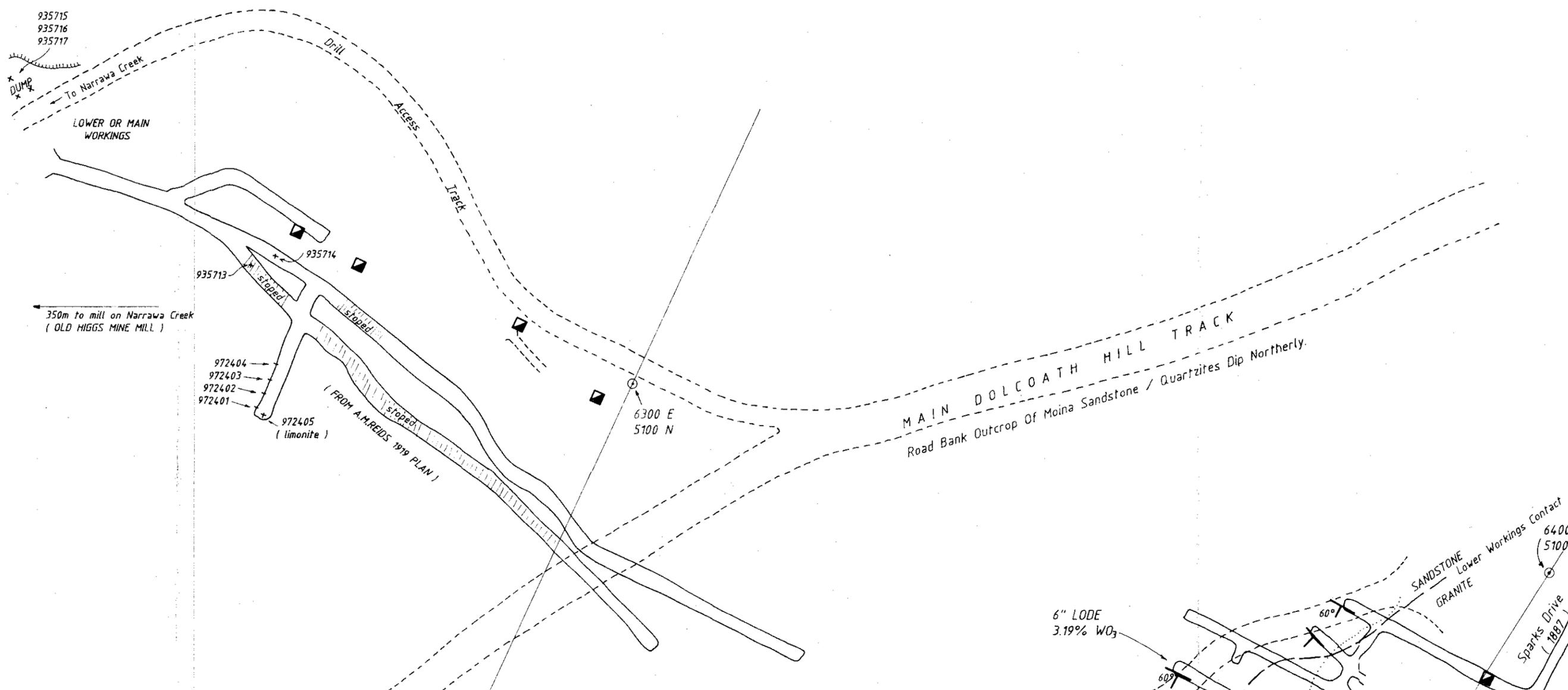
SHEFFIELD E.L. 7/73 3184

DOLCOATH GRANITE AREA

SOIL GEOCHEMISTRY-MOLYBDENUM

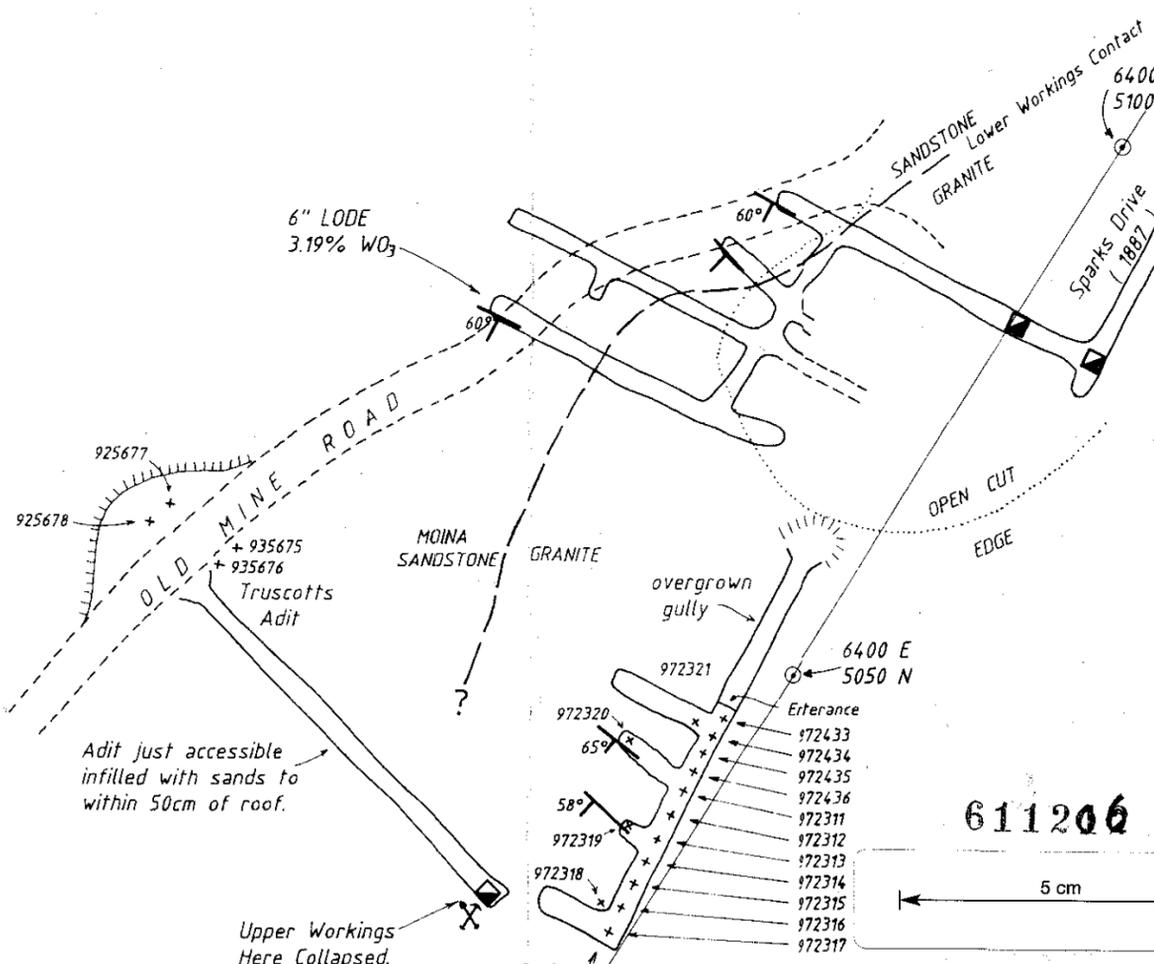
Geologist: G.W. Scale: 1:5000 Report No: 1881

Drawn: T.G.S. Date: August, 1982 Plan No: TAS h. 112



Cu Pb Zn Ag Bi
W Sn Au As Mo

935713	14	16	6	x	-	972433	68	21	17	x	-
	80	15	0.008	2	-		200	40	-	50	70
714	202	31	37	0.3	-	434	91	18	19	x	-
	150	75	0.145	32	-		7030	34	-	700	190
715	32	60	19	0.4	-	435	65	13	18	0.1	-
	5.03	35	2.5	85	-		556	28	-	50	150
716	181	4.2	85	0.5	-	436	66	4	24	x	-
	110	150	0.6	90	-		354	68	-	50	130
717	46	40	6	0.6	-	311	100	15	27	x	220
	190	25	0.032	20	-		2070	84	-	x	124
972401	35	62	26	x	-	312	110	9	26	x	166
	179	92	-	x	36		485	57	-	50	170
402	45	37	41	x	-	313	120	12	27	x	380
	261	48	-	x	34		573	27	-	x	300
403	46	50	65	0.2	-	314	100	9	28	x	210
	93	44	-	x	26		509	46	-	x	130
404	30	10	40	x	-	315	70	10	31	x	56
	1290	26	-	50	28		342	35	-	x	56
405	29	39	22	x	-	316	62	11	29	x	44
	105	12	-	300	1010		505	39	-	x	18
935675	80	30	x	1.5	-	317	32	13	19	x	112
	55	15	0.368	8	-		369	17	-	x	28
676	10	20	20	x	-	318	35	9	24	x	30
	15	130	0.048	83	-		439	43	-	x	8
677	25	35	20	x	-	319	100	6	27	x	122
	30	80	0.008	90	-		185	64	-	x	210
678	105	45	x	1.5	-	320	53	15	18	x	162
	1400	10	6.95	27	-		6990	4	-	x	78
						321	165	23	32	0.5	162
							479	469	-	100	400



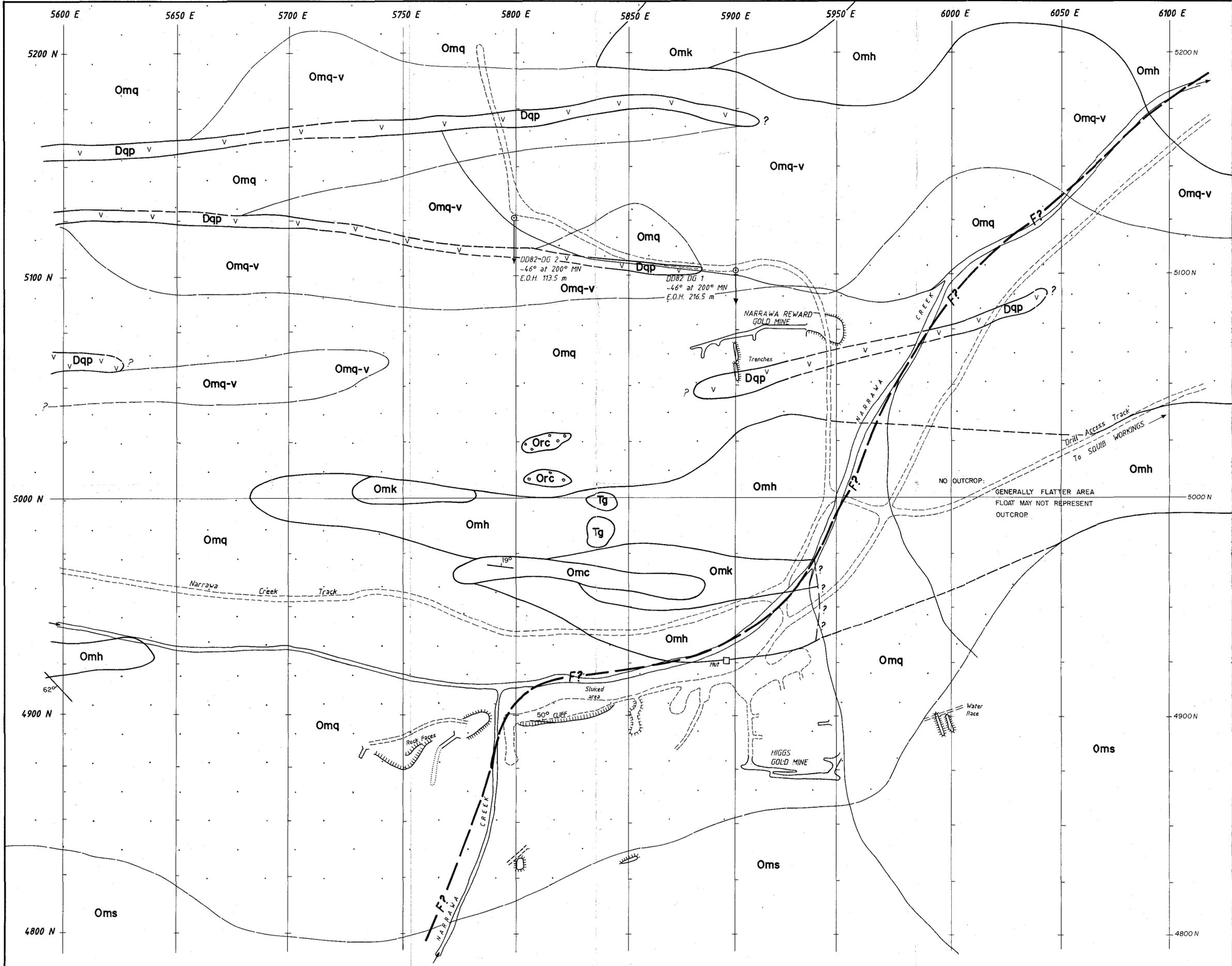
611206

5 cm

CRA EXPLORATION PTY. LIMITED

DOLCOATH GRID
SQUIB WORKS
(From Dickinson Plan 1941)
83-1938 (After Reid 1919) 318

Ref:	SKSS - 3
Scale:	1 : 5000 (approx)
Author:	G. W.
Date:	16 - 8 - 1982
Drawn:	R. T.
Report No:	
Plan No:	TASH 836



LEGEND

ORDOVICIAN

- Orc** Roland Conglomerate - Clean boulder conglomerate cemented by fine sands. Clasts to 20cm. well baked.
- Oms** Moina Sandstone - Fairly poorly sorted sandstone some zones argillaceous - muddy. Often called Tubicular Sandstone due to presence of worm casts - Pyritic.
- Omq** Moina Quartzite - Metamorphosed to quartzite generally well baked - better jointed, float harder, not so leached.
- Om_{q-v}** Quartzites - Heavily veined and fractured
- Omc** Thin calc - silicate zones finely banded trend along - strike into skarns.
- Omk** Skarn - dark green banded hedenbergite, actinolite diopside skarns banded, often contain significant pyrrhotite & magnetite.
- Om_h** Hornfels - Dark grey - dense well baked quartzite.
Gossan Zone.

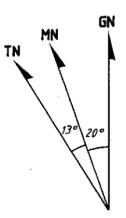
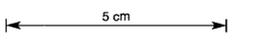
DEVONIAN

- Dqp** Quartz - porphyry dykes, often slightly greisenised - tourmalinized.

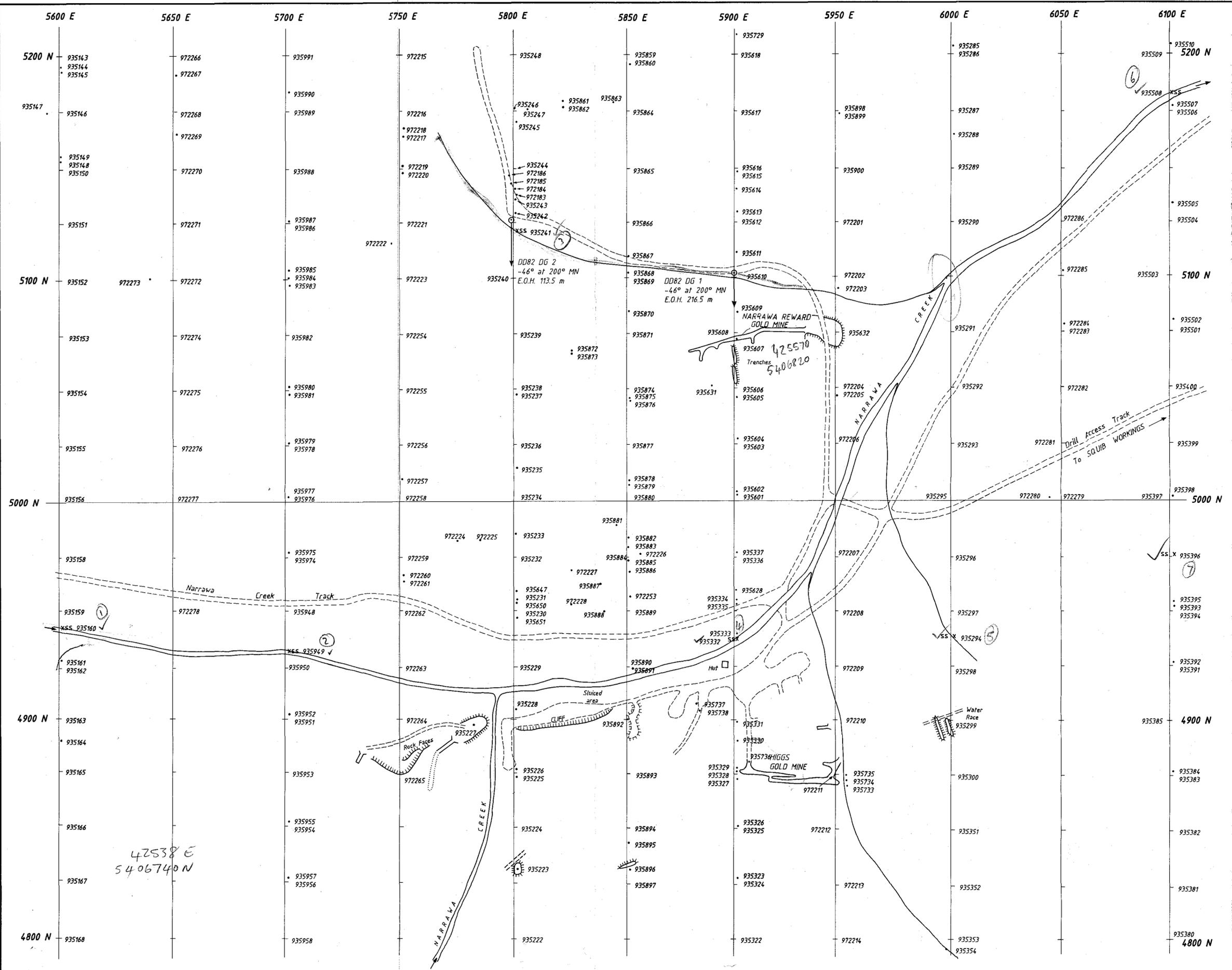
TERTIARY

- Tg** Grey Billy - ferruginised/silicified cemented gravels, often form outliers.

611201



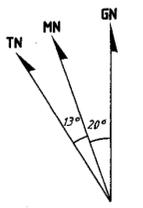
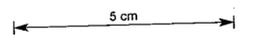
83-1938	
CRA EXPLORATION PTY. LIMITED	
NARRAWA REWARD - HIGGS GOLD MINING AREA 3186	
GEOLOGY PLAN	
Ref: SK55 - 3	
Scale: 1 : 1000	Drawn: T.G.D.S.
Author: G.W.	Report No: 1181
Date: Dec 1982	Plan No: TASH 823



LEGEND

- SAMPLE NUMBERS**
- Soil Samples
 - Rock Samples
 - x ss Stream Sediment Samples

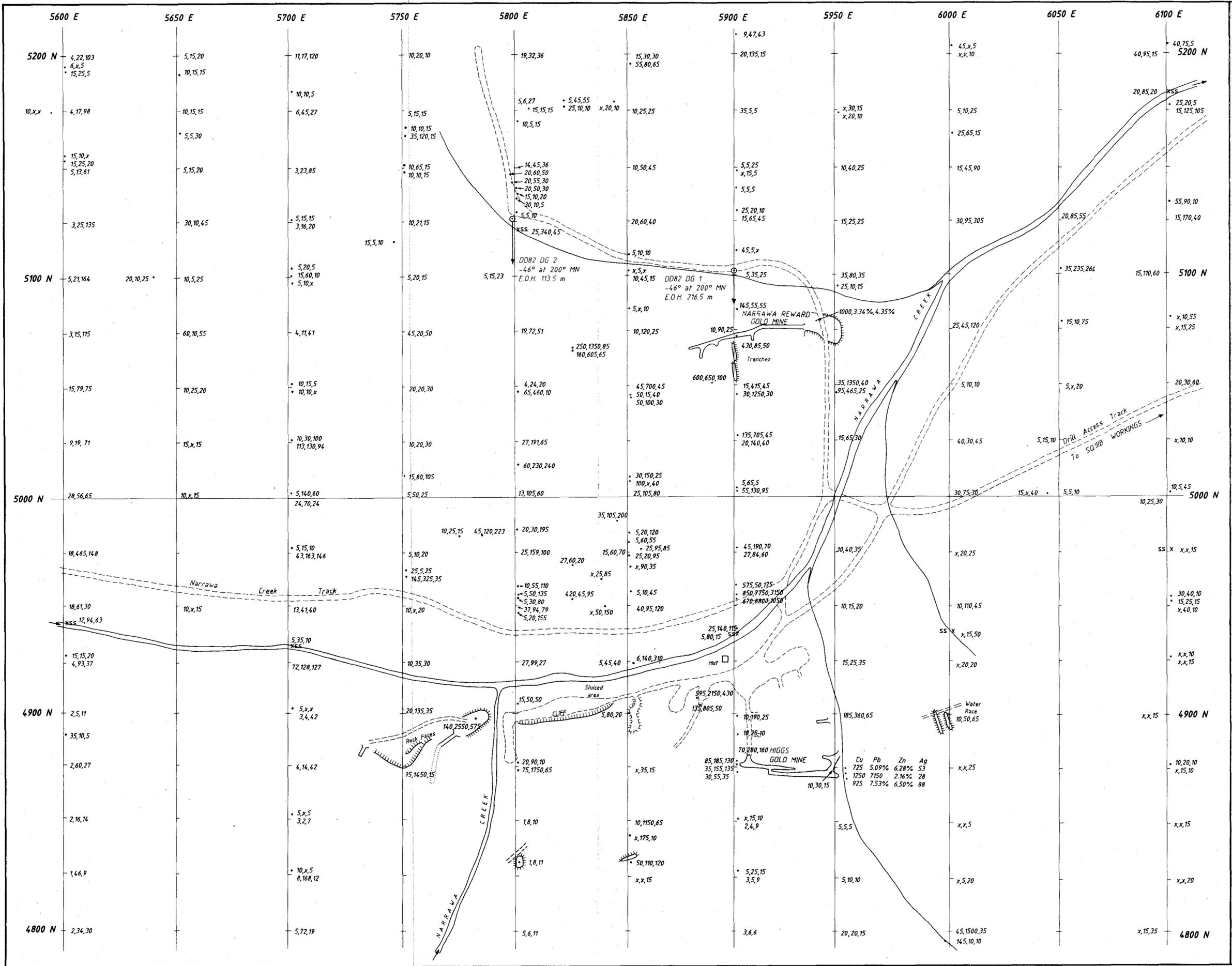
611200



83-1938

CRA EXPLORATION PTY. LIMITED	
NARRAWA REWARD - HIGGS GOLD MINING AREA	
3187	
SAMPLE LOCATIONS	
Ref: SK55 - 3	Drawn: R. T.
Scale: 1 : 1000	Report No: 11881
Author: G. W.	Plan No: TASH 825
Date: 2 - 8 - 1982	

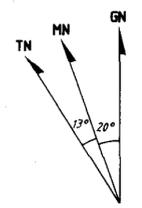
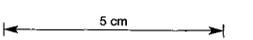
5406 N
5405 N
424 E
425



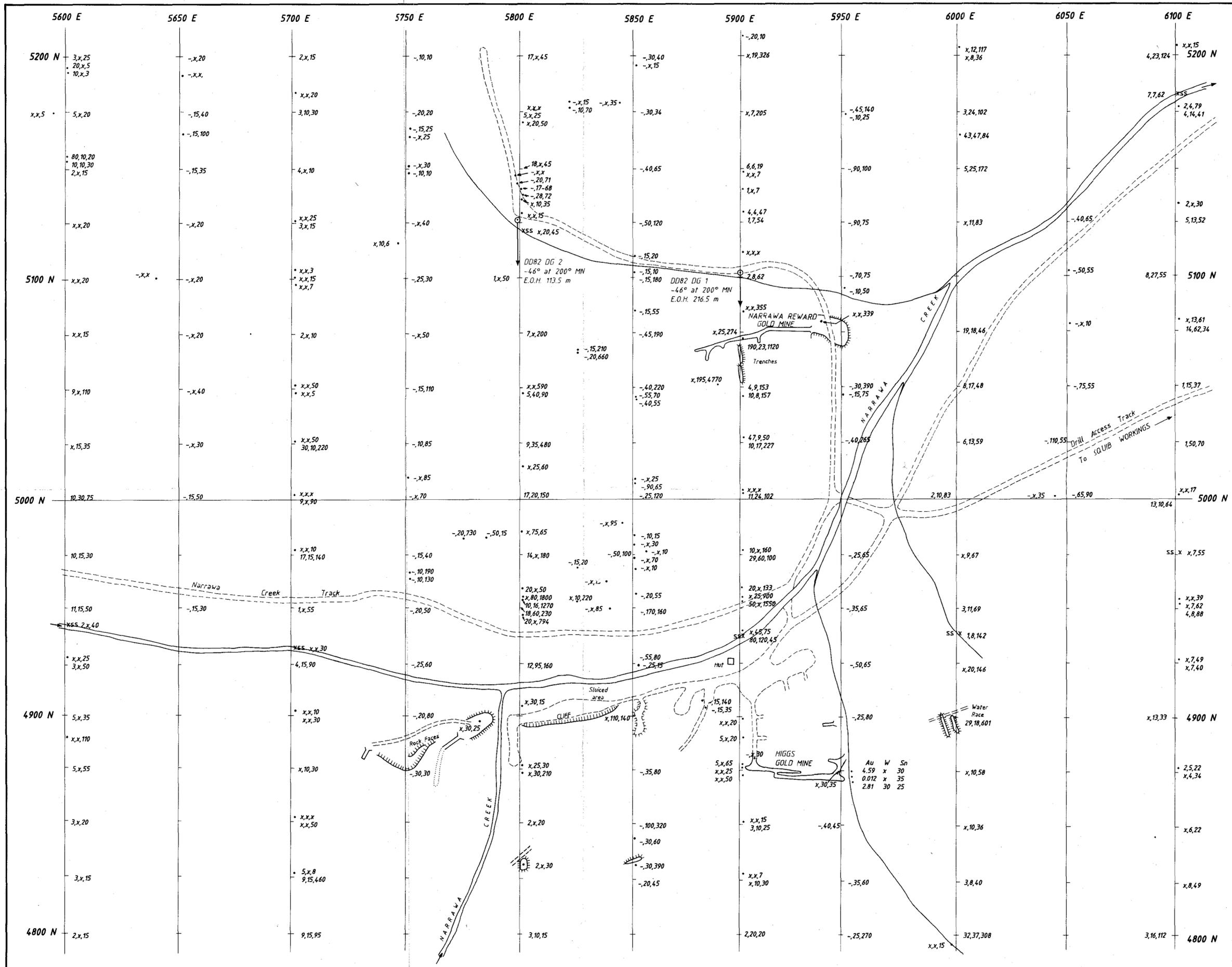
LEGEND

- ⊥ Soil Samples
- Rock Samples

611209



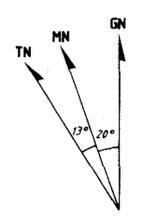
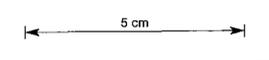
83-1938	
CRA EXPLORATION PTY. LIMITED	
NARRAWA REWARD - HIGGS GOLD MINING AREA	
GEOCHEM. RESULTS 'Cu, Pb, Zn' 3188	
Ref: SKSS - 3	Drawn: R. T.
Scale: 1 : 1000	Report No: 11881
Author: G. W.	Plan No: TASH 826
Date: 2 - 8 - 1982	



LEGEND

- Soil Samples
- Rock Samples

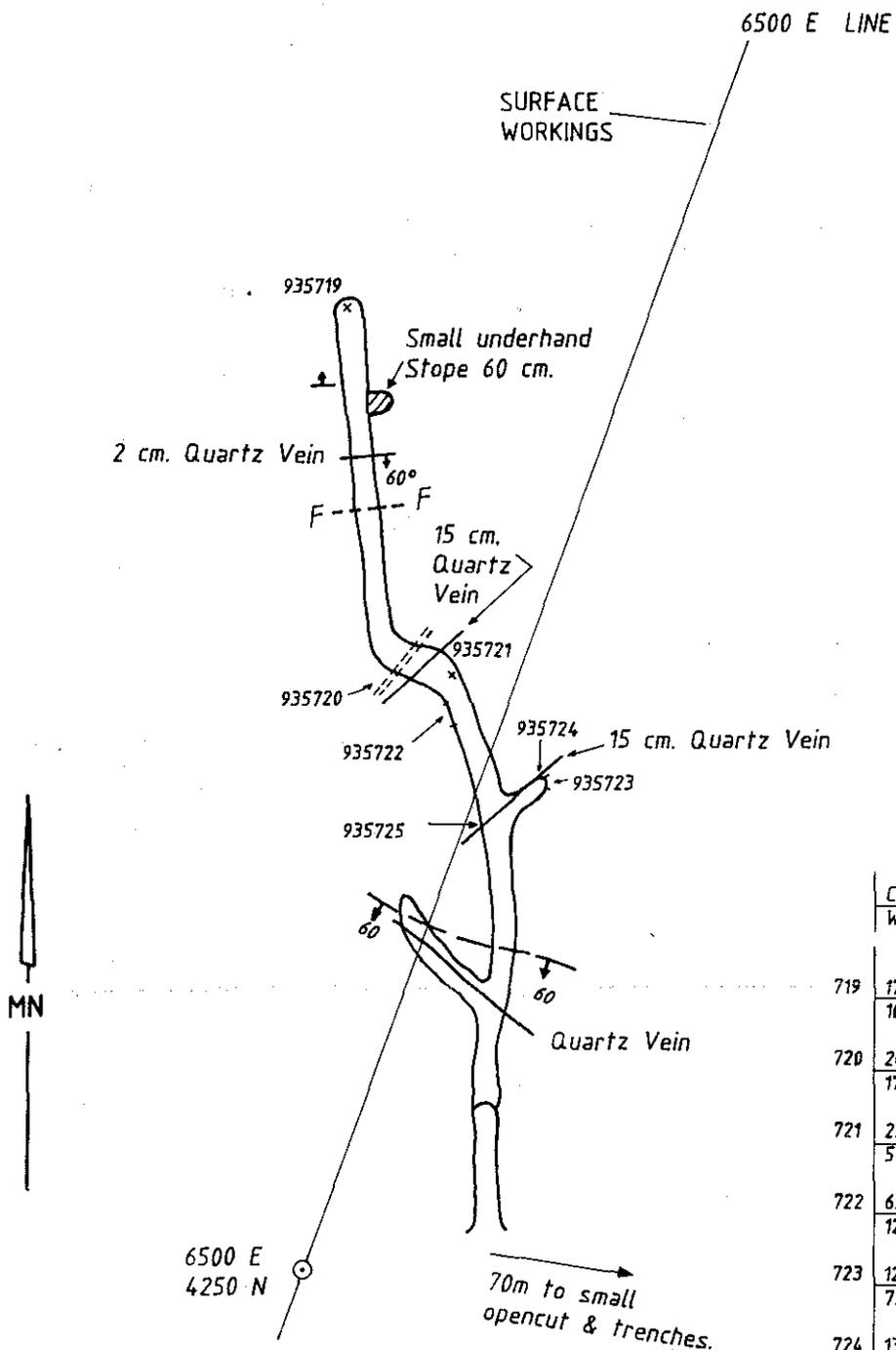
611200



83-1938	
CRA EXPLORATION PTY. LIMITED	
NARRAWA REWARD - HIGGS GOLD MINING AREA	
GEOCHEM. RESULTS 3189	
'Bi, W, Sn'	
Ref:	SKSS - 3
Scale:	1 : 1000
Author:	G. W.
Date:	2 - 8 - 1982
Drawn:	R. T.
Report No.:	11881
Plan No.:	TASH 827

Au	W	Sn
4.59	x 30	
0.012	x 35	
2.81	30	25

194



	Cu	Pb	Zn	Ag	Bi
	W	Sn	Au	As	Mo
719	175	192	23	1.5	-
	100	1250	0.076	680	-
720	26	175	33	0.6	-
	170	500	0.016	450	-
721	23	102	8	0.8	-
	540	110	0.056	2900	-
722	65	123	112	0.5	-
	120	170	0.020	580	-
723	128	490	26	1.5	-
	75	420	0.056	770	-
724	13	330	7	1.0	-
	15	200	0.064	240	-
725	92	300	33	1.8	-
	210	210	0.040	690	-

611207

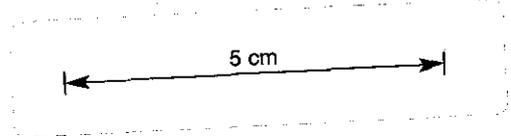
83-1938

CRA EXPLORATION PTY. LIMITED

DOLCOATH GRID

DOLCOATH ADIT
(After KEITH 1943)

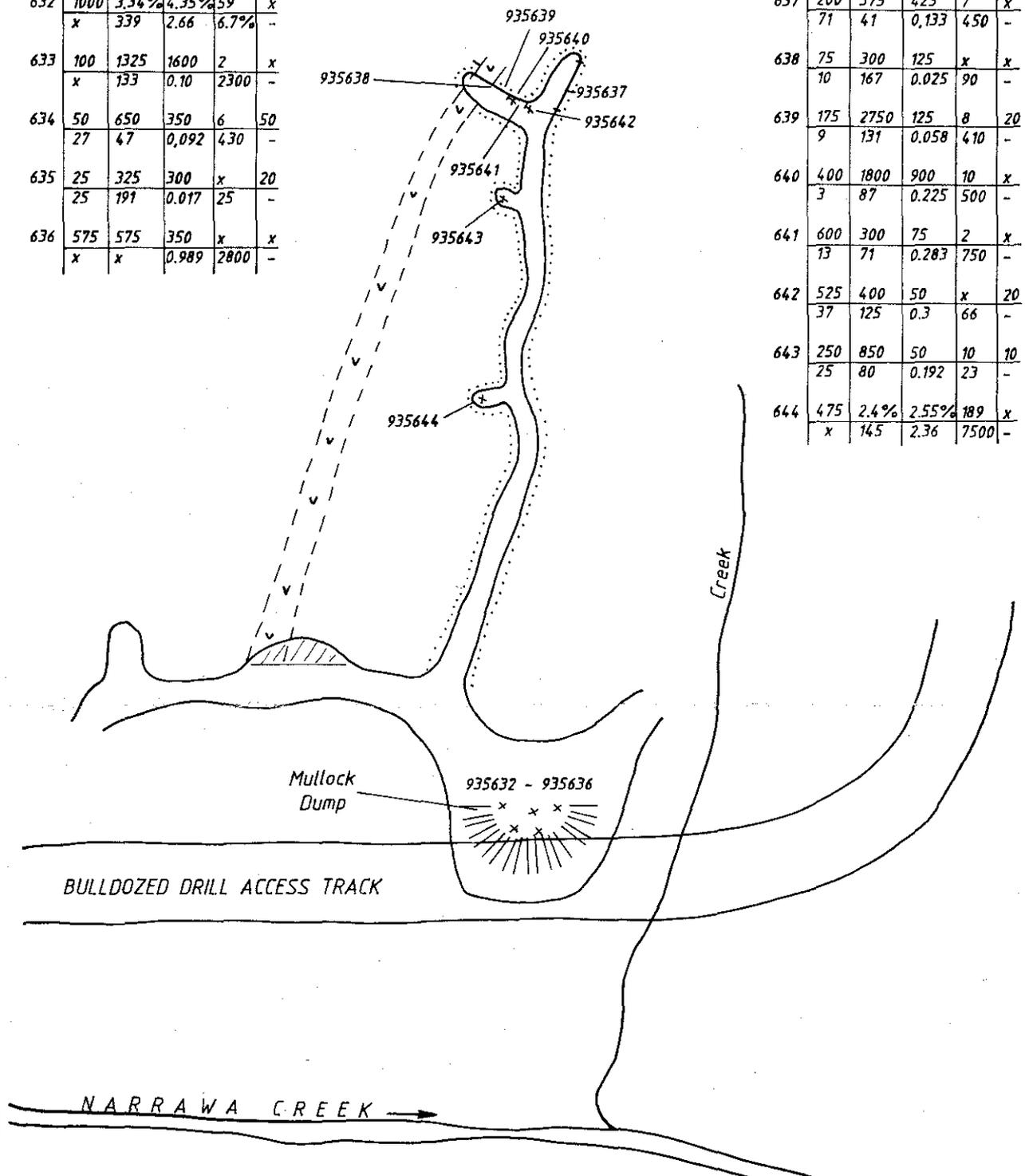
REF.	SK55 - 3	DRAWN.	R. T.
SCALE.	1 : 1000 (approx)	REPORT N°.	11881
AUTHOR.	G. W.	DATE.	13 - 8 - 1982
		TASH N°.	832



195

	Cu	Pb	Zn	Ag	Bi
	W	Sn	Au	As	Mo
632	1000	3.34%	4.35%	59	x
	x	339	2.66	6.7%	-
633	100	1325	1600	2	x
	x	133	0.10	2300	-
634	50	650	350	6	50
	27	47	0.092	430	-
635	25	325	300	x	20
	25	191	0.017	25	-
636	575	575	350	x	x
	x	x	0.989	2800	-

	Cu	Pb	Zn	Ag	Bi
	W	Sn	Au	As	Mo
637	200	375	425	7	x
	71	41	0.133	450	-
638	75	300	125	x	x
	10	167	0.025	90	-
639	175	2750	125	8	20
	9	131	0.058	410	-
640	400	1800	900	10	x
	3	87	0.225	500	-
641	600	300	75	2	x
	13	71	0.283	750	-
642	525	400	50	x	20
	37	125	0.3	66	-
643	250	850	50	10	10
	25	80	0.192	23	-
644	475	2.4%	2.55%	189	x
	x	145	2.36	7500	-



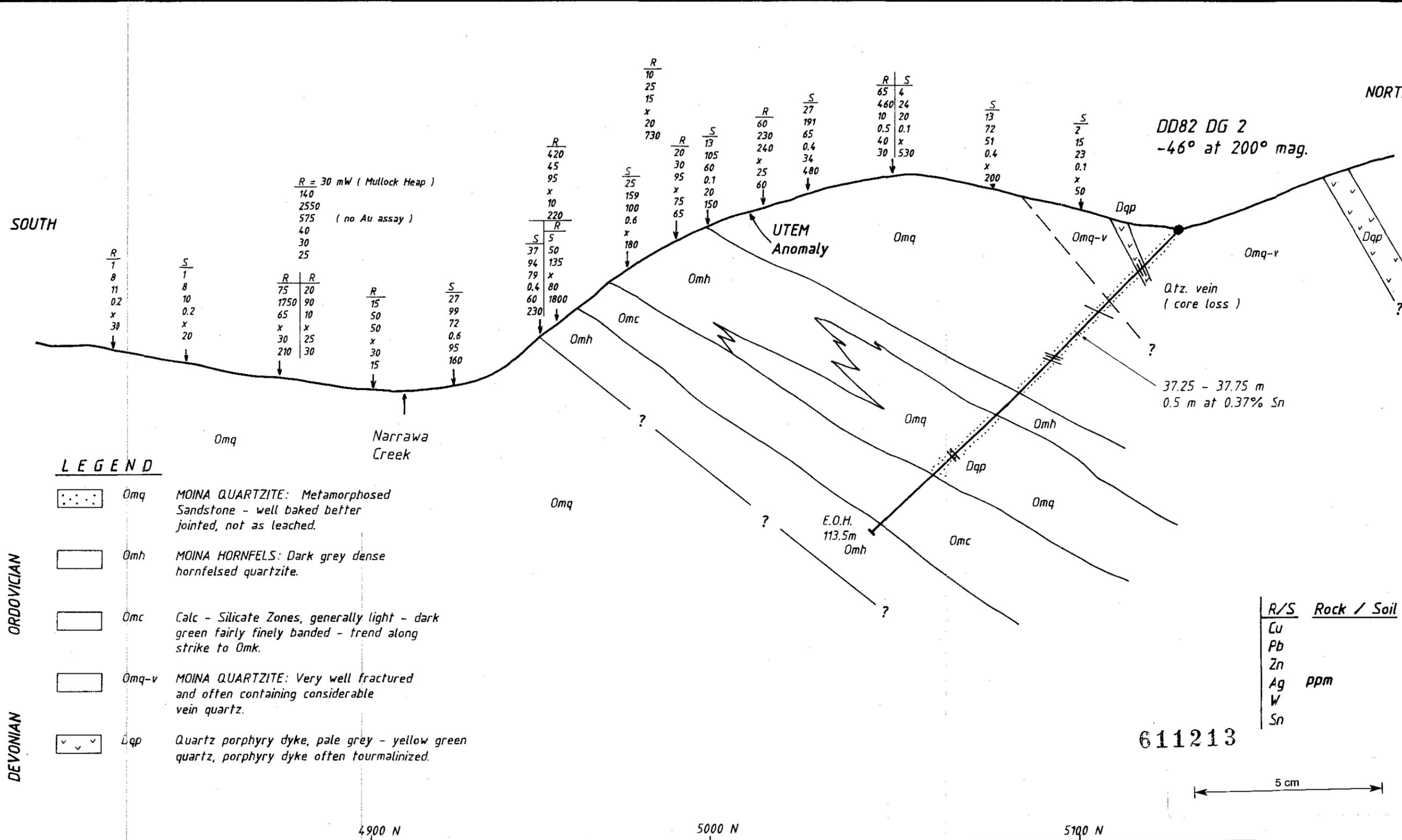
v v QTZ PORPHYRY DYKE

..... MOINA QUARTZITE

MAG NTH.

611200

CRA EXPLORATION PTY. LIMITED	
DOLCOATH GRID	
NARRAWA REWARD GOLD MINE 83-1938	
REF.	SK55 - 3
SCALE.	1 : 1000
AUTHOR.	G. W.
DATE.	13 - 8 - 1982
DRAWN.	R. T.
REPORT N°.	11881
TASH N°.	833



R = 30 mW (Mullock Heap)
140
2550
575 (no Au assay)
40
30
25

R	R
75	20
1750	90
65	10
x	x
30	25
210	30

R	S
15	27
50	99
50	72
x	0.6
30	95
15	160

S	R
37	50
94	135
79	x
60	80
60	1800
230	

R	S
420	
45	
95	
x	
10	
220	

S	R
25	
159	
100	
0.6	
x	
180	

R	S
20	13
30	105
95	60
x	0.1
75	20
65	150

R	S
60	27
230	191
240	65
x	0.4
25	34
60	480

R	S
65	4
460	24
10	20
0.5	0.1
40	x
30	530

S	R
13	
72	
51	
0.4	
x	
200	

S	R
2	
15	
23	
0.1	
x	
50	

R/S	Rock / Soil
Cu	
Pb	
Zn	
Ag	ppm
W	
Sn	

CRA EXPLORATION PTY. LIMITED			
DOLCOATH GRID		83-1938	
DRILLHOLE SECTION		DD82 DG 2	
5800 E Looking West		3190	
REF	SK55 - 3	SCALE	1 : 1000
AUTHOR	G. W.	DRAWN	R. T.
DATE	13 - 8 - 1982	REPORT N°	11881
		TASH N°	834

R	R	R
66	46	37
3000	1260	380
1.35%	1.51%	1960
30	10	4.8

DD82 DG 3
-46° at 20° M

S	R
8	20
20	200
30	30

R/S	ROCK / SOIL
Mo	
Bi	
W	ppm
Sn	

SOUTH

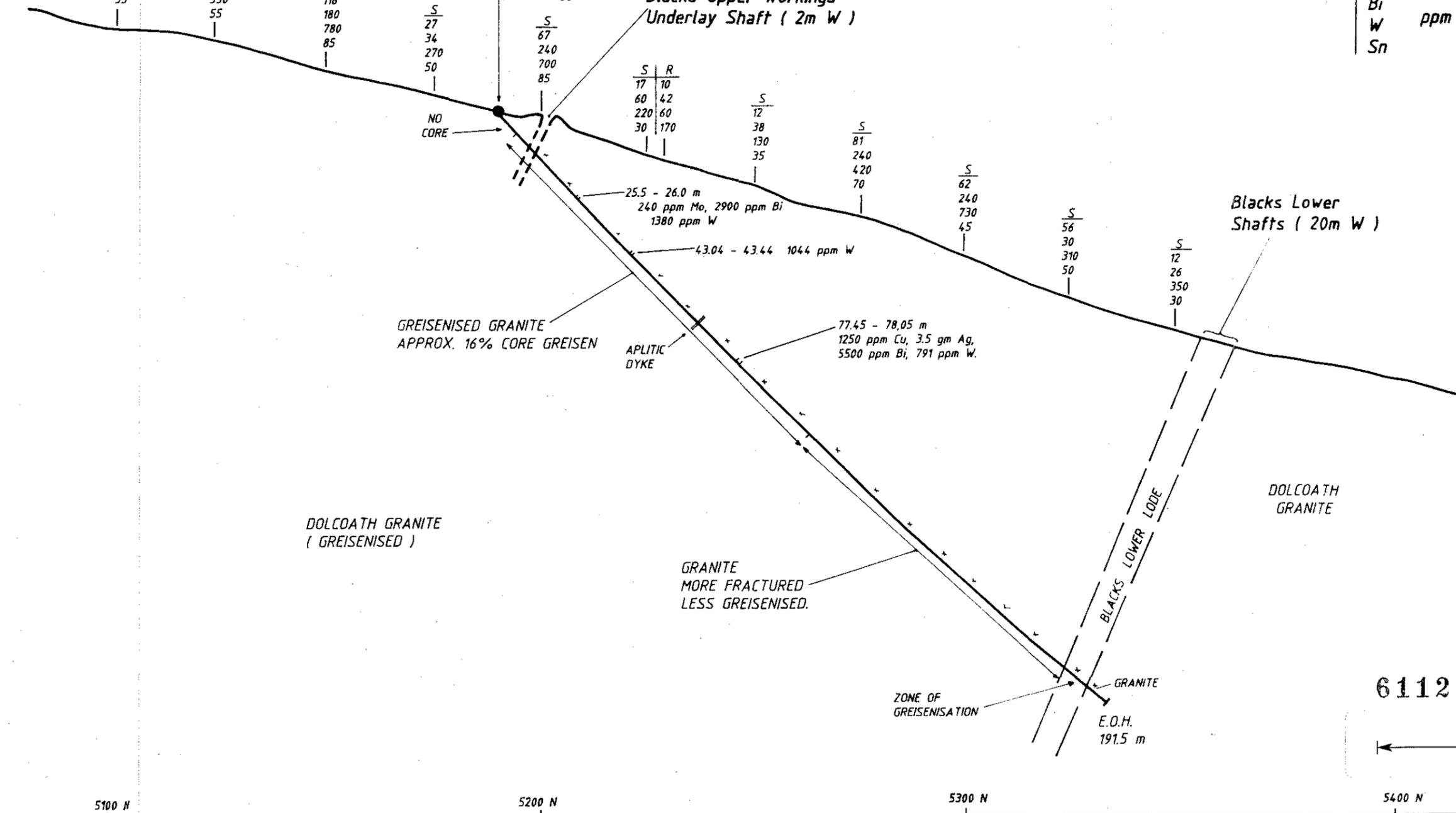
NORTH

5100 N

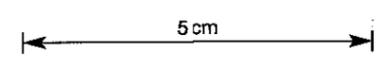
5200 N

5300 N

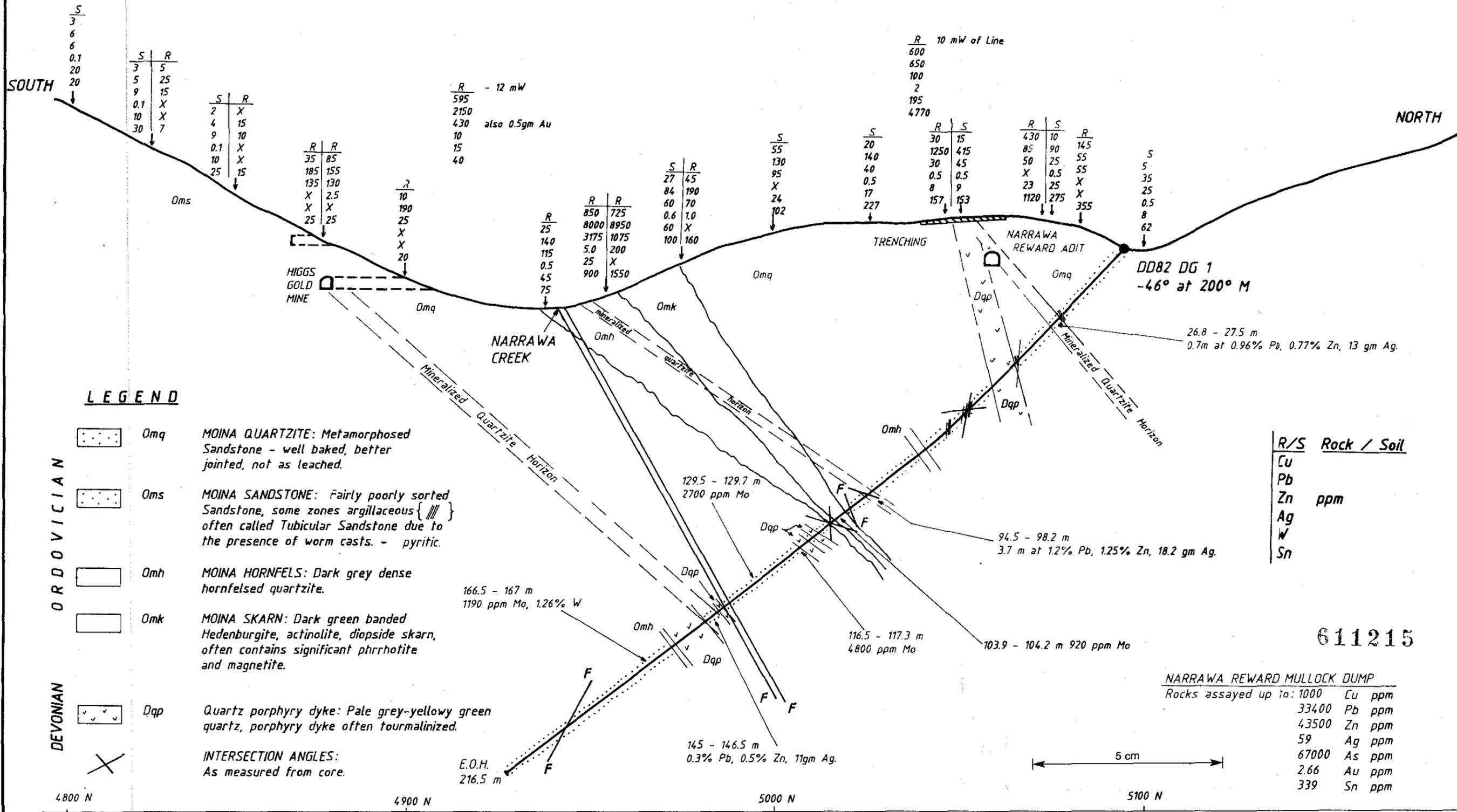
5400 N



611214



CRA EXPLORATION PTY. LIMITED	
DOLCOATH GRID 83-1938	
DRILLHOLE SECTION	
DD82 DG 3 3191	
6600 E Looking West	
REF. SK55 - 3	
SCALE. 1 : 1000	DRAWN. R. T.
AUTHOR. G. W.	REPORT N°. 11881
DATE. 13 - 8 - 1982	TASH N°. 835



CRA EXPLORATION PTY. LIMITED	
DOLCOATH GRID 83-1938	
DRILLHOLE SECTION	
DD82 DG 1	
5900 E Looking West 3192	
REF. SK55 - 3	
SCALE: 1 : 1000	DRAWN. R. T.
AUTHOR. G. W.	REPORT N°. 11881
DATE. 13 - 8 - 1982	TASH N°. 836

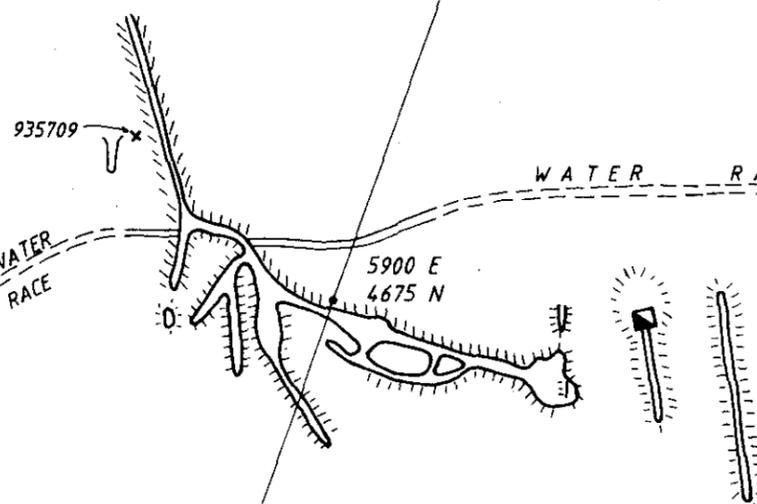
5800 E

5900 E

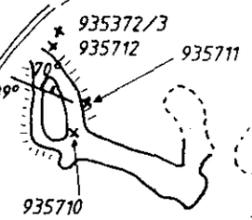
6000 E

6100 E

R.S.	Cu	Pb	Zn	Ag	Bi
	W	Sn	Au	As	Mo
709	13	8	5	X	-
	X	35	X	8	-



PACKETTS WORKINGS



R.S.	Cu	Pb	Zn	Ag	Bi
	W	Sn	Au	As	Mo
374	30	155	35	1.0	2
	X	37	-	-	2.0

M.N. G.N.

UNNAMED WORKINGS

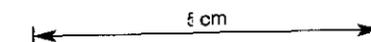
West of Packetts Workings
Not described in the literature.

R.S.	Cu	Pb	Zn	Ag	Bi
	W	Sn	Au	As	Mo
372	270	1400	15	28.8	94
	18	86	-	-	39
373	65	715	10	19.5	24
	18	37	X	-	34.5
710	6	162	8	0.1	-
	2970	45	0.008	2	-
711	34	4.8	17	2	-
	50	1050	0.024	0.8	-
712	293	1050	8	32	-
	4500	120	0.084	2	-

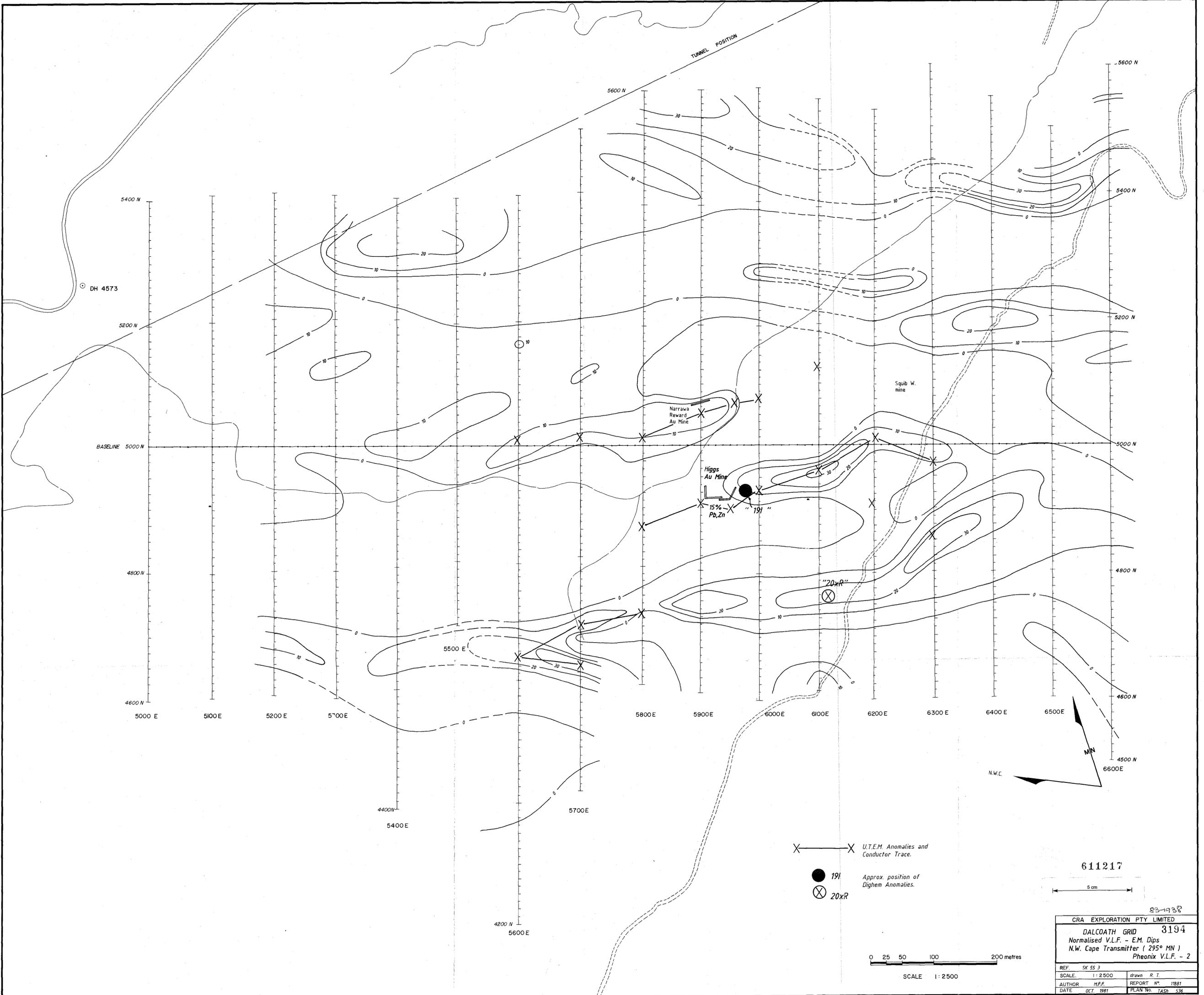
SHAFT

6100 E
4700 N

611216



CRA EXPLORATION PTY. LIMITED			
DOLCOATH GRID			83-1938
SCETCH PLAN OF PACKETTS WORKINGS 3193			
REF.	SK55 - 3		
SCALE.	1 : 1000	DRAWN.	R. T.
AUTHOR.	G. W.	REPORT N°.	11881
DATE.	13 . 8 . 1982	TASH N°.	837



DH 4573

TUNNEL POSITION

Narraua Reward Au Mine

Higgs Au Mine

Squib W. mine

15% Pb, Zn

"20XR"

X — X U.T.E.M. Anomalies and Conductor Trace.

● 19I Approx. position of Digheg Anomalies.

⊗ 20XR

611217

5 cm

0 25 50 100 200 metres

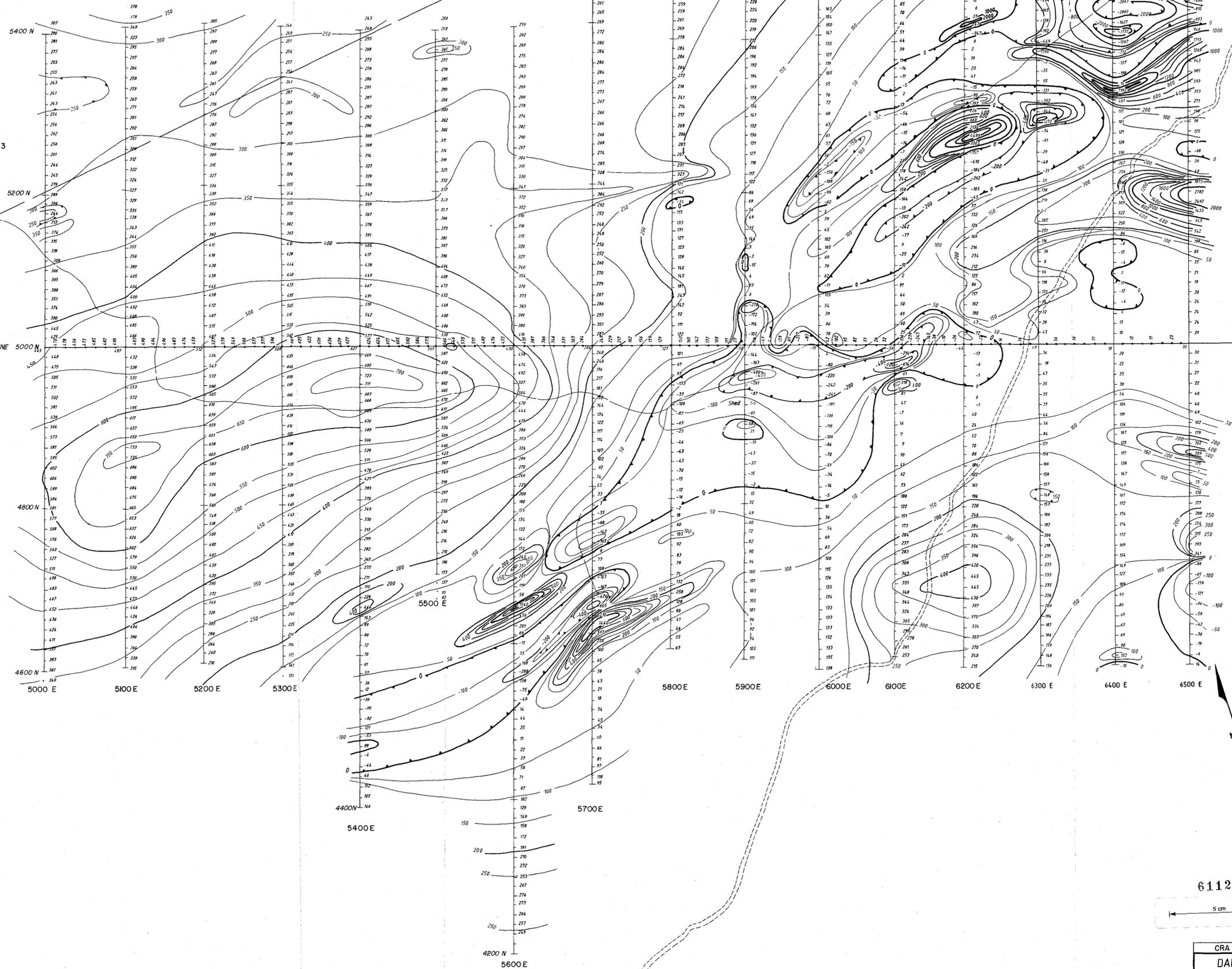
SCALE 1:2500

83-1938	
CRA EXPLORATION PTY LIMITED	
DALCOATH GRID	3194
Normalised V.L.F. - E.M. Dips	
N.W. Cape Transmitter (295° MN)	
Phoenix V.L.F. - 2	
REF. SK 55 3	
SCALE: 1:2500	drawn R.T.
AUTHOR M.F.F.	REPORT N° 1781
DATE OCT. 1981	PLAN N° TASH 536

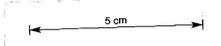
DH 4573

TUNNEL POSITION

BASELINE 5000 N



611218



83-938

CRA EXPLORATION PTY LIMITED	
DALCOATH GRANITE GRID	
3193	
GROUND MAGNETIC SURVEY	
Base value 62 000nT Sensor height 2.5m	
REF	SK55-3
SCALE	1 : 2500
AUTHOR	M. FLIS
DATE	June 1981
DRAWN	R. T.
REPORT No.	11881
PLAN No.	TASH 237

0 25 50 100 200 metres

SCALE 1 : 2500