NEWNHAM EXPLORATION & MINING SERVICES

EL 2/96 - TENTH LEGION AREA

REPORT FOR

TWELVE-MONTH PERIOD

ENDING FEBRUARY 2000

Prepared For:

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Report for 12 month period ending February 2000 -
EL2/96 - Tenth Legion Area
Allegiance Mining NL*; Newnham Exploration and Mini
Newnham, L.A.
EL2/96

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1. SUMMARY

A high resolution aeromagnetic survey was flown over EL 2/96 in 1998, to determine if there were magnetic anomalies within the licence area similar to that over the Avebury nickel deposit to the immediate south.

Several substantial anomalies were defined by this survey and it was decided to further study these by way of both detailed mapping and lithogeochemical sampling, and a re-examination of core from previous drill holes in the area.

This work was completed during the year with the following principal conclusions:

- The helimag anomalies were due to magnetite bodies developed as a result of metasomatic alteration of calcareous sediments by the nearby intrusion of the Heemskirk Granite.

- No substantial nickel mineralisation was identified in these iron rich skarns.

- Two zones of anomalous zinc mineralisation have been identified by previous drilling - one in the north-west corner of the licence area adjacent to the Tenth Legion Fault, and the other in the south-west corner of the licence.

  The zinc mineralisation in both areas appears to be hosted by skarn mineralisation.

- Zinc grades in these two anomalous zones appear to be sub-economic (<3% Zn average but locally up to 14%), based on the current drill hole information.

Only limited exploration is planned on this licence in the near future and it will probably be confined to the zinc rich zones and the far south-west corner, which lies adjacent to a nickel enriched structural zone on the contiguous EL 22/97.

2. INTRODUCTION

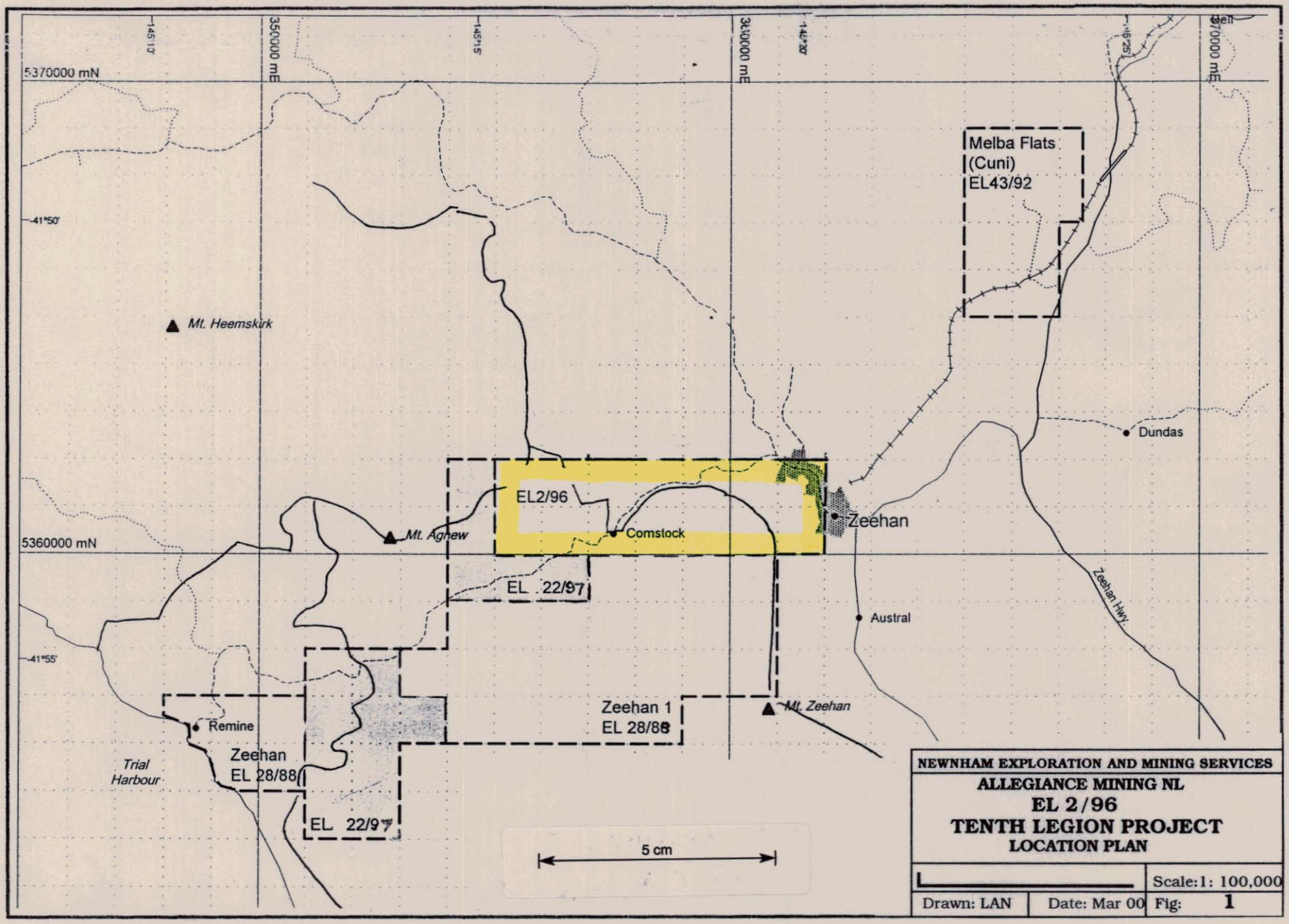
EL 2/96 of eight square kilometres is subject to a joint venture agreement between Rio Tinto Exploration Pty Ltd, and Allegiance Mining NL (90% interest and operators).

The principal exploration target is nickel sulfide deposits analagous to the Avebury deposit. The Avebury deposit lies several kilometres to the south of EL 2/96 and consists of nickel sulfide accumulations on the margins of folded and faulted ultramafic rocks. The nickel sulfide has been remobilised and focused on these margins as a result of hydrothermal processes associated with the intrusion of the Heemskirk Granite.

These hydrothermal processes resulted in the formation of substantial magnetite deposits within the ultramafics, typically (but not always) associated with the nickel sulfides.

A high resolution helimag survey flown in 1998 defined both the Avebury anomaly and several analagous magnetic anomalies within EL 2/96.

Work since that survey has focused on the evaluation of these helimag anomalies to further determine their potential to host "Avebury style" nickel sulfide deposits.


5370000 mN
5360000 mN
350000 mE
360000 mE
370000 mE
41°50'
41°55'
Mt. Heemskirk
Mt. Agnew
Mt. Zeehan
Melba Flats
(Cuni)
EL43/92
EL2/96
Comstock
Zeehan
Dundas
Austral
Zeehan Hwy
EL 22/97
Zeehan 1
EL 28/88
Zeehan
EL 28/88
EL 22/97
Remine
Trial
Harbour
5 cm
NEWNHAM EXPLORATION AND MINING SERVICES
ALLEGIANCE MINING NL
EL 2/96
TENTH LEGION PROJECT
LOCATION PLAN
Scale:1: 100,000
Drawn: LAN
Date: Mar 00
Fig: 1

635005

3. WORK COMPLETED DURING YEAR ENDED FEBRUARY 2000

Two major projects were completed during the year:

- detailed mapping and lithogeochemical sampling of the western half of the licence
- re-logging and re-assaying of previous drill cores

3.1 Mapping and Lithogeochemical Sampling:

A four-week program of detailed geological mapping and associated rock chip geochemical sampling was undertaken in November 1999 by Robert Reid.

His detailed report is attached as Appendix 1 and is titled:

> "*Report on Geological Mapping and Rock Chip Sampling of the Tenth Legion Area, EL 22/97 and EL 2/96*", for Allegiance Mining NL

With respect to EL 2/96, this mapping suggests the magnetic anomalies defined by the helimag survey are due to the formation of magnetite during alteration of calcareous Cambrian and Precambrian sediments resulting from intrusion of the Heemskirk Granite. Because this process involved the alteration of sediments rather than mafic and ultramafic rocks, nickel values are generally low.

The only area considered to be possibly prospective for nickel sulfides is the extreme south-west corner of the licence where faulted ultramafic and mafic formations on the adjacent EL 22/97 were strongly nickel anomalous. These formations may extend at depth into EL 2/96

3.2 Re-logging and Re-assaying Drill Core:

A number of cored drill holes had previously been drilled within the EL 2/96 area, principally searching for iron, tin, zinc. None of these holes were assayed for nickel.

A program of re-logging these holes and re-assaying certain sections for nickel was undertaken by Mick McKeown.

His detailed report is attached as Appendix 2 and is titled:

"Review of Drilling at Tenth Legion, March 2000", for Allegiance Mining NL

This work suggests, firstly, that none of the drill holes intersected significant nickel mineralisation and, secondly, the drilling has identified two zones of significant zinc mineralisation.

Whilst this zinc mineralisation may be currently of sub-economic value, further exploration and changed market conditions may change this position.

4. WORK PROPOSED FOR YEAR ENDING FEBRUARY 2001

Work on EL 2/96 is likely to focus on further evaluation of the nickel potential of the far south-west corner of the licence area. Work on the adjacent EL 22/97 in this area has identified a sequence of strongly nickel anomalous mafic and ultramafic rocks, disrupted by a NS trending fault which may represent the northern extension of a structure passing through the Avebury deposit. As such, it may represent a conduit for the hydrothermal influences which re-mobilised and focused nickel sulfides in this area.

These faulted, nickel anomalous formations may extend at depth into the south-west corner of EL 2/96.

Further detailed mapping and sampling is required in conjunction with programs on EL 22/97 to determine the potential of this area.

.....

NW zinc anomaly

nickel sulfide potential

SW zinc anomaly

EL 2/96

RL 9705

5 cm

NOTE: This plan is a direct reproduction of section of State 1:50,000 Zeehan sheet

NEWNHAM EXPLORATION AND MINING SERVICES

ALLEGIANCE MINING NL

EL 2/96

TENTH LEGION PROJECT

GEOLOGY and WORK AREA PLAN

Scale: 1: 50,000

Drawn: LAN | Date: Mar 00 | Fig: 2

635006

APPENDIX 1

GEOLOGICAL MAPPING AND LITHOGEOCHEMICAL SAMPLING

Report on Geological Mapping and Rock Chip Sampling of the Tenth Legion Area, EL22/97 & EL2/96

Allegiance Mining NL.

By Robert Reid, March 2000

(Newnham Exploration and Mining Services)

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Plates

Summary

Strong nickel and zinc mineralisation as well as magnetic highs were found to correspond with the principal structural intersection points located near the Davern's, Tenth Legion and Kynance Mines.

The highest level of Ni from rock chip samples in the Tenth Legion area was 2870ppm (Anomaly 1). This peak anomaly was returned from a strongly magnetic gabbro bearing 1% sulphide (pyrrhotite/pyrite?) located with Ni-anomalous (2290ppm) massive magnetite. The anomaly was on a significant N-S aligned fault between gabbro and Oonah Formation sediments in the south west of the Tenth Legion area. The fault zone comprises a wide zone of serpentinised gabbros and magnetite alteration and is interpreted to extend south through the Avebury Prospect. A further two Ni anomalous zones were identified (Figure 1).

Consistent anomalous Zn samples (up to 4.1%) returned from the Davern's area are highly encouraging. Little work has been undertaken in this area by past explorers (2 drill holes) and further work here is likely to define at least a small Zn resource, possibly with Ni credits.

Concentrations of Ni in the Tenth Legion area appear to be enhanced by granite alteration and/or structural processes. No evidence of primary nickel sulphide accumulation related to ultramafic rocks is evident. Given these observations, the Ni potential of the Tenth Legion area rates lower than that at Avebury or Trial Harbour. However, the possibility of an extension of the Avebury ultramafic horizon into the far south east corner of the Tenth Legion area cannot be discounted, but has not been assessed during this project.

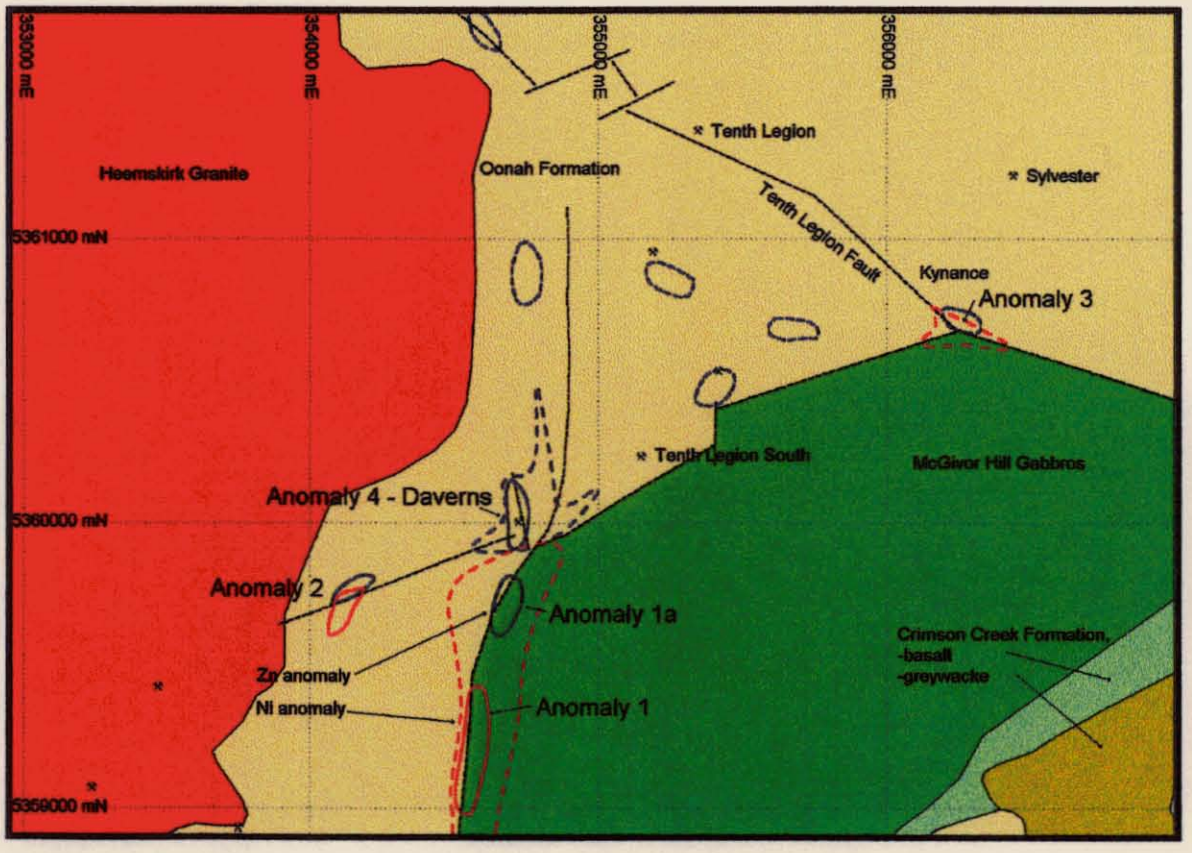

Figure 1: Principal nickel and zinc anomaly's, Tenth Legion Area.

Introduction

This report focuses upon the nickel potential of the Tenth Legion area (EL22/97 & EL2/96), located west of Zeehan, which is one of several Exploration Licences currently explored by Allegiance Mining in that area. Significant nickel intersections at the Avebury and Cuni Prospects attest to the metal potential of the area.

The area was mapped at 1:5000 scale during approximately 17 days of field-work. Rock chip sampling (298 samples) accompanied this mapping. Allegiance believed the nickel mineralisation at the Avebury Prospect is partly tied to magnetite mineralisation. Therefore, areas in the vicinity of magnetic highs were foci during the mapping program. Obvious magnetic highs were the main targets, but numerous subtle highs, covering the gabbros in particular, were investigated. Existing drill core, located at the Mineral Resources Tasmania Core shed in Mornington was re-logged and sampled by Mick McKeown to compliment this mapping project. Geological fact and interpretation maps (Plates 1 and 2), as well as rock chip geochemistry plots (Plates 3 to 7) are appended. Contractor, Gillian Bennet, completed all map drafting.

Aeromagnetics, flown over the area during 1998, and the concurrent digital terrain survey were used to assist map compilation and interpretation, as well as field targeting. Images used included total magnetic intensity, 1st vertical derivative, 1st vertical derivative with linear stretch and a digital terrain model. All were compiled by a geophysical contractor, Nigel Hungerford, and are presented within the 1998 Allegiance Annual Report for EL22/97. Mineral Resources Tasmania digital geological map data was incorporated into peripheral areas of the Geological Interpretation Map (Plate 1). Similarly, alteration zones mapped by RGC (Newnham, 1999) are used as a guide where they could be reasonably verified and also in the unmapped NE portion of the area mapped, where some silica-pyrite veins and quartz-tourmaline veins are similarly referred. The RGC alteration boundaries are partly used since their geologist had the benefit of open grid lines. However, the magnetite alteration distribution is modified based on Allegiance's aeromagnetics data.

Geology

The geology of the northern and western portions of the Tenth Legion area (Plate 1) is dominated by the upper Palaezoic-aged Oonah Formation, which mainly comprises laminated siltstone with interbeds of fine grained sandstone. Quartz-sandstone, quartzite and black shale are less common lithologies. The Oonah Formation is disrupted by the major WNW aligned Tenth Legion Fault, and a small thrust fault emplaced outlier in the south east of the Tenth Legion area. A plot of poles to bedding does not readily define a dominant fold direction, however the calculated fold plunge of 56°to 275° is similar to that at Avebury.

Extensive Eocambrian-Cambrian-age gabbro (McGivor Hill Gabbros) outcrops over much of the southern-central portion of the Tenth Legion area. The gabbros are typically medium grained and equigranular, although varieties range from fine to coarse grained (3-5mm). They are correlated with gabbro intruding the Serpentine Hill Ultramafic Complex (located ~14km ENE), and region-wide they form a geochemically distinct group unrelated to an older gabbro phase associated with tholeiitic volcanism of the Crimson Creek Formation (Brown, 1989).

A largely obscured ENE aligned fault forms the contact between the McGivor Hill Gabbros and Oonah Formation sediments in the central part of the Tenth Legion area. Magnetics and geochemical interpretation suggests this fault may continue westward into the Oonah Formation. While in the south west of the area, the gabbro/Oonah contact is formed by an ill-defined N-S aligned fault, which also extends northward into the Oonah Formation.

Massive aphyric basalt outcrops in the south east of the Tenth Legion area, adjacent to the McGivor Hill Gabbros. Mapping by Brown et al.(1994) indicates that areas of pillow lava and interbedded breccia flow are also present. The basalt may belong to the Eo-Cambrian to Cambrian aged Crimson Creek Formation; sediments of which outcrop over a small adjacent area in the far south east. In general, the Crimson Creek Formation consists of a turbiditic sequence of volcaniclastic lithic wacke and laminated siltstone and mudstone interbedded with tholeiitic basalt (Brown, 1986).

The Heemskirk Granite, which outcrops along the western margin of the Tenth Legion area, is a meta- to per-aluminous body comprising layered biotite granite ('Red' granite) intruded by a sill-like more alkalic biotite-muscovite granite ('White' granite). Collins et al.(1989) considers that district-wide tin mineralisation is related to the latter. Hybrid granite dykes comprising leucogranite, aplite and a quartz-rich granitiod are evident proximal to the granite and intruding the Oonah Formation sediments in the south west. Oonah Formation sediments within the contact aereole of the granite are commonly hornfels. Also common are granite-related calc-silicate alteration, silicification, and massive and veined magnetite +/-sphalerite bodies.

Extensive Quaternary gravels cover flat lying areas at Tenth Legion. Most of these deposits are recent alluvial gravels, but stranded terraces comprising lacustrine/fluvial clays with channels of granule-cobble sandstone and quartz-vein alluvium, reworked partly ironstone-derived sands and re-cemented pebbly ironstone are also present. These possibly reflect an older period of elevated sea level (related to the Henty Surface?).

Alteration and Mineralisation

A variety of mostly granite-related alteration and mineralisation styles are evident in the Tenth Legion area. Hornfels of Oonah formation sediments are particularly common near the granite contacts. Cream coloured pervasive calc-silicate alteration is widespread near the granite contact in the south west of the area mapped and also on a macro-scale at granite dyke margins (eg. 354085mE, 5359425mN). Pale green pervasive silica-serpentinite alteration, which is superficially similar to the calc-silicate alteration, is also evident and may, in part, have formed via alteration of limestone.

Magnetite (in replacement vein and massive form) and ironstone are evident both proximal and distal to the granite, particularly along or in the vicinity of identified faults. The magnetite may also form skarn-style replacement along calcareous beds. Ironstone may outcrop intermittently for up to 800m (eg. the Tenth Legion Prospect, located approximately 1km east of the outcropping Heemskirk Granite in the northern portion of the area mapped). The ironstone is mainly comprised of fine grained massive magnetite with lesser haematite and goethite, depending largely upon the degree of weathering. Locally coarsely crystalline magnetite and pale green silicate vug-fill is evident. Massive pyrite veins infrequently overprint magnetite and weathered box-work texture after pyrite is uncommon. Coarse grained veins of muscovite are evident as thin (<2cm) veins within the ironstone at several localities, including the Tenth Legion Prospect (355200E, 5361275N) and at Daverns.

Disseminated grains of magnetite also accompany pervasive silicification. This alteration is sometimes evident within permiable sandstones and is commonly located distal to the granite (eg. at the Kynance and Silver Stream mines). Silica-pyrite replacement veins are also evident at these mines.

Tourmaline veining is often accompanied by grey translucent silica and is sparsely distributed through the sediments and mafic rocks in Tenth Legion area. Tourmaline abundance is very low compared to within the granite west of Mt Heemskirk.

Native copper was identified at three disparate locations. One occurrence, in association with grey silica (quartz) veining, was hosted by laminated siltstone in the Tenth Legion Prospect area (354795E, 5361555N). Native copper was also located as patches of fine disseminated grains within basalt of the Crimson Creek Formation in the south east of the area mapped (355915mE, 5359345N), and within a serpentinised medium grained gabbro near the Trial Road (weak magnetic high) (355420mE, 5359575mN).

Discussion

Strong mineralisation and magnetic highs were found to correspond with structural intersections near the Davern's, Tenth Legion and Kynance Mines.

Two distinct mineralisation/alteration styles, differentiated by proximity to the granite, are evident in the Tenth Legion area. The ironstones, comprising magnetite-serpentinite? (+/-silica) fault bounded veins and skarn- style mineralisation, are located relatively close to the Heemskirk Granite (eg. Davern's, Tenth Legion). Silica-serpentinite pervasive-style alteration commonly accompanies magnetite alteration. More distal to the granite is quartz-sulphide (Pb-Zn-Ag +/-Cu) vein-lode style mineralisation (eg. Kynance), which is commonly accompanied by peripheral zones of pervasive silicification with disseminated pyrite. The relationships are not clear but alteration zonation appears to reflect variation of temperature and fluid composition with distance from a granite source. Oxidising conditions during magnetite precipitation with a change to reducing conditions for distal pyrite deposition may reflect the preferential consumption of oxygen prior to sulphur from the mineralising fluids as they flowed away from the granite source. Magnetite formation may, in part, reflect mixing of iron-rich granite-derived fluid with oxidised peripheral groundwaters.

No note of nickel is made within western Tasmanian granite-related deposits. However, granite-derived fluids and associated groundwater circulation may be capable of scavenging significant metal from the enclosing host rocks if conditions are favourable.

Geochemistry

Sampling Technique

A total of 298 rock chip samples were collected and analysed for Cu, Ni, Pb, Zn, As and Sb. However, the latter two elements (Ag, Sb) were not analysed in the initial batch of 70 samples. Rock chip samples were taken as both composite and grab samples. The composite samples comprised at least 4 chips and more typically up to 15 chips from outcrop or float in the general sample site vicinity. The rationale here being to obtain an average or more truly indicative analysis for the rock sampled. Grab samples of particularly strong mineralisation or specific alteration and mineralisation occurrences allowed characterisation of metal content within a given rock.

At the Tenth Legion and Tenth Legion South Prospects composite sampling was undertaken at ~20m sample intervals along the track side. Subcrop and float boulders were predominantly collected, as well as outcrop chips where available. It was intended to test for lateral element zonation along the magnetite bodies strike in both cases.

Lithogeochemistry

Histograms for nickel were assessed to determine background levels within various lithologies and to gauge the potential for leaching of that metal by granite-related fluids (Figure 2). Most mafic rocks contained up to at least 50ppm Ni, whereas many of the Oonah Formation sediments and ironstone samples return 20ppm Ni or less. Considering that many of the mafic rocks sampled were not strongly altered, it appears that little Ni is available for scavenging via granite-related fluids from the McGivor Hill Gabbros. Alternatively, a large volume of gabbro would be required to source sufficient Ni to form a remobilised orebody.

Geochemistry of Alteration and Mineralisation

Anomalous nickel values of greater than 500ppm all occur either in association with magnetite and/or serpentinite, along faults or in close proximity to the granite. At outcrop scale, comparing samples 16882 and 16883 reveals that slightly elevated Ni (108 vs 81ppm) levels are present within a grab sample of weakly serpentinised, gabbro with smeared pyrite on foliation planes (16883) with respect to

the composite sample from relatively unaltered gabbro. Whereas, a histogram plot of Ni concentrations in all mafic rocks with respect to degree of serpentinisation (figure 3) reveals that least altered mafics have low Ni content, whereas elevated Ni (>50ppm) is evident in serpentinised rocks. However, while the most anomalous Ni is associated with the strongest serpentinisation, some strongly serpentinised rocks are nickel poor.

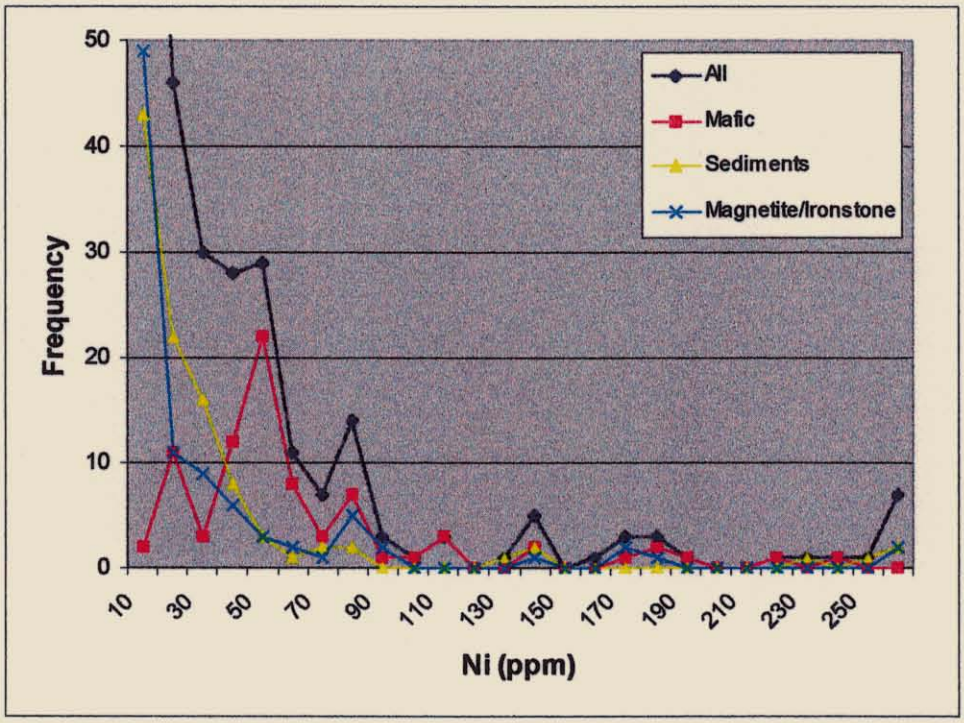

Figure 2: Nickel histograms for various lithologies, Tenth Legion area.

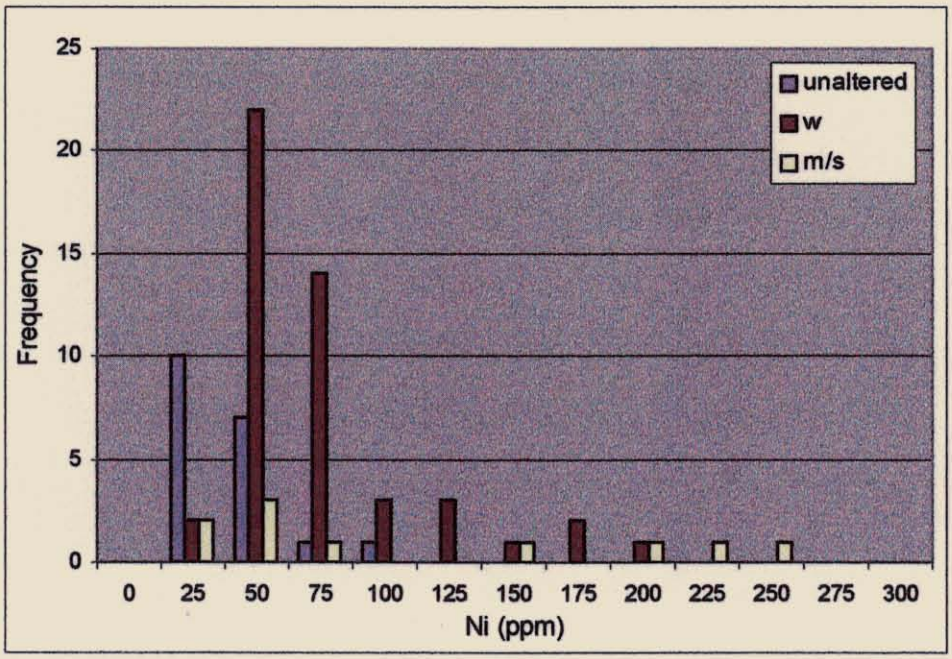

Figure 3: Nickel versus degree of serpentinisation within mafic rocks, Tenth Legion area.

Anomalous nickel was located in ironstone at the Trial Road magnetite body (Anomaly 1; 2290ppm; 354585mE, 5359220mN), at Anomaly 1a (180ppm; 354697mE, 5359710mN) and west of Daverns (162ppm; 354360mE, 5359860mN). These examples are discussed further below. The Ni potential of the ironstones and massive magnetite, from rock chip surface samples, appears to be low at the Tenth Legion Prospect, where nickel ranged from mostly below detection to 36ppm. Weak Ni was obtained from Daverns, returning a peak value of 85ppm. Since Ni depletion via weathering and leaching is possible, a comparison with drill core Ni assays should be conducted to more accurately assess the potential of the magnetite lodes.

Zinc rock geochemistry returned highly encouraging anomalous values to 4.1% from Daverns Prospect. Areas of best Zn potential as indicated by rock chip sampling are shown in figure 1. Zinc responses from most ironstones overlying known zinc prospects (eg. Tenth Legion, Tenth Legion South and Kynance) were mostly less than 1500ppm. Surface leaching of Zn from ironstones may have occurred.

A few observations pertaining to notable samples and concentrations of other elements:

- Peak Cu analyses were 1145 and 1160ppm from weathered ironstone (354697mE, 5359710mN) and 10cm massive pyrite band in massive magnetite (355465mE, 5360370mN), respectively.
- Peak Pb analysis was 1900ppm from massive magnetite (355494mE, 5360330mN) at Tenth Legion South. Elevated Pb is mostly anomalous in areas close to faults and distal to the Heemskirk Granite.
- No correlation exists between Ni and As or Cu, Pb and Zn or Cu and Zn. The lack of correlation between these metals suggests concentration may depends partly upon availability of metal-rich source rocks for scavenging of metal by granitic fluids. Tin (not analysed) and possibly Zn may be exceptions that are directly or partly granite-derived.
- Anomalous Cu, Pb and Zn distribution does not correspond well with Ni, suggesting that the Ni mineralisation and concentration processes or sources differ. The key criteria for locallising Ni appears to be faulted mafic contacts in the Tenth Legion Area. Proximity to granite or granite-derived alteration is also somewhat important.
- As distribution corresponds to fault zones and massive magnetite occurrences.
- Rock samples from 355240mE 5359976mN, were all exhotic and comprised mineralised rock (1.4% Pb and 0.66% Zn) probably from the Comstock Mine, as well as stichtite-bearing serpentinite (1540ppm Ni) from Dundas or Serpentine Hill.

Exploration Potential

Three principal nickel and one zinc anomalous zone were located from rock chip sampling (Figure 1).

Anomaly 1 - Trial Road Magnetite (354570mE, 5359235mN)
The highest nickel in rock chip from the Tenth Legion area was 2870ppm (17597). This peak anomaly was returned from a strongly magnetic gabbro bearing 1% sulphide (pyrrhotite/pyrite?) located near massive magnetite at a N-S aligned fault between gabbro and Oonah Formation sediments, in the south west of the Tenth Legion area. Analysis of sulphidic [tr to 0.5%] massive magnetite and weathered ironstone with fine grained sandstone selvages from Anomaly 1 returned 2290ppm (17596) and 456ppm (17595) Ni respectively.

Note that mapping at Avebury and a cursory traverse between Avebury and the Anomaly 1 vicinity reveals that the N-S aligned fault which hosts Anomaly 1 is likely to extend south through the Avebury Prospect.

Anomaly 1a (354700mE, 5359700mN) is a magnetite body on the N-S aligned fault, north of Anomaly1. Ni reaches 305ppm in serpentinised gabbro adjacent to the magnetite lode bearing up to 180ppm Ni from weathered ironstone. Note that the peak of this magnetic high is approximately banana shaped, which is an orientation consistent with a plunging magnetite shoot located at the cross-section of two perpendicular major structures.

Anomaly 2 (354120mE, 5359700mN) returned two Ni anomalous samples; a dark grey to green strongly silica-serpentinite(/serp?, s) altered fine/medium grained sediment, yielding 1885ppm Ni (17248); and a dark green magnetite altered sediment with silica-serpentinite overprinting(w/m) magnetite(w) alteration (trace pyrite), yielding 648ppn Ni (17249). Given the strong alteration, including serpentinisation, it is remotely possibly that these rocks are altered ultramafic feeders, but more likely, the Ni anomalism could be remobilised from underlying ultramafics/mafics, considering that the Precambrian Oonah formation is thrust over Cambrian rocks in the Tenth Legion area. Note also that Zn was strongly anomalous at 3120ppm and Cu 179ppm in sample 17250.

Anomaly 3 (356260mE, 5360685mN)
A grey pervasively silica(w)-magnetite(w/m) altered shale? bearing 229ppm Ni was located at the faulted contact between gabbro and Oonah Formation sediments (Tenth Legion Fault). Here Ni is clearly a hydrothermal addition related to the silica-magnetite alteration. Nearby, a weakly serpentinised gabbro containing quartz veinlets also contains weakly anomalous Ni (166ppm). Note that this anomaly is located in the vicinity of the convergence of two significant faults and a sample from a nearby adit returned 2200ppm Zn from silicified-magnetite altered shale.

Anomaly 4 - Daverns (354700mE, 5360000mN)
Zinc was highly anomalous in seven samples; ranging from 0.63% to 4.10%. The zinc is host in pervasively silicified, silica-serpentinite altered sediments, bearing bedding-parallel replacement-style vein to massive magnetite alteration with variable pyrite and sphalerite. The rock chip samples form an anomalous zone approximately parallel to a low angle, 170^{O} striking reverse(?) fault, the alignment of which corresponds to a weak magnetic ridge lying perpendicular to a significant magnetic high. The latter forms a second Zn anomalous trend with silica-serpentinite and magnetite altered samples yielding 1625 and 4810ppm Zn, located 100m east of Daverns. Magnetics and rock geochemistry suggest this Zn trend also extends west toward the Zn and Ni anomalous Anomaly 2. Similar to Anomaly 1a, a plunging zinc-rich magnetite shoot at the intersection of the approximately perpendicular faults is possible.

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Appendices

Sample Catalogue

Tenth Legion Rock Chip Sample Catalogue						
Sample No	Field No	East (AMG)	North (AMG)	Description	Sample Type	Outcrop/subcrop/float
16801	1	355145	5359540	gn mg gabbro, serp(w)	composite	outcrop
16802	2	355145	5359600	gn medium grained gabbro, serp(w), py(1%), Aspy(?, tr), q-vnd(tr)	grab	outcrop
16803	3	355330	5361450	mg hornfels sst, sil-ch-mag vnd(w)	composite	outcrop
16804	6	355245	5361620	grey & tan qtzite, fol(w)	composite	outcrop
16805	6	355245	5361620	grey & tan qtzite, fol(w), tour vnd(w)	composite	outcrop
16806	8	355100	5361615	bn msv ironstone	composite	outcrop
16807	8	355090	5361615	bn msv ironstone	composite	outcrop
16808	9	355080	5361595	bn msv ironstone	composite	outcrop
16809	10	355080	5361575	bn msv ironstone	composite	outcrop
16810	11	355090	5361550	msv magnetite	grab	outcrop
16811	11	355090	5361540	bn msv ironstone	composite	outcrop
16812	15	354770	5361660	bn msv ironstone	composite	float
16813	16	354745	5361580	bn msv ironstone	composite	subcrop
16814	17	354715	5361570	bn msv ironstone	composite	float
16815	18	354690	5361645	bn msv ironstone	composite	subcrop
16816	19	354650	5361670	bn msv ironstone	composite	subcrop
16817	20	354600	5361745	bn msv ironstone	composite	subcrop
16818	22	354515	5361385	grey laminated slst & sst, sil-tour vnd(w)	composite	outcrop
16819	26	354725	5361370	fg/mg sst, tour-sil+/-mag altn (m/s)	composite	outcrop
16820	28	354795	5361555	lht bn laminated slst, py(tr, dss), grey sil-vnd(tr)	grab	outcrop
16821	30	354950	5361520	pgn micaceous slst	composite	outcrop
16822	32	355055	5361455	crm slst/fg sst, sil-py vnd(3%), ser(w)	grab	outcrop
16823	33	355055	5361455	crm/grey weakly micaceous slst, py(tr, dss), sil-vnd(tr)	composite	outcrop
16824	34	355110	5361385	pgn silicified(m/s), pyritic(1%), altered sediment	grab	outcrop
16825	34.1	355240	5361360	bn msv ironstone	composite	subcrop
16826	34.2	355260	5361365	bn msv ironstone	composite	subcrop
16827	34.3	355280	5361365	bn msv ironstone	composite	subcrop
16828	34.4	355345	5361340	bn msv ironstone	composite	subcrop
16829	34.5	355365	5361335	bn msv ironstone	composite	subcrop
16830	34.6	355400	5361325	bn msv ironstone	composite	subcrop
16831	36	355415	5361315	bn msv ironstone	composite	subcrop
16832	36.1	355455	5361290	bn msv ironstone	composite	outcrop
16833	36.2	355490	5361275	bn msv ironstone	composite	subcrop
16834	36.3	355510	5361270	bn msv ironstone	composite	outcrop/subcrop
16835	36.4	355525	5361260	bn msv ironstone	composite	subcrop
16836	36.5	355542	5361255	bn msv ironstone	composite	subcrop
16837	36.6	355560	5361250	bn msv ironstone	composite	subcrop
16838	36.7	355580	5361245	bn msv ironstone	composite	subcrop

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Sample No	Field No	East (AMG)	North (AMG)	Description	Sample Type	Outcrop/subcrop/float
16839	36.8	355597	5361245	bn msv ironstone	composite	subcrop
16840	36.9	355616	5361240	bn msv ironstone	composite	subcrop
16841	36.91	355635	5361235	bn msv ironstone	composite	subcrop
16842	36.92	355655	5361232	bn msv ironstone	composite	subcrop
16843	36.93	355670	5361234	bn msv ironstone	composite	subcrop
16844	36.94	355685	5361236	bn msv ironstone	composite	subcrop
16845	37	355710	5361254	grey laminated slst & micaceous fg sst	composite	outcrop
16846	37.1	355568	5361245	weathered ironstone, calc-sil altn(w)	grab	outcrop
16847	38	355420	5361150	crm/grey fg q-sst & siliceous slst, mag(tr, dss)	composite	outcrop
16848	39	355425	5361130	lht bn mg q-sst, q-vnd(2%), sil(m), mag(tr, dss)	composite	outcrop
16849	43	355200	5361275	ironstone, trace muscovite flakes	composite	subcrop
16850	44	355200	5361290	msv fg mag(/ironstone)	composite	outcrop
16851	45	355285	5361475	msv magnetite, calc-silicate vug fill(5%)	composite	float
16852	46	355210	5361490	grey foliated(m) sil-py altered muscovite-bearing slst, sil(m), py(<0.5%)	composite	outcrop
16853	48	355260	5361520	crm silicified sst, mag(tr, dss)	composite	outcrop
16854	52	355645	5361260	crm&grey silicified sst	composite	outcrop
16855	53	355620	5361265	silicified sst, mag(tr), drussy q lined vugs	composite	outcrop
16856	57	355740	5361170	weathered ironstone, 1m wide	composite	outcrop
16857	57	355735	5361162	bn clay after slst	composite	outcrop
16858	57	355740	5361140	weathered ironstone	composite	outcrop
16859	58	355700	5361100	ironstone and silicified sst	composite	float
16860	59	355800	5361025	ironstone	composite	subcrop
16861	60	355820	5361040	grey silicified fg sst, sil(vw), mag(vw)	composite	float
16864	63	355898	5361005	grey foliated(m) slst	composite	outcrop
16865	64	355970	5360955	grey & tan slst, mag altn(w), fol(m), py(tr)	composite	subcrop
16866	65	356005	5360935	silica - pyrite(15%) alteration	composite	float
16867	65	356005	5360935	massive pyrite, q-vnd(tr)	composite	outcrop
16868	69	356175	5360905	fg silicified(w/m) sst, milky q-vnd+/-FeO(5%)	composite	float
16869	70	356285	5360875	ironstone, calc-sil(1%)	composite	outcrop
16870	75	355960	5360920	silicified(m/s) sst, py(to 4%, dss)	composite	outcrop
16871	76	356080	5360790	lht bn silicified(w/m) sst, q-vnlts(tr)	composite	outcrop
16872	79	356255	5361105	pgn silicifed(s) sst, py(15%, dss)	grab	outcrop
16873	80	355632	5360662	strong calc-silicate alteration, py(tr), mag(w)	composite	subcrop
16874	81	355672	5360695	weathered ironstone	composite	subcrop
16875	82	355675	5360670	strong calc-silicate alteration, mag(w)	composite	subcrop
16876	83	355691	5360682	crm silicified(w/m) sst?, mag vnd(2%), calc-sil(tr)	composite	outcrop
16877	86	355820	5360755	lht gn silicified(m) laminated sist, calc-sil(w) bands	composite	float
16878	88	355870	5360750	grey mg/cg arenite	composite	outcrop

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Sample No	Field No	East (AMG)	North (AMG)	Description	Sample Type	Outcrop/subcrop/float
16879	90	355970	5360752	dgn sst, sil-mag+/-tour? altn(w)	composite	float
16880	92	356325	5360725	wed kaki & FeOxidised mafic?	grab	float
16881	93	356510	5360625	dgrey slst/sh	composite	outcrop
16882	95	356545	5360605	crm&gn mg gabbro, fol(w)	composite	outcrop
16883	95	356545	5360595	crm&gn mg gabbro, fol(w), serp(w), mag(vw), py(tr)	grab	outcrop
16884	96	356590	5360555	crm&gn mg gabbro, fol(w), serp(w), mag(vw)	composite	outcrop
16885	98	356265	5360730	grey laminated sh/slst, mag(w)	composite	float
16886	98	356275	5360730	grey silicified laminated sh/slst, mag(w)	grab	outcrop
16887	99	356260	5360685	grey sil-mag(w) altered sh?	composite	outcrop
16888	100	356210	5360585	lht gn mg gabbro, serp(w), q-vnd(w), FeO on fracs(tr)	composite	outcrop
16889	101	356095	5360590	gn mg gabbro, serp(w)	composite	outcrop
16890	103	356115	5360760	pgn slst, fol(w)	composite	float
16891	104	355840	5360740	pgn silicified(w) slst	composite	subcrop
16892	105	355850	5360725	pgn sediment, pervasive & bnd sil(s)-mag(15%) altn, py(tr)	composite	outcrop
16893	106	355852	5360615	pgn silicified(w/m) fg sst/slst, q-vnd(<2%), sil-serp(w/m)	composite	float
16894	107	355855	5360590	pgn sil-serp(m) altered sst	grab	float
16895	108	355735	5360540	pgn grags & clay, fg/mg gabbro?	composite	float
16896	109	355704	5360515	gn fg mafic (gabbro?, 15% felsic mins)	grab	float
16897	111	355698	5360625	ironstone float	composite	subcrop
16898	112	355622	5360662	pgn pervasive sil-serp(m/s) altered mafic?, mag(s)	composite	subcrop
16899	113	355530	5360695	crm clay/wed sed?	composite	outcrop
16900	114	355504	5360697	pgn sil(m/s), mag(0.5%) altered sed?, sil-ch? vnd(1%)	grab	float
17201	224	354520	5359325	pgn sil-serp(m/s) altered sst	composite	outcrop
17202	225	354510	5359285	lht brn/pgn fg sst, sil-serp-vnd(20%, m), mag(tr)	composite	subcrop
17203	226	354315	5359245	msv fg mag, py(1-3%, dss&vnd), cpy(?tr), sil(tr)	composite	subcrop
17204	226	354315	5359245	mg/cg quartz(70%)-granitoid	composite	float
17205	227	354290	5359130	mg/cg quartz(70%)-granitoid, mag(w)	composite	float
17206	227	354290	5359130	dgrey weakly hornfels fg sst, mag(w)	composite	float
17207	228	354125	5359130	dgrey weakly hornfels fg sst, mag(w/m, tr-vnd), vfg py(0.5%)	composite	outcrop
17208	229	355175	5359640	mg gabbro, serp(w/m), mag(w)	composite	outcrop
17209	232	355180	5359780	gn fg/mg gabbro, serp(w/m), mag(dss, w/m), sil-serp-vnd & patches(w)	composite	outcrop
17210	233	355790	5359830	gn fg/mg gabbro, serp(w/m), mag(m/s), sil-serp-vnd(tr), gn act/tour?-xtals/vnd	composite	outcrop
17211	234	355230	5359875	mg/cg gabbro, serp(w/m), sil-serp-vnd(tr), mag(w)	composite	outcrop
17212	236	355305	5359870	gn mg/cg gabbro, serp(w)	composite	outcrop
17213	238	355305	5359975	gn mg gabbro, serp(w/m)	composite	outcrop
17214	240	355345	5360050	gabbro (locally vcg), serp(w), fol(w), jointing(m/s)	composite	outcrop
17215	241	355385	5360035	cg gabbro, serp(w), sil-tour?-vnd(tr)	composite	outcrop
17216	244	355610	5359805	mg gabbro, serp(w), tour?-vnd	composite	outcrop

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Sample No	Field No	East (AMG)	North (AMG)	Description	Sample Type	Outcrop/subcrop/float
17217	247	355475	5359635	mg gabbro, serp(w/m), py(tr), tour?-vnd(tr)	composite	outcrop
17218	248	355420	5359575	mg gabbro, irregular serp(m) zones "breccia-like"texture, py(tr), native Cu(tr), sil-serp(w)	composite	outcrop
17219	249	354760	5359310	mg gabbro, serp(w/m), mag(w)	composite	outcrop
17220	250	354750	5359335	mg gabbro, serp(w/m), mag(vw)	composite	outcrop
17221	251	354740	5359350	float, various, bk hornfels sph? py(tr), crm sil-tour vnd(m) hornfels fg sst	composite	float
17222	252	354720	5359375	weathered dgn serpentinite, mag(m)	composite	outcrop
17223	254	354735	5359545	weathered gabbro/serpentinite, serp(s), dss bk flecks(1%, mag?)	composite	outcrop
17224	255	354790	5359555	gn mg gabbro, serp(w/m), layered	composite	outcrop
17225	256	354810	5359600	mg gabbro, crm sil-vnd, FeO stained(2%), serp(w/m), py(tr?)	composite	outcrop
17226	257	354815	5359635	gn mg gabbro, serp(w)	composite	outcrop
17227	258	354840	5359690	mg gabbro, serp(w)	composite	outcrop
17228	259	354860	5359735	mg gabbro, serp(w/m), gn euhedral tour?-xtals	composite	outcrop
17229	260	354885	5359775	mg gabbro, serp(w/m), mag(vw), sil(tr)	composite	outcrop
17230	262	354900	5359550	mg gabbro, serp(w/m)	composite	outcrop
17231	265	354735	5359615	wed gabbro, serp(m), sulphide(tr)	composite	outcrop
17232	266	354775	5359705	gn serpentinised(m/s) gabbro, pyrrh?(0.5%, fol smears), dgn serp/ch?-sil vnd(tr)	composite	outcrop
17233	267	354785	5359735	gn serpentinised(m) gabbro, pyrrh?(0.5%, fol smears, localy 5%), serp bands	grab	outcrop
17234	267	354785	5359735	crm&gn sil-serp(m/s) altered gabbro, serp(?w)	composite	outcrop
17235	268	354790	5359755	mg gabbro, serp(w/m), sil-serp-py(0.5%)-mag/hm(0.5%)-vnd(w)	composite	outcrop
17236	271	354830	5359965	wed lht gn gabbro, serp(w/m), pyrrh?(tr, dss)	composite	outcrop
17237	273	354815	5359975	sil(s)-py(7%) altered fg/mg sst, cpy(tr)	composite	outcrop
17238	276	354770	5360005	grey silicified(m/s) sst, mag(m), aspy? dss, sil-serp(m), gn mica vnd(tr), sph(tr)	composite	outcrop
17239	277	354735	5360027	msv fg mag, dss sph(1%), py(0.5%)	grab	outcrop
17240	278	354735	5360050	bk fg magnetite zone, crm flecks dss sph?(1%, locally 10%), serp(m), py(tr),	composite	outcrop
17241	279	354705	5360010	grey silicified(m/s), sil-serp(m) altered sst & msv mag, py(1%), sph(tr), calc-sil(tr)	composite	outcrop
17242	281	354085	5359360	dgrey hornfels slst, sil-tour-vnd(10%), vuggy quartz & silicified zones, py(tr), axinite?(tr)	composite	outcrop
17243	282	354115	5359325	crm/lht bn fg sst, dgn tour-ch?-py-vnd(1%)	composite	outcrop
17244	286	354085	5359425	pgn sil-serp(w), hornfels, pyritic slst intruded by mg "white" granite dyke	composite	outcrop
17245	290	354095	5359560	lht bn hornfels slst/sst, q-mag-vnd(5%), py(tr)	composite	outcrop
17246	290	354100	5359575	crm fg leucogranite dyke, tour-mag(tr)-vnd(tr)	composite	outcrop
17247	291	354105	5359620	lht bn&dgrey laminated slst/hornfels, sil-vnd(4%), mag(w)	composite	outcrop
17248	292	354111	5359645	dgrey/gn sil-serp/serp?(s) altered sediment	composite	outcrop
17249	293	354115	5359720	dgn mag altered sediment, sil-serp overprint(w/m), mag(w), py(dss, tr)	composite	outcrop
17250	294	354113	5359750	sil-serp(s) altered sediment, mag(m), pyrrh?(6%), cpy?(tr)	composite	outcrop
17251	297	354100	5359780	sil-serp(m/s) altered laminated slst, sil-py/pyrrh(tr)-vnd, mag(w)	composite	outcrop
17252	301	354190	5359920	lht bn & grey weakly hornfels slst/fg sst, mag-vnd(tr)	composite	float
17253	302	354235	5359520	lht bn fg/mg sst, mag-vnd(1%)	composite	float
17254	303	354315	5359920	pgn sil-serp(m) altered slst, py(tr, dss)	composite	subcrop

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Sample No	Field No	East (AMG)	North (AMG)	Description	Sample Type	Outcrop/subcrop/float
17255	304	354345	5359880	msv mag & wed ironstone	composite	float
17256	305	354360	5359860	ironstone	composite	subcrop
17257	307	354445	5360780	pgn sil-serp(m) altered slst/sst	composite	outcrop
17258	308	354540	5359730	wed pgn sil-serp(w?) sediment?	composite	outcrop
17259	310	354697	5359710	wed ironstone	composite	float
17260	311	354795	5360400	wed ironstone	composite	float
17261	314	354750	5360470	ironstone and msv mag	composite	float
17262	332	354750	5360870	wed ironstone	composite	float
17263	329	354855	5360784	laminated slst, patchy sil-serp altn, py(tr) ,mag(tr)	composite	outcrop
17264	337	355054	5361100	crm/lht bn silicified(w/m) sst, py(tr), mag(tr, dss)	composite	float
17265	338	355095	5361100	d grey/gn thinly bdd slst, sil-serp(w/m)	composite	float
17266	339	355290	5361100	pgn to grey weakly hornfels slst	composite	float
17267	342	355385	5361020	grey/pgn hornfels(m) patchy sil-serp altered slst,	composite	outcrop
17268	345	355255	5360855	ironstone, sil-serp-sst selvages	composite	float
17269	348	354705	5359946	grey/pgn silicified(m) sed,patchy sil-serp(w/m),mag(tr),py(0.5%),cpy(tr),sph(1%),mica-vnd(tr)	composite	float
17270	349	354680	5359929	lht bn laminated slst, sil-serp-vnd(1%), py(tr), sph?(tr), sil-mag+/-py-vnd(tr)	composite	subcrop
17271	331	354636	5359883	pgn sil-serp(m) altered sed, py(tr, dss)	composite	subcrop
17272	352	354635	5359814	sil-serp(m) altered slst	composite	outcrop
17273	354	354661	5359787	msv mag, gn sil-serp?(w/m) overprint, bn mica-vnd(tr)	composite	outcrop
17274	355	354680	5359770	wed ironstone	composite	float
17275	356	354691	5359755	msv mag, fibrous replacement texture(after serp?)	composite	float
17276	358	354505	5359526	mg gabbro, mag(w/m)	composite	outcrop
17277	359	355469	5359528	cg gabbro, py(tr), ep?/gn tour(tr)	composite	outcrop
17278	359	355469	5359528	gabbro, joint plane py(4%), cpy(5%), sulphide <1% overall	grab	outcrop
17279	360	355446	5359529	cg gabbro, serp(vw), py(tr)	composite	outcrop
17280	361	355946	5359695	tan wed basaltic seds?, mag(w)	composite	outcrop
17281	361	355936	5359700	tan clay, after fg gabbro, mag(w)	composite	outcrop
17282	361	355928	5359706	tan clay, and fg gabbro, mag(m)	composite	outcrop
17283	361	355920	5359714	tan clay, and fg gabbro, mag(m)	composite	outcrop
17284	362	355900	5359910	mg/cg gabbro, serp(vw), mag(m)	composite	outcrop
17285	364	356150	5360285	mg gabbro, serp(w)	composite	outcrop
17286	365	356185	5360230	mg gabbro	composite	outcrop
17287	366	356280	5360069	fg gabbro, serp(m, locally vnd), mag-vnd(tr), mag(m/s) overall	composite	float
17288	367	356360	5360085	tan clay after gabbro?, bk vnd joints(10%)	composite	outcrop
17289	368	356390	5360180	mg gabbro, serp(w/m), mag(w/m)	composite	float
17290	369	356371	5360120	fg Fe stained gabbro	grab	float
17291	370	356101	5359830	gn fg/mg weakly porphyritic gabbro, serp(m), py(tr)	composite	subcrop
17292	371	355980	5359870	wed mg gabbro, wed mag-vnd(tr)	composite	outcrop

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Sample No	Field No	East (AMG)	North (AMG)	Description	Sample Type	Outcrop/subcrop/float
17293	373	355915	5359345	msv basalt, serp(w/m), py&cpy(tr), native Cu dss in patches(tr)	composite	outcrop
17294	375	356080	5359275	basalt, dgn fg acicular(tour?) xtals, serp(w), py(tr, dss cg)	composite	outcrop
17295	377	356275	5359200	dgn fg basalt, serp(m)	composite	outcrop
17296	378	356890	5360170	mg gabbro, serp(w), sil-serp(tr, vnd)	composite	outcrop
17297	379	355930	5360340	mg gabbro, serp(w)	composite	outcrop
17298	380	355770	5360340	mg gabbro, serp(w), sil-serp(tr, vnd)	composite	outcrop
17299	382	355760	5359900	mg gabbro, serp(w/m), tour-vnd(w), sil-serp(tr, vnd)	composite	outcrop
17300	383	355365	5359470	mg gabbro, serp(w/m), trace calc-sil slickensides, py(tr)	composite	outcrop
17501	118	355620	5360625	ironstone	composite	float
17502	118	355620	5360625	ironstone	composite	float
17503	119	355625	5360645	ironstone, calc-sil(w?)	composite	subcrop
17504	119	355604	5360638	ironstone	composite	float
17505	120	355590	5360650	ferruginous sst/clay, msv mag-vnd	composite	outcrop
17506	120	355575	5360645	ironstone	composite	float
17507	120	355558	5360640	ironstone	composite	subcrop
17508	121	355540	5360640	ironstone	composite	float
17509	122	355490	5360645	crm/pgn slst, sil-serp(w?)	composite	float
17510	123	355420	5360523	pgn fg/mg arenite, mag(m/s, replacement bnd 15%)	composite	float
17511	124	355400	5360507	massive ironstone, mag(s)	composite	subcrop
17512	125	355380	5360490	ironstone, goethite vnd	grab	float
17513	126	355380	5360473	sil(s)-mag(15%) altered zone within gn mg gabbro	grab	outcrop
17514	126	355380	5360575	mg gabbro	grab	outcrop
17515	126	355382	5360470	silica(m/s)-mag(10%)-py(1%) altered gabbro?	grab	outcrop
17516	126	355387	5360463	silica(m)-mag(m)-py(to 15%%, dss & blebs), cpy(tr), sph(tr?) altered gabbro?	composite	outcrop
17517	126	355394	5360457	silica(m/s)-mag(w)-py(1%), sph(0.5?) altered gabbro?	composite	outcrop
17518	127	355465	5360370	10cm+ msv py band, in msv magnetite	grab	float
17519	128	355442	5360357	massive magnetite/ironstone	composite	float
17520	129	355494	5360330	massive magnetite/ironstone	composite	float
17521	129	355494	5360330	gn/grey perv sil-serp(m) altered rock,q-vnd(tr), py(tr to 3%,ave 0.5%),cpy?(tr),mag(10-40%)	composite	float
17522	134	355185	5360243	tan wed mg mafic, FeO(w)	composite	outcrop
17523	136	355078	5360150	ironstone, cg magnetite in fg hm matrix	composite	outcrop
17524	138	354940	5360080	ironstone, FeO vnd	composite	float
17525	138	354925	5360065	grey/pgn sil-serp(m) altered rock, grey q-vnd(1%)	grab	float
17526	139	354918	5360060	pgn sil-serp(m/s) altered slst, sil-mag vnd(tr)	composite	subcrop
17527	140	355090	5359965	gn mg/cg gabbro, serp(w)	composite	float
17528	141	355110	5359953	gn mg/cg gabbro, serp(w)	grab	float
17529	143	355082	5359920	mg/cg gabbro, fol(vw), serp(w/m), crm sil-vnd(tr), mag(tr, dss)	composite	outcrop
17530	143	355215	5359940	lht gn mg/cg gabbro, tour(cg, <4%), serp(m)	composite	subcrop

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Sample No	Field No	East (AMG)	North (AMG)	Description	Sample Type	Outcrop/subcrop/float
17531	145	355240	5359976	Exhotic float grey pyritic(10%) cpy(tr) silicified sediment	composite	float
17532	145	355240	5359976	Exhotic float serpentinite with common stichtite (10%)	composite	float
17533	245	355240	5359976	Exhotic float pyritic(2%) black schist	composite	float
17534	150	355316	5360230	ironstone float	composite	float
17535	151	355310	5360265	ironstone float	composite	float
17536	155	355164	5360445	ironstone subcrop	composite	subcrop
17537	156	355140	5360440	ironstone subcrop	composite	subcrop
17538	157	355145	5360400	grey&crm silicified(m/s) slst&sst, py(tr to 0.5%)	composite	outcrop
17539	158	355245	5360180	msv magnetite & ironstone	composite	float
17540	158	355245	5360195	ironstone	composite	float
17541	159	355247	5360215	ironstone	composite	float
17542	160	355270	5360245	msv magnetite	composite	subcrop
17543	160	355275	5360265	msv magnetite & ironstone	composite	subcrop
17544	161	355086	5360209	wed ironstone, calc-sil(w?)	composite	float
17545	162	355079	5360185	wed ironstone	composite	float
17546	163	355150	5360202	wed ironstone	composite	float
17547	163.1	355114	5360157	msv magnetite & ironstone	composite	float
17548	163.2	355082	5360150	ironstone	composite	float
17549	163.3	355062	5360140	ironstone	composite	float
17550	163.4	355038	5360130	ironstone	composite	float
17551	163.5	355018	5360120	ironstone	composite	float
17552	163.6	354994	5360110	ironstone, sph?(tr)	composite	float
17553	163.7	354975	5360100	ironstone	composite	float
17554	164	354900	5360042	pgn/grey silicified(m/s) sed, grey tour?-sil patches(w), mag(tr, dss)	composite	subcrop
17555	165	354878	5360025	pgn sil-serp(m) altered sed, tour?(tr)	composite	subcrop
17556	166	354841	5359975	bn hornfels fg sst/slst, grey q-vnd, sil-serp-py vnd(3%), py(to 4% locally), cpy(tr)	composite	outcrop
17557	166	354836	5359979	pgn sil-serp(w/m) altered slst	composite	outcrop
17558	166	354836	5359979	sil-serp(m)-FeO veins	grab	outcrop
17559	166	354848	5359971	pgn sil-serp(m) altered sed?, tour?-vnd, py(tr, dss)	composite	outcrop
17560	167	354856	5359957	pgn sil-serp(w/m) hornfels slst, py(1%, patches)	composite	outcrop
17561	168	354858	5359951	lht bn hornfels slst, sil-serp-py(3%)-sph(2%)-vnd(w)	grab	outcrop
17562	169	354886	5359810	gn fg gabbro, serp(vw)	composite	outcrop
17563	170	354908	5359810	mg/cg gabbro	composite	outcrop
17564	172	354990	5359820	mg gabbro, serp(w), sil-serp-mag-vnd(1%), sulphide(tr)	composite	outcrop
17565	174	355004	5359840	mg gabbro, serp(w), mag(vw)	composite	outcrop
17566	175	355020	5359880	gn mg gabbro, serp(vw)	composite	outcrop
17567	177	354885	5360060	grey sil-serp(w, pervasive &vnd), hornfels slst	composite	outcrop
17568	178	354835	5360115	wed ironstone	composite	float

Tenth Legion Rock Chip Sample Catalogue

Sample No	Field No	East (AMG)	North (AMG)	Description	Sample Type	Outcrop/subcrop/float
17569	179	354840	5360135	msv mag, zoned hm-veining	composite	outcrop
17570	180	354832	5360255	wed calc-sil(w) altered bk slst?, FeO vnd(4%)	composite	outcrop
17571	183	354785	5360298	mg "white" granite, mafics(<10%)	composite	outcrop
17572	184	354777	5360320	lht bn laminated slst, calc-sil-mag(tr)-veining overprinted by pervasive calc-sil-altn front	composite	outcrop
17573	186	354805	5360170	bk wed msv mag, calc-sil patchy vug fill, hm-mag-vnd(w), mg q-sst selvage	composite	outcrop
17574	187	354710	5360098	dgn sil-serp(s) altered sed, mag(s, dss), sph(tr, locally 2%), py(tr to 2%), serp(s)	composite	outcrop
17575	187	354705	5360103	dgn sil-serp(s) altered sed?, mag(s), sph(3%), py(0.5%, dss)	grab	outcrop
17576	188	354675	5360111	pgn sil-serp(s) altered sed, mag(0.5%, dss), dgn serp-vnd(tr), sph?(tr)	composite	outcrop
17577	189	354652	5360126	indurated lht bn slst, grey q-mag-vnd(tr), py(tr, vnd&bdd parallel)	composite	outcrop
17578	192	354520	5360180	grey slst, mag(m) & sil-serp(m), py(0.5%) altered sst	composite	outcrop
17579	196	354585	5360247	hornfels sst, sil-serp(w/m), mag-vnd(0.5%)	composite	outcrop
17580	198	354725	5360077	laminated slst, sil-serp(m), mag(s), sph(tr to 2%)	composite	outcrop
17581	199	355155	5359550	serp-veins and margins, within mg/cg gabbro, serp(w/m)	composite	outcrop
17582	200	355125	5359505	dgn mg/cg gabbro, mag(m/s), serp(m), aspy/gal?(tr, dss)	composite	outcrop
17583	200	355115	5359520	dgn mg/cg gabbro, mag(m), serp(m)	composite	outcrop
17584	201	355095	5359495	mg/cg gabbro, serp(w/m)	composite	outcrop
17585	201	355095	5359495	dgn mg/cg gabbro, serp(m/s), fol(m)	composite	outcrop
17586	203	355055	5359445	mg gabbro, serp(w/m)	composite	outcrop
17587	205	355010	5359430	gn cg gabbro, serp(w)	composite	outcrop
17588	207	354910	5359345	gn mg gabbro, serp(m)	composite	outcrop
17589	209	354820	5359285	gn mg gabbro, serp(w/m), mag(w)	composite	outcrop
17590	210	354805	5359280	mg/cg gabbro, cg band, sil-serp-vnd(tr)	composite	outcrop
17591	211	354850	5359230	mg gabbro, serp(w/m)	composite	outcrop
17592	212	354810	5359200	mg gabbro, serp(w/m)	composite	outcrop
17593	213	354860	5359160	lht bn, fg/mg arenite, milky q-vnd(tr)	composite	outcrop
17594	215	354720	5359195	mg gabbro, serp(w)	composite	outcrop
17595	219	354590	5359225	wed ironstone, relict pgn fg sst, mag(m/s)	composite	float
17596	219	354585	5359220	dgrey, fg msv magnetite, py+/-cpy(tr to 0.5%)	composite	subcrop
17597	220	354570	5359235	gabbro, mag(s), py(1%)	composite	float
17598	221	354535	5359260	msv mag, serp(w), py(tr)	composite	float
17599	222	354540	5359290	pgn/grey silicified(s) sed?	composite	subcrop
17600	223	354540	5359310	sil-serp(m) altered slst, py(<1%)-vnd(10%)	composite	subcrop

Analytical Reports

Tenth Legion Rock Chip Analysis

Sample No	East (AMG)	North (AMG)	Cu_ppm	Pb_ppm	Zn_ppm	Ag_ppm	As_ppm	Ni_ppm	Sb_ppm
16801	355145	5359540	13	47	55		-50	41	
16802	355145	5359600	13	10	36		-50	54	
16803	355330	5361450	7	15	40		-50	4	
16804	355245	5361620	8	-3	8		-50	-3	
16805	355245	5361620	3	3	7		-50	-3	
16806	355100	5361615	203	77	410		135	21	
16807	355090	5361615	223	115	785		440	36	
16808	355080	5361595	178	394	275		190	-3	
16809	355080	5361575	42	38	127		-50	6	
16810	355090	5361550	17	64	186		-50	-3	
16811	355090	5361540	42	55	336		135	6	
16812	354770	5361660	-2	-3	5		-50	3	
16813	354745	5361580	58	36	175		-50	-3	
16814	354715	5361570	84	12	637		-50	-3	
16815	354690	5361645	100	384	888		345	11	
16816	354650	5361670	136	35	281		740	-3	
16817	354600	5361745	32	31	1510		190	13	
16818	354515	5361385	2	-3	12		-50	3	
16819	354725	5361370	4	-3	31		-50	4	
16820	354795	5361555	73	9	23		-50	23	
16821	354950	5361520	-2	23	9		-50	6	
16822	355055	5361455	25	11	39		-50	23	
16823	355055	5361455	4	14	26		-50	26	
16824	355110	5361385	9	11	27		-50	21	
16825	355240	5361360	48	3	347		-50	-3	
16826	355260	5361365	74	13	240		-50	4	
16827	355280	5361365	70	48	936		-50	3	
16828	355345	5361340	19	63	161		300	-3	
16829	355365	5361335	19	19	159		250	11	
16830	355400	5361325	22	45	155		415	4	
16831	355415	5361315	17	61	159		760	4	
16832	355455	5361290	16	47	484		60	-3	
16833	355490	5361275	15	67	371		-50	-3	
16834	355510	5361270	21	164	349		-50	-3	
16835	355525	5361260	30	97	406		-50	-3	
16836	355542	5361255	15	34	247		-50	-3	
16837	355560	5361250	20	42	124		-50	-3	
16838	355580	5361245	29	73	817		240	-3	
16839	355597	5361245	35	231	353		270	-3	
16840	355616	5361240	28	520	469		165	5	
16841	355635	5361235	3	83	132		-50	3	
16842	355655	5361232	55	166	303		-50	-3	
16843	355670	5361234	105	393	162		-50	3	
16844	355685	5361236	76	293	166		-50	-3	
16845	355710	5361254	11	39	27		-50	-3	
16846	355568	5361245	88	158	230		755	-3	
16847	355420	5361150	9	21	21		-50	11	
16848	355425	5361130	10	14	19		-50	6	
16849	355200	5361275	10	-3	185		-50	5	
16850	355200	5361290	104	11	798		55	-3	
16851	355285	5361475	64	-3	371		55	-3	

Tenth Legion Rock Chip Analysis

Sample No	East (AMG)	North (AMG)	Cu_ppm	Pb_ppm	Zn_ppm	Ag_ppm	As_ppm	Ni_ppm	Sb_ppm
16852	355210	5361490	271	64	53		80	10	
16853	355260	5361520	5	12	21		-50	3	
16854	355645	5361260	23	79	54		-50	3	
16855	355620	5361265	43	1195	695		700	-3	
16856	355740	5361170	79	174	192		-50	3	
16857	355735	5361162	22	236	76		-50	10	
16858	355740	5361140	26	134	136		-50	3	
16859	355700	5361100	137	219	403		190	-3	
16860	355800	5361025	328	423	979		515	12	
16861	355820	5361040	9	53	80		-50	5	
16864	355898	5361005	31	243	231		-50	8	
16865	355970	5360955	999	648	154		-50	10	
16866	356005	5360935	809	466	144		-50	19	
16867	356005	5360935	16	691	25		290	69	
16868	356175	5360905	212	92	31		-50	-3	
16869	356285	5360875	161	603	858		-50	5	
16870	355960	5360920	32	215	29		-50	12	
16871	356080	5360790	14	29	34		-50	9	
16872	356255	5361105	26	131	11		-50	9	
16873	355632	5360662	70	231	416	-1	-50	17	-10
16874	355672	5360695	32	99	1030	-1	340	18	-10
16875	355675	5360670	14	307	1015	-1	-50	23	-10
16876	355691	5360682	4	30	149	-1	-50	14	-10
16877	355820	5360755	13	8	43	-1	-50	13	-10
16878	355870	5360750	11	10	50	-1	-50	24	-10
16879	355970	5360752	-2	5	9	-1	-50	3	-10
16880	356325	5360725	16	530	191	-1	90	-3	-10
16881	356510	5360625	51	102	125	-1	-50	15	-10
16882	356545	5360605	6	12	98	-1	-50	81	-10
16883	356545	5360595	4	26	119	-1	-50	108	-10
16884	356590	5360555	4	17	169	-1	-50	101	-10
16885	356265	5360730	193	811	2200	4	70	25	-10
16886	356275	5360730	22	55	215	-1	-50	34	12
16887	356260	5360685	11	151	290	-1	-50	229	23
16888	356210	5360585	11	277	255	-1	-50	166	-10
16889	356095	5360590	21	4	49	-1	-50	106	-10
16890	356115	5360760	8	64	80	-1	-50	16	-10
16891	355840	5360740	-2	11	37	-1	-50	11	-10
16892	355850	5360725	22	18	26	-1	-50	12	-10
16893	355852	5360615	3	11	26	-1	-50	-3	-10
16894	355855	5360590	7	13	34	-1	-50	37	-10
16895	355735	5360540	4	26	55	-1	-50	41	-10
16896	355704	5360515	-2	85	160	-1	-50	21	-10
16897	355698	5360625	42	226	675	-1	410	35	-10
16898	355622	5360662	6	62	114	-1	105	11	-10
16899	355530	5360695	42	186	69	-1	75	122	-10
16900	355504	5360697	6	22	57	-1	65	-3	-10
17201	354520	5359325	13	8	22	-1	-50	27	-10
17202	354510	5359285	5	17	32	-1	-50	23	-10
17203	354315	5359245	5	-3	25	-1	-50	71	-10
17204	354315	5359245	4	-3	6	-1	-50	-3	-10

Tenth Legion Rock Chip Analysis

Sample No	East (AMG)	North (AMG)	Cu_ppm	Pb_ppm	Zn_ppm	Ag_ppm	As_ppm	Ni_ppm	Sb_ppm
17205	354290	5359130	3	-3	8	-1	-50	-3	-10
17206	354290	5359130	14	95	10	-1	-50	6	-10
17207	354125	5359130	15	7	34	-1	-50	60	-10
17208	355175	5359640	8	10	44	-1	-50	40	-10
17209	355180	5359780	7	5	44	-1	-50	34	-10
17210	355790	5359830	8	12	59	-1	-50	41	-10
17211	355230	5359875	10	16	69	-1	-50	37	-10
17212	355305	5359870	13	16	61	-1	-50	49	-10
17213	355305	5359975	12	10	54	-1	-50	74	-10
17214	355345	5360050	14	11	54	-1	-50	74	-10
17215	355385	5360035	11	14	48	-1	-50	46	-10
17216	355610	5359805	47	25	69	-1	-50	57	-10
17217	355475	5359635	38	3	47	-1	-50	46	-10
17218	355420	5359575	152	3	51	-1	-50	43	-10
17219	354760	5359310	10	-3	44	-1	-50	133	-10
17220	354750	5359335	9	-3	28	-1	-50	178	-10
17221	354740	5359350	4	7	11	-1	-50	4	-10
17222	354720	5359375	8	15	83	-1	-50	213	-10
17223	354735	5359545	42	49	133	-1	-50	181	-10
17224	354790	5359555	3	-3	23	-1	-50	97	-10
17225	354810	5359600	6	8	33	-1	-50	56	-10
17226	354815	5359635	7	9	36	-1	-50	49	-10
17227	354840	5359690	7	8	35	-1	-50	37	-10
17228	354860	5359735	12	7	42	-1	-50	51	-10
17229	354885	5359775	5	10	45	-1	-50	46	-10
17230	354900	5359550	6	8	34	-1	-50	45	-10
17231	354735	5359615	29	39	187	-1	-50	305	12
17232	354775	5359705	9	97	175	-1	-50	235	-10
17233	354785	5359735	7	25	449	-1	-50	281	-10
17234	354785	5359735	3	9	77	-1	-50	151	11
17235	354790	5359755	10	20	87	-1	-50	74	14
17236	354830	5359965	7	7	155	-1	-50	43	-10
17237	354815	5359975	6	4	56	-1	-50	40	14
17238	354770	5360005	11	14	533	-1	-50	13	-10
17239	354735	5360027	65	-3	17400	-1	-50	33	-10
17240	354735	5360050	9	-3	6300	-1	-50	41	-10
17241	354705	5360010	170	-3	41000	-1	-50	40	-10
17242	354085	5359360	6	-3	190	-1	-50	-3	-10
17243	354115	5359325	33	4	76	-1	-50	42	-10
17244	354085	5359425	6	12	43	-1	-50	9	-10
17245	354095	5359560	5	7	121	-1	-50	-3	-10
17246	354100	5359575	3	9	27	-1	-50	-3	-10
17247	354105	5359620	3	12	33	-1	-50	12	-10
17248	354111	5359645	34	5	151	-1	-50	1885	-10
17249	354115	5359720	6	-3	67	-1	-50	648	-10
17250	354113	5359750	179	11	3120	-1	-50	135	-10
17251	354100	5359780	26	14	104	-1	-50	12	-10
17252	354190	5359920	50	36	60	-1	-50	26	-10
17253	354235	5359520	7	14	51	-1	-50	6	-10
17254	354315	5359920	36	3	157	-1	-50	4	-10
17255	354345	5359880	75	-3	168	-1	65	161	-10

Tenth Legion Rock Chip Analysis

Sample No	East (AMG)	North (AMG)	Cu_ppm	Pb_ppm	Zn_ppm	Ag_ppm	As_ppm	Ni_ppm	Sb_ppm
17256	354360	5359860	164	-3	472	-1	-50	162	-10
17257	354445	5360780	32	7	165	-1	-50	74	-10
17258	354540	5359730	59	16	832	-1	-50	246	-10
17259	354697	5359710	1145	171	2880	4	245	180	-10
17260	354795	5360400	245	58	2050	2	125	4	-10
17261	354750	5360470	33	17	657	2	290	5	-10
17262	354750	5360870	130	26	1010	1	90	18	-10
17263	354855	5360784	33	10	106	-1	-50	6	-10
17264	355054	5361100	8	14	30	-1	-50	28	-10
17265	355095	5361100	16	5	68	-1	-50	4	-10
17266	355290	5361100	6	-3	19	-1	-50	7	-10
17267	355385	5361020	6	13	24	-1	-50	13	-10
17268	355255	5360855	152	8	1225	-1	-50	-3	-10
17269	354705	5359946	171	27	8300	-1	60	18	-10
17270	354680	5359929	13	-3	78	-1	-50	8	-10
17271	354636	5359883	15	6	680	-1	95	12	-10
17272	354635	5359814	8	43	110	-1	-50	19	-10
17273	354661	5359787	38	-3	931	-1	-50	73	-10
17274	354680	5359770	36	-3	250	-1	-50	74	-10
17275	354691	5359755	54	-3	880	-1	60	79	-10
17276	354505	5359526	63	10	50	-1	-50	41	-10
17277	355469	5359528	130	9	36	-1	-50	37	-10
17278	355469	5359528	307	7	45	-1	-50	27	-10
17279	355446	5359529	131	3	30	-1	-50	27	-10
17280	355946	5359695	163	20	29	-1	-50	34	-10
17281	355936	5359700	212	4	27	-1	-50	39	-10
17282	355928	5359706	188	3	25	-1	-50	37	-10
17283	355920	5359714	124	6	25	-1	-50	40	-10
17284	355900	5359910	90	3	34	-1	-50	41	-10
17285	356150	5360285	16	15	83	-1	-50	173	-10
17286	356185	5360230	82	-3	44	-1	-50	58	-10
17287	356280	5360069	36	-3	64	-1	-50	35	-10
17288	356360	5360085	214	4	141	-1	-50	70	-10
17289	356390	5360180	132	-3	86	-1	-50	44	-10
17290	356371	5360120	43	-3	82	-1	-50	18	-10
17291	356101	5359830	53	-3	31	-1	-50	17	-10
17292	355980	5359870	133	12	53	-1	-50	19	-10
17293	355915	5359345	142	-3	31	-1	-50	30	11
17294	356080	5359275	115	-3	25	-1	80	35	11
17295	356275	5359200	18	-3	42	-1	-50	18	-10
17296	356890	5360170	15	4	36	-1	-50	52	18
17297	355930	5360340	19	11	64	-1	-50	77	-10
17298	355770	5360340	38	20	51	-1	-50	50	-10
17299	355760	5359900	13	21	51	-1	-50	49	-10
17300	355365	5359470	211	3	46	-1	-50	48	-10
17501	355620	5360625	41	99	212	-1	185	12	-10
17502	355620	5360625	137	214	159	-1	-50	6	-10
17503	355625	5360645	102	106	351	-1	150	24	-10
17504	355604	5360638	128	61	232	-1	160	-3	-10
17505	355590	5360650	731	162	546	-1	620	9	-10
17506	355575	5360645	83	45	197	-1	-50	6	-10

Tenth Legion Rock Chip Analysis

Sample No	East (AMG)	North (AMG)	Cu_ppm	Pb_ppm	Zn_ppm	Ag_ppm	As_ppm	Ni_ppm	Sb_ppm
17507	355558	5360640	220	67	180	-1	80	3	-10
17508	355540	5360640	177	58	187	-1	55	19	-10
17509	355490	5360645	16	37	33	-1	-50	28	-10
17510	355420	5360523	220	168	496	-1	220	-3	-10
17511	355400	5360507	179	121	442	-1	220	-3	-10
17512	355380	5360490	190	128	319	-1	355	-3	-10
17513	355380	5360473	45	138	874	-1	-50	16	-10
17514	355380	5360575	39	135	855	-1	70	11	-10
17515	355382	5360470	207	395	2010	-1	-50	12	-10
17516	355387	5360463	78	69	1265	-1	-50	10	-10
17517	355394	5360457	24	59	470	-1	-50	4	-10
17518	355465	5360370	1160	27	145	3	-50	90	-10
17519	355442	5360357	67	18	219	-1	-50	9	-10
17520	355494	5360330	54	1900	331	-1	-50	40	-10
17521	355494	5360330	163	12	812	-1	-50	46	-10
17522	355185	5360243	73	59	127	-1	-50	17	-10
17523	355078	5360150	45	36	456	-1	-50	15	-10
17524	354940	5360080	12	10	452	-1	-50	51	-10
17525	354925	5360065	8	25	50	-1	-50	21	-10
17526	354918	5360060	6	16	58	-1	-50	20	-10
17527	355090	5359965	7	5	43	-1	-50	60	-10
17528	355110	5359953	12	8	32	-1	-50	64	-10
17529	355082	5359920	10	17	43	-1	-50	41	-10
17530	355215	5359940	74	79	698	-1	-50	132	-10
17531	355240	5359976	133	14000	6600	-1	1740	7	-10
17532	355240	5359976	12	63	139	-1	-50	1540	-10
17533	355240	5359976	18	91	114	-1	-50	29	-10
17534	355316	5360230	95	10	172	-1	60	15	-10
17535	355310	5360265	207	52	443	-1	195	25	-10
17536	355164	5360445	7	36	263	-1	425	-3	-10
17537	355140	5360440	7	23	398	-1	460	6	-10
17538	355145	5360400	12	26	83	-1	-50	5	-10
17539	355245	5360180	389	34	661	-1	-50	23	-10
17540	355245	5360195	118	19	423	-1	180	40	-10
17541	355247	5360215	47	5	178	-1	55	30	-10
17542	355270	5360245	93	26	674	-1	95	26	-10
17543	355275	5360265	814	68	678	-1	110	37	-10
17544	355086	5360209	238	11	330	-1	-50	71	-10
17545	355079	5360185	74	8	213	-1	75	26	-10
17546	355150	5360202	331	55	218	-1	70	26	-10
17547	355114	5360157	52	9	202	-1	70	27	-10
17548	355082	5360150	46	6	412	-1	-50	17	-10
17549	355062	5360140	68	6	398	-1	-50	30	-10
17550	355038	5360130	67	8	213	-1	-50	70	-10
17551	355018	5360120	18	-3	315	-1	-50	50	-10
17552	354994	5360110	22	3	293	-1	-50	85	-10
17553	354975	5360100	17	3	430	-1	-50	51	-10
17554	354900	5360042	6	4	51	-1	-50	10	-10
17555	354878	5360025	3	9	53	-1	-50	9	-10
17556	354841	5359975	8	8	90	-1	-50	30	-10
17557	354836	5359979	22	23	646	-1	-50	18	-10

Tenth Legion Rock Chip Analysis

Sample No	East (AMG)	North (AMG)	Cu_ppm	Pb_ppm	Zn_ppm	Ag_ppm	As_ppm	Ni_ppm	Sb_ppm
17558	354836	5359979	25	35	1625	-1	-50	39	-10
17559	354848	5359971	7	4	32	-1	-50	20	-10
17560	354856	5359957	72	6	261	-1	-50	70	-10
17561	354858	5359951	20	10	44	-1	-50	43	-10
17562	354886	5359810	32	14	60	-1	-50	43	-10
17563	354908	5359810	6	13	51	-1	-50	76	-10
17564	354990	5359820	17	12	32	-1	-50	16	-10
17565	355004	5359840	7	9	36	-1	-50	53	-10
17566	355020	5359880	8	9	37	-1	-50	49	-10
17567	354885	5360060	3	8	39	-1	-50	5	-10
17568	354835	5360115	105	3	471	-1	80	6	-10
17569	354840	5360135	123	278	885	-1	235	10	-10
17570	354832	5360255	243	206	340	-1	255	10	-10
17571	354785	5360298	13	30	343	-1	-50	38	-10
17572	354777	5360320	16	22	88	-1	-50	20	-10
17573	354805	5360170	550	15	4810	-1	-50	40	-10
17574	354710	5360098	70	8	6700	-1	-50	44	-10
17575	354705	5360103	62	-3	7900	-1	-50	39	-10
17576	354675	5360111	12	-3	90	-1	-50	15	-10
17577	354652	5360126	23	12	86	-1	-50	6	-10
17578	354520	5360180	136	6	987	-1	-50	25	-10
17579	354585	5360247	4	10	35	-1	-50	8	-10
17580	354725	5360077	19	9	7000	-1	-50	34	-10
17581	355155	5359550	20	42	49	-1	-50	14	-10
17582	355125	5359505	23	11	38	-1	-50	43	-10
17583	355115	5359520	16	6	44	-1	-50	42	-10
17584	355095	5359495	31	5	29	-1	-50	36	-10
17585	355095	5359495	19	12	32	-1	-50	20	-10
17586	355055	5359445	37	17	50	-1	-50	47	-10
17587	355010	5359430	12	-3	25	-1	-50	40	-10
17588	354910	5359345	19	9	46	-1	-50	72	-10
17589	354820	5359285	10	21	26	-1	-50	46	-10
17590	354805	5359280	5	13	19	-1	-50	14	-10
17591	354850	5359230	8	12	37	-1	-50	68	-10
17592	354810	5359200	6	5	30	-1	-50	63	-10
17593	354860	5359160	9	7	5	-1	-50	6	-10
17594	354720	5359195	9	7	28	-1	-50	72	-10
17595	354590	5359225	10	5	297	-1	145	456	-10
17596	354585	5359220	8	-3	121	-1	-50	2290	-10
17597	354570	5359235	8	-3	123	-1	-50	2870	-10
17598	354535	5359260	21	8	36	-1	-50	133	-10
17599	354540	5359290	31	22	58	-1	-50	78	-10
17600	354540	5359310	51	13	31	-1	-50	131	13

E.L. 2/96

E.L. 22/97

123M/47

TLC001 TLC002 TLC003 TLC004 TLC005 TLC006 TLC007 TLC008 TLC009 TLC010 TLC011 TLC012 TLC013 TLC014

TH4 TH5 TH6

SKYNAVICE

SILVER STREAM

DAVERNS P

Alluvial Cover over Pou

Harbour Trial Road

SY010 SY014

355000 mE 356000 mE 357000 mE

5361000 mN 5360000 mN 5359000 mN

LEGEND

QUATERNARY
- Qha — Alluvial gravels.
- Qhh — Lacustrine clays & sands locally including re-sedimented ironstone. (=Henty Surface - related?)
- Inferred distribution (eg facies change or resedimented ironstone using aeromag and RGC mapping)
- Qhr — Raised beach deposits

SILURIAN
- Ss — Greenish grey siltstone and siliceous fine grained sandstone with minor quartz sandstone.
- Sc — Grey/cream fine to medium grained quartz sandstone, lithic quartz-sandstone & minor conglomerate. Crinoid trace fossils locally.
- Scc — Pebble-cobble conglomerate with quartz sandstone, grey siliceous and minor quartz vein clasts, commonly moderately lithified.
- Sqf — Quartzo-feldspathic (10 to 20%) sandstone, medium grained, locally lithic bearing (stippled).
- Sl — Calcareous thin bedded siltstone (Silurian?)
- Su — Undifferentiated sediments.

ORDOVICIAN
- Og — Limestone (correlate of Gordon Limestone).
- Oc — Pebble conglomerate, minor lithic-quartz sandstone.
- Os — Cream to light brown siliceous sandstone and siltstone.

CAMBRIAN (Crimson Creek Formation)
- Ctsl — Siltstone with minor chert, shale and greywacke interbeds.
- Ctfg — Fine grained greywacke/hornfels with minor siltstone.
- Ctmg — Medium grained greywacke/hornfels with minor siltstone.
- Ctcg — Coarse grained greywacke/hornfels.
- Ctlg — Lithic-wacke/hornfels, bearing granules of greywacke and milky vein quartz.
- Ctc — Conglomerate, bearing mostly pebble-size greywacke clasts, with minor milky vein-quartz and siliceous clasts.
- Cts — Undifferentiated Cambrian sediments, mostly greywacke with minor lithic-wacke and conglomerate.

MAFIC ROCKS (McGlew Hill Complex)
- Cbs — Undifferentiated serpentinised gabbro and/or basalt.
- Cba — Undifferentiated basalt.
- Cbab — Massive to pillowed, aphyric basalt flows with interbedded breccia flows.
- Cbap — Pillowed aphyric basalt flows with interbedded breccia flows.
- Cbau — Undifferentiated gabbro.
- Cbagf — Fine grained gabbro.
- Cbagm — Medium grained gabbro.
- Cbagy — Coarse grained gabbro.
- Cbb — Porphyritic (pseudomorphed clinoenstatite and/or orthopyroxene, chromite) basalt, commonly with interbedded pillow and breccia flows.

ULTRAMAFIC ROCKS (McGlew Hill Complex?)
- Cum — Undifferentiated Ultramafic (+/- mafic) and massive serpentinite.
- Cbag — Mafic gabbro, equigranular medium to coarse grained.
- Cbag — Mafic gabbro, spinifex textured.
- Cbd — Highly feldspathic, medium/coarse grained gabbro.
- Cuc — Serpentinized equigranular ultramafic/dunite?
- Cuc — Pseudo-conglomeratic textured ultramafic.
- Cuus — Spinifex textured ultramafic dunite?

PRECAMBRIAN (Oonah Formation)
- Pos — Shale (black).
- Posl — Siltstone and laminated siltstone.
- Poss — Sandstone.
- Posq — Quartz sandstone.
- Pou — Undifferentiated sediments.

DEVONIAN GRANITES
- Dgif — White granite/leucogranite.
- Dgpu — Red granite.
- Dgpf — Red granite - porphyritic.
- Dgq — Quartz-rich granitoid (greisen?).
- Dma — Alpite (/leucogranite).

LITHOLOGY/FEATURES

- Geolocial boundary - accurate
- Geolocial boundary - approximate
- Geolocial boundary - inferred
- Outcrop.
- Subcrop/float.

STRUCTURE

- Major Fault Zone - Highly faulted & deformed rocks with zones of cataclasite/fault breccia and tectonic melange, comprising highly altered blocks and large clasts of variable lithologies (including Pou, Cts, Cam and Su, major lithologies noted).
- Fault, accurate.
- Fault, approximate.
- Fault, inferred.
- Thrust fault.
- Reverse fault
- 78 / 22 — Fault showing dip & plunge of lineation on fault plane.
- Vein
- Fold, anticline
- 85 — Bedding, facing unknown
- 75 — Bedding, facing known
- 38 — Cleavage
- 85 — Joint
- Joint - vertical
- 72 — Foliation
- 20 — Minor syncline, showing plunge.
- Minor anticline
- Recumbent anticline

MINE WORKINGS

- Mine
- Adit
- Dump
- Open cut or quarry
- Trench

ABBREVIATIONS

act	actinolite	goeth	goethite	sil-serp	silica-serpentinite
altn	alteration	hem	hematite	slst	siltstone
aspy	arsenopyrite	lam	laminated	sph	sphalerite
ax	axinite	mag	magnetite	sst	sandstone
bdd	bedded	mg	medium grained	tour	tourmaline
bnd	banded	msv	massive	vn	vein
calc-sil	calc-silicate	musc	muscovite	vnd	veined
cg	coarse grained	perv	pervasive	wed	weathered
ch	chlorite	py	pyrite		
cpy	chalcopyrite	pyrrh	pyrrhotite		
dss	disseminated	q	quartz		
fg	fine grained	ser	sericite		
fol	foliation	serp	serpentinisation		
fracs	fracs	sh	shale		
gal	galena	sil	silicification		

ALTERATION CODES

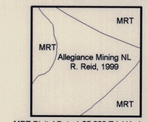
tr	trace	m	moderate 10 to 50%
w	weak 0 to 10%	s	strong 50+%

5 cm

SCALE : 1:5000

0 25 50 100 m

RESPONSIBILITY DIAGRAM



MRT Digital Data 1:25,000 Trial Harbour and Heemskirk.

00_4424

Report for 12 month period ending February 2000 -

635038

Allegiance Mining N.L.

TENTH LEGION GEOLOGICAL FACTUAL/OUTCROP MAP

COMPILED :	R. Reid
DATE :	Nov., 1999
DRAWN :	G.M.Bennett
REVISIONS :	
FILE :	TL Outcrop 5000.WOR

Newnham Exploration and Mining Services

Plate No. 1

E.L. 2/96

E.L. 22/97

123M/47

355000 mE

356000 mE

357000 mE

5361000 mN

5360000 mN

5359000 mN

TLC011 TLC001 TLC010 TLC009 TLC014 TLC002 TLC012 TLC013 TLC006 TLC007 TLC008 TLC003 TLC004 TLC005 SY014 SY010 TH4 TH5 TH6

TENTH LEGION FAULT ZONE

DAVERNSKYNANCE

SILVER STREAM

Road

Trial Harbour

Zone of moderate serpentinisation & lizardite alteration under Qha

LEGEND

QUATERNARY

- Qha — Alluvial gravels.
- Qhh — Lacustrine clays & sands locally including re-sedimented ironstone. (Henty Surface - related?)
- Inferred distribution (eg facies change or resedimented ironstone using aeromag and RGC mapping)
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SILURIAN

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- Sc — Grey/cream fine to medium grained quartz sandstone, lithic quartz-sandstone & minor conglomerate. Crinoid trace fossils locally.
- Sco — Pebble-cobble conglomerate with quartz sandstone, grey siliceous and minor quartz vein clasts, commonly moderately lithified.
- Sqf — Quartzo-feldspathic (10 to 20%) sandstone, medium grained, locally lithic bearing (stippled).
- Calcareous thin bedded siltstone (Silurian?)
- Su — Undifferentiated sediments.

ORDOVICIAN

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- €ts — Siltstone with minor chert, shale and greywacke interbeds.
- €tfg — Fine grained greywacke/hornfels with minor siltstone.
- €tmg — Medium grained greywacke/hornfels with minor siltstone.
- €tcg — Coarse grained greywacke/hornfels.
- €tlg — Lithic-wacke/hornfels, bearing granules of greywacke and milky vein quartz.
- €tc — Conglomerate, bearing mostly pebble-size greywacke clasts, with minor milky vein-quartz and siliceous clasts.
- €ts — Undifferentiated Cambrian sediments, mostly greywacke with minor lithic-wacke and conglomerate.

MAFIC ROCKS (McClover Hill Complex)

- €bsp — Undifferentiated serpentinised gabbro and/or basalt.
- €ba — Undifferentiated basalt.
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- €bap — Pillowed aphyric basalt flows with interbedded breccia flows.
- €bau — Undifferentiated gabbro.
- €bagf — Fine grained gabbro.
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- €bagv — Coarse grained gabbro.
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ULTRAMAFIC ROCKS (McClover Hill Complex?)

- €um — Undifferentiated Ultramafic (+/- mafic) and massive serpentinite.
- €bag — Mafic gabbro, equigranular medium to coarse grained.
- €bag — Mafic gabbro, spinifex textured.
- Highly feldspathic, medium/coarse grained gabbro.
- €ad — Serpentinized equigranular ultramafic/dunite?
- €sc — Pseudo-conglomeratic textured ultramafic.
- €sun — Spinifex textured ultramafic dunite?

PRECAMBRIAN (Oonah Formation)

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- Posl — Siltstone and laminated siltstone.
- Poss — Sandstone.
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- Fold, anticline
- 85 — Bedding, facing unknown
- 75 — Bedding, facing known
- 38 — Cleavage
- 85 — Joint
- Joint - vertical
- 72 — Foliation
- 20 — Minor syncline, showing plunge.
- Minor anticline
- Recumbent anticline

MINE WORKINGS

- Mine
- Adit
- Dump
- Open cut or quarry
- Trench

ALTERATION AND MINERALISATION (>= moderate intensity shown)

- Dcs — Cream coloured calc-silicate veining & pervasive alteration.
- Dpm — Pervasive silica with minor disseminated magnetite.
- Massive ironstone/magnetite.
- Dm — Magnetite, veined and disseminated.
- Dss — Pervasive silica-serpentinite alteration, +/- disseminated magnetite.
- Veined and/or semi-pervasive/ replacement silica - pyrite alteration.
- S — Veined (>=m) and/or pervasive serpentinisation.
- T — Tourmaline alteration.

00_4424

Report for 12 month period ending February 2000 - EL2/96 - Tenth Legion Area
Allegiance Mining NL*; Newnham Exploration and Mini
Newnham, L.A.

RESPONSIBILITY DIAGRAM

MRT — Allegiance Mining NL R. Reid, 1999 — MRT

MRT Digital Data 1:25,000 Trial Harbour and Heemskirk.

5 cm

SCALE : 1:5000

0 50 100 200 m

Allegiance Mining N.L.

635039

TENTH LEGION

GEOLOGICAL INTERPRETATION

COMPILED : R. Reid
DATE : Nov., 1999
DRAWN : G. Bennett
REVISIONS :
FILE : TL Geology 5000.WOR

Newnham Exploration and Mining Services

Plate No. 2

E.L. 2/96

E.L. 22/97

123M/47

TLC001
TLC002
TLC003
TLC004
TLC005
TLC006
TLC007
TLC008
TLC009
TLC010
TLC011
TLC012
TLC013
TLC014
TH4
TH5
TH6
SY010
SY014
KYNANCE
SILVER STREAM
DAVERNS P
Trial Harbour Road

355000 mE
356000 mE
357000 mE
5361000 mN
5360000 mN
5359000 mN

635040

00_4424

Report for 12 month period ending February 2000 -
EL2/96 - Tenth Legion Area
Allegiance Mining NL"; Newnham Exploration and Mini
Newnham, L.A. EL2/96

5 cm

SCALE : 1:5000

0 50 100 200 m

Allegiance Mining N.L.

TENTH LEGION
ROCK GEOCHEMISTRY
Ni (In ppm)

COMPILED : R. Reid
DATE : 09/03/2000
DRAWN : G. M. Bennett
REVISIONS :
FILE : TL Rocks Ni 5000.wor

Newnham Exploration and Mining Services

Plate No. 3

E.L. 2/96

E.L. 22/97

123M/47

TLC001 TLC002 TLC003 TLC004 TLC005 TLC006 TLC007 TLC008 TLC009 TLC010 TLC011 TLC012 TLC013 TLC014

TH4 TH5 TH6

SY010 SY014

KYNANCE

SILVER STREAM

DAVERNS P

Trial Harbour Road

355000 mE 356000 mE 357000 mE

5361000 mN 5360000 mN 5359000 mN

00_4424

Report for 12 month period ending February 2000 - EL2/96 - Tenth Legion Area
Allegiance Mining NL*; Newnham Exploration and Mini Newnham, L.A. EL2/96

635041

5 cm

SCALE : 1:5000

0 50 100 200 m

Allegiance Mining N.L.

TENTH LEGION
ROCK GEOCHEMISTRY
Zn (ln ppm)

COMPILED : R. Reid
DATE : 09/03/2000
DRAWN : G. M. Bennett
REVISIONS :
FILE : TL Rocks Zn 5000.wor

Newnham Exploration and Mining Services

Plate No. 4

E.L. 2/96

E.L. 22/97

123M/47

TLC001 TLC002 TLC003 TLC004 TLC005 TLC006 TLC007 TLC008 TLC009 TLC010 TLC011 TLC012 TLC013 TLC014

TH4 TH5 TH6

SY010 SY014

KYNANCE

SILVER STREAM

DAVERNS P

Trial Harbour Road

355000 mE 356000 mE 357000 mE

5361000 mN 5360000 mN 5359000 mN

635042

00_4424

Report for 12 month period ending February 2000 - EL2/96 - Tenth Legion Area
Allegiance Mining NL*; Newnham Exploration and Mini
Newnham, L.A. EL2/96

5 cm

SCALE : 1:5000

0 50 100 200 m

Allegiance Mining N.L.

TENTH LEGION
ROCK GEOCHEMISTRY
Cu (In ppm)

COMPILED : R. Reid
DATE : 09/03/2000
DRAWN : G. Bennett
REVISIONS :
FILE : TL Rocks Cu 5000.wor

Newnham Exploration and Mining Services

Plate No. 5

E.L. 2/96

E.L. 22/97

123M/47

355000 mE

356000 mE

357000 mE

5361000 mN

5360000 mN

5359000 mN

TLC001 TLC002 TLC003 TLC004 TLC005 TLC006 TLC007 TLC008 TLC009 TLC010 TLC011 TLC012 TLC013 TLC014

TH4 TH5 TH6

SY010 SY014

KYNANCE

SILVER STREAM

DAVERNS P

Trial Harbour Road

91,14000,63

12,1900

466,691

635043

00_4424

Report for 12 month period ending February 2000 -
EL2/96 - Tenth Legion Area
Allegiance Mining NL*; Newnham Exploration and Mini
Newnham, L.A. EL2/96

5 cm

SCALE : 1:5000

0 50 100 200 m

Allegiance Mining N.L.

TENTH LEGION

ROCK GEOCHEMISTRY

Pb (In ppm)

COMPILED : R. Reid
DATE : 09/03/2000
DRAWN : G. M. Bennett
REVISIONS :
FILE : TL Rocks Pb 5000.wor

Newnham Exploration and Mining Services

Plate No. 6

E.L. 2/96

E.L. 22/97

123M/47

TLC001
TLC002
TLC003
TLC004
TLC005
TLC006
TLC007
TLC008
TLC009
TLC010
TLC011
TLC012
TLC013
TLC014
TH4
TH5
TH6
SY010
SY014
XYNANCE
SILVER STREAM
DAVERNS P
Trial Harbour Road

355000 mE
356000 mE
357000 mE
5361000 mN
5360000 mN
5359000 mN

00_4424

Report for 12 month period ending February 2000 - EL2/96 - Tenth Legion Area
Allegiance Mining NL*; Newnham Exploration and Mini
Newnham, L.A. EL2/96

5 cm

SCALE : 1:5000

0 50 100 200 m

Allegiance Mining N.L.

TENTH LEGION
ROCK GEOCHEMISTRY
As (In ppm)

COMPILED : R. Reid
DATE : 09/03/2000
DRAWN : G. Bennett
REVISIONS :
FILE : TL Rocks As 5000.wor

Newnham Exploration and Mining Services

Plate No. 7

00-4424B

635045

APPENDIX 2

EVALUATION OF PREVIOUS DRILLING

ALLEGIANCE MINING N.L.

REVIEW OF DRILLING AT TENTH LEGION

MARCH 2000

Prepared by

MICHAEL V. McKEOWN

MEngSci (Ballarat), Grad Dip Mining (Ballarat),
BSc (Melbourne), Ass Dip Ag Bus Man (Launceston)
Fellow AusIMM

for

McKEOWN MINING PTY LTD
RIDGLEY, TASMANIA
(phone 03 6435 7560)

on behalf of

ALLEGIANCE MINING N.L.

ABBREVIATIONS

Textual abbreviations

CRAE	CRA Exploration Pty Ltd
MRT	Mineral Resources Tasmania
RGCE	RGC Exploration Pty Ltd

Scientific abbreviations

Ag	silver
Au	gold
As	arsenic
Cu	copper
Ni	nickel
Pb	lead
Sn	tin
W	tungsten
Zn	zinc

CONTENTS

TABLES

FIGURES

all figures appear at the end of the text before the appendices

1 INTRODUCTION

The Tenth Legion area lies 5 kilometres west of Zeehan, about a kilometre north of the Avebury prospect. Access to the area is by way of a track leading northwards of the Zeehan to Trial Harbour road.

The possibility of the presence of nickel in the known magnetite occurrences at the Tenth Legion was suggested after the discovery of significant nickel mineralisation associated with magnetite at the Avebury prospect (McKeown, 1998). Consequently, a decision was made to undertake a review of the logging of the existing drill core from the Tenth Legion and to split and assay the core for nickel where necessary (Newnham, 1999).

This report presents the results of the logging review and assaying.

2 RECENT HISTORY

The occurrence of magnetite at Tenth Legion has been known for many years. In the early 1970s, the area came to the notice of IMI, who had earlier held the Savage River iron leases, as a potential source of iron ore. Tenth Legion was held under five small Mining Leases which, at the time, were surrounded by an Exploration Licence held by RGC Exploration Pty Ltd (RGCE). The Mining Leases were numbered 50M/75 to 54M/75. During 1981, CRA Exploration Pty Ltd (CRAE), in joint venture with IMI, undertook exploration on the five leases, including the drilling of fourteen diamond drill holes, numbered TLC1 to TLC14 (Figure 1).

3 THE TENTH LEGION GRID

CRAE established a cut grid over the five leases, described by Broadbent (1981):

> "The boundaries of the leases were cleared and surveyed to Mines Department regulations by licensed surveyor Mr K. Michell of Devonport. Wherever possible the cut lease boundaries were incorporated into the grid. The north western corner of lease 53M/75 was assigned the grid co-ordinates 4990 North, 5000 East. Grids lines were made parallel to the North-south trending boundary lines, an AMG bearing of eight degrees, forty three minutes ... and spaced a

nominal 100 metres apart. The lines were set and turned with a WILD T16 theodolite, and kept on course with improvised line poles."

In this report, all co-ordinates and bearings are expressed using this local grid.

An approximate conversion to AMG can be obtained using the formulae:

AMG north = 5,359,600 + (local grid north - 3,105)*Cos8°43"

AMG east = 255,250 + (local grid east - 5,445)*Cos8°43"

This conversion has been estimated by reference to existing plans and is not based on field surveys.

4 LOCAL GEOLOGY

The rocks at Tenth Legion have been metasomatically metamorphosed by the nearby granite. The oldest rocks belong to the Oonah Formation, originally a sedimentary rock sequence, including sandstones, siltstones, shales, limestones and dolomites. These rocks were later intruded by the Cambrian ultramafic complex which outcrops in the south-eastern corner of the area. All these pre-existing rocks were intruded by the Devonian Heemskirk granite which outcrops just to the west of Tenth Legion.

The mega-structure of the area is dominated by two features, both attributable to Tabberabberan events: an anticline and a fault, the Tenth Legion fault. The anticlinal axis strikes just south of east and appears to plunge steeply to the east; the rocks on the limbs of the anticline dip steeply to the north on the northern limb, and to the south-west on the southern limb. The Tenth Legion fault cuts across the north-eastern corner of the area and separates the mineralised and altered rocks to the south from relatively unaltered Oonah Formation rocks to the north.

A stratigraphic succession has been derived, based on the lithological and structural relationships just described and the interpretation of the diamond drill holes (Table 1).

TABLE 1

TENTH LEGION AREA
STRATIGRAPHIC SUCCESSION IN
ALTERED SEDIMENTARY ROCK SEQUENCE

rock type	**original vertical thickness**		
siltstone, shale and quartzite	50m+	|	
calc-silicate rock +/- magnetite	30m to 70m	|	
siltstone, shale and quartzite	10m to 20m	|	TLC1, TLC2,
calc-silicate rock +/- magnetite	20m to 50m	|	TLC9, TLC10,
sitstone, shale and quartzite	0m to 20m	|	TLC11, TLC14
calc-silicate rock +/- magnetite	0m to 40m	|	
quartz sericite rock	30m to 40m	|	
calc-silcate rock	20m to 30m		
quartz sericite rock	70m to 90m		
calc-silicate rock +/- magnetite	0m to 20m		
quartz-sericite rock +/- magnetite	20m to 80m		
calc-silicate rock +/- magnetite	40m to 60m	|	TLC6, TLC13
limestone	50m to 70m		
limestone and calc-silicate rock	70m to 120m	|	TLC3, TLC4,
+/- magnetite		|	TLC5,TLC7,
		|	TLC8
calc-silicate rock	100m+		

note: TLC12 was drilled north of the Tenth Legion fault

The sedimentary rocks have been metamorphosed, and metasomatically altered during the intrusion of the granite. Metamorphism has altered the sandstones to quartzites, and crystallised parts of the dolomites. The most obvious effect of the metasomatism is the presence of massive to semi-massive magnetite which has replaced parts of the calcareous

rocks. Other alterations include serpentinisation of the calcareous rocks, calc-silicate alteration of siltsones, and calcareous siltstones, and sericitisation of quartzites. Several sulphide minerals are also known in the area including pyrrhotite and pyrite, chalcopyrite, and traces of cassiterite have been detected.

Of the base metal sulphides, the most common is sphalerite and parts of the area have been subject to prospecting for zinc in the past. As has already been mentioned (2 RECENT HISTORY), the magnetite in the area has been considered as a source of iron ore. The proximity of the nearby Heemskirk granite to the calcareous rocks at Tenth Legion suggests that significant tin mineralisation may occur.

Petrological examination of several specimens of drill core supports the view that the rocks at Tenth Legion were formed by the metasomatic alteration of calcareous sedimentary rocks (Fander, 1999, Appendix 5). Earlier petrogrpahic examination suggested that some of the altered rocks may have had ultramafic origins (Broadbent, 1981), however, such an origin now seems less likley (see 8 CONCLUSIONS).

5 DIAMOND DRILLING

Two programs of diamond drilling have been undertaken at Tenth Legion: a two hole program by the Tasmania Department of Mines, numbered MD1 and MD2, and a fourteen hole program by CRAE, numbered TLC1 to TLC14 (Figure 1). Core from the all but TLC1 of the CRAE holes is held at the Mineral Resources Tasmania core store at Mornington Rd, Mornington.

Logs of the holes logged by CRAE geologists are appended (Appendix 4).

6 REVIEW OF DIAMOND DRILLING

6.1 INTRODUCTION

Core from holes TLC2 and TLC10 was examined and re-logged in some detail (Appendix 1). Not surprisingly, the re-logging did not differ significantly from the original logging by CRAE staff. Subsequently, core from all other holes, except TLC1, was examined and re-logged in summary form (Appendix 2). Wherever practical, down-hole intervals in the re-logs were matched to down-hole intervals in the CRAE logs.

CRAE had split, by sawing, the mineralised and altered parts of the core for assaying for copper, lead, zinc, silver, tin, tungsten, arsenic and gold. Subsequent to re-logging, parts of the core were quartered by sawing and 295 samples were submitted for nickel analysis (Appendix 6).

For this review, the CRAE assay data, the new nickel assays, the drillhole collar co-ordinates, drillhole dips and bearings, and a brief rock code for each down-hole lithological interval (Appendix 3) were entered into spreadsheets. This database was used as the basis for the review of metal occurrences which follows and for the preparation of the drillhole sections (Figures 2 to 15).

6.2 THE ASSAY RESULTS

A summary of some statistics of the assay results is presented in Table 2.

TABLE 2

TENTH LEGION DIAMOND DRILLING
SUMMARY OF ASSAY RESULTS

element	no of samples	maximum value ppm	no of samples >1000ppm	no of samples >10000ppm
As	185	2300	1	0
Cu	1107	2750	12	0
Ni	295	395	0	0
Pb	1107	16000	10	1
Sn	1103	33000	33	1
W	1102	620	0	0
Zn	1107	141000	232	62

element	no of samples	maximum value ppm	no of samples >5ppm
Ag	1106	20	3

element	no of samples	maximum value ppm	no of samples >0.1ppm	no of samples >1ppm
Au	185	1.34	6	1

The re-assaying for nickel did not reveal any significant nickel occurrences. The altered rocks at Tenth Legion, including the magnetite bodies, all appear to be altered sedimentary rocks rather than altered ultramafic rocks.

There is extensive calc-silicate alteration in the Tenth Legion area and many skarnised rocks, so it is surprising that the only metals which are present in anomalous amounts are tin and zinc, but only zinc is present in significant amounts.

The only significant tin assay is 3.3% Sn in TLC1 from 28.5m to 31.1m in a zone of calc-silicate rock with magnetite. It is difficult to estimate the significance of this single anomalous assay.

Zinc levels range up to 14.1% Zn and there are 232 assay intervals where the assay exceeds 0.1% Zn. The anomalous zinc occurs in two areas: one in the north in holes TLC11, TLC10, TLC1, TLC9, TLC14 and TLC2; one in the south-west in holes TLC4, TLC3 and TLC8 (Figure 1). The zinc assays which exceed 0.1% Zn have a total down-hole length of 290.6m at a length weighted average grade of 0.73% Zn. Above 1% Zn, the total down-hole length is 55.4m and the length weighted average grade is 2.67% Zn.

The highest gold assay returned was 1.34ppm from TLC6 12.2m to 13.4m. The four highest gold assays were from four widely separated holes - TLC5, TLC6, TLC7 and TLC9 - and from four different rock types - calc-silicate rock, limestone with magnetite, massive magnetite, and siltstone respectively. There appears to be no correlation between the samples beyond their occurrence in a very altered rock sequence.

7 ZINC MINERALISATION

In the northern group of holes with anomalous zinc it is not possible to correlate the high zinc zones. The holes pass through a rock sequence which can be correlated from hole to hole using shale/siltstone bands as markers but, on this basis, the locations of the high zinc values are not stratigraphically consistent from hole to hole.

In the southern three holes, with similarly anomalous zinc content, correlation is possible. Holes TLC3 and TLC8 both intersected anomalous zinc over a broad zone which correlates spatially (Figures 4 and 9) and lithologically between the holes:

TLC3	9.0m to 75.6m	66.2m down-hole length at 1.33% Zn
TLC8	15.0m to 85.7m	70.7m down-hole length at 0.67% Zn

TLC3 and TLC8 are about 100 metres apart.

The anomalous zone in TLC4 was narrower:

TLC4	54.9m to 56.9m	2.0m down-hole length at 1.44% Zn

The intersection in TLC4 occurs about 200 metres to the south-west of TLC3 and this intersection could represent the tail end of the mineralised lens within the calcareous sequence.

Both TLC3 and TLC8 included higher grade zones, which are not readily correlatable:

TLC3	15.5m to 26.0m	7.9m down-hole length at 5.08% Zn
TLC8	53.6m to 70.1m	6.5m down-hole length at 2.66% Zn

In both holes, the zinc mineralisation occurs in a sequence of limestones and dolomites altered to calc-silicate rocks with varying magnetite content ranging from no magnetite to massive magnetite. The proportion of zinc present does not appear to be strictly related to the proportion of magnetite present but the two highest zinc grades in TLC3 were associated with high magnetite contents.

It appears that the rocks in the area near these two holes dip steeply to the south-east, so the horizontal thickness of the two anomalous zones is about 50 metres. The holes are collared about 100 metres apart and if the anomalous zone persisted over a vertical height of 100 metres. At a density of 3 tonnes per cubic metre, such a block represents 1,500,000 tonnes of mineralisation at a grade of about 1% Zn. The intersections in TLC3 and TLC8 suggest that there would be higher grade zones within this block.

8 CONCLUSIONS

The Tenth Legion mineralisation appears to be the result of metasomatic alteration of calcareous sedimentary rocks during the intrusion of a granite. This view is supported by:

- the presence of calc-silicate alteration in many of the drill holes,

- the presence of magnetite but no reported chromite,
- the significant tin content of some of the rocks,
- the lack of any significant nickel content in any of the rocks despite the presence of pyrhhotite in places,
- the presence of limestone and dolomite,
- the proximity of the Heemskirk granite.

Two zones of calc-silicate rocks with magnetite and significant zinc have been identified. The southern zone appears to have some stratigraphic and spatial continuity and is a potential target for the discovery of a zinc resource. Given Allegiance Mining's current tenure over other zinc tenements near Zeehan, drilling to test the possibility of the existence of a resource at Tenth Legion is recommended.

References

Broadbent, G., 1981. Tenth Legion prospect (IMI joint venture) interim report November 1980 - August 1981, 14th August 1981. CRA Exploration Pty Ltd.

Fander, H.W., 1999. Report CMS99/10/8, 18 October 1999. Central Mineralogical Services.

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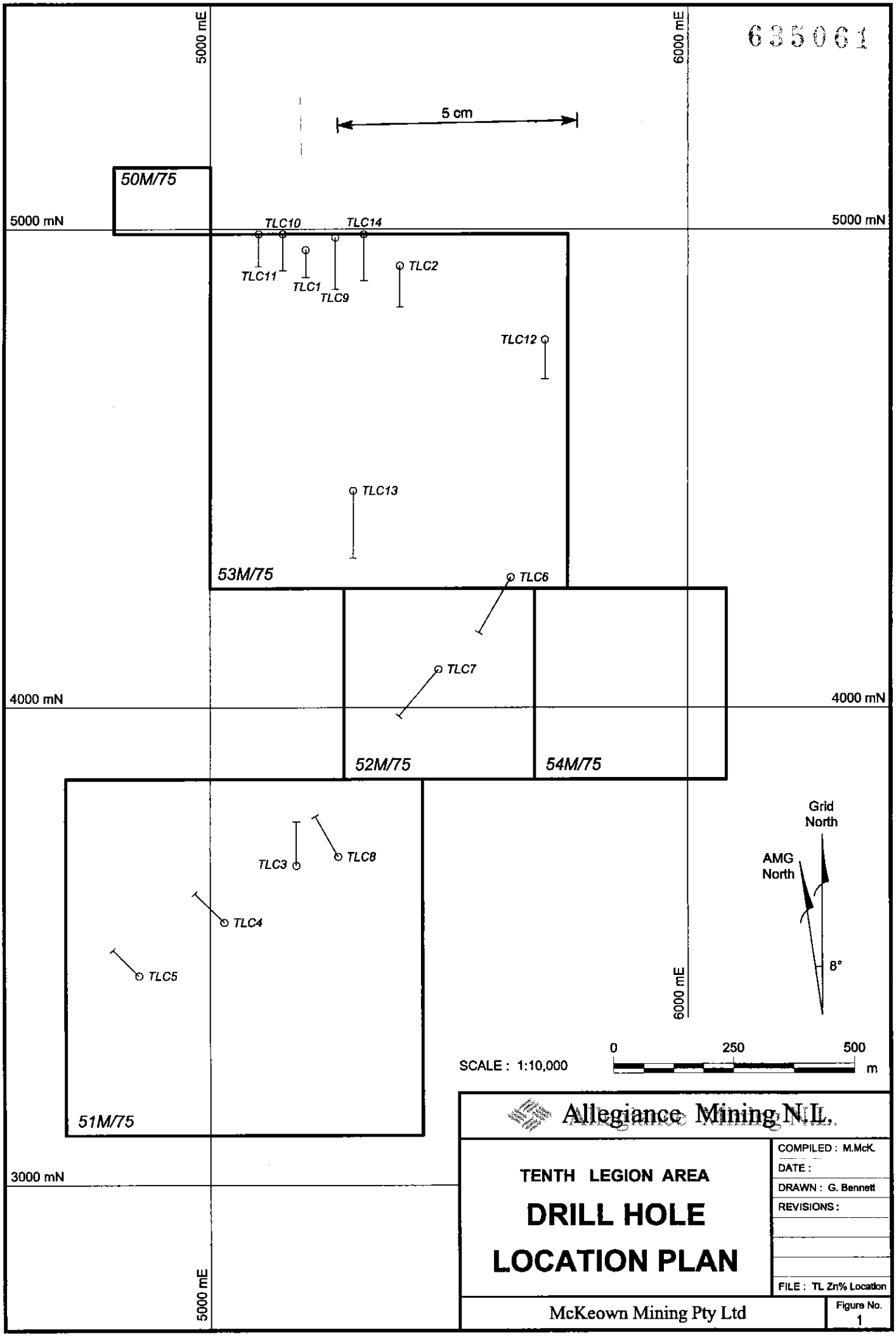
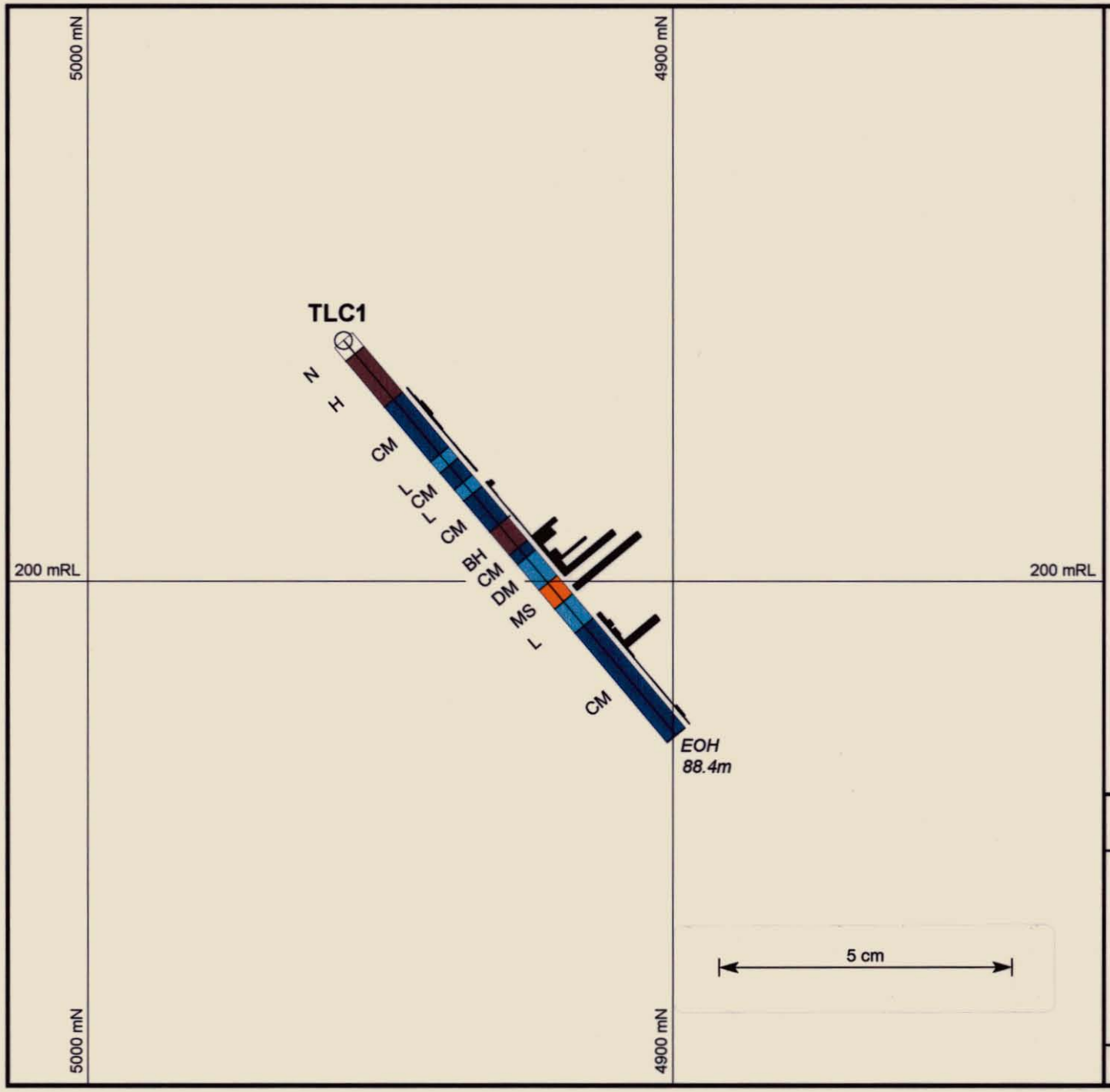

635061
5000 mE
6000 mE
5 cm
50M/75
5000 mN
TLC10
TLC14
TLC11
TLC1
TLC9
TLC2
TLC12
TLC13
53M/75
TLC6
TLC7
4000 mN
52M/75
54M/75
TLC3
TLC8
TLC4
TLC5
51M/75
3000 mN
Grid North
AMG North
8°
0
250
500
m
SCALE : 1:10,000
Allegiance Mining N.L.
TENTH LEGION AREA
DRILL HOLE LOCATION PLAN
COMPILED : M.McK.
DATE :
DRAWN : G. Bennett
REVISIONS :
FILE : TL Zn% Location
McKeown Mining Pty Ltd
Figure No. 1



LEGEND

N	No core recovered
Y	Clays
H	Shale and siltstone
Q	Quartzite, quartz-sericite rock
D	Dolomite
DM	Dolomite with magnetite
L	Limestone
LC	Limestone with calc-silicate alteration
LM	Limestone with magnetite
LS	Limestone with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
M	Massive magnetite
MC	Magnetite with calc-silicate mineralisation
MQ	Magnetite with silicate mineralisation
MS	Magnetite with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
S	Serpentinite
SM	Serpentinite with magnetite
	Breccia
BC	Brecciated calc-silicate rock
BH	Brecciated shale and siltstone
BS	Brecciated serpentinite

SCALE : 1:1000 0 25 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

DRILL HOLE TLC1

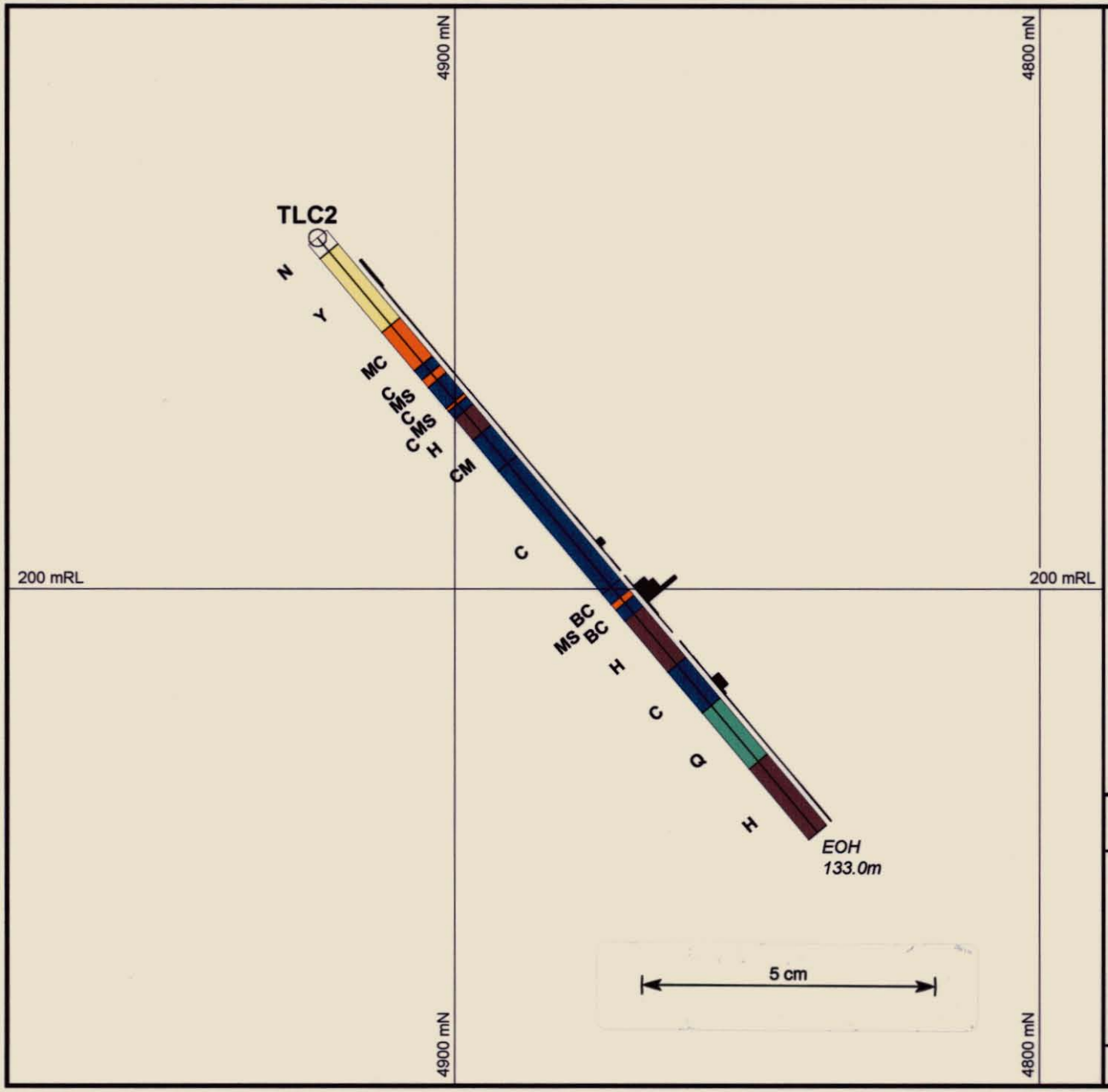
SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :
FILE : TL ZN% TLC001

McKeown Mining Pty Ltd

Figure No. 2

635062



LEGEND

N	No core recovered
Y	Clays
H	Shale and siltstone
Q	Quartzite, quartz-sericite rock
D	Dolomite
DM	Dolomite with magnetite
L	Limestone
LC	Limestone with calc-silicate alteration
LM	Limestone with magnetite
LS	Limestone with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
M	Massive magnetite
MC	Magnetite with calc-silicate mineralisation
MQ	Magnetite with silicate mineralisation
MS	Magnetite with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
S	Serpentinite
SM	Serpentinite with magnetite
	Breccia
BC	Brecciated calc-silicate rock
BH	Brecciated shale and siltstone
BS	Brecciated serpentinite

SCALE : 1:1000 0 25 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

DRILL HOLE TLC2

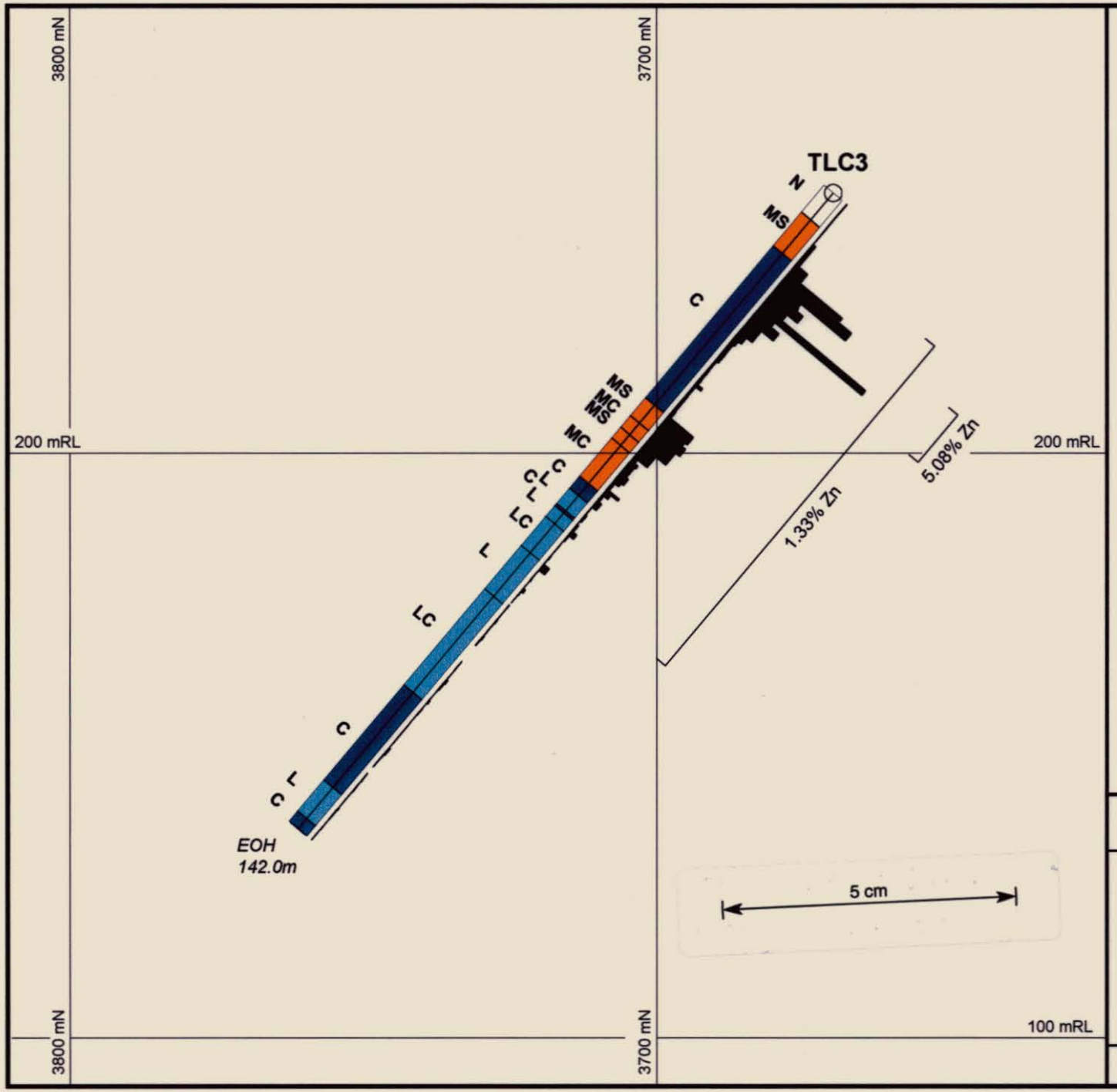
SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :
FILE : TL Zn% TLC002

McKeown Mining Pty Ltd

Figure No. 3

6350663



LEGEND

- N — No core recovered
- Y — Clays
- H — Shale and siltstone
- Q — Quartzite, quartz-sericite rock
- D — Dolomite
- DM — Dolomite with magnetite
- L — Limestone
- LC — Limestone with calc-silicate alteration
- LM — Limestone with magnetite
- LS — Limestone with serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- M — Massive magnetite
- MC — Magnetite with calc-silicate mineralisation
- MQ — Magnetite with silicate mineralisation
- MS — Magnetite with serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- S — Serpentinite
- SM — Serpentinite with magnetite
- Breccia
- BC — Brecciated calc-silicate rock
- BH — Brecciated shale and siltstone
- BS — Brecciated serpentinite

SCALE : 1:1000 — 0 — 25 — 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

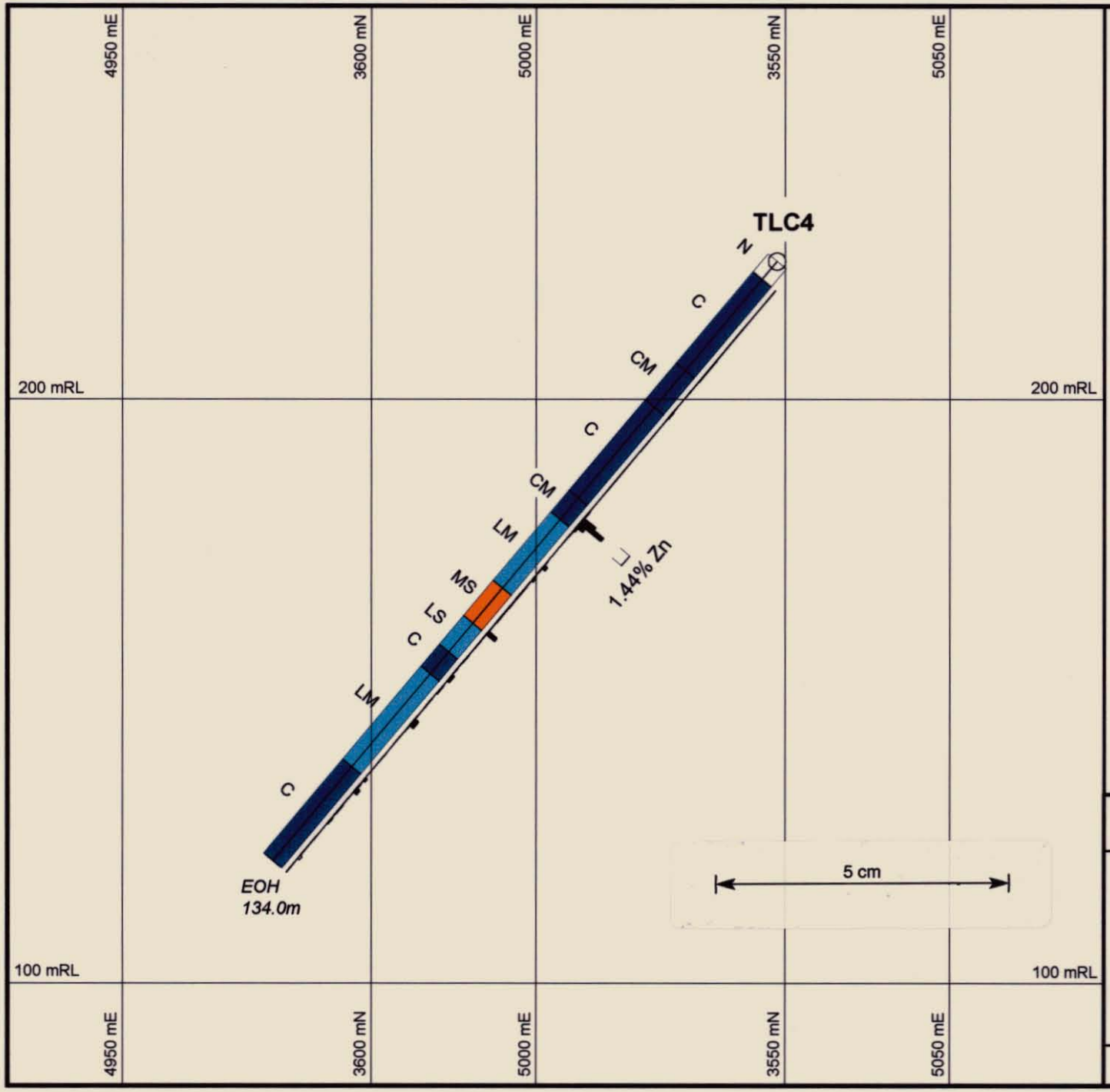
DRILL HOLE TLC3

SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :
FILE : TL Zn% TLC003

McKeown Mining Pty Ltd

Figure No. 4



LEGEND

N	No core recovered
Y	Clays
H	Shale and siltstone
Q	Quartzite, quartz-sericite rock
D	Dolomite
DM	Dolomite with magnetite
L	Limestone
LC	Limestone with calc-silicate alteration
LM	Limestone with magnetite
LS	Limestone with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
M	Massive magnetite
MC	Magnetite with calc-silicate mineralisation
MQ	Magnetite with silicate mineralisation
MS	Magnetite with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
S	Serpentinite
SM	Serpentinite with magnetite
	Breccia
BC	Brecciated calc-silicate rock
BH	Brecciated shale and siltstone
BS	Brecciated serpentinite

SCALE : 1:1000 — 0 — 25 — 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

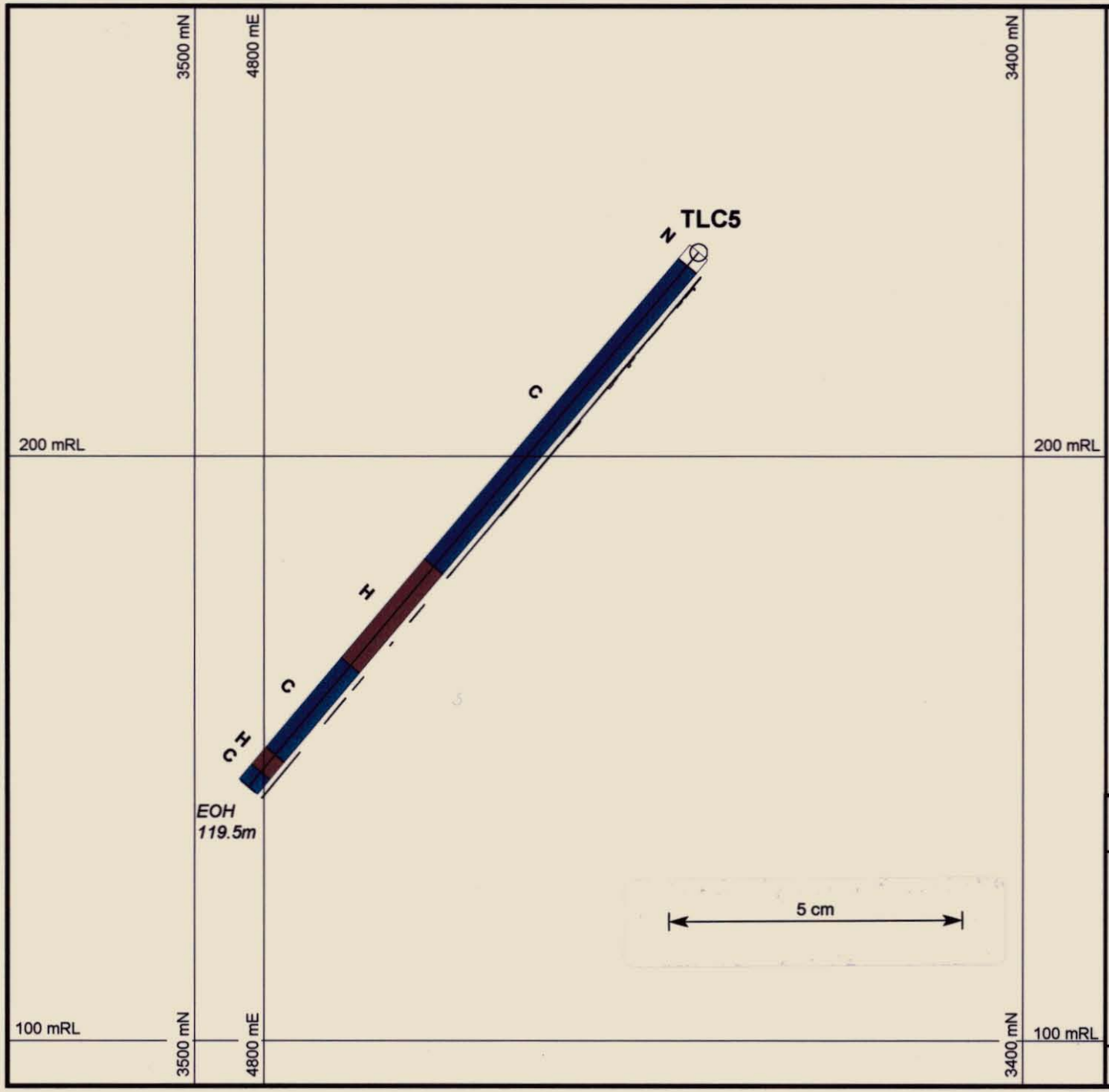
DRILL HOLE TLC4

SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :
FILE : TL Zn% TLC004

McKeown Mining Pty Ltd

Figure No. 5



LEGEND

N	No core recovered
Y	Clays
H	Shale and siltstone
Q	Quartzite, quartz-sericite rock
D	Dolomite
DM	Dolomite with magnetite
L	Limestone
LC	Limestone with calc-silicate alteration
LM	Limestone with magnetite
LS	Limestone with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
M	Massive magnetite
MC	Magnetite with calc-silicate mineralisation
MQ	Magnetite with silicate mineralisation
MS	Magnetite with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
S	Serpentinite
SM	Serpentinite with magnetite
	Breccia
BC	Brecciated calc-silicate rock
BH	Brecciated shale and siltstone
BS	Brecciated serpentinite

SCALE : 1:1000 — 0 — 25 — 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

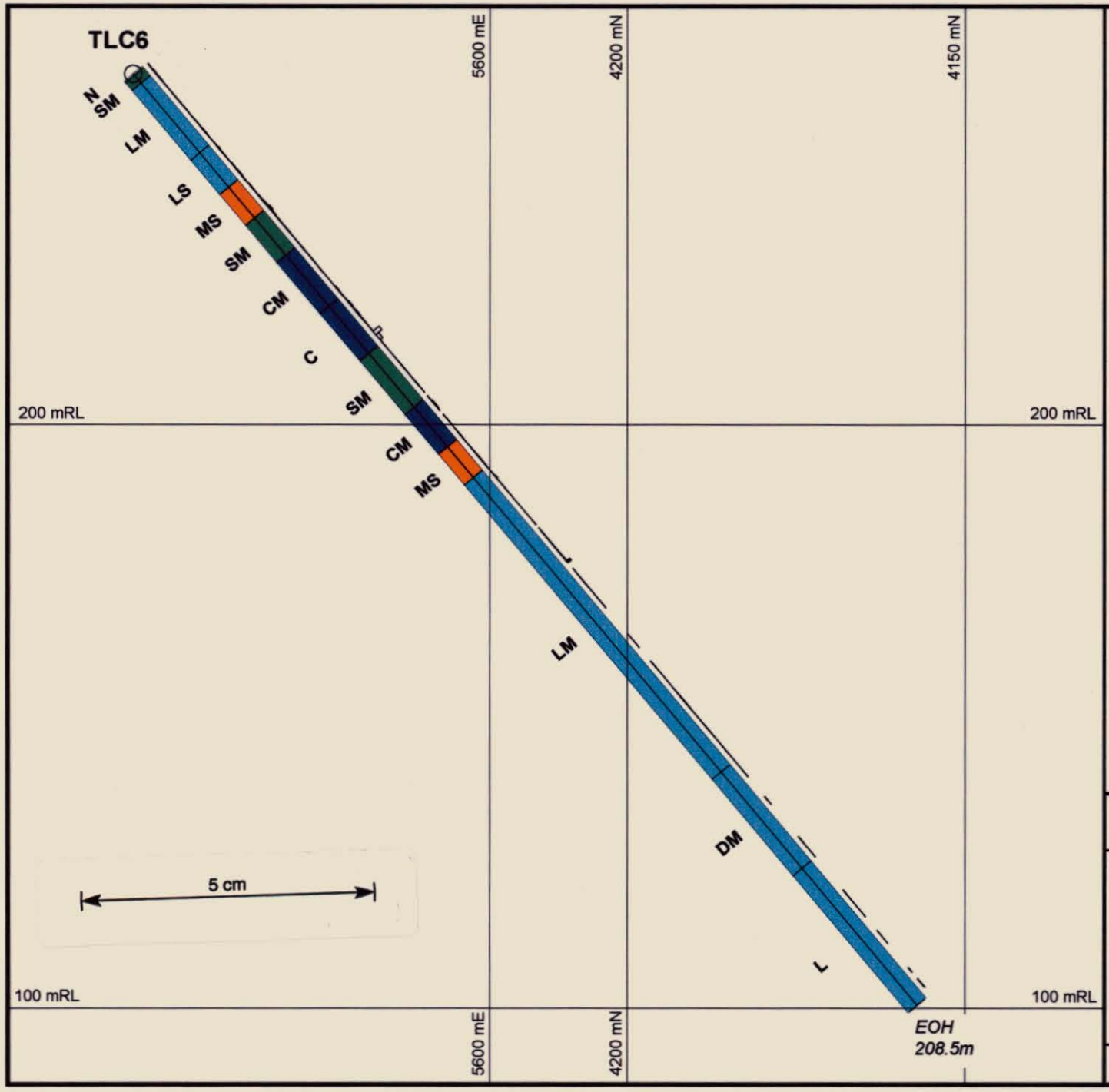
DRILL HOLE TLC5

SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK	
DATE : 15.03.00	
DRAWN : G. Bennett	
REVISIONS :	
FILE : TL Zn% TLC005	

McKeown Mining Pty Ltd

Figure No. 6



LEGEND

N	No core recovered
Y	Clays
H	Shale and siltstone
Q	Quartzite, quartz-sericite rock
D	Dolomite
DM	Dolomite with magnetite
L	Limestone
LC	Limestone with calc-silicate alteration
LM	Limestone with magnetite
LS	Limestone with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
M	Massive magnetite
MC	Magnetite with calc-silicate mineralisation
MQ	Magnetite with silicate mineralisation
MS	Magnetite with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
S	Serpentinite
SM	Serpentinite with magnetite
	Breccia
BC	Brecciated calc-silicate rock
BH	Brecciated shale and siltstone
BS	Brecciated serpentinite

SCALE : 1:1000

0 25 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

DRILL HOLE TLC6

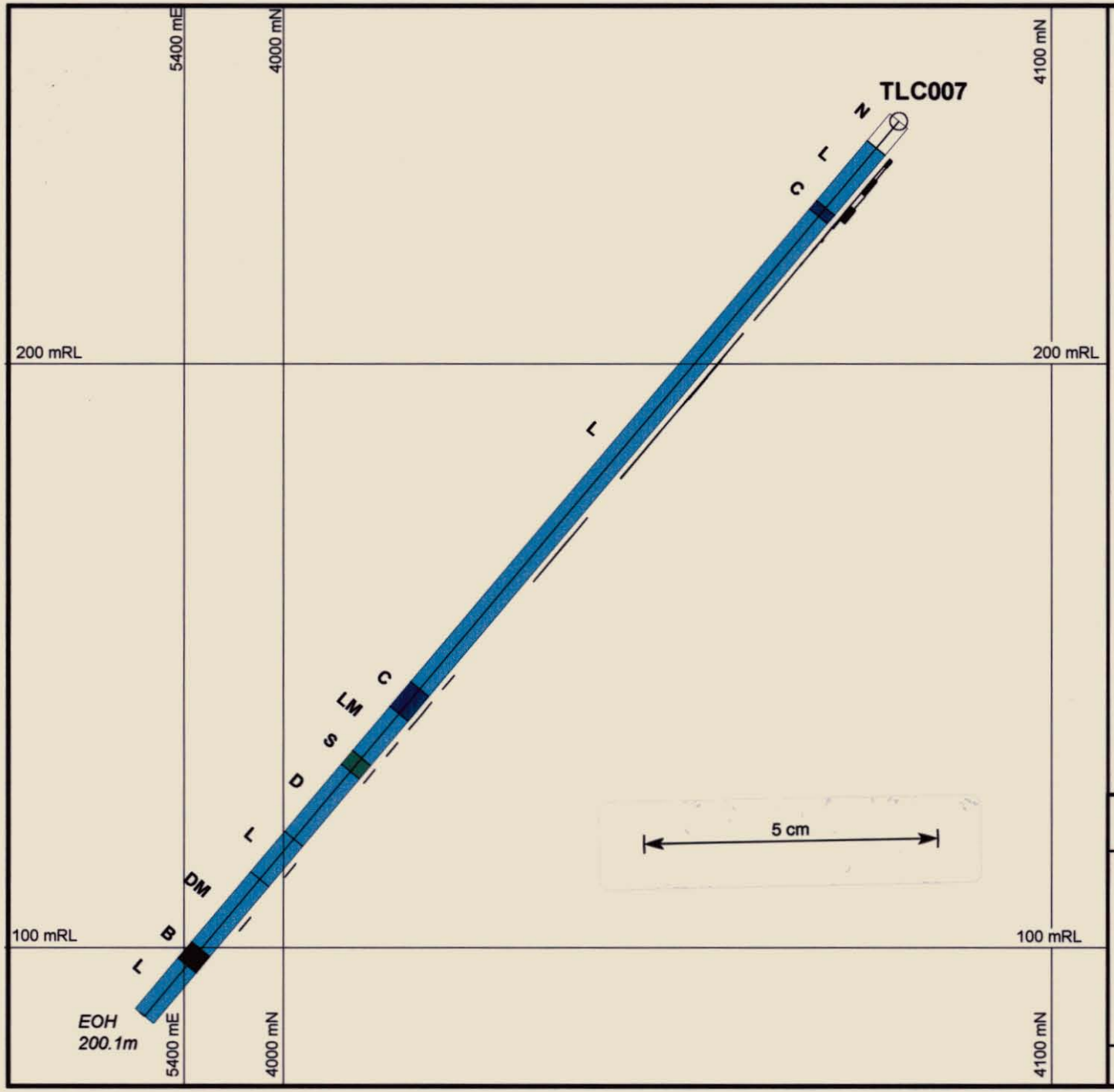
SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :

FILE : TL Zn% TLC006

McKeown Mining Pty Ltd

Figure No. 7



LEGEND

N	No core recovered
Y	Clays
H	Shale and siltstone
Q	Quartzite, quartz-sericite rock
D	Dolomite
DM	Dolomite with magnetite
L	Limestone
LC	Limestone with calc-silicate alteration
LM	Limestone with magnetite
LS	Limestone with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
M	Massive magnetite
MC	Magnetite with calc-silicate mineralisation
MQ	Magnetite with silicate mineralisation
MS	Magnetite with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
S	Serpentinite
SM	Serpentinite with magnetite
	Breccia
BC	Brecciated calc-silicate rock
BH	Brecciated shale and siltstone
BS	Brecciated serpentinite

SCALE : 1:1000

0 25 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

DRILL HOLE TLC7

SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

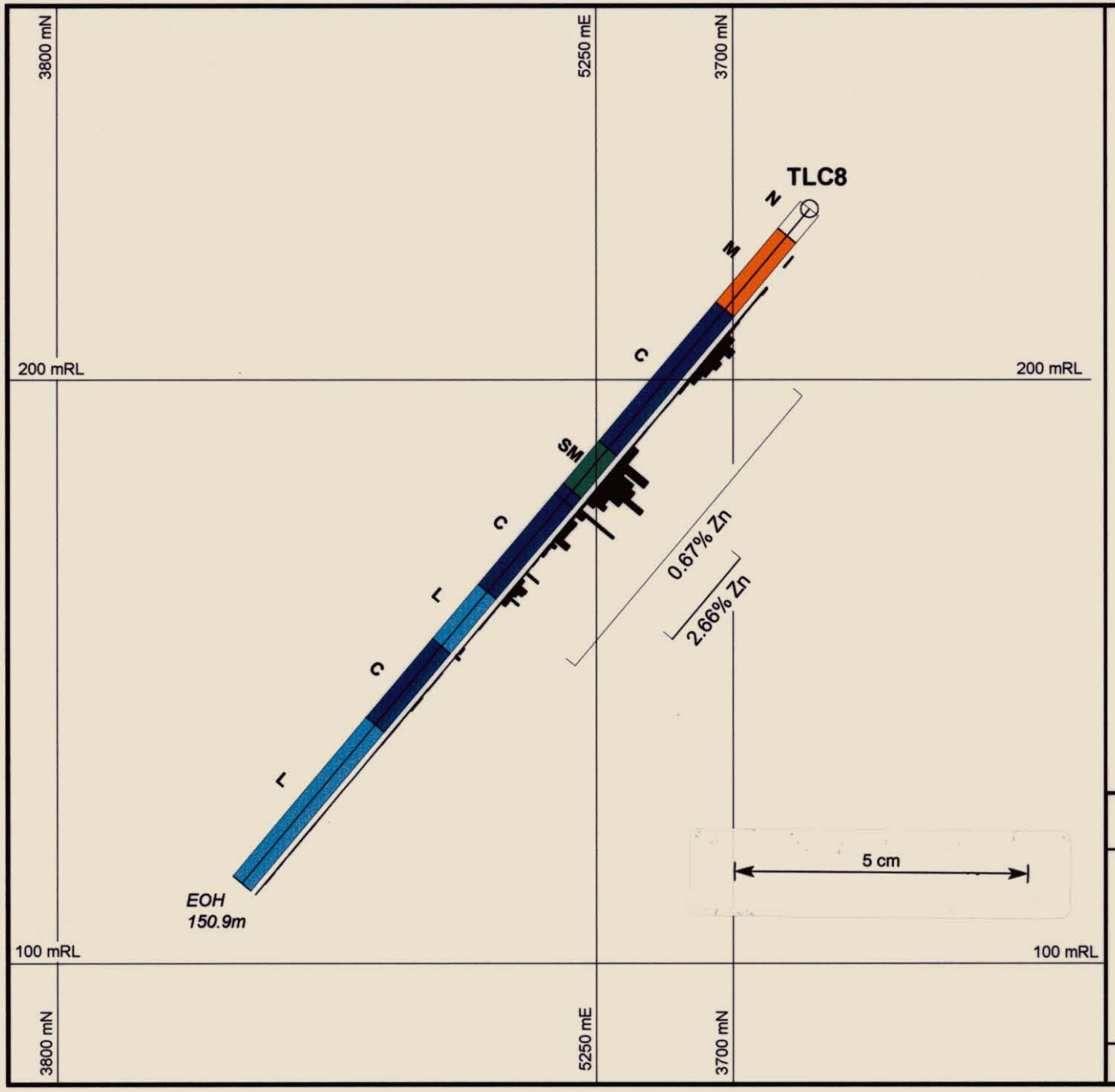
COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :

FILE : TL Zn% TLC007

McKeown Mining Pty Ltd

Figure No. 8

635068



LEGEND

- N — No core recovered
- Y — Clays
- H — Shale and siltstone
- Q — Quartzite, quartz-sericite rock
- D — Dolomite
- DM — Dolomite with magnetite
- L — Limestone
- LC — Limestone with calc-silicate alteration
- LM — Limestone with magnetite
- LS — Limestone with serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- M — Massive magnetite
- MC — Magnetite with calc-silicate mineralisation
- MQ — Magnetite with silicate mineralisation
- MS — Magnetite with serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- S — Serpentinite
- SM — Serpentinite with magnetite
- Breccia
- BC — Brecciated calc-silicate rock
- BH — Brecciated shale and siltstone
- BS — Brecciated serpentinite

SCALE : 1:1000 (0, 25, 50 m)

Allegiance Mining N.L.

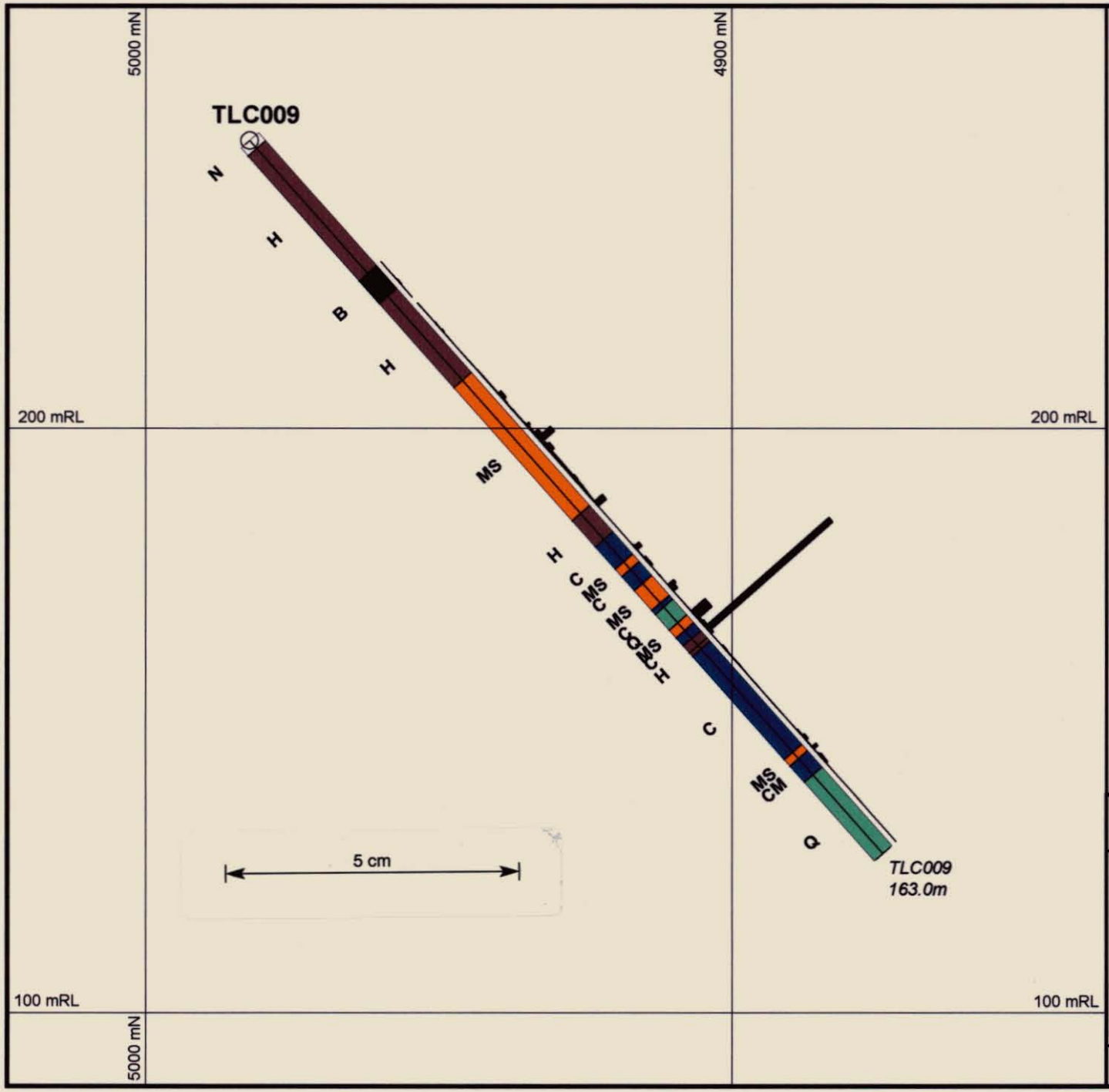
TENTH LEGION AREA
CROSS SECTION THROUGH
DRILL HOLE TLC8
SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :
FILE : TL Zn% TLC008

McKeown Mining Pty Ltd

Figure No. 9

6350369



LEGEND

N	No core recovered
Y	Clays
H	Shale and siltstone
Q	Quartzite, quartz-sericite rock
D	Dolomite
DM	Dolomite with magnetite
L	Limestone
LC	Limestone with calc-silicate alteration
LM	Limestone with magnetite
LS	Limestone with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
M	Massive magnetite
MC	Magnetite with calc-silicate mineralisation
MQ	Magnetite with silicate mineralisation
MS	Magnetite with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
S	Serpentinite
SM	Serpentinite with magnetite
	Breccia
BC	Brecciated calc-silicate rock
BH	Brecciated shale and siltstone
BS	Brecciated serpentinite

SCALE : 1:1000

0 25 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

DRILL HOLE TLC9

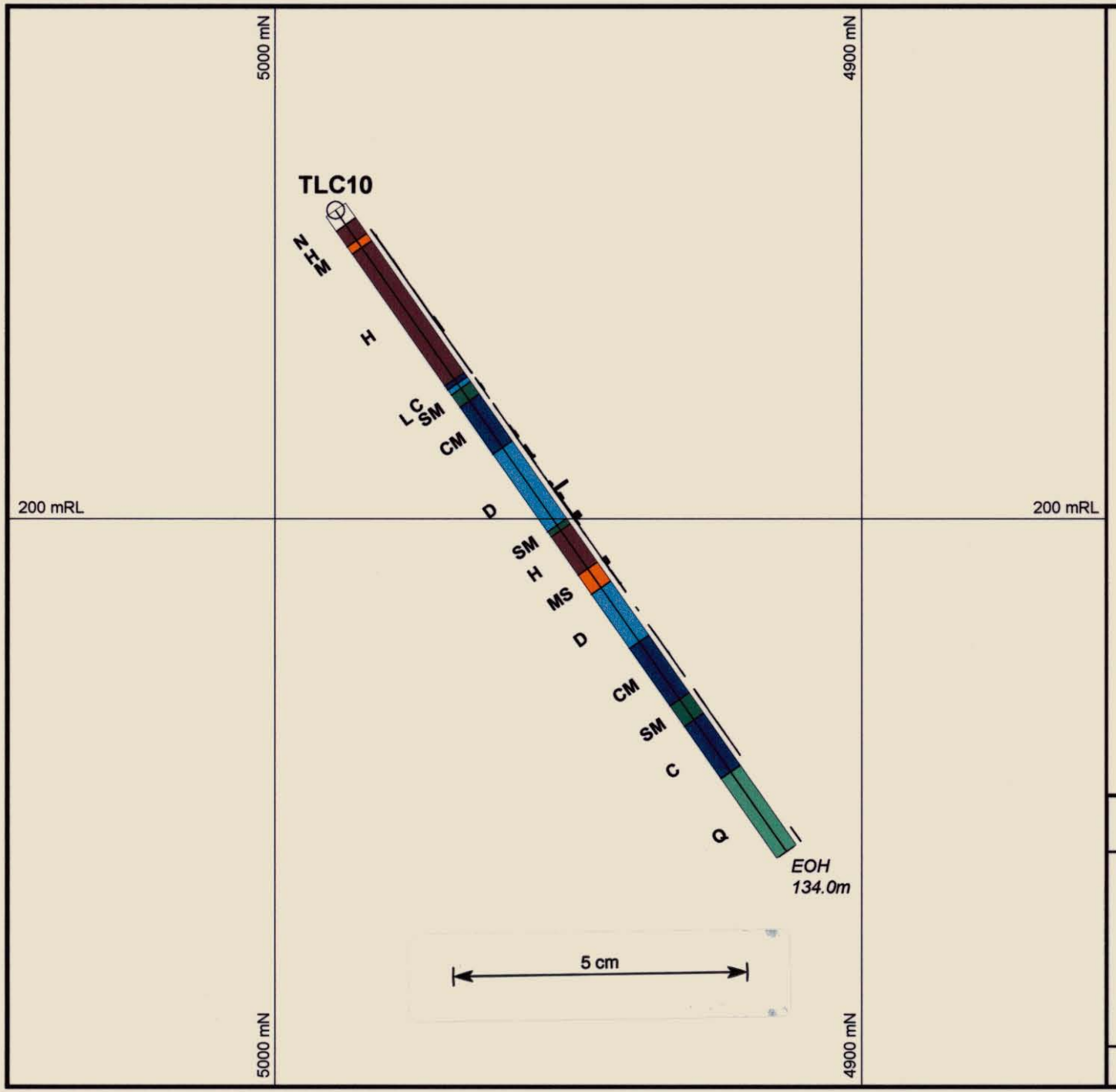
SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :
FILE : TL Zn% TLC009

McKeown Mining Pty Ltd

Figure No. 10

63507



LEGEND

N	No core recovered
Y	Clays
H	Shale and siltstone
Q	Quartzite, quartz-sericite rock
D	Dolomite
DM	Dolomite with magnetite
L	Limestone
LC	Limestone with calc-silicate alteration
LM	Limestone with magnetite
LS	Limestone with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
M	Massive magnetite
MC	Magnetite with calc-silicate mineralisation
MQ	Magnetite with silicate mineralisation
MS	Magnetite with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
S	Serpentinite
SM	Serpentinite with magnetite
	Breccia
BC	Brecciated calc-silicate rock
BH	Brecciated shale and siltstone
BS	Brecciated serpentinite

SCALE : 1:1000 — 0 — 25 — 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

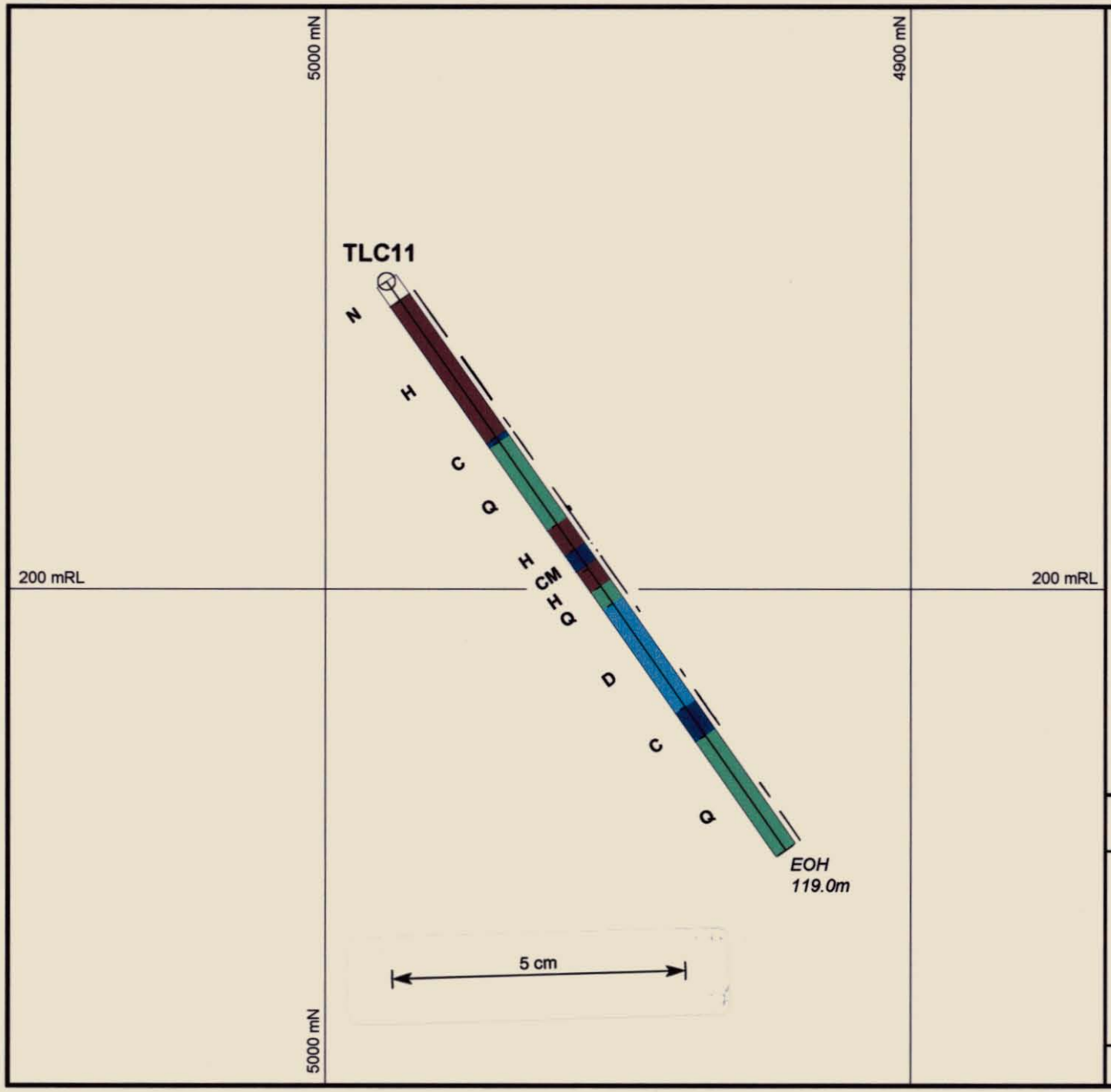
DRILL HOLE TLC10

SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK	
DATE : 15.03.00	
DRAWN : G. Bennett	
REVISIONS :	
FILE : TL Zn% TLC010	

McKeown Mining Pty Ltd

Figure No. 11



LEGEND

- N — No core recovered
- Y — Clays
- H — Shale and siltstone
- Q — Quartzite, quartz-sericite rock
- D — Dolomite
- DM — Dolomite with magnetite
- L — Limestone
- LC — Limestone with calc-silicate alteration
- LM — Limestone with magnetite
- LS — Limestone with serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- M — Massive magnetite
- MC — Magnetite with calc-silicate mineralisation
- MQ — Magnetite with silicate mineralisation
- MS — Magnetitewith serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- S — Serpentinite
- SM — Serpentinite with magnetite
- Breccia
- BC — Brecciated calc-silicate rock
- BH — Brecciated shale and siltstone
- BS — Brecciated serpentinite

SCALE : 1:1000 — 0 — 25 — 50 m

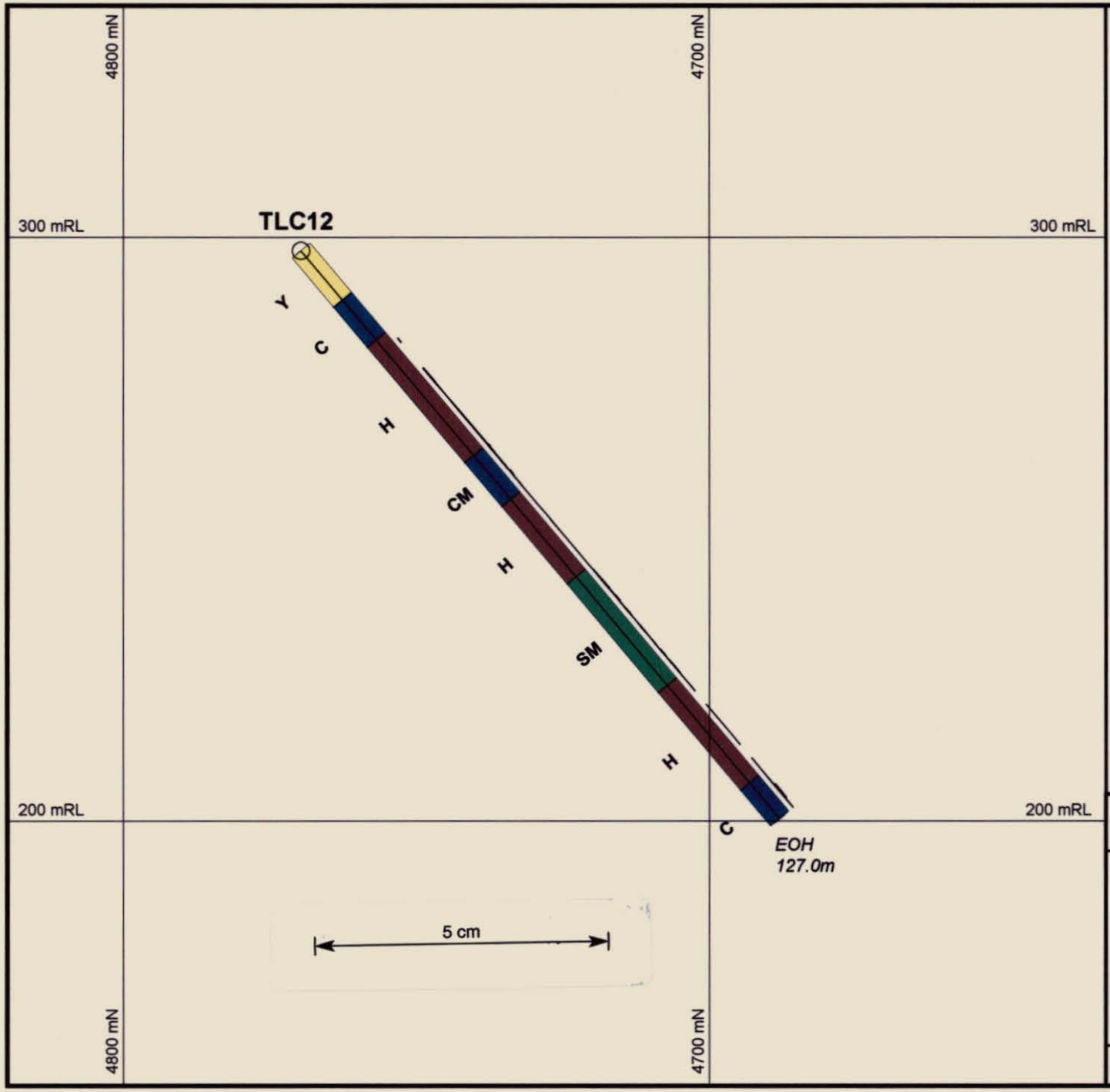
Allegiance Mining N.L.

TENTH LEGION AREA
CROSS SECTION THROUGH
DRILL HOLE TLC11
SHOWING LITHOGY AND
Zn ASSAYS (1cm = 1%)

COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :
FILE : TL Zn% TLC011

McKeown Mining Pty Ltd

Figure No. 12



LEGEND

- N — No core recovered
- Y — Clays
- H — Shale and siltstone
- Q — Quartzite, quartz-sericite rock
- D — Dolomite
- DM — Dolomite with magnetite
- L — Limestone
- LC — Limestone with calc-silicate alteration
- LM — Limestone with magnetite
- LS — Limestone with serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- M — Massive magnetite
- MC — Magnetite with calc-silicate mineralisation
- MQ — Magnetite with silicate mineralisation
- MS — Magnetite with serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- S — Serpentinite
- SM — Serpentinite with magnetite
- Breccia
- BC — Brecciated calc-silicate rock
- BH — Brecciated shale and siltstone
- BS — Brecciated serpentinite

SCALE : 1:1000

0 25 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

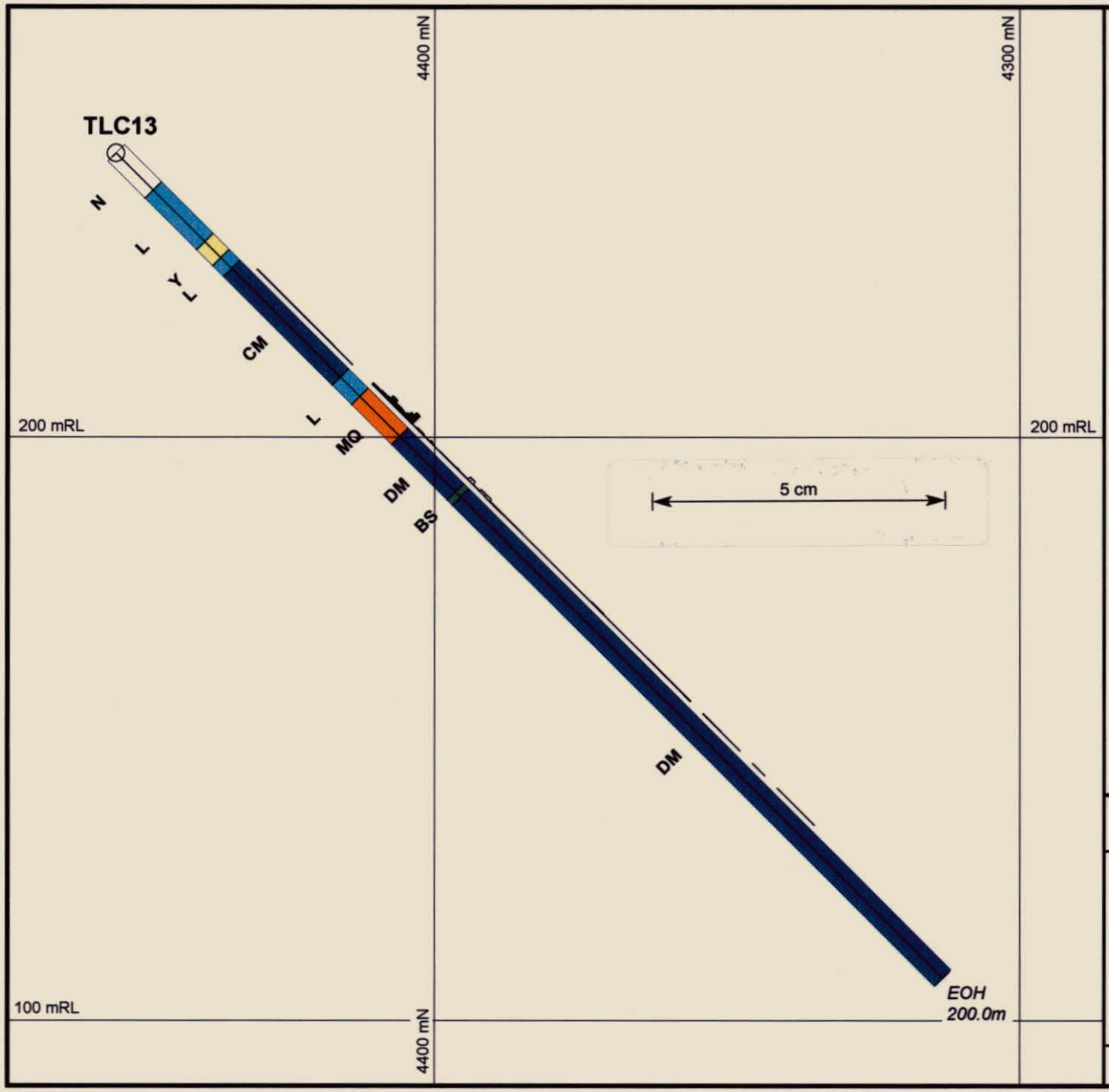
DRILL HOLE TLC12

SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED :	M. McK
DATE :	15.03.00
DRAWN :	G. Bennett
REVISIONS :	
FILE :	TL Zn% TLC012

McKeown Mining Pty Ltd

Figure No. 13



LEGEND

- N — No core recovered
- Y — Clays
- H — Shale and siltstone
- Q — Quartzite, quartz-sericite rock
- D — Dolomite
- DM — Dolomite with magnetite
- L — Limestone
- LC — Limestone with calc-silicate alteration
- LM — Limestone with magnetite
- LS — Limestone with serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- M — Massive magnetite
- MC — Magnetite with calc-silicate mineralisation
- MQ — Magnetite with silicate mineralisation
- MS — Magnetite with serpentinite
- C — Calc-silicate rock
- CM — Calc-silicate rock with magnetite
- S — Serpentinite
- SM — Serpentinite with magnetite
- Breccia
- CC — Brecciated calc-silicate rock
- BH — Brecciated shale and siltstone
- BS — Brecciated serpentinite

SCALE : 1:1000 — 0 25 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

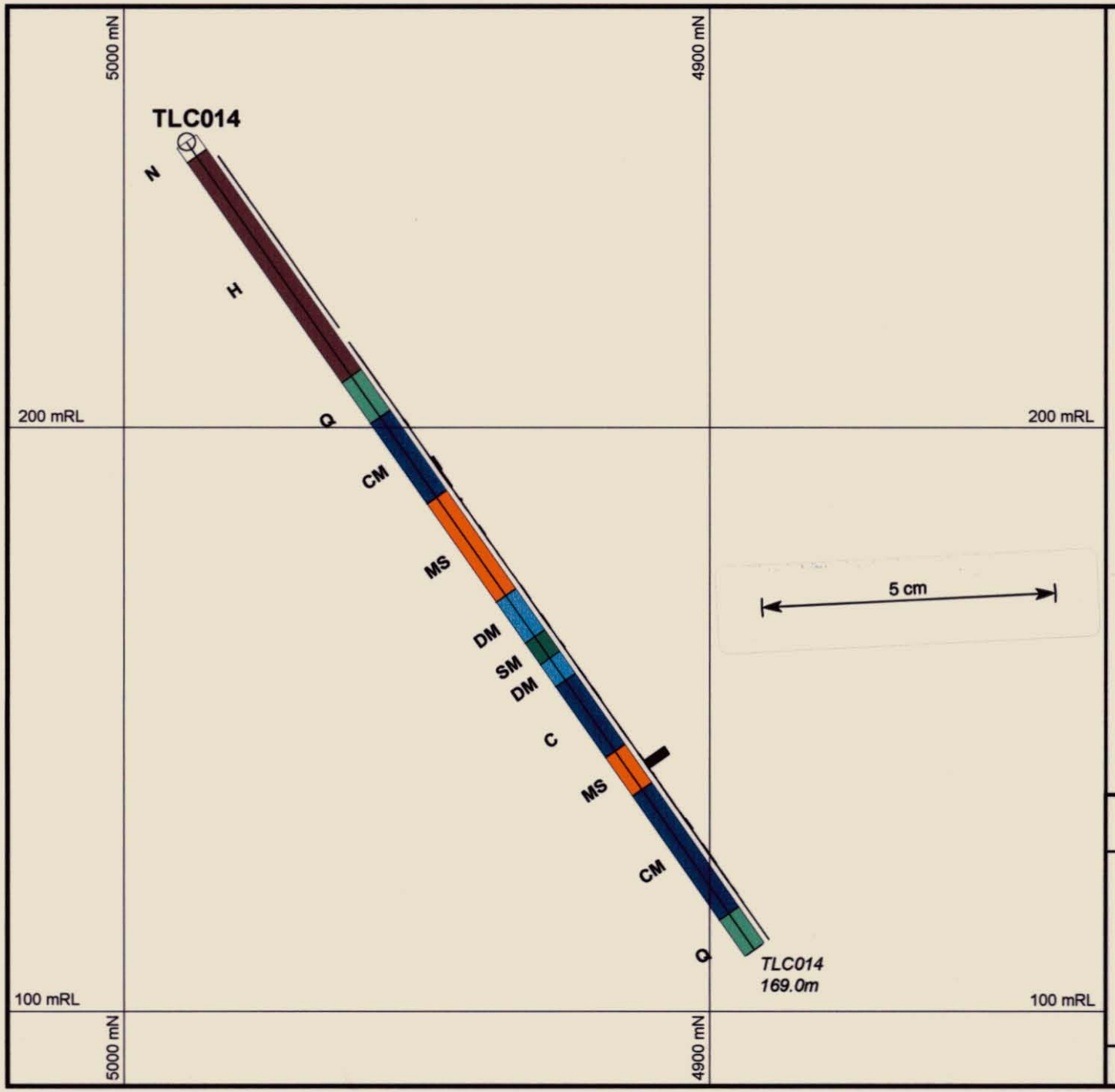
DRILL HOLE TLC13

SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK
DATE : 15.03.00
DRAWN : G. Bennett
REVISIONS :
FILE : TL Zn% TLC013

McKeown Mining Pty Ltd

Figure No. 14



LEGEND

N	No core recovered
Y	Clays
H	Shale and siltstone
Q	Quartzite, quartz-sericite rock
D	Dolomite
DM	Dolomite with magnetite
L	Limestone
LC	Limestone with calc-silicate alteration
LM	Limestone with magnetite
LS	Limestone with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
M	Massive magnetite
MC	Magnetite with calc-silicate mineralisation
MQ	Magnetite with silicate mineralisation
MS	Magnetite with serpentinite
C	Calc-silicate rock
CM	Calc-silicate rock with magnetite
S	Serpentinite
SM	Serpentinite with magnetite
	Breccia
BC	Brecciated calc-silicate rock
BH	Brecciated shale and siltstone
BS	Brecciated serpentinite

SCALE : 1:1000

0 25 50 m

Allegiance Mining N.L.

TENTH LEGION AREA

CROSS SECTION THROUGH

DRILL HOLE TLC14

SHOWING LITHOGY AND Zn ASSAYS (1cm = 1%)

COMPILED : M. McK	
DATE : 15.03.00	
DRAWN : G. Bennett	
REVISIONS :	
FILE : TL Zn% TLC014	

McKeown Mining Pty Ltd

Figure No. 15

Appendix 1

Detailed re-logging of TLC2 and TLC10

bhid	from	to	rocktype
TLC2	0.0	3.0	not cored
TLC2	3.0	19.5	Weathered rock, claystone (after rock) and clay with common limonite BCA is obscure. The interval is rubbly The contact with the next interval is gradational (weathering).
TLC2	19.5	20.0	Semi-massive magnetite with common brown-clay interstitial to magnetite patches. BCA is obscure. The interval is very broken. The contact with the next interval is gradational (lithology).
TLC2	20.0	24.4	Cream, cream-green and grey-green cherty hornfels with trace magnetite as lace veining. BCA is obscure. The interval is very broken. The contact with the next interval is sharp and irregular.
TLC2	24.4	28.1	Massive magnetite with trace to sparse interstitial quartz. BCA is obscure. The interval is very broken. The contact with the next interval is sharp and irregular.
TLC2	28.1	30.1	Cream silicate rock with sparse magnetite as stringers and veinlets. The rock has a microfractured texture. BCA is obscure. The interval is broken. The contact with the next interval is sharp and irregular.
TLC2	30.1	31.8	Massive to semi-massive magnetite and grey interstitial silicate with sparse iron sulphides as flecks, blebs and stringers. BCA is obscure. The interval is broken. The contact with the next interval is sharp and irregular.
TLC2	31.8	36.5	Cream calc-silicate rock with minor magnetite as flecks

bhid	from	to	rocktype
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is gradational (lithology).
TLC2	36.5	37.2	Semi-massive magnetite and interstitial green-black serpentine with common magnetite.
			BCA is obscure.
			The interval is very broken.
			The contact with the next interval is sharp and irregular.
TLC2	37.2	38.9	Cream calc-silicate rock.
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is sharp but broken.
TLC2	38.9	43.6	Black siltstone and shale with common pyrite accumulating along bedding planes.
			BCA generally obscure but typically high.
			The interval is broken.
			The contact with the next interval is gradational (lithology).
TLC2	43.6	50.5	Dark green-grey, pink and white calc-silicate rock with locally abundant magnetite.
			BCA is obscure.
			The interval is very broken.
			The contact with the next interval is sharp and irregular.
TLC2	50.5	78.1	Cream, brown and white calc-silicate rock with sparse disseminated magnetite.
			BCA is obscure.
			The interval is very broken.
			The contact with the next interval is gradational (lithology).
TLC2	78.1	80.4	Intermixed shale and calc-silicate rock breccia.
			BCA is obscure.

bhid	from	to	rocktype
			The interval is very broken.
			The contact with the next interval is sharp and irregular.
TLC2	80.4	81.7	Massive to semi-massive magnetite with interstitial serpentine.
			BCA is obscure.
			The interval is very broken.
			The contact with the next interval is sharp and irregular.
TLC2	81.7	84.1	Dark green-grey calc-silicate breccia with common iron sulphides.
			BCA is obscure.
			The interval is very broken.
			The contact with the next interval is sharp but broken.
TLC2	84.1	95.5	Shale, siltstone and lesser green calc-silicate rock.
			BCA is obscure.
			The interval is very broken.
			The contact with the next interval is sharp and irregular.
TLC2	95.5	99.9	Mottled cream, white and green calc-silicate rock with sparse magnetite throughout, sparse to minor pyrite as flecks and patches.
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is sharp at 75 degrees to the core axis.
TLC2	99.9	104.7	Green-black serpentinite and calc-silicate rock with locally massive magnetite, trace iron sulphides as fine flecks.
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is gradational.
TLC2	104.7	117.2	Grey and pink-brown quartz sericite rock with trace pyrite as stringers and veinlets.
TLC2	117.2	133.0	Mottled purple and grey-green cherty hornfels.

END OF HOLE AT 133.0m

bhid	from	to	rocktype
TLC10	0.0	3.0	not cored
TLC10	3.0	6.3	Shale and siltstone with trace pyrite BCA is obscure. The interval is rubbly. The contact with the next interval is sharp but broken.
TLC10	6.3	7.8	Massive magnetite with brown clay. BCA is obscure. The interval is rubbly. The contact with the next interval is sharp but broken.
TLC10	7.8	35.3	Shale, siltstone and quartzite with trace sphalerite as fine crystals, sparse pyrite as disseminations and stringers. BCA is contorted and irregular in part but is typically about 45 degrees. The interval is extremely broken. The contact with the next interval is sharp but broken.
TLC10	35.3	36.2	Green-grey and pink calc-silicate rock with trace pyrite. BCA is obscure. The interval is extremely broken. The contact with the next interval is sharp but broken.
TLC10	36.2	37.2	core not recovered
TLC10	37.2	39.8	Dark green serpentinite with sparse magnetite, sparse pyrite as disseminations and stringers. BCA is obscure. The interval is extremely broken. The contact with the next interval is sharp and irregular.
TLC10	39.8	49.6	Mottled green-grey calc-silicate rock and serpentinite with locally abundant magnetite, sparse pyrite. BCA is obscure. The interval is very broken to extremely broken. The contact with the next interval is sharp and irregular.
TLC10	49.6	65.8	Mottled grey crystalline dolomite with trace magnetite, trace sphalerite,

bhid	from	to	rocktype
			sparse pyrite, trace sphalerite.
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is sharp but broken.
TLC10	65.8	66.9	Black serpentinite with minor disseminated magnetite, sparse pyrite, trace sphalerite.
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is sharp but broken.
TLC10	66.9	74.9	Siltstone and shale with sparse magnetite.
			BCA is obscure.
			The interval is extremely broken.
			The contact with the next interval is sharp but broken.
TLC10	74.9	78.9	Massive magnetite and serpentine, trace sphalerite, trace pyrite.
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is gradational.
TLC10	78.9	90.2	Grey crystalline dolomite with sparse green serpentine as stringers, veinlets and patches.
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is sharp and irregular.
TLC10	90.2	102.2	Interbedded siltstone and calc-silicate rock with minor magnetite as disseminations, flecks and patches, trace pyrite.
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is sharp and irregular.
TLC10	102.2	106.5	Mottled green serpentinite with common magnetite, trace pyrite.
			BCA is obscure.
			The interval is broken.

bhid	from	to	rocktype
			The contact with the next interval is sharp and irregular.
TLC10	106.5	117.4	Mottled green grey and cream calc-silicate rock with trace magnetite, trace pyrite.
			BCA is obscure.
			The interval is broken.
			The contact with the next interval is sharp and irregular.
TLC10	117.4	134.0	Brown and grey quartz-sericite rock with sparse pyrite.
			BCA is typically about 50 degrees.
			The interval is broken.

END OF HOLE AT 134.0m

Appendix 2

Summary logs of holes TLC2 to TLC14

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC2	0.0	3.0	not cored											
TLC2	3.0	19.5	claystone (after rock)	7.6	10.5	0.19		120	50	1.5	270	x		
				10.5	13.5	0.19		5	360	0.5	240	x		
				13.5	16.5	0.04		10	55	0.5	15	x		
				16.5	19.5	0.03		5	50	0.5	120	x		x
TLC2	19.5	20.0	semi-massive magnetite with calc-silicates	19.5	20.0	0.03		5	70	x	200	x		
TLC2	20.0	24.4	cherty hornfels; trace iron sulphides	20.0	22.0	0.03		x	45	x	40	x		
				22.0	24.4	0.04		5	390	5	25	x		
TLC2	24.4	28.1	massive magnetite	24.4	26.4	0.02	x	20	30	0.5	230	10		x
				26.4	28.1	0.03	30	115	40	x	60	20		
TLC2	28.1	30.1	altered calc-silicate rock	28.1	30.1	0.01		25	20	x	35	x		
TLC2	30.1	31.8	semi-massive magnetite with serpentine, trace pyrite	30.1	31.8	0.02		85	30	x	45	10		
TLC2	31.8	36.5	altered calc-silicate rock	31.8	33.8	0.01		5	25	x	25	x		x
				33.8	36.5	0.01		x	60	x	35	x		
TLC2	36.5	37.2	semi-massive magnetite with serpentine	36.5	37.2	0.02	x	5	20	x	60	x		
TLC2	37.2	38.9	altered calc-silicate rock	37.2	38.9	0.01		5	50	x	45	x		
TLC2	38.9	43.6	siltstone and shale; common pyrite	38.9	39.6	0.01		55	60	x	15	x		x
				39.6	41.6	0.01		75	25	x	7	x		
				41.6	43.6	0.02		15	100	x	30	x		
TLC2	43.6	50.5	skarn with minor magnetite	43.6	45.0	0.03		5	95	x	450	x		
				45.0	46.5	0.04		35	70	x	100	x		x
				46.5	48.5	0.01	100	x	10	x	230	x		
				48.5	50.5	0.01	155	x	10	x	180	x		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC2	50.5	78.1	altered calc-silicate rock	50.5	52.5	0.01	130	5	50	0.5	75	x		
				52.5	54.5	0.01	120	5	50	0.5	45	x		x
				54.5	56.5	0.01	145	5	25	x	30	x		
				56.5	58.5	0.01	125	5	15	x	30	x		
				58.5	60.5	0.01	115	5	20	x	75	x		
				60.5	62.5	0.01	92	5	15	x	70	x		x
				62.5	64.5	0.01	105	5	20	x	40	10		
				64.5	66.4	0.02	52	15	55	x	45	10		
				66.4	68.4	0.02	150	10	60	x	140	x		
				68.4	70.4	0.02	160	5	125	x	130	10		x
				70.4	71.6	0.56	88	20	40	x	60	x		
				71.6	72.4	0.05	46	5	50	x	90	20		
				72.4	74.1	0.01		5	15	x	100	x		
				74.1	74.9	0.03		40	85	x	15	x		x
				74.9	76.9	0.02		5	15	x	30	x		
				76.9	78.1	0.00		5	x	x	55	x		
TLC2	78.1	80.4	shale and calc-silicate rock breccia	78.1	80.4	0.01		50	50	x	15	x		
TLC2	80.4	81.7	semi-massive magnetite with serpentine	80.4	81.5	1.20	46	640	4400	13	70	x		x
TLC2	81.7	84.1	skarn breccia with pyrite	81.5	83.5	1.70		280	3800	6	20	x		
				83.5	84.1	3.30		2000	16000	20	40	x		
TLC2	84.1	95.5	shale, siltstone and minor calc-silicate rock	84.1	86.9	0.09		15	260	0.5	150	x		
				86.9	88.8	0.01		10	30	x	25	x		x
				88.8	90.8	0.01		50	40	0.5	4	x		
				90.8	92.8	0.00		30	x	x	5	x		
				92.8	93.4	0.04		105	70	x	20	x		
				93.4	96.0	0.01		25	40	0.5	15	x		x
TLC2	95.5	99.9	altered calc-silicate rock	96.0	97.1	0.02	80	1000	105	0.5	15	10		
				97.1	97.8	0.03		15	180	1.5	40	x		
				97.8	99.9	0.01		5	30	x	25	x		
TLC2	99.9	104.7	serpentine and calc-silicate rock with	99.9	101.2	0.02		65	25	x	45	10		x

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
			magnetite; trace iron sulphides	101.2	103.7	0.77	x	50	20	x	190	x		
				103.7	104.7	0.18	x	25	20	0.5	120	x		
TLC2	104.7	117.2	altered siltstone: quartz sericite rock;	104.7	106.8	0.01		15	10	0.5	4	x		
			trace pyrite	106.8	111.8	0.01		24	9	<1	4	25		
				111.8	117.2	0.01		71	11	1	x	60		
TLC2	117.2	133.0	cherty hornfels; trace pyrite	117.2	122.2	0.01		86	8	2	<4	115		
				122.2	127.2	0.03		45	17	1	16	55		
				127.2	133.0	0.02		65	19	1	<4	65		

END OF HOLE AT 133.0m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC3	0.0	6.0	not cored											
TLC3	6.0	13.5	semi-massive magnetite	9.0	13.5	0.32		790	20	2	20	x		
TLC3	13.5	27.1	altered calc-silicate rock with magnetite; sparse sphalerite, trace pyrite	13.5	15.5	1.30		1700	70	1	30	x		
				15.5	16.1	6.00		2750	45	2	35	x		0.017
				16.1	16.4	3.00	46	1350	90	2	6	x		
				16.4	18.1	7.40	82	920	85	3	20	x		
				18.1	19.0	2.50	88	180	15	0.5	20	x		
				19.0	19.5	2.60		365	25	1.5	15	x		0.017
				19.5	21.0	3.30		175	20	0.5	20	x		
				21.0	22.4	2.20		40	15	1	25	x		
				22.4	23.4	11.50		510	15	0.5	3	x		
				23.4	24.4	1.80		25	5	0.5	10	x		0.008
				24.4	26.0	2.70		200	15	1	7	x		
				26.0	27.1	1.40		610	10	1	10	x		
TLC3	27.1	47.4	altered calc-silicate rock; trace sphalerite, trace iron sulphides	27.1	28.5	1.40		220	10	1	20	x		
				28.5	29.9	0.80		50	15	1	20	x		x
				29.9	30.9	0.47		155	5	1	15	x		
				30.9	32.9	0.32		35	5	0.5	4	x		
				32.9	34.9	0.35		35	10	0.5	15	x		
				34.9	36.9	0.16		15	5	0.5	15	x		x
				36.9	38.9	0.18		30	5	0.5	15	x		
				38.9	40.0	0.22		35	10	0.5	9	x		
				40.0	40.5	0.73		250	35	x	6	x		
				40.5	42.5	0.17		15	15	x	10	25		x
				42.5	44.5	0.19		20	15	x	15	x		
				44.5	46.0	0.20		15	40	0.5	6	x		
				46.0	47.4	0.28		70	15	x	10	x		
TLC3	47.4	51.4	massive magnetite with serpentine; sparse sphalerite, sparse iron sulphides	47.4	49.0	2.80	42	890	25	1	6	x		x
				49.0	49.8	2.55	28	270	25	0.5	6	x		
				49.8	51.4	2.95	30	285	30	0.5	6	x		
TLC3	51.4	54.0	semi-massive magnetite with calc-silicates;	51.4	54.0	2.50	26	185	30	0.5	4	x		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
			sparse sphalerite, sparse iron sulphides											
TLC3	54.0	56.4	semi-massive magnetite with serpentine, sparse sphalerite, abundant pyrrhotite, sparse pyrite	54.0	55.2	1.45	190	390	30	0.5	x	x		0.017
				55.2	56.4	1.45	98	2450	25	0.5	x	x		
TLC3	56.4	64.9	altered calc-silicate rock and semi-massive magnetite with serpentine; trace sphalerite, abundant pyrrhotite, sparse pyrite	56.4	57.2	0.40	x	200	25	0.5	10	x		
				57.2	57.8	0.77	120	640	25	0.5	3	x		
				57.8	60.0	0.62	48	565	20	x	x	x		x
				60.0	61.3	0.85	105	1350	20	0.5	4	x		
				61.3	62.0	0.62	x	500	20	x	8	x		
				62.0	63.6	0.21		510	20	x	4	x		
				63.6	64.0	1.35		1800	25	1	3	x		0.008
				64.0	64.9	0.60		515	45	x	x	x		
TLC3	64.9	67.6	altered calc-silicate rock; trace sphalerite, trace pyrrhotite	64.9	66.2	0.18		70	30	x	4	x		
				66.2	67.6	0.48		185	40	x	4	x		
TLC3	67.7	70.8	limestone; trace sphalerite, trace pyrite	67.6	69.3	0.03		15	80	0.5	9	x		0.008
				69.3	70.8	0.15		170	210	1	6	x		x
TLC3	70.8	71.5	altered calc-silicate rock	70.8	71.5	0.01		25	30	1	25	20		
TLC3	71.5	73.9	limestone; trace sphalerite, sparse iron sulphides	71.5	73.0	0.16		90	195	1	8	x		
				73.0	73.9	0.56		510	410	4.5	5	x		
TLC3	73.9	80.4	limestone and altered calc-silicate rock / skarn; trace pyrrhotite	73.9	75.2	0.12		170	80	1.5	x	x		
				75.2	75.8	0.01		35	40	1	20	130		x
				75.8	76.9	0.03		20	95	1.5	3	x		
				76.9	78.5	0.03		15	60	0.5	10	20		
				78.5	79.4	0.05		35	80	1	x	15		
				79.4	80.4	0.04		75	40	0.5	8	65		x
TLC3	80.4	90.1	limestone; trace sphalerite, minor pyrrhotite	80.4	81.7	0.64		240	650	8.5	4	x		
				81.7	82.2	0.03		10	190	0.5	x	x		
				82.2	83.8	0.02		15	65	0.5	3	x		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				83.8	84.2	0.08		20	430	2.5	x	x		x
				84.2	85.8	0.01		20	50	0.5	x	x		
				85.8	86.5	0.22		90	1200	5.5	x	x		
				86.5	87.4	0.05		70	825	4	x	30		
				87.4	89.0	0.01		70	150	1	9	x		x
				89.0	89.5	0.00		20	125	0.5	x	x		
				89.5	91.2	0.02		30	45	0.5	x	x		
TLC3	90.1	111.5	altered calc-silicate rock and limestone; sparse pyrrhotite	91.2	92.0	0.01		55	25	1	9	x		
				92.0	92.7	0.01		215	25	0.5	x	20		0.008
				92.7	93.6	0.07		25	65	1	7	20		
				93.6	95.1	0.02		20	15	x	x	x		
				95.1	95.8	0.03		35	15	0.5	x	x		
				95.8	96.4	0.02		20	40	0.5	4	15		0.025
				96.4	97.3	0.09		10	25	0.5	x	15		
				97.3	98.5	0.04		30	25	0.5	5	15		
				98.5	99.4	0.00		30	5	x	3	20		
				99.4	99.8	0.00		75	x	x	7	40		x
				99.8	100.5	0.00		15	5	0.5	x	x		
				100.5	102.1	0.00		30	15	0.5	20	20		
				102.1	103.0	0.01		5	15	x	x	x		
				103.0	103.8	0.01		20	10	0.5	x	x		x
				103.8	104.2	0.04		20	70	1	x	x		
				104.2	106.2	0.01		x	30	0.5	x	x		
				106.2	107.0	0.15		25	90	1	6	x		
				107.0	108.4	0.08		15	55	0.5	x	x		x
				108.4	109.0	0.03		10	75	0.5	5	15		
				109.0	110.3	0.01		10	35	0.5	x	x		
				110.3	110.8	0.01		15	35	0.5	5	x		
				110.8	111.5	0.11		55	130	2	x	x		0.033
TLC3	11.5	132.8	altered calc-silicate rock; minor pyrrhotite	111.5	112.6	0.01		25	35	0.5	9	x		
				112.6	114.0	0.05		35	95	1	x	x		
				114.0	115.1	0.01		115	25	0.5	4	10		
				115.1	116.5	0.01		90	35	0.5	x	x		0.017
				116.5	117.7	0.02		30	95	1	10	35		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				117.7	119.0	0.01		75	50	1	x	x		
				119.0	120.4	0.03		30	100	1	x	x		
				120.4	121.4	0.02		110	25	1	4	x		x
				121.4	122.9	0.14		20	90	1.5	x	x		
				122.9	123.6	0.04		55	30	1	x	x		
				123.6	125.3	0.01		5	25	0.5	5	20		
				125.3	125.7	0.01		30	25	x	5	x		x
				125.7	127.1	0.00		5	25	x	x	x		
				127.1	128.6	0.02		45	30	0.5	5	x		
				128.6	129.0	0.06		15	100	1	x	x		
				129.0	129.5	0.01		25	20	1	7	x		x
				129.5	129.9	0.01		40	20	0.5	x	x		
				129.9	131.3	0.04		30	95	1	x	10		
				131.3	132.8	0.02		15	50	0.5	x	x		
				132.8	134.7	0.02		35	65	1	x	x		0.025
TLC3	132.8	139.7	limestone; trace pyrite	134.7	135.3	0.07		10	120	1.5	x	10		
				135.3	136.5	0.03		5	30	1	x	x		
				136.5	138.2	0.03		5	60	1	x	x		
				138.2	139.7	0.02		15	35	0.5	x	x		0.017
TLC3	139.7	142.0	altered calc-silicate rock	139.7	141.0	0.01		x	20	0.5	4	10		
				141.0	142.0	0.01		x	20	0.5	x	x		

END OF HOLE AT 142.0m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC4	0.0	4.0	not cored											
TLC4	4.0	24.4	altered calc-silicate rock	4.0	9.5	0.02		27	23	<1	8	55		
				9.5	14.5	0.01		38	9	<1	6	40		
				14.5	19.5	0.01		26	10	<1	4	50		
				19.5	24.4	0.05		130	14	1	<4	140		
TLC4	24.4	32.6	altered calc-silicate rock and minor magnetite; trace pyrite	24.4	26.0	0.02		5	25	x	30	x		
				26.0	26.6	0.02		5	15	x	3	x		
				26.6	26.9	0.03		5	20	0.5	25	x		
				26.9	27.2	0.01		5	20	x	6	x		
				27.2	27.8	0.02		5	20	x	7	x		
				27.8	28.4	0.01		x	10	x	7	x		
				28.4	29.6	0.02		x	15	x	10	x		0.008
				29.6	31.2	0.02		x	15	x	10	x		
				31.2	32.6	0.07		25	30	x	15	x		
TLC4	32.6	52.9	altered calc-silicate rock; trace pyrite	32.6	34.1	0.01		10	20	x	10	x		x
				34.1	35.1	0.01		5	45	x	10	x		
				35.1	40.1	0.02		160	9	1	4	165		
				40.1	44.0	0.01		60	5	<1	6	80		
				44.0	47.9	0.02		63	14	1	<4	60		
				47.9	50.7	0.02		15	40	x	35	10		
				50.7	52.9	0.01		5	20	x	10	x		
TLC4	52.9	57.7	skarn and abundant magnetite; sparse iron sulphides	52.9	53.5	0.04		160	25	x	x	x		x
				53.5	54.9	0.08		50	40	0.5	15	x		
				54.9	55.4	1.30		180	90	0.5	15	15		
				55.4	56.1	2.40	54	75	90	x	15	x		
				56.1	56.9	0.69	115	450	40	x	15	x		x
				56.9	57.7	0.17		50	30	x	35	x		
TLC4	57.7	73.0	altered limestone and minor magnetite; trace sphalerite, trace pyrrhotite	57.7	59.1	0.06		65	35	x	6	x		
				59.1	59.6	0.01		35	20	x	x	x		
				59.6	61.0	0.02		5	35	x	4	x		x
				61.0	61.4	0.01		15	25	x	x	x		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				61.4	62.3	0.01		5	40	x	7	x		
				62.3	63.2	0.01		x	25	x	6	x		
				63.2	63.8	0.01		x	20	x	4	x		x
				63.8	64.5	0.01		x	30	x	4	x		
				64.5	65.4	0.04		5	25	x	8	x		
				65.4	66.1	0.35		100	30	x	25	x		
				66.1	67.2	0.03		60	15	x	25	x		x
				67.2	67.6	0.01		5	10	x	x	x		
				67.6	68.0	0.06		35	650	1	25	10		
				68.0	68.9	0.18	30	90	225	1	50	x		
				68.9	69.6	0.03	120	10	85	x	25	x		0.008
				69.6	70.1	0.04	78	15	115	x	7	x		
				70.1	71.7	0.06	28	20	80	x	7	x		
				71.7	73.0	0.06	26	5	90	x	60	x		
TLC4	73.0	80.9	massive to semi-massive magnetite and serpentine; trace sphalerite	73.0	73.4	0.05	x	5	45	x	40	x		x
				73.4	75.1	0.06	44	30	90	x	60	x		
				75.1	76.2	0.04	60	60	1000	5	140	x		
				76.2	77.5	0.05	155	75	700	5	140	x		
				77.5	78.3	0.06	140	25	155	x	65	x		x
				78.3	78.9	0.02	46	35	40	x	50	x		
				78.9	79.4	0.02	x	x	50	x	30	x		
				79.4	80.2	0.04	x	10	95	x	55	x		
				80.2	80.9	0.95	32	235	620	4	120	25		0.025
TLC4	80.9	87.3	serpentinised limestone; trace pyrite	80.9	82.3	0.02	x	5	50	0.5	60	20		
				82.3	83.9	0.05		x	65	x	x	x		
				83.9	85.5	0.02		x	50	x	20	x		
				85.5	87.3	0.05		x	40	x	5	x		0.017
TLC4	87.3	92.2	altered calc-silicate rock; trace sphalerite, trace pyrite	87.3	88.5	0.01		5	30	x	15	x		
				88.5	89.9	0.02		5	30	x	25	x		
				89.9	91.3	0.25	x	35	50	x	20	x		
				91.3	92.2	0.03		260	40	x	15	x		0.008
TLC4	92.2	113.0	altered limestone and minor magnetite; trace	92.2	94.1	0.08		35	40	x	20	x		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
			sphalerite, trace iron sulphides	94.1	95.0	0.01		5	30	x	15	x		
				95.0	95.4	0.01		5	45	x	x	x		
				95.4	96.5	0.01		20	45	x	10	20		0.017
				96.5	98.0	0.02		20	50	x	7	x		
				98.0	99.8	0.03	98	15	50	x	30	x		
				99.8	101.3	0.42	44	165	130	0.5	70	30		
				101.3	102.7	0.04	x	25	40	0.5	40	x		0.05
				102.7	104.5	0.01		x	35	x	15	x		
				104.5	106.2	0.02		10	40	x	15	x		
				106.2	107.4	0.01		x	30	x	15	x		
				107.4	108.9	0.02		5	40	x	15	x		0.017
				108.9	110.3	0.01		20	35	x	35	x		
				110.3	110.8	0.01		5	45	x	30	x		
				110.8	112.1	0.01		15	35	x	10	x		
				112.1	113.0	0.01		35	30	x	55	x		0.025
TLC4	113.0	134.0	altered calc-silicate rock / skarn, trace sphalerite, sparse iron sulphides	113.0	113.6	0.22		215	50	x	45	40		
				113.6	114.3	0.04	46	10	55	0.5	310	x		
				114.3	115.3	0.08		105	35	x	170	x		
				115.3	116.2	0.35		125	190	2	230	15		0.008
				116.2	117.0	0.02		15	40	x	35	x		
				117.0	117.7	0.02		20	30	x	130	x		
				117.7	119.0	0.01		15	30	x	10	x		
				119.0	119.8	0.07		5	20	x	130	x		x
				119.8	120.9	0.07		65	130	1.5	290	10		
				120.9	121.8	0.02		10	35	0.5	25	x		
				121.8	123.1	0.10		25	30	0.5	120	x		
				123.1	125.0	0.02		15	10	x	30	x		
				125.0	126.8	0.02		30	15	x	40	x		
				126.8	129.0	0.01		60	10	x	25	x		x
				129.0	130.3	0.02		25	20	x	30	200		
				130.3	131.0	0.19		65	20	x	95	15		
				131.0	132.4	0.01		90	15	x	30	x		
				132.4	134.0	0.01		85	10	x	25	x		x

END OF HOLE AT 134.0m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC5	0.0	3.0	not cored											
TLC5	3.0	70.3	altered calc-silicate rock; trace sphalerite, trace iron sulphides	3.0	5.2	0.03		5	45	1	140	x		
				5.2	5.4	0.29		10	745	0.5	140	15		
				5.4	7.4	0.11		15	175	1	45	x		
				7.4	8.2	0.05		15	80	2	210	x		
				8.2	9.6	0.12		10	215	0.5	540	x		
				9.6	10.7	0.02		90	35	x	45	x		
				10.7	11.7	0.01		45	20	0.5	70	x		x
				11.7	13.2	0.01		10	15	0.5	150	x		
				13.2	14.4	0.06		10	10	0.5	60	x		
				14.4	15.5	0.05		10	30	1	65	x		
				15.5	17.1	0.06		20	25	0.5	40	x		
				17.1	18.2	0.02		40	25	x	1700	x		
				18.2	19.5	0.04		10	30	x	170	x		
				19.5	19.8	0.05		660	240	1.5	2300	x		
				19.8	20.5	0.01		5	10	x	170	x		x
				20.5	20.8	0.01		5	15	0.5	290	x		
				20.8	22.3	0.12		120	5	0.5	70	x		
				22.3	22.8	0.27		40	5	0.5	35	x		
				22.8	25.0	0.03		35	20	x	45	x		
				25.0	25.4	0.05		5	20	x	140	x		
				25.4	26.6	0.10		30	10	x	30	x		x
				26.6	27.7	0.18		85	15	x	15	x		
				27.7	31.3	0.01		86	13	<1	6	40		
				31.3	35.2	0.01		23	16	<1	<4	30		
				35.2	38.5	0.13		5	810	4	175	40		
				38.5	40.2	0.04		5	175	1.5	140	15		x
				40.2	40.7	0.02		5	95	1	170	x		
				40.7	46.4	0.02		33	36	<1	55	30		
				46.4	51.5	0.01		83	16	<1	8	40		
				51.5	56.3	0.09		28	180	<1	36	10		
				56.3	60.0	0.02		95	105	0.5	15	x		0.042
				60.0	61.5	0.01		5	40	x	9	x		
				61.5	66.6	0.01		5	30	x	9	x		
				66.6	67.7	0.01		5	25	x	70	x		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				67.7	69.0	0.01		35	35	x	40	x		0.05
				69.0	70.3	0.01		175	15	x	x	x		
TLC5	70.3	92.4	quartzite, trace iron sulphides	70.3	76.3	0.00		12	11	<1	<4	30		
				76.3	80.2	0.01		19	18	<1	<4	25		
				80.2	82.0	0.00		5	15	x	5	x		
				82.0	82.9	0.00		5	10	x	x	x		
				82.9	83.7	0.00		x	15	x	3	x		0.033
				83.7	84.7	0.00		x	15	x	6	x		
				84.7	85.5	0.01		90	15	x	10	x		
				85.5	86.9	0.00		15	10	x	x	x		
				86.9	88.3	0.00		10	15	x	15	x		0.017
				88.3	89.6	0.00		x	5	x	5	x		
				89.6	91.2	0.00		x	10	x	4	x		
				91.2	92.4	0.00		x	10	x	10	x		
TLC5	92.4	112.4	altered calc-silicate rock; trace iron sulphides	92.4	94.0	0.01		85	10	x	9	x		0.017
				94.0	95.4	0.01		240	20	0.5	6	x		
				95.4	96.2	0.00		35	10	x	5	x		
				96.2	97.2	0.00		40	15	x	10	x		
				97.2	98.0	0.01		x	25	x	80	x		0.142
				98.0	102.9	0.01		50	9	<1	4	60		
				102.9	109.3	0.00		60	59	<1	18	75		
TLC5	112.4	116.2	quartzite	109.3	119.5	0.01		170	12	<1	6	110		
TLC5	116.2	119.5	altered calc-silicate rock											

END OF HOLE AT 119.5m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC6	0.0	0.3	not cored											
TLC6	0.3	2.1	serpentinite and magnetite	0.3	1.6	0.05	x	x	10	x	25	x		
				1.6	2.1	0.08	48	x	10	x	30	x		
TLC6	2.1	17.7	limestone and magnetite	2.1	4.3	0.04	28	x	5	x	15	x		0.017
				4.3	5.9	0.02	x	x	10	x	15	15		
				5.9	7.2	0.03	40	x	20	x	5	x		
				7.2	8.4	0.02	28	x	20	x	10	20		
				8.4	9.0	0.02		5	15	x	9	15		0.017
				9.0	10.4	0.03		x	80	0.5	60	35		x
				10.4	11.0	0.04		x	40	x	170	50		x
				11.0	12.2	0.02		x	20	x	15	x		x
				12.2	13.2	0.02		x	15	x	10	x		1.34
				13.2	14.6	0.02		10	25	x	5	10		x
				14.6	16.2	0.04		40	30	0.5	6	x		x
				16.2	17.7	0.02		5	15	x	9	x		x
TLC6	17.7	25.4	serpentinised limestone	17.7	18.9	0.04		20	75	0.5	30	15		0.1
				18.9	19.5	0.07		10	50	x	30	10		
				19.5	21.0	0.02		x	20	x	20	10		
				21.0	22.5	0.03		x	25	x	20	10		
				22.5	23.9	0.05		5	20	x	15	15		x
				23.9	25.4	0.06		5	25	x	15	x		
TLC6	25.4	32.3	massive magnetite and serpentine	25.4	26.2	0.03		5	10	x	40	10		
				26.2	27.1	0.03	32	30	100	x	30	20		
				27.1	27.9	0.05	48	115	335	x	25	x		x
				27.9	29.6	0.04	42	15	20	x	30	x		
				29.6	30.9	0.05	74	20	170	0.5	30	x		
				30.9	32.3	0.07	64	10	190	x	30	x		
TLC6	32.3	40.6	serpentinite and magnetite; trace pyrite	32.3	33.2	0.18	42	125	230	x	x	x		
				33.2	34.3	0.06	50	60	85	x	20	15		
				34.3	35.8	0.03	60	25	50	x	8	x		x
				35.8	36.7	0.02	32	10	30	x	8	20		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				36.7	38.2	0.04	64	75	40	x	15	15		
				38.2	39.6	0.02	38	40	20	x	15	20		
				39.6	40.6	0.03	56	10	50	x	20	15		x
TLC6	40.6	52.1	altered calc-silicate rock and magnetite	40.6	42.0	0.03	28	55	65	x	20	x		
				42.0	42.9	0.02	52	30	45	0.5	15	x		
				42.9	44.5	0.02	30	45	45	0.5	15	x		
				44.5	45.2	0.02	68	85	50	x	10	10		x
				45.2	46.4	0.01	32	5	10	x	10	x		
				46.4	48.1	0.01	34	x	15	x	20	x		
				48.1	49.1	0.01	54	20	10	x	x	x		
				49.1	50.1	0.01	64	35	20	x	15	x		0.008
				50.1	51.1	0.06		x	95	x	15	x		
				51.1	52.1	0.01		x	25	x	5	x		
TLC6	52.1	62.7	altered calc-silicate rock; trace sphalerite	52.1	52.8	0.01		x	20	0.5	20	x		
				52.8	53.5	0.04		x	165	0.5	60	x		0.008
				53.5	54.8	0.09		x	180	0.5	65	20		
				54.8	55.5	0.04		x	130	x	30	x		
				55.5	56.7	0.09		5	610	1	110	490		
				56.7	58.0	0.05		x	65	0.5	70	x		x
				58.0	58.6	0.03		x	110	0.5	100	x		
				58.6	60.2	0.03		10	100	0.5	120	x		
				60.2	61.0	0.69		45	1100	2	15	200		
				61.0	62.1	0.30		210	1350	2	25	30		0.033
				62.1	62.7	0.02		410	40	0.5	20	x		
TLC6	62.7	74.7	serpentinite and magnetite; trace pyrite	62.7	64.0	0.02	115	275	15	x	10	x		
				64.0	65.1	0.01	78	455	30	x	8	x		0.092
				65.1	65.9	0.01	76	180	15	x	20	x		
				65.9	66.4	0.02	36	255	30	x	10	x		
				66.4	67.9	0.01	30	65	10	x	35	x		
				67.9	69.7	0.02	78	100	20	x	25	x		0.025
				69.7	71.2	0.01	x	65	5	x	25	x		
				71.2	72.5	0.02	26	60	25	x	20	x		
				72.5	72.9	0.01	x	30	5	x	20	20		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				72.9	74.0	0.01	74	155	5	x	30	x		x
				74.0	74.7	0.00	38	1150	20	0.5	10	x		
TLC6	74.7	83.6	altered calc-silicate rock / skarn and magnetite	74.7	75.5	0.01		85	75	x	6	x		
				75.5	75.8	0.01		65	20	0.5	15	x		0.017
				75.8	77.5	0.08		15	230	0.5	30	x		
				77.5	78.0	0.01		25	35	0.5	65	180		
				78.0	78.9	0.00		15	15	x	20	x		
				78.9	79.8	0.01		15	25	x	45	20		x
				79.8	81.1	0.04	40	650	135	6.5	45	320		
				81.1	82.1	0.03	x	1550	120	1.5	20	x		
				82.1	83.6	0.01	x	55	35	0.5	60	x		
TLC6	83.6	90.5	massive magnetite and serpentine, trace pyrite	83.6	85.1	0.01	38	75	15	0.5	15	x		0.008
				85.1	86.9	0.02	x	35	25	0.5	30	25		
				86.9	88.3	0.02	x	10	10	x	20	25		
				88.3	89.4	0.03	x	10	20	0.5	20	x		
				89.4	90.5	0.03	x	385	15	0.5	30	30		x
TLC6	90.5	156.4	limestone (sparsely serpentinised) and minor magnetite; common iron sulphides	90.5	90.9	0.01		1700	65	1	x	x		
				90.9	92.6	0.02		165	25	0.5	x	x		
				92.6	93.2	0.08		950	125	0.5	7	x		
				93.2	94.8	0.01		40	35	0.5	6	x		0.008
				94.8	97.7	0.01		10	33	1	4	10		
				97.7	100.7	0.01		5	36	1	<4	10		
				100.7	103.0	0.01		7	32	1	<4	<10		
				103.0	103.6	0.02	x	10	30	0.5	x	x		
				103.6	104.3	0.00	x	5	15	0.5	10	x		
				104.3	105.0	0.02	x	15	65	1	3	x		
				105.0	106.0	0.02	x	15	110	1.5	4	x		x
				106.0	111.7	0.01		25	15	0.5	4	x		
				111.7	112.1	0.37		35	20	0.5	x	15		
				113.4	116.3	0.01		6	27	1	<4	10		
				116.3	119.0	0.01		7	30	1	<4	10		
				119.0	122.2	0.01		6	39	1	<4	<10		
				122.2	125.2	0.00		3	28	1	<4	<10		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				125.2	128.1	0.00		2	28	1	<4	10		
				128.1	131.1	0.01		2	32	1	<4	<10		
				131.1	134.1	0.00		1	26	1	<4	<10		
				134.1	137.1	0.01		2	28	1	<4	<10		
				137.1	140.1	0.01		4	24	<1	<4	<10		
				140.1	143.1	0.02		2	29	<1	<4	10		
				143.1	145.9	0.01		18	28	<1	<4	20		
				145.9	149.1	0.01		3	36	1	4	<10		
				149.1	151.9	0.01		2	25	1	4	<10		
				151.9	154.9	0.01		1	24	<1	<4	<10		
				154.9	156.4	0.01		1	24	1	4	<10		
TLC6	156.4	177.9	dolomite and sparse magnetite; sparse iron sulphides	156.4	158.1	0.01		5	10	x	x	x		
				158.1	160.0	0.01		5	10	x	x	x		x
				160.0	161.4	0.00		10	10	0.5	x	x		
				161.4	162.5	0.00		10	10	x	x	x		
				162.5	164.4	0.00		5	20	0.5	x	x		
				164.4	166.2	0.01	x	5	15	0.5	x	x		x
				166.2	167.0	0.00	x	5	15	x	x	x		
				167.0	168.2	0.00	30	5	10	x	x	x		
				168.2	169.2	0.00	x	5	10	x	x	x		
				169.2	170.2	0.00		5	10	x	x	x		x
				170.2	172.1	0.00		5	15	x	x	x		
				172.1	173.4	0.00		5	15	x	x	x		
				173.4	174.9	0.02		10	20	0.5	x	x		
				174.9	176.5	0.01		5	10	x	x	x		x
				176.5	177.5	0.01		10	15	0.5	x	x		
				177.5	177.9	0.01		10	15	0.5	x	x		
TLC6	177.9	208.5	limestone (partly serpentinised, partly crystalline) and sparse magnetite; sparse iron sulphides	177.9	182.3	0.00		1	7	<1	6	<10		
				182.3	185.3	0.00		<1	8	2	<4	<10		
				185.3	188.3	0.01		<1	12	2	<4	<10		
				188.3	191.2	0.01		2	5	1	<4	x		
				191.2	194.3	0.00		2	2	1	<4	<10		
				194.3	197.2	0.01		<1	4	1	<4	<10		
				197.2	200.2	0.00		<1	1	2	<4	<10		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				200.2	202.6	0.00		<1	5	1	<4	<10		
				202.6	203.6	0.01		5	15	x	x	x		
				203.6	205.1	0.00		10	15	0.5	x	x		x
				205.1	207.0	0.01		5	10	x	x	x		
				207.0	208.5	0.00		5	15	x	5	x		

END OF HOLE AT 208.5m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC7	0.0	6.0	not cored											
TLC7	6.0	19.4	weathered limestone?	6.0	7.5	0.30		355	120	x	10	15		
				7.5	10.3	0.25		360	250	x	8	25		
				10.3	13.5	0.41		275	120	x	15	50		
				13.5	16.5	0.43		170	85	x	15	50		0.017
				16.5	19.4	0.60		195	60	5.5	7	45		
TLC7	19.4	21.3	altered calc-silicate rock / skarn	19.4	21.3	0.12		70	15	1.5	15	x		
TLC7	21.3	127.1	limestone and sparse magnetite; common iron sulphides	21.3	22.7	0.01		50	5	1	5	x		
				22.7	23.8	0.01		90	10	0.5	x	x		x
				23.8	24.4	0.13		150	20	x	x	10		
				24.4	25.9	0.01		25	10	x	x	x		
				25.9	27.5	0.01		55	10	x	8	x		
				27.5	28.8	0.01		50	10	0.5	x	x		x
				28.8	29.4	0.01		15	15	x	x	x		
				29.4	30.1	0.01		10	15	0.5	x	x		
				30.1	33.2	0.01		6	1	2	<4	<10		
				33.2	36.2	0.01		4	5	2	<4	<10		
				36.2	39.0	0.02		3	5	2	<4	<10		
				39.0	42.0	0.01		7	10	1	6	15		
				42.0	44.9	0.00		5	4	1	<4	<10		
				44.9	47.8	0.02		2	18	1	<4	<10		
				47.8	50.7	0.02		3	12	1	<4	15		
				50.7	54.5	0.06		4	11	1	6	15		
				54.5	56.6	0.09		9	9	1	<4	10		
				56.6	59.6	0.09		9	5	1	6	10		
				59.6	62.6	0.02		18	9	1	4	25		
				62.6	65.6	0.01		5	7	1	4	<10		
				65.6	68.6	0.01		7	6	1	<4	<10		
				68.6	71.4	0.02		12	6	1	<4	10		
				71.4	74.3	0.02		36	7	1	<4	15		
				74.3	77.4	0.04		30	333	2	<4	25		
				77.4	80.3	0.00		4	5	1	4	<10		
				80.3	83.3	0.00		1	5	1	<4	<10		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				83.3	86.2	0.00		7	2	1	<4	15		
				86.2	89.3	0.01		6	20	1	<4	10		
				89.3	92.3	0.01		33	3	2	<4	10		
				92.3	100.5	0.01		2	6	2	4	<10		
				100.5	103.6	0.00		2	3	2	<4	10		
				103.6	106.6	0.00		4	9	1	<4	<10		
				106.6	109.6	0.00		3	1	1	<4	<10		
				109.6	112.6	0.00		2	1	1	<4	<10		
				112.6	117.0	0.00		2	5	1	<4	<10		
				117.0	121.5	0.00		3	4	1	6	<10		
				121.5	124.6	0.01		9	4	1	6	20		
				124.6	127.5	0.00		27	4	1	<4	10		
[LC7	127.1	132.6	altered calc-silicate rock and limestone and sparse magnetite	127.5	130.5	0.01		19	7	1	10	10		
				130.5	133.5	0.01		27	5	1	8	15		
[LC7	132.6	142.5	limestone and sparse magnetite; trace pyrite	133.5	136.5	0.00		10	10	0.5	x	x		
				136.5	139.5	0.01		5	10	x	x	x		
				139.5	142.5	0.00		5	10	x	x	x		
[LC7	142.5	145.5	serpentinite; trace iron sulphides	142.5	145.5	0.01		x	15	x	6	10		
[LC7	145.5	160.5	dolomite; trace pyrite	145.5	148.5	0.00		x	10	x	x	x		
				148.5	151.5	0.00		x	10	x	x	x		
				151.5	154.5	0.00		x	15	0.5	x	x		
				154.5	157.5	0.00		x	10	x	x	x		
				157.5	160.5	0.00		x	5	x	5	x		
LC7	160.5	169.5	limestone and sparse magnetite, trace pyrite	160.5	163.5	0.00		x	5	0.5	x	x		
				163.5	166.5	0.01		5	5	0.5	x	10		
				166.5	169.5	0.00		x	10	x	x	x		
LC7	169.5	185.2	dolomite and minor magnetite, sparse iron sulphides	169.5	172.5	0.00		x	10	1	x	x		
				172.5	175.5	0.00		x	5	1	x	x		
				175.5	178.5	0.01		5	10	0.5	4	x		
				178.5	181.2	0.00		x	5	1	x	x		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				181.2	184.3	0.00		x	10	1	4	x		
TLC7	185.2	188.8	breccia	184.3	187.4	0.00		5	10	1	x	x		
TLC7	188.8	200.1	limestone (partly serpentinised)	187.4	190.5	0.00		x	15	1	x	x		
				190.5	193.5	0.00		x	15	1	x	x		
				193.5	196.5	0.00		x	10	0.5	x	x		
				196.5	200.1	0.00		x	15	0.5	x	20		

END OF HOLE AT 200.1m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC8	0.0	6.0	not cored											
TLC8	6.0	22.5	massive magnetite and clay	8.1	10.5	0.08		200	25	2.5	10	x		
				15.0	16.5	0.16		525	25	2.5	20	140		
				16.5	18.0	0.07		425	25	x	60	100		0.125
				18.0	19.5	0.05		475	125	x	10	x		
				19.5	21.0	0.05		425	25	x	10	x		
				21.0	22.5	0.06		75	25	2.5	25	x		
TLC8	22.5	53.6	weathered altered calc-silicate rock; trace to sparse sphalerite, sparse iron sulphides	22.5	24.0	0.15		550	100	x	35	x		0.025
				24.0	25.5	0.17		450	25	2.5	30	x		
				25.5	27.0	0.80		825	25	2.5	20	x		
				27.0	28.5	1.47		250	x	2.5	4	x		
				28.5	30.0	0.94		50	x	2.5	x	x		0.008
				30.0	31.5	1.26		75	25	x	x	x		
				31.5	32.9	0.96		200	x	2.5	7	x		
				32.9	33.6	0.97		750	x	x	30	20		
				33.6	34.5	0.68		625	x	2.5	5	x		
				34.5	35.8	0.60		300	x	2.5	x	x		
				35.8	36.1	0.17		150	25	2.5	x	x		
				36.1	38.6	0.21		100	x	2.5	3	x		
				38.6	40.4	0.07		25	30	2.5	20	x		0.017
				40.4	41.9	0.05		25	25	2.5	8	x		
				41.9	43.8	0.04		25	x	x	15	x		
				43.8	45.2	0.03		25	x	x	10	x		
				45.2	47.0	0.04		50	x	2.5	9	x		x
				47.0	50.6	0.06		400	65	0.8	x	x		
				50.6	53.6	0.64		790	21	0.5	x	55		
TLC8	53.6	63.1	serpentinite and magnetite, sparse sphalerite	53.6	54.9	3.01	34	600	200	x	10	x		
				54.9	55.6	0.96	x	175	150	x	15	x		x
				55.6	56.5	2.20	28	825	75	x	8	x		
				56.5	58.0	2.71	x	750	100	x	10	x		
				58.0	58.9	4.26	x	700	125	2.5	10	x		
				58.9	60.1	2.38	x	625	125	x	15	x		x
				60.1	61.5	1.35	x	350	100	x	15	x		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				61.5	62.4	1.68	x	575	250	2.5	20	x		
				62.4	63.1	0.83	28	200	175	2.5	15	x		
TLC8	63.1	65.3	altered calc-silicate rock and sparse magnetite; sparse sphalerite	63.1	64.6	0.14	32	25	50	x	x	x		x
				64.6	65.0	3.81	x	175	125	x	6	x		
				65.0	65.3	0.43	x	575	100	x	x	x		
TLC8	65.3	85.7	altered calc-silicate rock / skarn and sparse magnetite, trace sphalerite, trace iron sulphides	65.3	66.0	0.82		250	75	x	8	x		
				66.0	66.9	0.14		150	100	x	9	x		x
				66.9	68.2	0.62		575	75	x	9	x		
				68.2	69.0	0.58		250	150	2.5	x	x		
				69.0	70.6	0.59		75	75	x	x	x		
				70.6	71.6	1.41		75	100	x	3	x		x
				71.6	72.1	0.16		x	75	x	7	x		
				72.1	72.7	0.54		50	325	x	x	x		
				72.7	73.9	0.20		25	50	x	5	x		
				73.9	75.0	0.25		25	50	x	4	x		0.008
				75.0	75.8	0.02		25	50	x	6	x		
				75.8	77.4	0.07		50	450	5	4	x		
				77.4	78.8	0.04		25	1175	5	10	x		
				78.8	79.1	1.36		100	275	2.5	7	x		0.008
				79.1	80.2	0.04		75	x	x	10	20		
				80.2	81.3	0.36		25	300	x	5	x		
				81.3	82.0	1.10	x	50	x	x	9	x		
				82.0	82.6	1.03	x	25	x	x	10	x		0.017
				82.6	83.3	0.63	x	25	175	2.5	25	x		
				83.3	83.9	0.43	x	50	50	2.5	4	x		
				83.9	84.2	1.31	x	150	x	2.5	55	x		
				84.2	85.7	0.49		75	100	x	6	x		0.017
TLC8	85.7	97.9	altered limestone and sparse magnetite; sparse to minor iron sulphides	85.7	88.8	0.05		26	30	0.3	x	20		
				88.8	91.6	0.07		47	22	0.3	4	15		
				91.6	95.7	0.01		18	18	0.2	x	x		
				95.7	97.0	0.19		175	x	2.5	7	x		
				97.0	97.5	0.04		x	50	x	7	x		
				97.5	97.9	0.45		150	x	2.5	7	50		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC8	97.9	101.2	siltstone and altered calc-silicate rock	97.9	101.2	0.01								
								64	18	1	x	110		
TLC8	101.2	115.5	altered calc-silicate rock and sparse magnetite; trace iron sulphides	101.2	104.6	0.06		38	27	1	25	75		
				104.6	105.4	0.07		25	100	2.5	6	x		0.042
				105.4	106.7	0.02		75	25	5	x	x		
				106.7	109.7	0.12		47	94	1.4	x	45		
				109.7	112.6	0.01		51	19	0.9	7	75		
				112.6	115.5	0.04		19	22	0.5	3	20		
TLC8	115.5	150.9	altered limestone and trace magnetite; trace pyrrhotite	115.5	117.4	0.03		47	25	0.5	x	20		
				117.4	120.4	0.01		15	11	0.2	x	20		
				120.4	123.5	0.01		7	15	0.1	x	x		
				123.5	124.6	0.01		25	25	2.5	x	x		
				124.6	127.6	0.01		7	23	0.2	x	x		
				127.6	130.6	0.01		10	21	0.1	x	x		
				130.6	133.6	0.01		12	48	0.3	x	10		
				133.6	136.6	0.04		11	33	0.2	3	15		
				136.6	138.9	0.02		17	18	0.1	5	x		
				138.9	142.1	0.02		34	11	0.2	6	15		
				142.1	142.7	0.01		50	25	x	x	x		
				142.7	144.3	0.02		25	25	x	10	x		0.008
				144.3	145.9	0.03		25	25	x	x	x		
				145.9	148.5	0.06		58	53	1.1	20	55		
				148.5	150.9	0.01		109	13	0.4	x	20		

END OF HOLE AT 150.9m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC9	0.0	1.8	rubble											
TLC9	1.8	30.4	quartzite and siltstone											
TLC9	30.4	35.6	breccia; sparse pyrite	30.4	30.9	0.01		50	25	7.5	65	20		
				30.9	32.1	0.01		25	25	2.5	80	x		
				32.1	34.5	0.02		200	25	5	130	30		
				34.5	35.6	0.08		175	50	5	95	30		0.025
TLC9	35.6	54.8	altered siltstone; sparse iron sulphides	35.6	38.3	0.01		75	x	2.5	x	x		
				38.3	38.5	0.01		525	x	2.5	x	x		
				38.5	39.8	0.00		25	x	5	x	x		
				39.8	43.9	0.01		113	24	1.1	10	95		
				43.9	44.3	0.02		x	x	2.5	80	x		x
				44.3	44.7	0.07		x	50	2.5	140	x		x
				44.7	45.9	0.02		x	25	2.5	140	x		0.025
				45.9	46.6	0.09		25	x	2.5	160	x		x
				46.6	47.5	0.01		x	x	5	200	x		0.383
				47.5	50.0	0.01		98	13	1.3	5	170		
				50.0	52.9	0.01		49	12	0.9	10	110		
				52.9	54.2	0.01		x	50	2.5	60	x		0.016
				54.2	55.1	0.02		x	50	5	230	x		0.025
TLC9	54.8	85.2	massive and semi-massive magnetite and serpentine, trace sphalerite, sparse iron sulphides	55.1	56.6	0.04	x	25	75	5	5350	x		0.004
				56.6	58.1	0.05	x	x	100	5	310	x		0.013
				58.1	59.1	0.05	x	x	50	7.5	240	x		0.008
				59.1	60.5	0.05	x	50	50	5	700	x		0.008
				60.5	61.9	0.33	x	100	50	5	1550	x		0.008
				61.9	62.8	0.08	x	250	50	5	1750	x		0.017
				62.8	64.1	0.04	x	75	25	2.5	2600	x		x
				64.1	64.9	0.06	82	25	300	2.5	210	x		0.008
				64.9	65.9	0.05	48	50	100	2.5	480	x		0.008
				65.9	67.2	0.05	x	150	75	2.5	9100	x		0.009
				67.2	67.7	0.08	x	100	75	2.5	2250	x		x
				67.7	68.1	0.35	30	250	150	2.5	320	x		x
				68.1	69.6	0.15	28	150	25	2.5	2700	x		0.008

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				69.6	70.6	0.55	x	175	75	2.5	1400	x		0.004
				70.6	71.7	1.50	x	100	150	2.5	2600	x		x
				71.7	72.0	0.19	x	25	200	2.5	310	x		x
				72.0	72.6	0.30	x	25	175	5	2750	x		x
				72.6	73.9	0.51	32	225	150	2.5	490	x		x
				73.9	75.5	0.22	36	475	75	2.5	350	x		x
				75.5	77.0	0.22	30	175	50	2.5	540	x		x
				77.0	78.2	0.20	28	175	50	2.5	1600	x		x
				78.2	79.5	0.19	x	25	75	x	3750	x		0.025
				79.5	80.6	0.26	40	125	25	2.5	1000	x		x
				80.6	82.1	0.20	x	25	50	2.5	2350	x		x
				82.1	83.4	0.15	36	150	100	2.5	4100	x		x
				83.4	84.4	0.11	x	50	75	2.5	2400	x		0.008
				84.4	85.2	0.07	x	50	50	2.5	6000	x		x
TLC9	85.2	91.2	siltstone and shale; trace pyrite	85.2	86.3	0.94	40	50	25	2.5	150	x		x
				86.3	88.1	0.01		25	25	x	120	x		x
				88.1	89.5	0.01		75	325	x	x	x		0.008
				89.5	91.2	0.01		75	200	2.5	x	x		x
TLC9	91.2	96.3	altered calc-silicate rock / skarn; sparse iron sulphides	91.2	94.4	0.01		81	22	1.1	30	100		
				94.4	95.2	0.02		25	50	5	220	x		
				95.2	95.5	0.12		175	250	5	190	x		
				95.5	96.3	0.56		200	500	5	330	x		0.042
TLC9	96.3	98.0	massive magnetite and serpentine; trace pyrite	96.3	98.0	0.04	36	125	125	2.5	80	x		
TLC9	98.0	101.2	altered calc-silicate rock / skarn	98.0	99.9	0.20	46	75	75	5	120	x		
				99.9	101.2	0.02	30	25	25	2.5	250	x		
TLC9	101.2	105.7	massive magnetite and serpentine; trace sphalerite, trace pyrite	101.2	101.9	0.02	x	25	50	2.5	100	x		0.017
				101.9	102.6	0.03	x	25	75	2.5	50	x		
				102.6	104.2	0.02	36	25	50	5	120	x		
				104.2	104.8	0.68	36	125	x	2.5	270	x		
				104.8	105.7	0.48	32	225	50	2.5	80	x		0.1

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC9	105.7	106.6	altered calc-silicate rock / skarn	105.7	110.2	0.01		31	30	0.7	35	35		
TLC9	106.6	110.2	quartz sericite rock, trace pyrite											
TLC9	110.2	112.0	massive magnetite and serpentine; sparse sphalerite, sparse pyrite	110.2	112.0	1.58	x	275	500	2.5	220	x		
TLC9	112.0	113.8	altered calc-silicate rock / skarn; trace sphalerite, trace pyrite	112.0	112.7	0.18	x	25	50	x	100	x		
				112.7	113.8	0.28	36	50	25	x	170	x		
TLC9	113.8	115.4	serpentinite and magnetite; common sphalerite, sparse pyrite	113.8	114.8	14.10	x	550	25	x	180	x		
				114.8	115.4	0.25	x	75	75	x	130	x		
TLC9	115.4	116.2	siltstone; trace pyrite	115.4	118.1	0.01		15	21	0.4	35	x		
TLC9	116.2	139.8	altered calc-silicate rock and trace magnetite, trace iron sulphides	118.1	119.4	0.10		25	250	x	30	x		
				119.4	121.2	0.06		25	125	x	15	x		
				121.2	122.2	0.06		200	75	x	25	x		0.017
				122.2	123.1	0.06		175	x	x	45	x		
				123.1	124.7	0.03		25	25	2.5	45	x		
				124.7	126.5	0.02		25	25	x	80	x		
				126.5	127.7	0.02		25	50	x	50	x		x
				127.7	128.5	0.01		25	25	x	15	x		
				128.5	131.4	0.01		11	65	0.3	50	x		
				131.4	134.4	0.01		6	43	0.4	65	x		
				134.4	137.4	0.01		31	21	0.4	9	15		
				137.4	138.7	0.09		25	x	x	70	x		
				138.7	139.8	0.26	x	50	50	x	120	x		
TLC9	139.8	141.3	massive magnetite and serpentine	139.8	141.3	0.05	x	75	50	x	25	x		0.008
TLC9	141.3	145.0	altered calc-silicate rock / skarn and magnetite; trace sphalerite, sparse iron sulphides	141.3	141.8	0.46	32	125	x	x	360	x		
				141.8	142.1	0.04		400	25	x	x	x		
				142.1	142.7	0.01		25	25	x	20	x		
				142.7	143.1	0.09		25	25	x	40	x		0.017

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				143.1	143.9	0.22		25	x	x	130	x		
				143.9	145.0	0.18		25	25	2.5	130	x		
TLC9	145.0	163.0	quartz sericite rock; sparse iron sulphides	145.0	148.2	0.01		50	19	0.6	x	25		
				148.2	151.0	0.01		53	20	0.9	6	65		
				151.0	154.0	0.02		72	85	1.3	10	75		
				154.0	157.0	0.01		69	15	1	6	110		
				157.0	159.9	0.01		65	15	0.9	3	65		
				159.9	163.0	0.01		141	19	0.6	60	620		

END OF HOLE AT 163.0m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC10	0.0	3.0	not cored											
TLC10	3.0	6.3	shale and siltstone; trace pyrite	6.1	6.3	0.02		105	175	1.5	1030	35		
TLC10	6.3	7.8	massive magnetite	6.3	7.4	0.04		55	75	<0.5	110	62		
				7.4	7.8	0.12		54	70	<0.5	87	320		
TLC10	7.8	35.3	shale, siltstone and quartzite; trace sphalerite, sparse pyrite	7.8	12.5	0.07		55	55		7	<10		
				12.5	15.3	0.08		175	10	1.5	<4	33		
				15.3	18.4	0.03		185	15	1	<4	38		
				18.4	21.5	0.04		110	10	4.5	<4	20		
				21.5	24.5	0.05		115	10	1	<4	22		
				24.5	27.5	0.17		170	20	0.5	<4	48		
				27.5	29.5	0.02		85	5	<0.5	<4	25		
				29.5	32.5	0.01		110	15	2.5	<4	6		
				32.5	35.3	0.02		150	15	5	<4	24		
TLC10	35.3	36.2	altered calc-silicate rock	35.3	36.2	0.05		30	45	<0.5	33	<10		
TLC10	36.2	37.2	core not recovered											
TLC10	37.2	39.8	serpentinite and magnetite, sparse pyrite	37.2	38.5	0.04		85	40	<0.5	23	<10		
				38.5	39.8	0.12		35	75	<0.5	53	<10		
TLC10	39.8	49.6	altered calc-silicate rock and serpentinite and magnetite, sparse pyrite	39.8	40.3	0.02		35	40	0.5	10	<10		
				40.3	41.4	0.01		15	25	<0.5	12	<10		
				41.4	42.5	0.00	x	65	30	<0.5	11	<10		
				42.5	43.2	0.01	x	10	45	<0.5	53	<10		
				43.2	44.6	0.02	x	35	35	<0.5	18	<10		
				44.6	46.1	0.01	x	5	50	<0.5	7	<10		
				46.1	47.2	0.01	x	20	35	<0.5	9	<10		
				47.2	48.4	0.10		15	55	<0.5	88	<10		
				48.4	49.6	0.19		55	35	0.5	72	<10		
TLC10	49.6	65.8	dolomite and sparse magnetite; trace sphalerite, sparse pyrite	49.6	51.4	0.01		10	475	1	<3	<10		
				51.4	53.7	0.25		20	40	0.5	<4	<10		

›hid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				53.7	54.0	0.37		95	90	1.5	<4	49	70	
				54.0	55.2	0.04		30	30	1	<4	105	36	
				55.2	56.0	0.01		15	10	0.5	<4	<4	27	
				56.0	56.3	0.01		115	30	1	<4	<4	57	
				56.3	57.7	0.01		40	20	<0.5	<4	<4	34	
				57.7	58.9	0.02		65	20	0.5	<4	<4	37	<0.005
				58.9	59.4	0.17	x	135	50	1	14	<4	140	<0.005
				59.4	59.8	0.22	30	90	75	<0.5	14	11	230	<0.005
				59.8	60.4	0.02		45	50	1	<4	13	47	<0.005
				60.4	60.8	1.40		175	45	1	<4	<4	44	<0.005
				60.8	61.5	0.12		90	340	0.5	43	<4	33	
				61.5	62.7	0.32		35	535	1	<4	<4	19	
				62.7	64.2	0.11		10	75	1	<4	<4	14	
				64.2	65.8	0.11		150	160	1	<4	<4	10	
ΓLC10	65.8	66.9	serpentinite and magnetite; sparse pyrite	65.8	66.9	0.69		210	40	1	85	<4	41	
ΓLC10	66.9	74.9	siltstone and shale and sparse magnetite	66.9	68.0	0.14		190	60	1	25	<4	22	
				68.0	68.9	0.02		10	120	<0.5	<4	<4	18	
				68.9	69.9	0.01		60	60	<0.5	<4	<4	80	
				69.9	70.2	0.01		10	45	<0.5	<4	7	32	
				70.2	74.0	0.03		75	70	1	<4	4	64	
				74.0	74.9	0.02		55	50	1.5	<4	<4	69	<0.005
ΓLC10	74.9	78.9	massive magnetite and serpentine; trace sphalerite, trace pyrite	74.9	76.2	0.38		55	1600	3	<4	<4	150	<0.005
				76.2	77.4	0.05	x	10	350	2	6	<4	99	<0.005
				77.4	78.9	0.06	x	15	490	2.5	<4	<4	89	<0.005
ΓLC10	78.9	90.2	dolomite; sparse pyrite	78.9	80.0	0.05	48	10	20	<0.5	<4	<4	87	0.011
				80.0	80.4	0.12	x	30	70	0.5	<4	<4	580	<0.005
				80.4	81.9	0.05	28	10	30	1	<4	<4	87	<0.005
				81.9	83.5	0.00		5	45	<0.5	<4	5	62	<0.005
				83.5	85.0	0.00		<5	25	1	<4	5	16	
				85.0	85.8	0.01		5	30	0.5	<4	<4	12	
				85.8	87.4	0.00		10	25	<0.5	<4	4	6	
				87.4	88.7	0.00		5	20	1	<4	<4	7	

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				88.7	90.2	0.01		10	20	0.5	<4	<4	5	
TLC10	90.2	102.2	siltstone and altered calc-silicate rock and minor magnetite; minor pyrite	90.2	91.7	0.01		25	35	<0.5	<4	<4	43	
				91.7	93.2	0.01		15	40	0.5	<4	<4	24	
				93.2	94.3	0.02		15	40	<0.5	<4	<4	43	
				94.3	94.9	0.05	x	<5	30	<0.5	<4	<4	5	
				94.9	96.4	0.03	x	<5	30	<0.5	<4	<4	7	
				96.4	97.5	0.02	x	5	25	1	96	5	5	
				97.5	98.8	0.02		10	45	1	11	4	9	
				98.8	99.6	0.01		10	35	0.5	994	5	44	
				99.6	101.3	0.00		<5	25	<0.5	54	<4	6	
				101.3	102.2	0.00		10	15	0.5	48	<4	8	
TLC10	102.2	106.5	serpentinite and magnetite; trace pyrite	102.2	103.6	0.03	46	220	30	0.5	31	4	50	
				103.6	105.2	0.04	44	155	25	0.5	29	17	43	
				105.2	106.5	0.01	34	30	20	1	7	20	54	
TLC10	106.5	117.4	altered calc-silicate rock and trace magnetite; trace pyrite	106.5	106.9	0.01		10	60	0.5	13	<4	13	<0.005
				106.9	110.0	0.01		45	45	1	69	16	10	
				110.0	113.0	0.01		30	20	1.5	21	17	14	
				113.0	116.0	0.01		20	15	<0.5	46	<4	10	
				116.0	119.0	0.00		25	10	1	59	4	5	
TLC10	117.4	134.0	quartz-sericite rock; sparse pyrite	119.0	122.0	0.00		45	<5	<0.5	<4	21	<1	
				122.0	125.0	0.00		60	15	<0.5	<4	30	4	
				125.0	128.0	0.00		70	25	3	<4	42	5	
				128.0	131.0	0.00		65	20	<0.5	<4	43	5	
				131.0	134.0	0.01		225	30	0.5	<4	269	2	

END OF HOLE AT 134.0m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC11	0.0	4.0	not cored											
TLC11	4.0	32.6	siltstone, shale and quartzite; sparse pyrite	4.0	6.4	0.02		105	20	<0.5	<4	64	15	
				6.4	9.3	0.02		60	15	1	<4	<4	22	
				9.3	11.8	0.02		100	30	1	<4	10	20	
			core not recovered between 13.2m and 28.5m, the assays were made using sludge samples	11.8	13.7	0.02		80	35	1.5	<4	13	34	
				18.0	21.0	0.07		90	45	1	<4	16	150	<0.005
				21.0	24.0	0.09		95	50	0.5	11	15	170	<0.005
				24.0	27.0	0.09		90	50	1	8	19	140	<0.005
				27.0	30.7	0.00		60	25	1	<4	11	38	
				30.7	32.6	0.01		60	65	1	<4	36	74	
TLC11	32.6	33.6	altered calc-silicate rock / skarn	32.6	33.6	0.00		<5	10	1	<4	<4	6	
TLC11	33.6	50.8	quartz sericite rock; sparse iron sulphides	33.6	36.5	0.01		60	30	<0.5	<4	11	23	
				36.5	39.4	0.01		90	20	0.5	<4	22	30	
				39.4	42.3	0.00		85	40	1	<4	6	45	
				42.3	45.3	0.00		60	30	1	<4	<4	31	
				45.3	48.2	0.01		40	35	<0.5	<4	10	33	
				48.2	49.0	0.01		40	35	<0.5	<4	<4	41	
				49.0	49.4	0.04	32	135	15	1.5	34	<4	11	
				49.4	50.2	0.24	28	45	25	<0.5	64	<4	31	
				50.2	50.8	0.01	30	10	35	<0.5	7	<4	44	
TLC11	50.8	56.1	shale and siltstone	50.8	53.5	0.02		80	30	<0.5	<4	73	43	
				53.5	56.1	0.01		85	40	<0.5	<4	22	68	
TLC11	56.1	60.1	altered calc-silicate rock / skarn and minor magnetite; sparse iron sulphides	56.1	56.9	0.00		50	25	<0.5	9	<4	65	
				56.9	57.0	0.01		1350	20	<0.5	<4	6	12	
				57.0	58.3	0.00		45	20	1.5	14	<4	18	
				58.3	58.6	0.01		270	20	0.5	<4	<4	41	
				58.6	59.6	0.00		350	20	0.5	<4	<4	33	
				59.6	60.1	0.02		65	75	0.5	<4	<4	210	<0.005
LC11	60.1	63.8	shale and siltstone	60.1	62.8	0.01		70	30	0.5	<4	28	57	

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC11	63.8	67.4	quartz sericite rock	62.8	65.7	0.01		50	60	<0.5	<4	32	25	
				65.7	67.4	0.01		35	10	0.5	<4	<4	59	
TLC11	67.4	89.0	dolomite and sparse magnetite; sparse pyrite	67.4	68.8	0.00	x	10	10	1	<4	<4	7	
				68.8	69.5	0.00	x	5	15	<0.5	<4	<4	7	
				69.5	70.2	0.00	x	5	10	0.5	<4	<4	6	
				70.2	70.8	0.01	30	20	20	1	<4	49	69	
				70.8	71.2	0.01	x	15	20	1	<4	7	31	
				71.2	72.7	0.00	x	5	20	<0.5	<4	<4	41	
				72.7	74.1	0.00	x	5	20	<0.5	<4	<4	140	<0.005
				74.1	75.5	0.00	x	5	20	0.5	<4	4	12	
				75.5	76.3	0.00	x	5	30	<0.5	<4	5	12	
				76.3	76.7	0.00	x	<5	15	<0.5	<4	7	27	
				76.7	77.1	0.00	x	<5	25	0.5	<4	6	19	
				77.1	77.6	0.00	x	5	15	<0.5	<4	<4	11	
				77.6	78.3	0.00	28	10	5	1	<4	<4	7	
				78.3	79.7	0.00	44	5	10	1	<4	<4	4	
				79.7	81.2	0.00	32	<5	10	<0.5	<4	<4	3	
				81.2	82.6	0.00	x	5	10	<0.5	<4	<4	4	
				82.6	83.3	0.00	x	10	10	0.5	<4	<4	4	
				83.3	83.9	0.01	x	5	15	0.5	<4	<4	24	
				83.9	84.8	0.01	x	15	30	1.5	<4	<4	18	
				84.8	86.2	0.00	x	10	10	1	<4	<4	12	
				86.2	87.6	0.00	28	10	15	1.5	<4	<4	12	
				87.6	89.0	0.02	x	20	15	<0.5	<4	<4	10	
TLC11	89.0	95.0	altered calc-silicate rock / skarn and sparse magnetite, trace pyrite	89.0	89.5	0.04		55	25	0.5	14	<4	60	
				89.5	90.0	0.01		10	35	1	7	<4	11	
				90.0	91.1	0.02		60	85	1	62	<4	29	
				91.1	91.6	0.01		15	30	1.5	86	<4	33	
				91.6	92.7	0.01		135	40	1.5	16	10	87	
				92.7	93.1	0.01		145	25	1	69	<4	13	
				93.1	93.4	0.01		50	20	1	4	<4	33	
				93.4	93.9	0.03		10	45	1	228	<4	6	
				93.9	95.0	0.01		10	15	1	123	<4	4	

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC11	95.0	119.0	quartz sericite rock	95.0	98.0	0.00		35	20	<0.5	24	4	9	
				98.0	101.0	0.00		15	15	<0.5	<4	13	13	
				101.0	104.0	0.00		20	5	<0.5	<4	12	7	
				104.0	107.0	0.00		40	10	<0.5	<4	17	4	
				107.0	110.0	0.02		160	10	<0.5	<4	255	4	
				110.0	113.0	0.00		20	10	<0.5	<4	19	7	
				113.0	116.0	0.02		45	20	<0.5	<4	13	6	
				116.0	119.0	0.01		30	25	<0.5	<4	6	31	

END OF HOLE AT 119.0m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC12	0.0	11.0	clay											
TLC12	11.0	20.0	weathered altered calc-silicate rock											
TLC12	20	45.8	shale and siltstone; sparse pyrite	22.1	23.0	0.02		145	240	<0.5	<4	<10		
				28.8	32.0	0.06		90	130	<0.5	<4	185		
				32.0	35.0	0.03		130	60	<0.5	<4	251		
				35.0	38.0	0.03		100	50	<0.5	<4	126		
				38.0	45.8	0.06		75	185	<0.5	37	68		
TLC12	45.8	55.7	altered calc-silicate rock / skarn and minor magnetite; trace sphalerite	45.8	46.5	0.10		10	715	7	23	<4	60	
				46.5	48.0	0.06	x	<5	40	0.5	59	17	310	
				48.0	49.5	0.04	x	<5	15	<0.5	64	<4	91	
				49.5	49.9	0.04	x	<5	20	0.5	57	<4	250	
				49.9	50.3	0.04	x	<5	30	<0.5	25	<4	290	
				50.3	51.1	0.05	x	<5	30	<0.5	41	9	170	
				51.1	51.7	0.01		5	35	<0.5	15	<4	18	
				51.7	52.9	0.08		20	15	<0.5	5	<4	15	
				52.9	53.3	0.01		<5	15	<0.5	<4	4	5	
				53.3	53.9	0.01		100	20	<0.5	<4	<4	25	
				53.9	54.5	0.01		35	20	<0.5	<4	4	44	
				54.5	55.7	0.01		30	55	<0.5	<4	<4	15	
TLC12	55.7	73.0	siltstone, trace pyrite	55.7	59.0	0.01		50	30	<0.5	<4	30		
				59.0	62.0	0.01		35	20	<0.5	<4	13		
				62.0	65.0	0.01		65	20	<0.5	<4	10		
				65.0	68.0	0.01		50	15	<0.5	<4	24		
				68.0	73.0	0.01		20	35	<0.5	6	22		
TLC12	73.0	97.2	serpentinite and magnetite; trace sphalerite	73.0	73.9	0.01		<5	230	2	34	<4	8	
				73.9	75.3	0.05	30	<5	125	<0.5	58	124	200	
				75.3	76.9	0.06	x	10	225	0.5	68	84	180	
				76.9	78.2	0.07	38	15	125	0.5	58	7	100	
				78.2	79.7	0.04	x	<5	45	0.5	41	<4	41	
				79.7	81.1	0.08	28	15	175	1	31	34	52	
				81.1	82.6	0.02	26	<5	60	0.5	15	117	44	

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				82.6	84.1	0.04	x	5	80	<0.5	26	53	93	
				84.1	85.5	0.02	x	<5	80	0.5	31	119	150	
				85.5	87.0	0.02	x	<5	90	0.5	65	51	120	
				87.0	88.8	0.03	x	10	40	<0.5	62	41	92	
				88.8	90.2	0.01	x	<5	95	0.5	68	84	120	
				90.2	91.7	0.01	x	5	175	1.5	40	12	41	
				91.7	93.2	0.04	x	<5	145	1	30	<4	10	
				93.2	94.2	0.02	x	10	110	1	27	<4	14	
				94.2	95.6	0.06	x	10	350	1	56	68	45	
				95.6	96.6	0.04	x	<5	90	0.5	108	126	210	
				96.6	97.2	0.04	x	<5	100	0.5	73	25	100	
TLC12	97.2	119.0	siltstone; sparse pyrite	97.2	99.1	0.01		30	30	<0.5	11	<4	47	
				99.1	101.0	0.01		40	20	<0.5	<4	<4		
				101.0	104.0	0.00		80	25	<0.5	<4	4		
				104.0	107.0	0.01		80	20	<0.5	8	<4		
				107.0	110.0	0.01		145	15	<0.5	<4	<4		
				110.0	113.0	0.01		200	15	<0.5	<4	7		
				113.0	116.0	0.00		85	10	<0.5	<4	<4		
				116.0	119.0	0.01		105	15	<0.5	<4	<4		
TLC12	119.0	127.0	altered calc-silicate rock / skarn	119.0	122.0	0.01		25	15	<0.5	12	<4		
				122.0	125.0	0.12		45	255	<0.5	28	14		
				125.0	127.0	0.01		40	25	<0.5	<4	<4		

END OF HOLE AT 127.0m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC13	0.0	9.0	not cored											
TLC13	9.0	21.5	core not recovered											
TLC13	21.5	25.4	weathered rock											
TLC13	25.4	28.0	core not recovered											
TLC13	28.0	54.3	altered calc-silicate rock / skarn and common magnetite	31.2	31.6	0.02		15	30	<0.5	<4	8		
				31.6	47.0	0.01		25	65	<0.5	<4	<4		
				47.0	50.0	0.02		35	40	<0.5	8	<4		
				50.0	54.3	0.01		10	80	<0.5	34	<4		
TLC13	54.3	59.0	core not recovered											
TLC13	59.0	68.7	massive magnetite and silicates; sparse sphalerite,	59.0	61.0	0.14	46	75	30	<0.5	16	<4		
				61.0	61.1	0.21	88	25	35	<0.5	4	<4		
				61.1	62.5	0.20	60	10	15	<0.5	4	<4		
				62.5	63.0	0.24	70	15	25	<0.5	6	<4		
				63.0	64.1	0.54	40	95	40	<0.5	4	<4		
				64.1	65.1	0.32	70	210	30	<0.5	<4	<4		
				65.1	65.9	0.32	x	235	30	<0.5	4	<4		
				65.9	66.8	0.23	x	80	25	<0.5	27	<4		
				66.8	67.2	0.40	x	30	25	<0.5	<4	<4		
				67.2	67.9	0.64	36	30	20	<0.5	8	<4		
				67.9	68.7	0.96	52	75	25	<0.5	80	<4		
TLC13	68.7	82.2	dolomite and minor magnetite; trace sphalerite, minor pyrite	68.7	69.8	0.02	x	45	30	<0.5	<4	<4		
				69.8	71.4	0.09	280	185	30	<0.5	<4	<4		
				71.4	71.9	0.02	220	160	30	<0.5	<4	<4		
				71.9	73.0	0.03	48	30	35	<0.5	<4	<4		
				73.0	73.4	0.15	44	25	35	<0.5	<4	<4		
				73.4	74.1	0.04	x	20	50	<0.5	<4	<4		
				74.1	75.3	0.01	x	20	35	<0.5	<4	<4		
				75.3	77.2	0.02		10	20	<0.5	<4	<4		
				77.2	79.4	0.03		35	15	<0.5	<4	<4		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				79.4	79.9	0.06		45	15	<0.5	<4	<4		
				79.9	82.2	0.02		15	30	<0.5	<4	<4		
TLC13	82.2	83.4	serpentine breccia	82.2	83.4	0.30		20	20	<0.5	<4	<4		
TLC13	83.4	199.2	dolomite and trace magnetite; trace pyrite	83.4	85.0	0.02		5	25	<0.5	<4	<4		
				85.0	87.5	0.20		15	15	<0.5	<4	<4		
				87.5	94.0	0.01		5	20	<0.5	<4	<4		
				94.0	97.0	0.01		5	20	<0.5	<4	<4		
				97.0	100.0	0.01		5	25	<0.5	<4	<4		
				100.0	103.0	0.01		5	30	<0.5	<4	<4		
				103.0	106.0	0.01		<5	25	<0.5	<4	<4		
				106.0	109.0	0.01		<5	15	<0.5	<4	<4		
				109.0	112.0	0.01		5	20	<0.5	<4	<4		
				112.0	115.0	0.03		30	20	<0.5	<4	<4		
				115.0	118.0	0.01		5	25	<0.5	<4	<4		
				118.0	121.0	0.01		10	20	<0.5	<4	<4		
				121.0	124.0	0.01		5	25	<0.5	<4	<4		
				124.0	127.0	0.01		5	20	<0.5	<4	<4		
				127.0	130.0	0.01		<5	25	<0.5	<4	<4		
				130.0	133.0	0.01		<5	25	<0.5	<4	<4		
				133.0	136.0	0.01		5	25	<0.5	<4	<4		
				136.0	139.0	0.00		<5	25	<0.5	<4	<4		
				139.0	142.0	0.01		<5	40	<0.5	<4	<4		
				142.0	145.0	0.01		<5	25	<0.5	<4	<4		
				145.0	148.0	0.01		10	25	<0.5	<4	<4		
				148.0	151.0	0.00		5	30	<0.5	<4	<4		
				151.0	154.0	0.01		<5	25	<0.5	<4	<4		
				154.0	157.0	0.00		<5	20	<0.5	<4	<4		
				157.0	160.0	0.02		5	20	<0.5	<4	<4		
				160.0	163.0	0.01		5	20	<0.5	<4	<4		
				163.0	166.0	0.01		20	20	<0.5	<4	<4		
				166.0	169.0	0.00		5	20	<0.5	<4	<4		
				169.0	172.0	0.00		<5	20	<0.5	<4	<4		
				172.0	175.0	0.00		<5	35	<0.5	<4	<4		
				175.0	178.0	0.00		5	20	<0.5	<4	<4		

›hid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				178.0	181.0	0.00		5	25	<0.5	<4	<4		
				181.0	184.0	0.00		<5	20	<0.5	<4	<4		
				184.0	187.0	0.00		<5	25	<0.5	<4	<4		
				187.0	190.0	0.00		<5	30	<0.5	<4	<4		
				190.0	193.0	0.00		<5	30	<0.5	<4	<4		
				193.0	196.0	0.00		<5	25	<0.5	<4	<4		

:ND OF HOLE AT 199.2m

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
TLC14	0.0	3.0	not cored											
TLC14	3.0	49.0	quartzite and siltstone; trace iron sulphides	5.1	8.0	0.02		75	50	<0.5	<4	35		
				8.0	11.0	0.02		45	30	<0.5	5	<4		
				11.0	14.0	0.02		85	20	0.5	<4	45		
				14.0	17.0	0.01		60	20	0.5	9	<4		
				17.0	20.0	0.01		80	15	0.5	3	20		
				20.0	23.0	0.01		45	5	<0.5	<4	<4		
				23.0	26.0	0.01		55	15	<0.5	<4	<4		
				26.0	29.0	0.01		475	35	<0.5			14	
				29.0	32.0	0.01		25	5	<0.5	<4	6	9	
				32.0	35.0	0.01		55	<5	<0.5	<4	15	9	
				35.0	38.0	0.01		30	<5	<0.5	<4	<10	12	
				38.0	41.0	0.01		35	5	<0.5	<4	<10	4	
				41.0	44.0	0.00		15	<5	<0.5	<4	<10	2	
				44.0	47.0	0.01		25	<5	<0.5	5	7	3	
				47.0	50.0	0.03		25	35	1.5			3	
TLC14	49.0	57.6	quartz sericite rock; trace pyrite	50.0	53.0	0.03		15	30	<0.5	8	5	3	
				53.0	56.0	0.01		20	10	<0.5	4	7	12	
				56.0	57.6	0.02		45	95	0.5			6	
TLC14	57.6	74.4	altered calc-silicate rock / skarn and common magnetite; trace sphalerite, sparse pyrite	57.6	58.3	0.03	26	15	80	<0.5	103	<4		
				58.3	59.1	0.03	x	15	50	<0.5	56	<4		
				59.1	60.4	0.03	x	20	150	<0.5	75	<4		
				60.4	60.9	0.07	x	25	30	<0.5	134	<4		
				60.9	61.6	0.07		45	25	<0.5	213	<4		
				61.6	62.4	0.05		15	45	<0.5	186	<4		
				62.4	65.0	0.01		35	30	1			5	
				65.0	68.3	0.01		20	25	<0.5	47	<10	13	
				68.3	68.9	0.29		165	1700	5.5	101	<4		
				68.9	69.2	0.23		170	720	1	245	<4		
				69.2	71.0	0.26		25	255	2	6	<4	21	
				71.0	74.4	0.12		15	50	1	141	<4		
TLC14	74.4	95.0	massive magnetite and serpentine; trace	74.4	75.2	0.01	52	215	40	<0.5	181	<4		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
			pyrite	75.2	75.8	0.02	x	90	20	<0.5	210	<4		
				75.8	76.9	0.01	x	25	30	<0.5	1030	39		
				76.9	77.3	0.14	40	15	15	<0.5	173	57		
				77.3	77.8	0.02	26	100	30	<0.5	382	51		
				77.8	78.5	0.01	x	45	15	<0.5	943	49		
				78.5	80.0	0.02	x	10	25	<0.5	1510	62		
				80.0	81.5	0.01	x	10	100	<0.5	1690	44		
				81.5	82.5	0.01	255	10	220	1	58	116		
				82.5	84.5	0.07	395	35	475	3	79	282		
				84.5	85.4	0.01	26	5	25	<0.5	382	<4		
				85.4	86.9	0.01	38	5	20	<0.5	1850	27		
				86.9	87.7	0.01	x	5	25	<0.5	2080	24		
				87.7	88.6	0.02	x	15	35	<0.5	847	13		
				88.6	89.6	0.01	x	10	15	<0.5	298	30		
				89.6	91.1	0.01	x	10	25	<0.5	1590	12		
				91.1	92.5	0.01	x	<5	20	<0.5	584	58		
				92.5	93.9	0.02	x	5	35	<0.5	244	69		
				93.9	95.0	0.02	x	5	30	<0.5	401	<4		
TLC14	95.0	103.6	dolomite and minor magnetite; sparse pyrite	95.0	98.0	0.06		20	35	<0.5	59	4		67
				98.0	101.0	0.01		35	25	<0.5	27	<4		160
				101.0	103.6	0.06		25	10	<0.5	11	9		60
TLC14	103.6	108.1	serpentinite and magnetite	103.6	104.0	0.04	x	60	45	<0.5	186	<4		
				104.0	105.1	0.03	x	100	40	<0.5	162	28		
				105.1	106.7	0.02	x	30	30	<0.5	94	21		
				106.7	108.1	0.07	x	40	35	<0.5	69	17		
TLC14	108.1	112.7	dolomite and minor magnetite; sparse pyrite	108.1	112.2	0.02		45	15	<0.5	6	<4		
				112.2	112.7	0.02		10	20	1	930	7		2300
TLC14	112.7	127.5	altered calc-silicate rock / skarn and shale and sparse magnetite	112.7	114.5	0.03		10	5	<0.5	333	<10		420
				114.5	115.7	0.02	32	55	15	<0.5	6	12		89
				115.7	116.4	0.03	46	45	20	<0.5	19	19		680
				116.4	119.0	0.07		95	30	0.5	250	<4		
				119.0	122.8	0.01		30	25	<0.5	40	<4		

bhid	from	to	rocktype	from	to	Zn %	Ni ppm	Cu ppm	Pb ppm	Ag ppm	Sn ppm	W ppm	As ppm	Au ppm
				122.8	123.8	0.01		55	40	<0.5	<4	<4		
				123.8	125.0	0.02		35	75	<0.5	<4	<4		
				125.0	127.5	0.01		15	105	<0.5	110	<4		
TLC14	127.5	135.5	massive magnetite and serpentine, sparse sphalerite, common pyrite	127.5	128.1	0.03	x	45	<5	<0.5	487	16		
				128.1	129.6	0.02	x	30	<5	<0.5	1440	19		
				129.6	130.3	0.03	x	55	10	<0.5	253	10		
				130.3	131.7	0.05	x	95	<5	<0.5	1130	15		
				131.7	133.2	2.15	30	325	15	<0.5	610	<10		
				133.2	134.2	0.02	62	840	10	<0.5	197	12		
				134.2	134.9	0.06	x	35	180	<0.5	38	<4		
				134.9	135.5	0.05	84	100	35	<0.5	11	8		
TLC14	135.5	161.4	altered calc-silicate rock / skarn and common magnetite; trace sphalerite, sparse pyrite	135.5	137.0	0.03		20	40	<0.5	90	<4		
				137.0	140.0	0.02		20	70	0.5	80	<4		
				140.0	141.5	0.02		30	30	<0.5	65	<4		
				141.5	141.9	0.03		115	5	0.5	23	6		37
				141.9	142.5	0.02		20	50	<0.5	38	<4		15
				142.5	143.8	0.05		55	<5	<0.5	34	<4		42
				143.8	146.0	0.13		15	90	0.5	100	10		
				146.0	149.0	0.02		15	50	<0.5	95	<4		
				149.0	153.3	0.07		25	65	<0.5	80	10		
				153.3	154.2	0.01		15	5	<0.5	9	<4		9
				154.2	155.0	0.02	26	25	<5	<0.5	13	19		11
				155.0	156.1	0.02	x	15	<5	<0.5	11	<4		10
				156.1	156.8	0.03	x	15	<5	<0.5	17	6		20
				156.8	158.0	0.02	x	200	<5	<0.5	32	<4		20
				158.0	159.6	0.05		45	35	0.5	95	<10		
				159.6	161.4	0.03		45	120	1	180	<10		
TLC14	161.4	169.0	quartz sericite rock	161.4	165.0	0.01		30	25	0.5	10	<10		
				165.0	169.0	0.01		15	35	<0.5	40	<10		

END OF HOLE AT 169.0m

Appendix 3

Summary of rock codes for holes TLC1 to TLC14

bhid	from	to	rockcode
TLC1	0.0	3.0	N
TLC1	3.0	13.2	H
TLC1	13.2	25.5	CM
TLC1	25.5	28.0	L
TLC1	28.0	31.8	CM
TLC1	31.8	34.3	L
TLC1	34.3	41.3	CM
TLC1	41.3	46.4	BH
TLC1	46.4	48.6	CM
TLC1	48.6	54.3	DM
TLC1	54.3	58.5	MS
TLC1	58.5	63.9	L
TLC1	63.9	88.4	CM
TLC2	0.0	3.0	N
TLC2	3.0	19.5	Y
TLC2	19.5	28.1	MC
TLC2	28.1	30.1	C
TLC2	30.1	31.8	MS
TLC2	31.8	36.5	C
TLC2	36.5	37.2	MS
TLC2	37.2	38.9	C
TLC2	38.9	43.6	H
TLC2	43.6	50.5	CM
TLC2	50.5	78.1	C
TLC2	78.1	80.4	BC
TLC2	80.4	81.7	MS
TLC2	81.7	84.1	BC
TLC2	84.1	95.5	H
TLC2	95.5	104.7	C
TLC2	104.7	117.2	Q
TLC2	117.2	133.0	H
TLC3	0.0	6.0	N
TLC3	6.0	13.5	MS
TLC3	13.5	27.1	C
TLC3	27.1	47.4	C
TLC3	47.4	51.4	MS
TLC3	51.4	54.0	MC
TLC3	54.0	56.4	MS
TLC3	56.4	64.9	MC
TLC3	64.9	67.6	C
TLC3	67.7	70.8	L
TLC3	70.8	71.5	C
TLC3	71.5	73.9	L
TLC3	73.9	80.4	LC
TLC3	80.4	90.1	L
TLC3	90.1	111.5	LC
TLC3	111.5	132.8	C
TLC3	132.8	139.7	L
TLC3	139.7	142.0	C
TLC4	0.0	4.0	N
TLC4	4.0	24.4	C
TLC4	24.4	32.6	CM
TLC4	32.6	52.9	C
TLC4	52.9	57.7	CM
TLC4	57.7	73.0	LM
TLC4	73.0	80.9	MS

bhid	from	to	rockcode
TLC4	80.9	87.3	LS
TLC4	87.3	92.2	C
TLC4	92.2	113.0	LM
TLC4	113.0	134.0	C
TLC5	0.0	3.0	N
TLC5	3.0	70.3	C
TLC5	70.3	92.4	H
TLC5	92.4	112.4	C
TLC5	112.4	116.2	H
TLC5	116.2	119.5	C
TLC6	0.0	0.3	N
TLC6	0.3	2.1	SM
TLC6	2.1	17.7	LM
TLC6	17.7	25.4	LS
TLC6	25.4	32.3	MS
TLC6	32.3	40.6	SM
TLC6	40.6	52.1	CM
TLC6	52.1	62.7	C
TLC6	62.7	74.7	SM
TLC6	74.7	83.6	CM
TLC6	83.6	90.5	MS
TLC6	90.5	156.4	LM
TLC6	156.4	177.9	DM
TLC6	177.9	208.5	L
TLC7	0.0	6.0	N
TLC7	6.0	19.4	L
TLC7	19.4	21.3	C
TLC7	21.3	127.1	L
TLC7	127.1	132.6	C
TLC7	132.6	142.5	LM
TLC7	142.5	145.5	S
TLC7	145.5	160.5	D
TLC7	160.5	169.5	L
TLC7	169.5	185.2	DM
TLC7	185.2	188.8	B
TLC7	188.8	200.1	L
TLC8	0.0	6.0	N
TLC8	6.0	22.5	M
TLC8	22.5	53.6	C
TLC8	53.6	63.1	SM
TLC8	63.1	65.3	C
TLC8	65.3	85.7	C
TLC8	85.7	97.9	L
TLC8	97.9	101.2	C
TLC8	101.2	115.5	C
TLC8	115.5	150.9	L
TLC9	0.0	1.8	N
TLC9	1.8	30.4	H
TLC9	30.4	35.6	B
TLC9	35.6	54.8	H
TLC9	54.8	85.2	MS
TLC9	85.2	91.2	H
TLC9	91.2	96.3	C
TLC9	96.3	98.0	MS
TLC9	98.0	101.2	C

bhid	from	to	rockcode
TLC9	101.2	105.7	MS
TLC9	105.7	106.6	C
TLC9	106.6	110.2	Q
TLC9	110.2	112.0	MS
TLC9	112.0	113.8	C
TLC9	115.4	116.2	H
TLC9	116.2	139.8	C
TLC9	139.8	141.3	MS
TLC9	141.3	145.0	CM
TLC9	145.0	163.0	Q
TLC10	0.0	3.0	N
TLC10	3.0	6.3	H
TLC10	6.3	7.8	M
TLC10	7.8	35.3	H
TLC10	35.3	36.2	C
TLC10	36.2	37.2	L
TLC10	37.2	39.8	SM
TLC10	39.8	49.6	CM
TLC10	49.6	65.8	D
TLC10	65.8	66.9	SM
TLC10	66.9	74.9	H
TLC10	74.9	78.9	MS
TLC10	78.9	90.2	D
TLC10	90.2	102.2	CM
TLC10	102.2	106.5	SM
TLC10	106.5	117.4	C
TLC10	117.4	134.0	Q
TLC11	0.0	4.0	N
TLC11	4.0	32.6	H
TLC11	32.6	33.6	C
TLC11	33.6	50.8	Q
TLC11	50.8	56.1	H
TLC11	56.1	60.1	CM
TLC11	60.1	63.8	H
TLC11	63.8	67.4	Q
TLC11	67.4	89.0	D
TLC11	89.0	95.0	C
TLC11	95.0	119.0	Q
TLC12	0.0	11.0	Y
TLC12	11.0	20.0	C
TLC12	20	45.8	H
TLC12	45.8	55.7	CM
TLC12	55.7	73.0	H
TLC12	73.0	97.2	SM
TLC12	97.2	119.0	H
TLC12	119.0	127.0	C
TLC13	0.0	9.0	N
TLC13	9.0	21.5	L
TLC13	21.5	25.4	Y
TLC13	25.4	28.0	L
TLC13	28.0	54.3	CM
TLC13	54.3	59.0	L
TLC13	59.0	68.7	MQ
TLC13	68.7	82.2	DM
TLC13	82.2	83.4	BS
TLC13	83.4	199.2	DM

bhid	from	to	rockcode
TLC14	0.0	3.0	N
TLC14	3.0	49.0	H
TLC14	49.0	57.6	Q
TLC14	57.6	74.4	CM
TLC14	74.4	95.0	MS
TLC14	95.0	103.6	DM
TLC14	103.6	108.1	SM
TLC14	108.1	112.7	DM
TLC14	112.7	127.5	C
TLC14	127.5	135.5	MS
TLC14	135.5	161.4	CM
TLC14	161.4	169.0	Q

Appendix 4

CRAE logs of holes TLC1 to TLC14

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1

TENEMENT NAME TENTH LEGION No. 53M/75

PLAN – MAP REFERENCE TASH 2 TASH 11

CO-ORDINATES 4956.3 N / 5198.9 E AZIMUTH 180° Grid DRILLERS S. RIMAK COMMENCED 19.2.81 DEPTH 88.4m HOLE No. TLC1

RL COLLAR 241.3 m INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 24.2.81 CASING LEFT 27m BQ RODS; BQ BARRELL/BIT (HOLE LOST) DPO No(s) 26667

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
)	3m				TRICONED – NO CORE.												
·0	4.0	0.5	NQ	ss/sh	3.0 – 13.2 Dark Grey Thinly												
.0	4.8	0.1	to		bedded SILTSTONES + SHALES	3.1m So 53°											
.8	6.0	0.25	42m		Thinly bedded (10–20 mm) contorted	Extensively weathered – soft, crumbly											
·0	7.0	0.45			black shaley beds with pale grey	and broken core with some pitting											
·0	8.0	0.80			siltstones and ?some creamy coloured	and minor limonitic staining,											
.0	9.0	0.35			calc-silicate laminae.	suggesting sulphides originally											
0	9.9	0.35			8.0–10.5 yellowish/pinkish soft	present 1–5%.											
·9	11.1	0.50			rotten weathered ? calc silicate interval												
1.1	12.0	0.50			finely bedded and highly contorted.	12.2–34.5 Fault zone?											
2.0	13.0	0.45				Soft white cream and grey											
3.0	14.0	0.9				puggy clays; some magnetite											
4.0	15.0	0.4				intervals; overall, the ground is											
5.0	16.5	0.6				soft, crumbly and rotten											
6.5	19.5	0.45		Css ?	13.2 – 16.5 CALC SILICATES	13.2 – 15.0 Traces of Mn oxides	877356	13.2	15.0	1.3	140	70	680	<1	120	–	0.025
1.5	22.5	0.4			White and pink soft greasy	along fine stringers.	357	15.0	16.5	0.6	220	310	1150	×	390	65	
					feeling calc silicates, shattered												
					and broken.												
					15 – 16.5 Pronounced pinkish												
					and orange tones, with some												
					weathered micaceous patches												
					and small blebs of Mn oxides												
					to 2mm												
				M/Css ?	16.5 – 22.5 Mixed MAGNETITE	Magnetite 30–40% of	358	16.5	19.4	0.4	170	80	3050	×	150	30	
					and CALC SILICATES.	recovered core – porous and	359	19.4	22.5	0.4	125	305	1150	×	190	30	
					Porous crumbly magnetite,	cellular; locally massive											
					highly weathered and friable	lengths to 20 cm.											
					pink and soft shattered calc-	Mn as coatings and black											
					silicate matrix. Some highly	soft crumbly wad 2–3%											
					Mn rich portions – black oxides												
					assoc. with greenish calc silicates												

U27

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

SHEET No. 2
TENEMENT NAME TENTH LEGION No. .....
PLAN – MAP REFERENCE .....
CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. THC 1
RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s). 26667

DEPTH om (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
2·5	25·5	0·4	NQ	Cst/sh	?22·5 – ?25·5 CALC SILICATES	22·5 – 25·5 Highly weathered	877360	22·5	25·5	0·4	140	40	380	×	380	×	·017
			to		with Grey SILTSTONE / SHALE.	– totally leached.											
			42m		Finely bedded pink and white												
					totally kaolinised calc silicates												
					with thin laminae of greasy												
					feeling rotten grey shale.												
·5	28·0			LOST CORE	25·5 – 28·0 LOST CORE ZONE												
·0	28·5	0·5		M	28·0 – 28·5? Soft crumbly massive	Weakly banded ≐ 45°, traces	361	28·0	28·5	0·5	35	30	470	×	9900	30	
					granular MAGNETITE.	of white ?magnesite remnants.											
·5	31·5	0·6		Css/M	?28·5 – ?31·1 CALC-SILICATES with		362	28·5	31·1	0·3	60	30	750	×	3·3%	×	
					Dissem. MAGNETITE.		932309	28·6m.	Mineragraphic	Sample.							
					Dark greeny grey calc silicate rock	Highly weathered, shattered and											
					with finely dissem. mag 20-30%.	crumbly. Dissem mag 20-30%.											
					Originally a serpentinite?												
5	31·8	0·2		M	?31·1 – 31·8 Massive MAGNETITE	?Contact 42°	363	31·1	31·8	0·6	25	30	1050	×	3200	×	
					Granular crystalline mag (2-3mm grains)												
					with 1-2% white weathered ?carbonates												
					and a little greeny-grey talc												
·8	34·3			LOST CORE	31·8 – 34·3? LOST CORE ZONE												
·3	34·5	0·2		Css/M	?34·3 – 34·5 TALCOSE CALC-SILICATE	Highly faulted, shattered & crumbly	364	34·3	34·5	0·2	40	75	1600	×	1150	30	×
					ROCK WITH MAGNETITE.												
					Pale greeny grey soft talcose												
					? carbonate rock with pinkish (Mn?)												
					patches, some greenish serpentinite												
					and granular dissem. mag. 20-30%.												
·5	37·5	2·0		M/S	34·5 – 35·3 Faulted MAGNETITE/SERPENTINITE.	34·5 faulted contact, 80°	365	34·5	35·3	0·8	290	55	4950	×	2500	×	
					Olive green crumbly textured rock	Magnetite, variable 70-80%											
					with abundant granular crystalline mag.	to 10%, average 40-50%.											
				Css	?35·3 ?35·8 TALCOSE CALC-SILICATE ROCK	Magnetite 10-20%, granular	366	35·3	37·3	2·0	45	25	420	×	130	×	
					White crumbly weakly talcy rock	and disseminated.											
					with small brownish spots in matrix.												

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

SHEET No. 3
TENEMENT NAME ..... No. .....
PLAN – MAP REFERENCE .....
CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC1
RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s). 26667

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
37.5	40.0	3.0	NQ	Cst	35.8–?41.3 CALC SILICATE ROCK	35.8 Contact ?50°	877367	37.3	39.3	2.0	5	30	80	x	55	x	
40.0	43.4	3.3	42m		Very hard bone coloured fine	The entire fabric has been	368	39.3	41.3	2.0	10	55	95	x	70	x	0.008
43.4	46.5	3.0	↓		grained siliceous rock with	brecciated, with fine grained											
46.5	49.5	3.0	BQ		pale greeny grey crystalline patches	pinkish ?Mn silicates as irregular											
49.5	52.5	2.8			(? diopside). Some white ?magnesite	bands around breccia clasts. Traces											
52.5	55.3	2.8			as irregular cavity fillings. Lower	sp as clots in interstices; rare											
					down in interval, some pale green	irregular veinlets of bluish grey											
					?epidote veining.	serpentinite/chlorite											
				ss/sh	?41.3–46.4 SILTSTONE/SHALE BRECCIA	Highly deformed, altered and	369	41.3	42.5	1.2	50	65	85	x	25	x	
					Finely laminated grey and pink	metasomatised, with irregular patches	370	42.5	43.5	1.0	25	50	80	x	30	x	
					argillaceous rock, highly deformed	of grey qtz, green chlorite and	371	43.5	44.4	0.9	20	50	105	x	40	x	
					and contorted. Some deformed laminae	serpentinite – calcite – py – sp veining	372	44.4	46.4	2.0	50	45	110	x	8	x	x
					and stringers of remobilised pyrite –		432279	44m	THIN	SECTION	SAMPLE.						
					originally a pyritic siltstone/shale, the												
					pinkish patches being due to later alteration?												
					Contact irregular.												
				Css/M	46.4–48.6 CALC SILICATE ROCK WITH	Magnetite varying from 10-20% in	373	46.4	47.1	0.7	190	50	2.55%	x	420	x	
					MAGNETITE AND SERPENTINITE	calc-silicate rock to almost massive	374	47.1	48.2	1.1	310	50	1.75%	x	150	x	
					Alternating bands of magnetite serpentinite	for 5–10 cm. Pyrrhotite dissem up to	375	48.2	48.6	0.4	155	55	1.8%	x	440	x	
					alternating with a grey siliceous rock with	30% locally, av. 10%. Py, sp, finely											
					abundant f.gr. dissem po and mag with	dissem throughout, up to 2–5%.											
					serpentinite veining.												
					Contact 55°												
					48.6–54.3 DOLOMITE/TREMOLITE WITH	Mag, finely dissem. in small grains to	376	48.6	50.6	2.0	15	20	2700	x	6	x	x
					MAGNETITE.	3mm, 10–20%. Trace py, sp in blebs	377	50.6	52.3	0.7	30	25	9100	x	20	x	
					Pale grey finely crystalline massive	to 2 mm.	378	52.3	52.7	0.4	100	30	3.5%	x	35	x	
					carbonate/tremolite with finely dissem. mag.		379	52.7	54.3	1.6	85	65	6000	x	20	x	
					and minor serpentinite alteration.												
					30° contact 52.3–52.7 Mag 50–60% in pale green serp.	52.3–52.7 Sp intergrown with mag 3-5%											
					45° contact 53.0–53.55 Mag 20–30%; serp 65%; dolomite? 10%.												

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 4

TENEMENT NAME ..... No. .....

PLAN – MAP REFERENCE .....

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC1

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 26667

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
5·3	57·4		BQ	M/S	54·3 - 58·5 MAGNETITE WITH SERPENTINITE. Contact 40° ?		877380	54·3	55·3	1·0	125	60	5·65%	x	120	x	x
7·4	58·5	1·1			Granular black magnetite 40-60%, with patches of olive green serpentinite. Some ? pale brown garnets 54·3 - 54·6.		381	57·4	58·5	1·1	145	100	1·2%	x	300	x	
8·5	63·9				58·3 - 58·5 Grey crystalline calc silicates - see 48·6 - 54·3												
					58·5 - 63·9 - Cavity - LOST CORE												
3·9	64·2	0·3		Cst	63·9 - 67·0 CALC SILICATE ROCK	Traces py, sp in irregular	382	63·9	65·9	2·0	75	60	2950	x	100	x	
4·2	67·0	2·9			Pale white and grey f.gr. matrix	crystalline aggregates; some	383	65·9	67·0	1·1	95	20	5200	x	160	x	
7·0	70·3	3·3			-diopside/tremolite, patches of pale	minor green and black serpentinite											
0·3	73·4	3·0			green epidote, some pinkish Mn	with mag. along irregular fractures											
3·4	76·5	3·0			silicates and later whitish alteration	1-2%.											
6·5	79·2	2·9			around the margins of breccia clasts.												
9·2	82·4	3·1			Contact 45°												
				M/S	67·0 - 67·6 MAGNETITE WITH SERPENTINITE.	Mag 40-60%; py 1-2%.	384	67·0	67·6	0·6	95	20	1300	x	740	x	x
					Contact 45°												
				Cst	67·6 - 69·1 CALC SILICATE ROCK.	Mag 1-2%, finely dissem in grey	385	67·6	69·1	1·5	90	15	4250	x	150	20	
					As above 63·9 - 67·0, minor pinkish	crystalline rock and with patches of											
					garnets and patches of remnant	serpentinite. Po intergrown with py											
					grey tremolite/diopside.	in blebs and finely dissem 2-3%.											
					Contact 30°, irregular.												
				M/S	69·1 - 71·5 MAGNETITE WITH SERPENTINITE.	Magnetite 30-40%; py 1-2%	386	69·1	70·3	1·2	40	20	3050	x	70	x	
					See 54·3 - 58·5 for description.	in upper 0·6 m. From 69·7 - 71·5, patches	387	70·3	71·5	1·2	95	30	3·8%	x	110	x	
					69·7 - 70·3 Altered bone white/green	dark brown sp intergrown with mag											
					mottled calc silicate rock with pervasive	locally 15-20%, overall 2-3%.											
					mag/sep alteration.												
				Css	71·5 - 80·7 CALC SILICATE (SKARN) ROCK	Traces of blue ? interstitial	388	71·5	73·5	2·0	20	85	1000	x	40	x	x
					Very altered/metasomatised rock - mottled	fluorite ?; rare blebs magnetite	389	73·5	75·5	2·0	15	25	65	x	50	x	
					bone/pale greens - mostly diopside	py and po.	390	75·5	77·5	2·0	25	25	110	x	100	x	
					with patches Mn silicates, idocrase and		391	77·5	79·5	2·0	5	15	75	x	100	x	
					brownish garnets. Randomly and chaotically		392	79·5	80·7	1·2	15	15	130	X	150	X	x
					banded - original breccia fabric.		932280	75 m	THIN SECTION SAMPLE								

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

SHEET No. 5
TENEMENT NAME ..... No. .....
PLAN – MAP REFERENCE .....
CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC 1
RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 26667

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Mo
82.4	85.4	2.4	BQ		Contact 50°?												
85.4	88.4	3.0		S/M	80.7 - 82.5 SERPENTINITE WITH MAGNETITE. Massive black serpentinite matrix with black crystalline magnetite 20-40% Contact ?45°	Py 5-7% as interstitial blebs sometimes intergrown with fibrous magnetite. Traces sp.	877393	80.7	82.5	1.8	210	30	240	x	100	x	
				Css	82.5 - 84.5 CALC SILICATE (SKARN) ROCK See 71.5 - 80.7 for description. Contact broken.	Minor pinkish garnets, epidote veining	394	82.5	84.5	2.0	40	55	175	x	140	x	
				Css/M	84.5 - 86.8 BANDED CALC SILICATE ROCK WITH MAGNETITE. Pale grey and white metasomatised breccia - tremolite/actinolite? silicified with abundant dissem mag. giving the rock a grey colour.	Mag 20-30%; po/py 3%; dots of ultrafine pale brown sp.	395	84.5	86.8	1.7	95	25	1900	0.5	100	x	
				S/M	86.8 - 88.4 SERPENTINITE WITH MAGNETITE. Dark green serp. with with incipient talcose alteration and fibrous bluish grey mineral (? tremolite).	Mag. finely dissem 15-30%; py 2-3% as interstitial blebs; trace dark brown sp.	396	86.8	88.4	1.6	145	25	360	x	40	x	x
					END OF HOLE 88.4M.												

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1

TENEMENT NAME TENTH LEGION No. 53M/75

PLAN – MAP REFERENCE TASH 2 TASH 12

CO-ORDINATES 4923.5N 5397.3E AZIMUTH 180° GRID DRILLERS S. RIMAK COMMENCED 2.3.81 DEPTH 133.0m HOLE No. TLC 2

RL COLLAR 2615m INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 3.3.81 CASING LEFT 21m NW DPO No(s) 26667/26668

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	Au	
			NQ		0-3.0m TRICONED - NO CORE		877574	7.5	10.5		85	730	2150	4.5	220	30	SLUDGE	
3.0	4.5	0.1	to	q/ss	3.0-7.5 QUARTZITES, minor SILTSTONES	Minor barren qtz 'sweatout' veins.	575	10.5	13.5		145	390	1550	4.0	140	130	SAMPLES.	
4.5	6.5	0.2	133m		Fragments of very hard f.gr. pinkish brown		576	13.5	16.5		45	465	1400	3.0	140	25	x	
6.5	7.5	0.5			quartzite with qtz segregations, minor thinly	3.0 - 19.5 Highly fractured and	577	16.5	19.5		55	360	1550	3.0	150	65		
7.5	10.5	1.0		↓	bedded contorted grey siltstone interbeds	broken - weathered - no obvious												
10.5	13.5	0.9		Cst	?7.5-10.5 CALC SILICATE ROCK.	mineralisation.	877397	7.6	10.5	1.0	120	50	1850	1.5	270	x		
13.5	16.5	0.2			Highly altered chlorite-actinolite-?talc													
16.5	19.5	0.7			rock - soft, mottled dark greens and greys													
19.5	22.5	2.7			with white tremolite (dolomite?) remnants.													
22.5	25.0	2.5			?10.5-16.5 ? CALC SILICATE ROCK		398	10.5	13.5	0.7	5	360	1850	0.5	240	x		
25.0	27.8	3.0			Highly weathered soft white puggy rock													
27.8	30.9	3.1			with slightly speckled appearance													
				↓	LOST CORE 13.5 - 16.5 m.													
				qs Cst	?16.5 - 19.5 QUARTZITES/CALC SILICATES.		399	13.5	16.5	0.1	10	55	405	0.5	15	x		
					Most recovered core brownish pink		400	16.5	19.5	0.5	5	50	250	0.5	120	x	x	
					quartzite frags in a matrix of soft													
					shattered rock, some pale green epidote.													
				Css/M	19.5-20.0 DIOPSIDE/TREMOLITE ROCK WITH	Mag 30-35%, ? trace sp.	877501	19.5	20.0	0.5	5	70	330	x	200	x		
					MAGNETITE. Pale greasy grey rock with													
				↓	dissem crystalline mag to 3mm.													
				Csd	20.0-22.5 DIOPSIDE/TREMOLITE ROCK	Small clots of dissem magnetite	502	20.0	22.0	1.7	x	45	260	x	40	x		
					Greyish green crystalline rock, with irregular	with the more fibrous minerals.												
					patches of grey-green tremolite/actinolite in													
					a granular diopside mass. Smo green ?hornblende.													
				↓	Contact 70°													
				Cst	22.5-24.4 CALC SILICATE ROCK	1-2% Magnetite along fine fracturing.	503	22.0	24.4	2.4	5	390	350	5.0	25	x		
					Bone coloured f.gr. diopside/tremolite	Traces po, py.												
					rock, well fractured, with epidote veining													
					and talcose alteration along fractures.													
				↓	Contact 50°													
				M	24.4-28.05 MAGNETITE – See next page.													

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

SHEET No. 2

TENEMENT NAME TENTH LEGION No. 53 M/75

PLAN – MAP REFERENCE

CO-ORDINATES ... AZIMUTH ... DRILLERS ... COMMENCED ... DEPTH ... HOLE No. TLC 2

RL COLLAR ... INCLINATION ... DRILL TYPE ... COMPLETED ... CASING LEFT ... DPO No(s) 26667/26668

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
			NQ		24.4 - 26.4 60% f.gr. mag. with irreg. white diopside/tremolite patches serpentinite, minor veining.		877504	24.4	26.4	2.0	20	30	165	0.5	230	10	x
					26.4-28.05 Mag 50-60% in a matrix of dark green serpentinite. - py 1-2%; trace sp, gn		505	26.4	28.05	1.65	115	40	270	x	60	20	
				↓	Contact 50° from fragment												
0.9	34.0	3.1		Cst	28.05-30.1 CALC SILICATE ROCK	Mag 10% as fine stringers and laminae	506	28.05	30.1	2.05	25	20	70	x	35	x	
4.0	37.0	3.0			Hard base - white tremolite rock with	within calc silicates. Traces dissem py											
7.0	40.5	3.5		↓	corroded remnants of grey crystalline dolomite.	at base of interval.											
0.5	43.5	3.0		S/M	30.1-31.8 SERPENTINITE WITH MAGNETITE	Py 1-2% as interstitial blebs in 30-35%	507	30.1	31.8	1.7	85	30	180	x	45	10	
3.5	46.5	3.0		↓	Grey-Green serpentinite with dissem mag.	disseminated magnetite											
6.5	49.5	3.0		Cst/Dol	31.8-36.5 CALC SILICATE WITH DOLOMITE	31.8-32.4 Mag 5-15% dissem in 'dolomite'											
9.5	52.5	3.4			31.8-32.4 White crystalline dolomitic rock with		508	31.8	33.8	2.0	5	25	85	x	25	x	x
					spots of serpentinous alteration near upper contact.		509	33.8	36.5	2.7	x	60	115	x	35	x	
					32.4-36.5 Yellowish grey f.gr. calc silicate	32.4-36.2 Mag dissem along fine stringers with											
					rock (tremolite/diopside), spotted with	yellowish green serpentinite 3-5%.											
					dissem. black magnetite. Last 30cm mag	36.2-36.5 Mag dissem. 20%.											
					rich, some serpentinite alteration.												
				↓	Contact 35°												
				M/S	36.5-37.2 MAGNETITE WITH SERPENTINITE.		510	36.5	37.2	0.7	5	20	160	x	60	x	
				↓	Mag. 50-60% grey serpentinite with green? hornblende.												
				Cst/Dol	37.2-38.9 Calc silicate rock; as for		511	37.2	38.9	1.7	5	50	135	x	45	x	
					32.4-36.5m												
				↓	Contact 75°												
				ss/sh	38.9-43.6 GREY SILTSTONE/BLACK SHALE	Py dissem along bedding as	512	38.9	39.6	0.7	55	60	120	x	15	x	x
					Hard hornfelsed grey and black highly	contorted laminae, veinlets and	513	39.6	41.6	2.0	75	25	65	x	7	x	
					deformed matrix of f.gr sediments.	stringers 10-12%.											
					41.3-43.6 Metasomatised. irregular patches	39.3 Bedding 70°	514	41.6	43.6	2.0	15	100	230	x	30	x	
					of tremolite, carbonates etc.		515	43.6	45.0	1.4	5	95	250	1.0	450	x	
				↓	Gradual Change		516	45.0	46.5	1.5	35	70	390	x	100	x	x
				Css	43.6 - 50.5 CALC SILICATE (SKARN) ROCK	No magnetite; fabric originally	517	46.5	48.5	2.0	x	10	110	x	230	x	
					- Amphibolite? Mottled greens, greys, minor	brecciated/deformed; now metasomatised	518	48.5	50.5	2.0	x	10	120	x	180	x	
				↓	pinks and whites - Highly altered/metasomatic	with crude replacement banding about	932281	45	THIN SECTION SAMPLE.								

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

SHEET No. 3
TENEMENT NAME TENTH LEGION No. 53 M/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC 2
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s) 26667/26668

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
					43.6-50.5 Cont...												
2.5	55.5	2.8	NQ		crystalline fabric with epidote, chlorite, ?diopside	46.1-46.5 Magnetite/Serpentinite											
5.5	58.5	3.1			?hornblende; actinolite; qtz; dolomite	; mag 30-40%											
8.5	61.2	2.8			; pink Mn silicates and patches of residual black												
1.2	64.4	3.2			cherty material.												
4.4	67.3	3.0			Contact 50° 46.5-47.7 Pink matrix with spots of												
7.3	70.5	3.2			green ?hornblende.												
0.5	73.5	3.0			47.7-50.5 Gradually becomes more spotted												
3.5	76.5	2.9			- diopside/hornblende calc silicate hornfels?												
6.5	79.2	2.7		V	Contact 20°												
9.2	82.5	3.3		Csd	50.5-65.0 SPOTTED CALC SILICATE ROCK	Fabric massive/granular; some	877519	50.5	52.5	2.0	5	50	75	0.5	75	x	
					Pinkish brown and white speckled	veinlets and streaks of ?hornblende and	520	52.5	54.5	2.0	5	50	70	0.5	45	x	x
					matrix, fine grained and hard; spotted	epidote. Minor ÷ 5mm qtz-calcite	521	54.5	56.5	2.0	5	25	80	x	30	x	
					with 1-2 mm green clots of ?hornblende	veining at low angles to LCA.	522	56.5	58.5	2.0	5	15	70	x	30	x	
					and paler green fibrous ?actinolite.		523	58.5	60.5	2.0	5	20	80	x	75	x	
					54.1-65.0 Higher percentage of dark green		524	60.5	62.5	2.0	5	15	70	x	70	x	x
					?hornblende in a pinkish brown (idocrase?)		525	62.5	64.5	2.0	5	20	80	x	40	10	
					matrix, with lesser white tremolite/actinolite		526	64.5	66.4	1.9	15	55	220	x	45	10	
				V	Gradual Change		932282	55	THIN SECTION SAMPLE.								
				Cst	65.0-78.1 CALC SILICATE ROCK	65.0-78.1 Brecciated fabric with	527	66.4	68.4	2.0	10	60	150	x	140	x	
					Bone coloured (tremolite/diopside) f.gr.	pervasive alteration, including Mn silicates	528	68.4	70.4	2.0	5	125	210	x	130	10	x
					rock mottled with pink (Mn?) hard	and epidote along fractures. Rare											
					silicate mineral, with veins and patches	patches f.gr. dissem magnetite.											
					of yellow-green epidote.	70.5-71.6 Increase in fabric size - up to	529	70.4	71.6	1.1	20	40	5550	x	60	x	
					71.6-72.4 Magnetite 30% with calcite, qtz	5mm white clasts of corroded carbonates;	530	71.6	72.4	0.6	5	50	520	x	90	20	
					and epidote.	some black shale/chert clasts with much	531	72.4	74.1	1.7	5	15	95	x	100	x	
					74.1-74.9 Black shale/chert breccia - see	remobilised qtz/calcite, some clots of sp	532	74.1	74.9	0.8	40	85	260	x	15	x	x
					38.9-43.6. Minor calc silicate minerals	and patches of finely dissem magnetite.	533	74.9	76.9	2.0	5	15	230	x	30	x	
				V	Contact 65°												
					74.9-78.1 As above, minor serpentinite veins		534	76.9	78.1	1.2	5	x	45	x	55	x	
				sh/Cst	78.1-80.4 BLACK SHALE/CALC SILICATE BRECCIA.	Graphitic partings, trace py in thin veinlets and	535	78.1	80.4	2.3	50	50	105	x	15	x	
					Black, highly deformed rock; lenses to 3mm of black	dissem. Thin veinlets of green serpentinite.											
				V	shale/grey siltstone, with pinkish patches of calc silicate minerals.												

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

SHEET No. 4
TENEMENT NAME TENTH LEGION No 63M/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC2
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s) 26667/26668

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
					Contact 65°												
4.5	85.3	2.5	NQ	M/S	80.4-81.7 MAGNETITE with SERPENTINITE	Abundant fine calcite veining and	877536	80.4	81.5	1.1	640	4400	1.2%	13.0	70	x	x
5.3	88.5	3.2			Dark green serp. matrix, spotted with greenish	impregnations in mag. Traces py in veins,											
8.5	91.5	3.0			harder minerals.	with minor sp.											
.5	94.5	3.0			Contact 75°												
4.5	97.5	3.0		CV	81.7-84.1 BRECCIA WITH CALCITE+PYRITE.	81.7-82.4 15% py/marcasite, some euhedral	537	81.5	83.5	2.0	280	3800	1.7%	6.0	20	x	
7.5	100.5	3.0			White calcite vein, with garnets and black	garnets.	538	83.5	84.1	0.6	2000	1.6%	3.3%	20.0	40	x	
00.5	103.5	3.0			serpentinite as a cavity filling. Clasts of a	82.4-83.5 Massive white calcite with serp.											
03.5	106.5	3.0			dark green-grey calc silicate rock	83.5-84.1 Mag 10%, py 15-20%, lesser											
					preserved	calcite in a grey-green calc silicate matrix,											
					Contact 45°	Strong trace sp, some ga?											
				sh/Csd	84.1-95.5 Interbedded BLACK SHALES/	Calcite veining, small patches of	539	84.1	86.9	2.8	15	260	855	0.5	150	x	
					SILTSTONES and CALC SILICATES.	clissem. magnetite.	540	86.9	88.8	1.9	10	30	65	x	25	x	x
					Dark grey → black finely laminated black	89.1-89.4 White vuggy calcite vein.	541	88.8	90.8	2.0	50	40	120	0.5	4	x	
					shale breccia with some crystalline chlorite	92.8-93.4 Vuggy calcite and veining with	542	90.8	92.8	2.0	30	x	30	x	5	x	
					patches and small intervals of drab green	a matrix of dark green-black talcy	543	92.8	93.4	0.6	105	70	390	x	20	x	
					diopside/tremolite rock with minor idocrase(?)	serpentinite with chlorite material.	544	93.4	96.0	2.6	25	40	100	0.5	15	x	x
					?vesuvianite and ?Mn silicates.		932283	94.8m THIN SECTION SAMPLE									
				Cst	95.5-99.9 CALC SILICATE ROCK		545	96.0	97.1	1.1	1000	105	215	0.5	15	10	
					Mottled whites, creams and greens-highly		546	97.1	97.8	0.7	15	180	300	1.5	40	x	
					altered calc silicate rock - dominantly diopside/		547	97.8	99.9	2.1	5	30	75	x	25	x	
					tremolite with epidote, minor idocrase.		932284	96.6m THIN SECTION SAMPLE.									
					Contact 75°												
					96.0-97.1 Dark green massive serpentinite												
					with py 10-15% replacing magnetite (now 2-3%)												
					Contact 55°												
				S/M	99.9-101.2 SERPENTINITE WITH MAGNETITE.	Mag 40-50%; traces very fine sp.	548	99.9	101.2	1.3	65	25	230	x	45	10	x
					Dark green → black serp. matrix with black		932285	97.2m THIN SECTION SAMPLE.									
					crystalline magnetite 40-50%, minor grey talc												
					and corroded grey clasts of remnant tremolite.												
				Css	101.2-104.7 TREMOLITE ROCK WITH MAGNETITE	Mag 20-30%, very finely dissem and in small	549	101.2	103.7	2.5	50	20	7650	x	190	x	
					Grey crystalline matrix with small pink clots of	veinlets. Fine calcite-py-sp-po veinlets, 5%	550	103.7	104.7	1.0	25	20	1800	0.5	120	x	
					?idocrase. The green colour is due to ultrafine fuchsite												

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

SHEET No. 5
TENEMENT NAME TENTH LEGION No. 53M/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. THC2 26672
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s) 26667/26668

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W
06·5	109·5	3·0	NQ		Contact 70°		877551	104·7	106·8	2·1	15	10	130	0·5	4	x
09·5	112·5	3·0		qs	104·7–117·2 QUARTZ SERICITE ROCK	Patches of chloritic alteration and some										
12·5	115·5	3·0			Intensely altered sedimentary rock	blebs po, py to 3mm scattered through	GRIND	SAMPLES								
15·5	118·5	3·0			- drab olive greys and pinkish brown	the rock. Some fine calcite-pyrite	877569	106·8	111·8	5·0	24	9	75	<1	4	25
18·5	121·5	3·0			alternating layers of silt rich sediment	veining at low angles to core. 3%–5%	570	111·8	117·2	5·4	71	11	112	1	x	60
21·5	124·5	3·0			to 3 cm. thick. Some qtz segregations		571	117·2	122·2	5·0	86	8	134	2	<4	115
24·5	127·5	3·0			and lenses to 3cm. thick. The paler		572	122·2	127·2	5·0	45	17	280	1	16	55
27·5	130·5	3·0			coloured layers are probably sericite		573	127·2	133·0	5·8	65	19	183	1	<4	65
30·5	133·5	3·0			rich, with the brown areas being		932286	110m.	} THIN SECTION SAMPLES.							
					hornfelsed siltstones.		287	125m.	}							
					Bedding? preserved; angles 60°–80° to CA.											
					Some intervals pale grey qtz and sericite											
					only – originally sandstones?											
				↓	Contact 60°											
				SS	117·2–133·0 HORNFELSED SILTSTONE	Some green and white stockworks of										
					Impure tough green-grey rock with	qtz, chlorite and epidote in bleached										
					brown intervals. Finely laminated, minor	pale brown calc silicate rock. Traces py										
					deformation – contact metamorphosed	in veinlets and as small blebs.										
					impure carbonate? Not a skarn rock.											
					125·3–130·2 Dominantly brownish f.gr.											
					rock (silt-rich argillite?) with green											
					qtz-epidote stockwork.											
					119·8 Bedding 50°											
					122·7 Bedding 50°											
				↓	130·0 Bedding 50°.											
					END OF HOLE 133·0m.											

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1

TENEMENT NAME TENTH LEGION No. 5IM/75

PLAN – MAP REFERENCE TASH 2 TASH 14

3669.9N

CO-ORDINATES 5180.11E AZIMUTH 360° grid DRILLERS S. RIMAK COMMENCED 6.3.81 DEPTH 142.0m 9x3m NW casing HOLE No. TLC3

RL COLLAR 244.5m INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 13.3.81 CASING LEFT 2x3m NQ rods DPO No(s) 26667/26668

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
					TRICONED TO 6.0m - NO CORE		SLUDGE SAMPLES										
0	13.5	0.5	NQ	M	6.0 - ?13.5 MAGNETITE	Highly weathered to 16.0m.	877578	0	3.0m		50	15	420	0.5	10	x	
.5	16.2	1.2	to		Very poor recovery; mostly black granular	6.0-13.5 Soft crumbly puggy clay matrix	877579	3.0	6.0		40	15	335	0.5	15	x	
.2	19.3	2.5	68m		magnetite 80-90% with some interstitial clay.	rock was originally calc silicate material	877680	6.0	9.0		35	15	320	1.0	15	x	x
1.3	22.5	3.0			13.5 - 16.1 CALC SILICATE ROCK	with much diosem mag. and discrete lenses	SPLIT	SAMPLES									
2.5	25.5	2.8			Pale green fibrous skarn rock - tremolite	& massive mag.	877582	6.0	13.5	0.5	790	20	3200	2.0	20	x	
5.5	28.5	3.0			/diopside with patches & green chlorite		583	13.5	15.5	0.2	1700	70	1.3%	1.0	30	x	
8.5	31.3	2.8			and epidote with 5-7% mag and trace sp		584	15.5	16.1	0.6	2750	45	6.0%	2.0	35	x	0.017
1.3	34.3	3.0			veining.												
4.3	37.0	2.1			16.1 - 19.6 CALC SILICATE ROCK WITH MAGNETITE.	Mag 25-30%, with 2.3% intergrown py	585	16.1	16.35	0.25	1350	90	3.0%	2.0	6	x	
7.0	40.0	2.7			As above, mag diosem and in massive	and 1-2% blebs of sp.	586	16.35	18.1	0.85	920	85	7.4%	3.0	20	x	
0.0	43.5	3.5			bands to 10cm, 2 - 5%.		587	18.1	19.0	0.9	180	15	2.5%	0.5	20	x	
3.5	46.5	3.0			Gradual Change.		588	19.0	19.5	0.5	365	25	2.6%	1.5	15	x	0.017
6.5	49.5	3.0		Css	19.6-27.1 CALC SILICATE SKARN ROCK.	Mag diosem in narrow alteration zones	589	19.5	21.0	1.5	175	20	3.3%	0.5	20	x	
					As above, but magnetite decreases to 2.3%.	and small veinlets. 3-5%. Strong trace	590	21.0	22.4	1.4	40	15	2.2%	1.0	25	x	
					Some green actinolite? and ? hornblende.	sp.	591	22.4	23.4	1.0	510	15	11.5%	0.5	3	x	
					22.4-23.1 Green epidote rock with mag 3-5% and	sphalerite 10-15%.	592	23.4	24.4	0.7	25	5	1.8%	0.5	10	x	0.008
					23.1-24.4 Green epidote rock alternating with	23.1-24.4 Sp diosem 1-2% throughout	593	24.4	26.0	1.6	200	15	2.7%	1.0	7	x	
					bands of massive magnetite to 30 cm		594	26.0	27.1	1.1	610	10	1.4%	1.0	10	x	
					24.4-27.1 Massive granular pale green rock	24.4-26.0 2-3% Sp throughout in small veinlets	595	27.1	28.5	1.3	220	10	1.4%	1.0	20	x	
					- diopside/tremolite with 10-20% crystalline	with mag 1-2%. Trace py.	596	28.5	29.9	1.4	50	15	8000	1.0	20	x	x
					dark green chlorite and abundant epidote	26.0-27.1 Mag diosem throughout as small	597	29.9	30.9	1.0	155	5	4700	1.0	15	x	
					alteration.	stringers 5-10% with traces sp, py.	598	30.9	32.9	2.0	35	5	3200	0.5	4	x	
					Contact irregular.		599	32.9	34.9	1.8	35	10	3450	0.5	15	x	
				Css	27.1 - 47.7 CALC SILICATE ROCK	Traces py, po and sp.	600	34.9	36.9	1.4	15	5	1550	0.5	15	x	x
					Mottled white and green f.gr. matrix -	Thoroughly brecciated fabric which has been	601	36.9	38.9	1.5	30	5	1800	0.5	15	x	
					tremolite/diopside with major later dark	altered/metasomatised, giving the unusual	602	38.9	40.0	1.1	35	10	2200	0.5	9	x	
					green chloritic alteration, some epidote	spotted texture and crude irregular banding	603	40.0	40.5	0.5	250	35	7250	x	6	x	
					veining and small patches of brown ? idocrase.	Extensive fracturing and brown dendritic staining.	604	40.5	42.5	2.0	15	15	1050	x	10	25	x
						From 44.3 Gradually reverts to a more massive	605	42.5	44.5	2.0	20	15	1850	x	15	x	
						fabric reminiscent of 24.4-27.1 m.	606	44.5	46.0	1.5	25	40	1950	0.5	6	x	

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

SHEET No. 2

TENEMENT NAME TENTH LEGION No. SLM/15

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. THC3

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
49.5	52.5	3.0			Contact 47°		877607	46.0	47.4	1.4	70	15	2750	x	10	x	
52.5	55.5	3.0			47.7-51.4 MAGNETITE WITH SERPENTINITE.	Mag. 40-60% ; sp dissem throughout 1-2%	552	47.4	49.0	1.6	890	25	2.8%	1.0	6	x	x
55.5	58.5	3.0			Black crystalline magnetite, crudely banded	; py as blebs to 20mm, 1%; po as rare	553	49.0	49.8	0.8	270	25	2.55%	0.5	6	x	
58.5	61.5	3.0			± 40° to CA. The matrix is dark muddy green	interstitial blebs and in small veinlets with	554	49.8	51.4	1.6	285	30	2.95%	0.5	6	x	
					serpentinite with some remnants of greyish	py in greyish coarsestone material, 1-2%.	932288	26.0	} THIN SECTION SAMPLES								
					calc silicate rock and small white blebs of		289	28.4									
					refractory minerals (residuals from serpentinite		290	52.6									
					alteration?)												
					Contact 35°												
					51.4-54.0 CALC SILICATE WITH MAGNETITE	Banded 40° in upper 1m.											
					Yellowish grey crystalline tremolite-diopside-	Mag 15-25% dissem throughout with	555	51.4	54.0	2.6	185	30	2.5%	0.5	4	x	
					epidote (?) matrix with heavily dissem mag 20-25%	serpentinite; sp 1-2% in veinlets and stringers											
					The yellowish colour is due to incipient	; Po 1-2% as interstitial blebs; trace											
					serpentinisation - small stringers of translucent	py as interstitial blebs.											
					serp. 10-15%.												
				S/M	54.0-56.4 SERPENTINITE WITH MAGNETITE.	54.0-55.2 Mag 40-50%; sp 5-7%; py 2-3%											
					Almost black massive serpentinite with bands	55.2-56.4 po 50-60%, virtually massive	556	54.0	55.2	1.2	390	30	1.45%	0.5	x	x	0.017
					of fine grained magnetite, or heavily dissem	55.5-55.9, with py/marcasite 2-3%, sp	557	55.2	56.4	1.2	2450	25	1.45%	0.5	x	x	
					pyrrhotite.	1-2%, trace cp?											
					Gradual Change												
				Css/M	56.4-64.9 ALTERNATING CALC SILICATE												
					SKARN ROCK AND MAGNETITE/SERPENTINITE.												
					56.4-57.2 Massive granular pale green rock	56.4-57.2 po 5-7%, dissem along	558	56.4	57.2	0.8	200	25	4000	0.5	10	x	
					- diopside/tremolite, with dark green chlorite?	weak breccia cracks at approx 50° to CA											
					and abundant epidote alteration	, traces sp, py.											
					Contact 60° 57.2-57.8 CALC SILICATE WITH SERPENTINITE	57.2-57.8 po 10-15%, mag 10%, py, sp	559	57.2	57.8	0.6	640	25	7700	0.5	3	x	
					See above 51.4-54.0.	1-2%. Dissem; some 3-5 cm bands of											
					57.8-59.1 Mottled grey rock - tremolite with	magnetite. py/marcasite appears to be after po.											
					clots of serpentinite and much po.	57.8-59.1 po 30-35%; sp 1-2%, traces py.	560	57.8	60.0	2.2	565	20	6150	x	x	x	x
					Contact 40° 59.1-59.5 Magnetite 30-35% associated	59.1-59.5 po 20-25%; mag 30-35%; sp 1-2%											
					with black serpentinite.												

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

SHEET No. 3
TENEMENT NAME TENTH LEGION No SIM/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC 3
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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.....) Cu	Pb	Zn	Ag	Sn	W	Au
5	64.5	3.0			Contact 40° 59.5 - 60.0 As above, 57.8 - 59.1												
.5	67.5	3.0			60.0 - 60.4 Massive magnetite	60.0 - 60.4 Mag 70-80%, po 1-2%, sp 1-2%.	877561	60.0	61.3	1.3	1350	20	8500	0.5	4	x	
.5	70.5	3.0			60.4 - 61.3 Pyrrhotite in black serpentinite.	60.4 - 61.3 po 70-80%; sp 3-5%; py 1-2%.											
.5	76.5	6.0			Contact 45° 61.3 - 63.6 As above 57.8 - 59.1	61.3 - 62.0 po 10%; sp 1-2%	562	61.3	62.0	0.7	500	20	6200	x	8	x	
						62.0 - 63.6 po 10-15%; sp 1%; py 1%;	563	62.0	63.6	1.6	510	20	2100	x	4	x	
						some bands of black serp to 15 cm, 40° to CA.											
					Contact 70° 63.6 - 64.0 Pyrrhotite in serpentinite	63.6 - 64.0 po 70-80%; py 2-3%.	564	63.6	64.0	0.4	1800	25	1.35%	1.0	3	x	0.008
					Contact 70° 64.0 - 64.9 Transition zone - serpentinite	64.9 - 64.9 po 5-7% ; patchily distributed	565	64.0	64.9	0.9	515	45	5950	x	x	x	
					and mag, po gradually decrease - a	and finely banded; strong trace sp.											
					banded calc silicate rock becomes	Weak py - serpentinite - calcite veinlets.											
					dominant (see below)												
					Contact 65°												
				Cst	64.9 - 67.6 CALC SILICATE ROCK	po 1%, dissem and in small veinlets.	566	64.9	66.2	1.3	70	30	1800	x	4	x	
					Crudely banded bone coloured mottled	Strong trace sp, py.	567	66.2	67.6	1.4	185	40	4800	x	4	x	
					? tremolite - diopside skarn rock.												
				Lst	67.6 - 70.8 LIMESTONE	Banded 30-35° - recrystallisation or	568	67.6	69.3	1.7	15	80	250	0.5	9	x	0.008
					Grey crystalline impure limestone with	? bedding. Trace py in calcite/serpentinite	877608	69.3	70.8	1.5	170	210	1500	1.0	6	x	x
					minor serpentinite zones and tremolite/diopside	zones.	932291	69m	THIN	SECTION	SAMPLE.						
					with white calcite segregations.												
					Contact 55°												
				Css	70.8 - 71.5 CALC SILICATE ROCK		877347	70.8	71.5	0.7	25	30	100	1.0	25	20	
					Green epidote - tremolite - diopside rock												
					with 30% pink crystalline garnets.												
				Lst	71.5 - 73.9 LIMESTONE	Mag dissem. throughout Lst or	877609	71.5	73.0	1.5	90	195	1600	1.0	8	x	
					Grey crystalline limestone with serpentinite	in crystalline patches with serp. and calcite	610	73.0	73.9	0.9	510	410	5600	4.5	5	x	
					alteration and some finely dissem. mag.	3-5%. Po finely dissem. 1-2%; py											
					minor crystalline mag intervals with serp. and	in blebs 1%; trace sp.											
					calcite, minor garnets.												
				Cst	73.9 - 75.2 CALC SILICATE ROCK		611	73.9	75.2	1.3	170	80	1200	1.5	x	x	
					See 64.9 - 67.6 for description.												

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

SHEET No. 4
TENEMENT NAME TENTH LEGION No. 51M/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T.L. C.3.
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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.....) Cu	Pb	Zn	Ag	Sn	W	Au
					Contact 35°												
6·5	79·5	3·0		Css	75·2 – 75·8 CALC SILICATE SKARN		877612	75·2	75·8	0·6	35	40	120	1·0	20	130	x
9·5	82·5	3·0			See 70·8 – 71·5 for description.												
2·5	85·5	3·0		lst	Contact 55° 75·8 – 76·9 LIMESTONE WITH SERPENTINITE	Mag 2-3%, weak trace cp, po.	613	75·8	76·9	1·1	20	95	270	1·5	3	x	
5·5	88·5	3·0			Grey lst with olive green drab serpentinite												
8·5	91·8	3·3			30%; banded												
1·8	94·5	2·7			Contact 50°												
4·5	97·5	3·0		Csd	76·9 – 78·5 CALC SILICATE ROCK	Fine serpentinite veining.	614	76·9	78·5	1·6	15	60	250	0·5	10	20	
17·5	100·4	2·9			Green massive diopsidic rock with qtz												
10·4	103·5	3·1			segregations, minor garnets.												
03·5	106·5	3·0			Contact 40°												
06·5	109·5	3·0		lst	78·5 – 79·4 LIMESTONE WITH SERPENTINITE	Banded 45° LCA; 10-12% serpentinite	615	78·5	79·4	0·9	35	80	525	1·0	x	15	
09·5	112·1	2·5			See 75·8 – 76·9 for description	1-2% finely dissem. mag.; trace py, sp.											
				Cst	79·4 – 80·4 CALC SILICATE ROCK	Traces po near contacts; weak calcite	616	79·4	80·4	1·0	75	40	390	0·5	8	65	x
					See 73·9 – 75·2 for description.	veinlets with rare blebs py.											
					Contact 60°												
				lst	80·4 – 90·1 LIMESTONE, altered.	80·4 – 81·7 Po dissem in lst 3-5%; sp 1%	617	80·4	81·7	1·3	240	650	6400	8·5	4	x	
					Grey crystalline rock with olive green	Patches dark green serp with calcite and	932292	86·1	THIN SECTION SAMPLE.								
					serpentinite banding 40-60° LCA. Very altered,	garnets. Mag. dissem. up to 2% for the interval											
					with patches of bone white calc silicates, and	81·7 – 85·8 Mag dissem in grey lst 2-3%, trace	618	81·7	82·2	0·5	10	190	310	0·5	x	x	
					more rarely green diopsidic rocks up to 0·8m	po, trace py in fine calcite veining.	619	82·2	83·8	1·6	15	65	150	0·5	3	x	
					thick throughout the interval, with irregular	85·8 – 87·4 Mag 2-3%, locally 10%, dissem with	620	83·8	84·2	0·4	20	430	770	2·5	x	x	x
					contacts	brown serp alteration; po 1-2%, locally 20%,	621	84·2	85·8	1·6	20	50	70	0·5	x	x	
					Contact 60° 85·8 – 87·4 White calc silicate rock with	py in veinlets with mag 1-2%.	622	85·8	86·5	0·7	90	1200	2150	5·5	x	x	
					brown serpentinite alteration	87·4 – 89·5 po, finely dissem 3-7%	623	86·5	87·4	0·9	70	825	450	4·0	x	30	
					Contact 60°	89·5 – 90·1 po, finely dissem 10%, banded.	624	87·4	89·0	1·6	70	150	110	1·0	9	x	x
				Cst/lst	90·1 – 111·5 CALC SILICATES WITH LIMESTONE.	90·1 – 98·5 Po dissem. in discrete intervals	625	89·0	89·5	0·5	20	125	35	0·5	x	x	
					Banded rock – alternating 10-70 cm intervals of	assoc. with silicified zones. Traces ultrafine	626	89·5	91·2	1·7	30	45	235	0·5	x	x	
					yellow (serp. alteration) and bone white calc	mag. in black fine bands in carbonate.	627	91·2	92·0	0·8	55	25	50	1·0	9	x	
					silicates, finely banded 35-45°, and grey and	98·5 – 104·2 Traces po with serp. in discrete	628	92·0	92·7	0·7	215	25	50	0·5	x	20	0·008
					white limestone intervals – finely banded 1-5mm	zones.	629	92·7	93·6	0·9	25	65	690	1·0	7	20	
					white and black recryst. segregated carbonates.		630	93·6	95·1	1·5	20	15	150	x	x	x	

0·10

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 5

TENEMENT NAME TENTH LEGION No. 51M/75

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. T.L.C.3

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH From (M)	DEPTH To (M)	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 .....) Cu	Pb	Zn	Ag	Sn	W	Au
					Contact 75°												
2·1	115·1	3·0			104·2 – 111·5 Major constituent grey crystalline	104·2 – 111·5 po dissem 3-5% in grey lst	877631	95·1	95·8	0·7	35	15	340	0·5	×	×	
15·1	118·1	3·0			lst with serp and po, with lesser yellowish	, mag finely dissem 1-2% throughout.	632	95·8	96·4	0·6	20	40	210	0·5	4	15	0·025
18·1	121·3	3·3			calc silicates.		633	96·4	97·3	0·9	10	25	920	0·5	×	15	
21·3	124·5	3·0			108·4 – 109·0 Patch of green and pink calc silicate rock, finely bedded 45°.		634	97·3	98·5	1·2	30	25	440	0·5	5	15	
24·5	127·5	2·9			110·3 – 110·8 Black chert interval, brecciated and metasomatised.		635	98·5	99·4	0·9	30	5	40	×	3	20	
27·5	130·5	3·0			Contact 55°		636	99·4	99·8	0·4	75	×	45	×	7	40	×
30·5	133·5	3·0		Css	111·5 – 132·8 CALC SILICATE (SKARN) ROCKS.	111·5 – 112·6 traces po as blebs stringers (d)	637	99·8	100·5	0·7	15	5	20	0·5	×	×	
					Alternating intensely altered rocks of any	112·6 – 114·6 Minor calcite – py – mag veining (a)	638	100·5	102·1	1·6	30	15	45	0·5	20	20	
					of the following 4 types, in intervals	114·6 – 116·5 10% dissem po, mag, traces py (b)	639	102·1	103·0	0·9	5	15	60	×	×	×	
					from 10 cm to 2·5 m; (a) Mottled	116·5 – 117·7 finely dissem mag 1-2%, trace po. (b)	640	103·0	103·8	0·8	20	10	75	0·5	×	×	×
					pink and yellow-brown rock – idocrase,	117·7 – 119·0 po dissem 5-7%, f.gr. mag 2-3%	641	103·8	104·2	0·4	20	70	400	1·0	×	×	
					diopside and ? garnet.	Mureasite, py after po 1-2%. (a/b)	642	104·2	106·2	2·0	×	30	60	0·5	×	×	
					(b) Mottled grey	119·0 – 120·4 trace mag, po (a)	643	106·2	107·0	0·8	25	90	1500	1·0	6	×	
					and white rock – tremolite/diopside (Cst)	120·4 – 121·4 po dissem, along stringers 15-20%	644	107·0	108·4	1·4	15	55	840	0·5	×	×	×
					that has been silicified; the grey colour	, degraded to py. Trace mag? (b)	645	108·4	109·0	0·6	10	75	300	0·5	5	15	
					is due to disseminated po and magnetite	121·4 – 122·9 Mag dissem throughout 3-5%,	646	109·0	110·3	1·3	10	35	100	0·5	×	×	
					(c) Mottled greens,	intergrown with 2-3% po (c)	647	110·3	110·8	0·5	15	35	75	0·5	5	×	
					yellows, pinks and browns – appears to	122·9 – 123·6 po dissem throughout, partially	648	110·8	111·5	0·7	55	130	1100	2·0	×	×	0·033
					be type (a), that has been thoroughly	degraded to py. (d)	649	111·5	112·6	1·1	25	35	100	0·5	9	×	
					seperitised.	123·6 – 125·3 Weak calcite veinlets (a)	650	112·6	114·0	1·4	35	95	450	1·0	×	×	
					(d) grey green rock	125·3 – 125·7 po, py, dissem. 10% (d)	651	114·0	115·1	1·1	115	25	130	0·5	4	10	
					mottled with pink – diopside – tremolite	125·7 – 127·1 No mineralisation (d)	652	115·1	116·5	1·4	90	95	115	0·5	×	×	0·017
					rock with minor epidote veining and	127·1 – 128·6 po, py, mureasite in veinlets and	653	116·5	117·7	1·2	30	95	180	1·0	10	35	
					patches of ? Mn silicates, silicified.	disseminated. 10-15% (d)	654	117·7	119·0	1·3	75	50	140	1·0	×	×	
					Types a, b, c originally Cst?	128·6 – 129·0 1-2% po; mag-serp veinlets (a)	655	119·0	120·4	1·4	30	100	340	1·0	×	×	
					Type d originally Csd?	129·0 – 129·5 trace po, py in veinlets, blebs (d)	656	120·4	121·4	1·0	110	25	155	1·0	4	×	×
					129·5 – 129·9 Grey hornfelsed cherty sediment	129·5 – 129·9 2-3% py dissem., and as	657	121·4	122·9	1·4	20	90	1400	1·5	×	×	
					less.	bedded laminae.	658	122·9	123·6	0·7	55	30	400	1·0	×	×	
						129·9 – 132·8 trace fine magnetite (a)	659	123·6	125·3	1·7	5	25	60	0·5	5	20	
							660	125·3	125·7	0·4	30	25	95	×	5	×	×
							661	125·7	127·1	1·4	5	25	45	×	×	×	

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

SHEET No. 6
TENEMENT NAME TENTH LEGION No. 5M/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T.L.C.3
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH nm M)	DEPTH To(M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION Contact 25°	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....) Cu	Pb	Zn	Ag	Sn	W	Au
3.5	136.5	2.9		Lst	132.8 - 139.7 LIMESTONE, altered.	132.8 - 135.3 Ultrafine magnetite in lst. 5-10%; trace py in veinlets.	87662	127.1	128.6	1.5	45	30	195	0.5	5	x	
6.5	139.5	3.0			See 80.4 - 90.1 for description. The rock		663	128.6	129.0	0.4	15	100	565	1.0	x	x	
9.5	142.0	2.5			has a banded 'striped' appearance - bands	135.3 - 139.7 Ultrafine mag in grey lst, 5%.	664	129.0	129.5	0.5	25	20	85	1.0	7	x	x
					of yellow serpentinite with white calc		665	129.5	129.9	0.4	40	20	60	0.5	x	x	
					silicate or remobilised carbonates, mostly		666	129.9	131.3	1.4	30	95	410	1.0	x	10	
					< 1 cm thick.		667	131.3	132.8	1.5	15	50	185	0.5	x	x	
					136.8 Banding 40°		668	132.8	134.7	1.7	35	65	195	1.0	x	x	0.025
					Contact 40°		669	134.7	135.3	0.6	10	120	700	1.5	x	10	
				Csd	139.7 - 142.0 CALC SILICATE ROCK.	139.7 - 142.0 Minor qtz - calcite veining.	670	135.3	136.5	1.2	5	30	250	1.0	x	x	
					Pinkish and greenish grey well banded		671	136.5	138.2	1.7	5	60	290	1.0	x	x	
					silicified ? Diopside-tremolite rock; alternating		672	138.2	139.7	1.5	15	35	155	0.5	x	x	0.017
					colour bands 5-10mm. Some pink? Mn silicates		673	139.7	141.0	1.3	x	20	105	0.5	4	10	
					141 Banding 15°.		674	141.0	142.0	1.0	x	20	110	0.5	x	x	
					END OF HOLE 142.0 m.		932293	113.0	} THIN SECTION SAMPLES								
							294	114.8									
							295	122									

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1

TENEMENT NAME TENTH LEGION No. 51M175

PLAN – MAP REFERENCE TASH 2 TASH 16

CO-ORDINATES 3551·02N 5029·1E AZIMUTH 315° GRID DRILLERS S.RIMAK COMMENCED 14·3·81 DEPTH 134m HOLE No. THC4 26669/26672

RL COLLAR 223·6m INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 20·3·81 CASING LEFT 4m NW (collar) DPO No(s). 26671

DEPTH From (M)	DEPTH To (M)	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.....) Cu	Pb	Zn	Ag	Sn	W	Au
			NQ	NC	0-4·0m TRICONE DRILLED – NO CORE.				GRIND		SAMPLES						
·0	7·0	2·6		Cst	4·0 – 24·35 CALC SILICATE ROCK	Minor chlorite – epidote veining	869962	4·0	9·5	5m	27	23	180	<1	8	55	
0	8·5	1·5			Bone coloured f.gr tremolite-diopside	7·7m Bedding 40°		9·5	14·5	5m	38	9	100	<1	6	40	
·5	10·5	1·9			assemblage, with patches of pinkish brown and	Extensively brecciated and disrupted		14·5	19·5	5m	26	10	103	<1	4	50	
·5	13·5	3·0			green wall bedded more diopside	– the white tremolite alteration		19·5	24·4	4·9m	130	14	500	1	<4	140	
3·5	16·0	2·5			rich material 0.3 – 1.0m. Some epidote	appears to post-date the green and brown	932296	10									
·0	19·5	3·4			veining.	material. Some thin calcite stringers	297	22	THIN		SECTION	SAMPLES.					
9·5	22·5	2·9			Gradually becomes greener and more	and segregations	298	25									
2·5	25·5	2·9			chloritic and altered with depth												
5·5	28·5	3·0			(after about 16m) – grossly brecciated												
8·5	31·5	3·0			and metasomatised fabric.												
1·5	34·5	2·9		↓	Contact 65°				CUT		SAMPLES.						
4·5	37·5	3·0		Css	24·35 – 31·9 CHLORITE-RICH CALC	Grossly brecciated, metasomatised	877675	24·4	26·0	1·6	5	25	200	×	30	×	
7·5	40·5	2·8			SILICATE ROCK.	fabric – totally recrystallised.	676	26·0	26·6	0·6	5	15	150	×	3	×	×
0·5	43·5	3·0			Dark green coarsely crystalline chlorite	24·35 – 26·0 no obvious mineralisation	677	26·6	26·9	0·3	5	20	275	0·5	25	×	
3·5	46·5	3·0			in interstices of white crystalline	26·0 – 26·5 Granular mag with chlorite	678	26·9	27·2	0·3	5	20	90	×	6	×	
6·5	49·5	2·7			tremolite with recrystallised white	10%	679	27·2	27·8	0·6	5	20	155	×	7	×	
					residual calcite	26·5 – 26·9 Mag 70-80%, green serpentinite	680	27·8	28·4	0·6	×	10	115	×	7	×	0·008
						matrix. Py 1-2%.	681	28·4	29·6	1·2	×	15	185	×	10	×	
						26·9 – 27·5 Pinkish brown crystalline garnets	682	29·6	31·2	1·6	×	15	215	×	10	×	
						15% 20%	683	31·2	32·6	1·4	25	30	740	×	15	×	
						27·5 – 28·0 Granular mag with chlorite, 10%.											
						28·0 – 31·9 Patches of very crystallic											
				↓	Contact 75°	chlorite, mag rare, trace Py.											
				Csd	31·9 – 47·90 CALC SILICATE ROCK?	31·9 – 35·1 Minor epidote veining	684	32·6	34·1	1·5	10	20	120	×	10	×	×
					Medium green f.gr diopside rich	and alteration. Sparse thin calcite veins.	685	34·1	35·3	1·2	5	45	115	×	10	×	
					matrix, with paler mottlings (tremolite?)	35·1 – Extensively brecciated, with			GRIND		SAMPLES						
					and brownish portions – possibly	greenish alteration proceeding along	869966	35·1	40·1	5·0	160	9	166	1	4	165	
					idocrase?, or more sediment rich	fractures. Little obvious mineralisation	967	40·1	44·0	3·9	60	5	107	<1	6	80	
					portions – less altered.	parts of the rock have a 'spotted' fabric	968	44·0	47·9	3·9	63	14	193	1	<4	60	
				↓	35·4 Bedding? 70° TCA	Patches of green crystalline chlorite occur randomly	932299	43·2	THIN		SECTION		SAMPLE				

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

SHEET No. 2

TENEMENT NAME TENTH LEGION No. 51M/15

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC4

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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:) Cu	Pb	Zn	Ag	Sn	W	Au
					43-78 bedding 60° Contact 60°												
9·8	52·5	2·5		Cst	47·90–52·9 CALC SILICATE ROCK.	No obvious mineralisation; pervasive calcite stringers.	877686	47·9	50·7	2·8	15	40	150	×	35	10	
2·5	55·5	3·0			Pale green and bone white f.gr.	48·0–48·5 Pink crystallic garnets with	687	50·7	52·9	2·2	5	20	125	×	10	×	
5·5	58·5	2·8			? tremolite-diopside rock, very similar	epidote 20-25%, minor calcite veining.											
8·5	61·5	3·0			to 4·0–24·35m. Extensive yellow-green												
1·5	64·5	2·8			epidote alteration and veining, esp.												
4·5	67·5	3·1			51·3–52·9m.												
7·5	70·5	2·8			Contact 68°												
0·5	73·4	3·1		Css	52·9–57·7 CALC SILICATE SKARN	52·9–53·5 Po diosem as small blebs, 3%	688	52·9	53·5	0·6	160	25	435	×	×	×	×
					Granular grey-green rock - mainly diopside	53·5–54·9 Minor epidot, chlorite	689	53·5	54·9	1·4	50	40	760	0·5	15	×	
					, with extensive chloritic alteration.	54·9–55·4 Mag diosem along fractures, 10%	690	54·9	55·4	0·5	180	90	1·3%	0·5	15	15	
					Mottled appearance, with minor residual	, with sp 3-5%.											
					intervals of 47·9–52·9, above	55·4–56·1 Irregular masses of mag 40%	691	55·4	56·1	0·7	75	90	2·4%	×	15	×	
					Contact 35° 55·4–56·1 Magnetite with serpentinite	, sp 7-10% as interstitial blebs											
					60–80%.	56·1–56·9 Mag, diosem, 5-7%; with po	692	56·1	56·9	0·8	450	40	6900	×	15	×	^
						2-5%; py 1-2% diosem and also in small											
						calcite-sp veins 1-2%.											
					Contact 80°	56·9–57·7 Trace po	693	56·9	57·7	0·8	50	30	1650	×	35	×	
				Lst/Cst	57·7–73·0 ALTERED LIMESTONE	57·7–59·6 Very finely diosem po 5%	694	57·7	59·1	1·4	65	35	640	×	6	×	
					Grey finely banded impure recrystallined	59·6–65·4 Serpentinite 10-20% of rock	695	59·1	59·6	0·5	35	20	140	×	×	×	
					limestone, serpentinised, with bands of	rare traces diosem po.	696	59·6	61·0	1·4	5	35	210	×	4	×	×
					yellow and green serpentinite up to	65·4–67·2 Po in small veinlets 2-3%.	697	61·0	61·4	0·4	15	25	105	×	×	×	
					10 cm thick, usually at 70° LCA. In places	locally some mag. veinlets 1-2%	698	61·4	62·3	0·9	5	40	135	×	7	×	
					totally altered to bone white and green	67·2–67·6 Black chert band - rare trace py.	699	62·3	63·2	0·9	×	25	140	×	6	×	
					calc silicate assemblages for up to 1m.	67·6–68·0 Green banded calc silicate, 50°	700	63·2	63·8	0·6	×	20	60	×	4	×	×
					Very distinctive 'stripey' rock.	; trace py, marcasite along banding.	701	63·8	64·5	0·7	×	30	115	×	4	×	
					The grey carbonate intervals usually have	68·0–6 Magnetite/serpentinite banding 50°	702	64·5	65·4	0·9	5	25	385	×	8	×	
					up to 5% very finely diosem po, which	to LCA, 35% of rock. Trace sp?	703	65·4	66·1	0·7	100	30	3500	×	25	×	
					makes the rock magnetic.	69·6–71·7 Very finely diosem mag in	704	66·1	67·2	1·1	60	15	330	×	25	×	×
					Most banding 80–85° LCA	lst 5-7%, locally 10-15%.	705	67·2	67·6	0·4	5	10	60	×	×	×	
					65·4–73·0 Greater percentage of calc silicate	71·7–73·0 Calc silicate rock, minor	706	67·6	68·0	0·4	35	650	600	1·0	25	10	
					rock – 80% overall	mag in grey bands to 5 cm.	707	68·0	68·9	0·9	90	225	1800	1·0	50	×	

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

SHEET No. 3

TENEMENT NAME TENTH LEGION No 5IM/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC4

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
					Contact 72°												
3·4	76·5	3·0		S/M	73·0 – 80·9 SERPENTINITE/MAGNETITE	73·0 – 73·4 Mag 10%	877708	68·9	69·6	0·7	10	85	340	×	25	×	0·008
5·5	79·3	2·8			finely banded green (serp), white (carbonates	73·4 – 75·1 Mag 40%, with green serp and	709	69·6	70·1	0·5	15	115	380	×	7	×	
7·3	82·4	2·8			and residual minerals) and black (mostly mag)	white residual minerals.	710	70·1	71·7	1·6	20	80	590	×	7	×	
2·4	85·3	3·0			rock, rather incompletely altered, with up	75·1 – 77·5 Mag 20-30%, variable 10-50%	711	71·7	73·0	1·3	5	90	600	×	60	×	
5·3	88·3	3·2			to 0·6 m bands of mag/serp alternating	, with bottle green serp or diseem in pale	712	73·0	73·4	0·4	5	45	490	×	40	×	×
8·3	91·5	3·4			with thinner banded mixtures of all three.	green serpentinized carbonates.	713	73·4	75·1	0·7	30	90	560	×	60	×	
1·5	95·5	3·0				77·5 – 78·3 Mag 10% in serp stockwork within	714	75·1	76·2	1·1	60	1000	365	5·0	140	×	
5·5	98·5	3·0				bone white calc-silicates	715	76·2	77·5	1·3	75	700	490	5·0	140	×	
8·5	101·5	3·0				78·3 – 78·9 Mag 40% in green serpentinite	716	77·5	78·3	0·8	25	155	620	×	65	×	×
01·5	104·5	3·0				78·9 – 79·4 Mag 15% finely dissem in calc silicates	717	78·3	78·9	0·6	35	40	225	×	50	×	
04·5	107·5	3·0				79·4 – 80·9 Mag 25-30% in serpentinite (30 cm)	718	78·9	79·4	0·5	×	50	175	×	30	×	
07·5	110·5	3·0			Contact 60°	bands; overall 15-20%.	719	79·4	80·2	0·8	10	95	390	×	55	×	
0·5	113·5	3·0		S/Lst	80·9 – 87·25 SERPENTINISED LIMESTONE	80·9 – 82·6 Mag 1-2% in discrete zones	720	80·2	80·9	0·7	235	620	9500	4·0	120	25	0·025
					White carbonate rich rock, with minor	, some dissem. blebs. Trace py in thin veinlets	721	80·9	82·3	1·4	5	50	220	0·5	60	20	
					intervals of bony white calc-silicate	82·6 – 87·25 Rare blebs magnetite (trace)	722	82·3	83·9	1·6	×	65	500	×	×	×	
					minerals, highly contorted grossly banded	; even more rare thin py veinlets.	723	83·9	85·5	1·6	×	50	240	×	20	×	
					fabric with extensive yellowish greeny brown		724	85·5	87·3	1·8	×	40	470	×	5	×	0·017
					serpentinite in 5mm → 10 cm bands throughout.													
					? Possibly the calcite is an alteration												
					product associated with the serpentinisation												
					of a calc silicate rock?.												
					Contact 65°		725	87·3	88·5	1·2	5	30	80	×	15	×	
				Cst	87·25 – 92·6 CALC SILICATE ROCK.	87·25 – 91·3 Traces of mag, po, sp	726	88·5	89·9	1·4	5	30	180	×	25	×	
					Bone coloured diopside/tremolite rock	associated with sparse serpentinite	727	89·9	91·3	1·4	35	50	2500	×	20	×	
					banded 40-60° minor dark (chlorite?)	bands.											
					alteration along small fractures	91·3 – 92·6 Pyrrhotite in bands to 15cm	728	91·3	92·2	0·9	260	40	290	×	15	×	0·008
					Some minor grey banded lst interbeds	with epidote, partially degraded to py	729	92·2	94·1	1·9	35	40	750	×	20	×	
					Contact 70°	10-12%.	730	94·1	95·0	0·9	5	30	85	×	15	30	
				Lst/(s)	92·6 – 113·0 ALTERED LIMESTONE	92·6 – 96·5 1-2% finely dissem po, mag?	731	95·0	95·4	0·4	5	45	65	×	×	×	
					See 57·7 – 73·0 for description	96·5 – 98·0 5% finely dissem po, py 1%, mag?	732	95·4	96·5	1·1	20	45	70	×	10	20	0·017
						98·0 – 99·5 Mag, dissem, 10%; po 2-3%, py(tr)	733	96·5	98·0	1·5	20	50	155	×	7	×	

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

SHEET No. 4

TENEMENT NAME TENTH LEGION No 5M175

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC4

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	Au		
13.5	116.5	3.0			99.5 - 101.8 Silicified zone with 15% po,	partially degraded to py.	877734	98.0	99.8	1.8	15	50	320	x	30	x			
16.5	119.5	3.0			101.3 - 106.2 Grey spotted carbonate	101.3 - 106.2 rare po in carbonates, some	735	99.8	101.3	1.5	165	130	4200	0.5	70	30			
19.5	122.4	2.7			, not so well banded, extensively	rare blebs magnetite	736	101.3	102.7	1.4	25	40	350	0.5	40	x	0.050		
22.4	125.2	3.0			saprolitised - yellow and brown sap > 50%	106.2 - 113.0 Minor mag veining, some	737	102.7	104.5	1.8	x	35	85	x	15	x			
25.2	128.5	3.5			of rock.	very finely disem mag; trace po.	738	104.5	106.2	1.7	10	40	150	x	15	x			
28.5	131.5	3.2			106.2 - 113.0 Greater percentage of 1st, again		739	106.2	107.4	1.2	x	30	75	x	15	x			
31.5	134.0	2.3			moderately well banded at approx 60°.		740	107.4	108.9	1.5	5	40	160	x	15	x	0.017		
					Contact		741	108.9	110.3	1.4	20	35	90	x	35	x			
				Css	113.0 - 116.2 CALC SILICATE SKARN ROCK	113.0 - 113.6 Po disem 10-15%, 1-2% Sp	742	110.3	110.8	0.5	5	45	75	x	30	x			
					Green, pink and white F.gr. calc silicate	, trace py in veinlets.	743	110.8	112.1	1.3	15	35	90	x	10	x			
					rock, extensively silicified and	113.6 - 114.3 Minor disem mag in more	744	112.1	113.0	0.9	35	30	120	x	55	x	0.025		
					converted to a grey massive rock	finely banded portions.	745	113.0	113.6	0.6	215	50	2150	x	45	40			
					with disem po.	114.3 - 116.2 Po disem in 10-30 cm intervals	746	113.6	114.3	0.7	10	55	360	0.5	310	x			
						, 10-15%, elsewhere 1-2%. Patchy disem	747	114.3	115.3	1.0	105	35	830	x	170	x			
						mag. Minor haematite; and traces py in	748	115.3	116.2	0.9	125	190	3500	2.0	230	15	0.008		
					Contact 85°	fine calcite veinlets (with mag).	749	116.2	117.0	0.8	15	40	195	x	35	x			
				Csd	116.2 - 134.0 ?CALC SILICATE ROCK.	116.2 - 117.0 Weak trace py; fine calcite veins	750	117.0	117.7	0.7	20	30	160	x	130	x			
				(ss/sh?)	Brown and green thinly bedded	117.0 - 117.7 Green epidote rich rock	751	117.7	119.0	1.3	15	30	60	x	10	x			
					rock, hard tough and very fine grained	117.7 - 119.0 Trace py, weak epidote veining	752	119.0	119.8	0.8	5	20	700	x	130	x	x		
					irregular patches of grey green to	119.0 - 120.3 Green epidote rich rock	753	119.8	120.9	1.1	65	130	670	1.5	290	10			
					white alteration (epidote, chlorite)	120.3 - 120.8 po, py disem 10-15%	754	120.9	121.8	0.9	10	35	170	0.5	25	x			
					associated with fracturing / veining.	120.8 - 121.8 Green epidote veining (weak) tr py.	877756	121.8	123.1	1.3	25	30	990	0.5	120	x			
					Most bedding angles 80-85°	121.8 - 123.1 Epidote rich, 2-5% po (disem)	932114	123.1	125.0	1.9	15	10	170	x	30	x			
					128.7 - 131.1 More greenish diopsidic	minor calcite - py veinlets.	115	125.0	126.8	1.8	30	15	170	x	40	x			
					rock	123.1 - 130.6 Brown rock, extensively	116	126.8	129.0	2.2	60	10	90	x	25	x	x		
					131.1 - 134.0 Very well bedded pale	fractured - weak stockworks of dark	117	129.0	130.3	1.3	25	20	215	x	30	200			
					brown and maroon laminae - sediments?	alteration products, rare epidote, rare	118	130.3	131.0	0.7	65	20	1900	x	95	15			
					133.0 Bedding 80°	blebs py. Some Strahlie disem py.?	119	131.0	132.4	1.4	90	15	60	x	30	x			
						130.6 - 130.9 5-7% disem po with epidote,	trace po. 120	132.4	134.0	1.6	85	10	50	x	25	x	x		
						130.9 - 134.0 py, po as bedded	932300	114.8	THIN SECTION SAMPLES.										
					END OF HOLE 134.0 m.	laminae and fine stringers; 5-7%.	301	134.0											

046

3439·17N

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1

TENEMENT NAME TENTH LEGION No. SM/75

PLAN – MAP REFERENCE TASH 2 TASH 17

CO-ORDINATES 4852·40E AZIMUTH 315° GRID DRILLERS S RIMAK COMMENCED 20·3·81 DEPTH 119·5 m HOLE No. T.L.C.5

RL COLLAR 235 m INCLINATION −50° DRILL TYPE BOYLES 37 COMPLETED 31·3·81 CASING LEFT 3m NW (collar) DPO No(s) 26671, 26670, 26672

DEPTH (from M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	Au	
					TRICONED TO 3·0m – NO CORE													
·0	4·6	1·4	NQ	Cst	3·0–7·4 CALC SILICATE ROCK	3·0–7·4 Well fractured and broken;	932107	3·0	5·2	2·2	5	45	320	1·0	140	×		
·6	5·7	1·2	to 30m		Pale grey, pink and green tremolite-	pale green epidote veining.	108	5·2	5·4	0·2	10	745	2850	1·5	140	15	0·025	
·7	8·0	2·4			diopside rock. Very hard, fine grained	7·4–8·0 Pale green epidote 20–25% of rock	109	5·4	7·4	2·0	15	175	1100	0·5	45	×		
·0	11·0	3·0			, weakly and randomly banded, and	mottled green and white, metasomatised.	877781	7·4	8·2	0·8	15	80	470	1·0	210	×		
·0	13·6	2·6			fractured, with a cross cutting	8·0–8·3 Barren pink and green calc silicate.	782	8·2	9·6	1·4	10	215	1150	2·0	540	×		
·6	16·0	2·4			network of epidote veins.	8·3–9·6 40–50% yellow-green epidote.	783	9·6	10·7	1·1	90	35	165	0·5	45	×		
·0	17·6	2·0			Most veins around 15–20° ∠CA	9·6–10·7 Trace py, epidote 2·3%.	784	10·7	11·7	1·0	45	20	105	×	70	×	×	
·6	21·5	3·9		Css	7·4–23·5 CALC SILICATE SKARN	10·7–11·7 Pink and green calc silicate; minor	785	11·7	13·2	1·5	10	15	120	0·5	150	×		
·5	23·2	1·8			As above, but grossly altered and	epidote.	786	13·2	14·4	1·2	10	10	580	0·5	60	×		
3·2	24·6	0·9			metasomatised fabric – greens – pinks	11·7–13·2 Epidote veining, some pink ?garnets	787	14·4	15·5	1·1	10	30	450	1·0	65	×		
·6	25·6	1·0			– greys and yellow-greens (epidote)	or ? idocrase.	788	15·5	17·1	1·6	20	25	590	0·5	40	×	×	
5·6	27·6	2·0			Some intervals rather greyer and less	13·2–14·4 Greyish breccia, barren.	789	17·1	18·2	1·1	40	25	240	×	1700	×		
·6	30·0	2·4			altered, with pronounced breccia	14·4–17·1 Mixed breccia (grey) and minor	790	18·2	19·5	1·3	10	30	430	×	170	×		
·0	31·5	2·0			fabric.	pink and green intervals with epidote.	791	19·5	19·8	0·3	660	240	480	1·5	2300	×		
·5	34·3	2·9				17·1–17·6 Chloritic alteration – crystalline	792	19·8	20·5	0·7	5	10	55	×	170	×	×	
·3	37·5	3·2				chlorite/phlogopite 30% of rock	793	20·5	20·8	0·3	5	15	135	0·5	290	×		
·5	40·3	2·8				17·6–18·2 Massive dark green chloritic	794	20·8	22·3	1·5	120	5	1150	0·5	70	×		
0·3	43·5	2·6			18·2 Contact 45°	rock, minor epidote, traces py in veinlets.	795	22·3	22·8	0·5	40	5	2650	0·5	35	×		
3·5	46·5	3·0			18·2–19·4 Weakly banded grey calc	18·2–19·4 Green ? chloritic bands.	932110	22·8	25·0	2·2	35	20	340	×	45	×		
6·5	49·5	3·0			-silicate rock. 18·7 banding 55°.	19·4–19·8 felted mass of ?tremolite in a	111	25·0	25·4	0·4	5	20	465	×	140	×		
·5	52·4	2·9			19·4–23·5 Grossly brecciated grey rock	dark green-grey matrix (or v.v.)	112	25·4	26·6	1·2	30	10	1000	×	30	×	×	
2·4	55·5	3·1			with dark green-grey interstitial material	19·8–20·2 Green-grey barren calc silicate	113	26·6	27·7	1·1	85	15	1750	×	15	×		
5·5	58·5	2·9			(chloritic) in a felted mass of ?tremolite	20·2–20·8 As for 19·4–19·8	869969	27·7	31·3	3·6	86	13	63	<1	6	40		Grind samples
·5	61·5	3·0			19·8 Contact 45°	20·8–23·5 No obvious mineralisation	970	31·3	35·2	3·9	23	16	66	<1	<4	30		
·5	64·5	3·0			20·8 " 40°	, trace sp at 22·3 m.	971	35·2	38·5	3·3	5	810	1320	4	175	40		
·5	67·5	3·0			Contact 45°		877796	38·5	40·2	1·7	5	175	380	1·5	140	15	×	
·5	70·3	2·8		Cst	23·5–69·9 CALC SILICATE ROCK	23·5–40·7 Coarse gr. chlorite in	797	40·2	40·7	0·5	5	95	160	1·0	170	×		
					Pale greeny-grey diopside-tremolite	irregular patches, usually some	869972	40·7	46·4	5·7	33	36	155	<1	55	30		Grind samples
					rock crystalline; minor irregular patches	intergrown magnetite. Traces po, py	973	46·4	51·5	5·1	83	16	122	<1	8	40		
					of crystalline chlorite. Thin epidote veining	, sp also. Some pink garnet? (idocrase?)	974	51·5	56·3	4·8	28	180	860	<1	36	10		

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

SHEET No. 2

TENEMENT NAME TENTH LEGION No. SM175

PLAN – MAP REFERENCE

CO-ORDINATES ... AZIMUTH ... DRILLERS ... COMMENCED ... DEPTH ... HOLE No. TLC5

RL COLLAR ... INCLINATION ... DRILL TYPE ... COMPLETED ... CASING LEFT ... DPO No(s)

DEPTH From (M)	DEPTH To (M)	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 ...) Cu	Pb	Zn	Ag	Sn	W	Au		
0.3	74.4	3.1	NQ		23.5 – 69.9 cont...		869975	56.3	65.0	8.7	13	12	43	<1	6	20		Grind	samp
4.4	77.5	3.1	to 30m		Most alteration contacts approx 45-50°.	40.7 – 69.9 Sparse epidote veins, rare	877756	58.5	60.0	1.5	95	105	160	0.5	15	x	0.042		
7.5	80.5	3.1	BQ		Gradually becomes harder and whiter	blebs py: Barren.	757	60.0	61.5	1.5	5	40	60	x	9	x			
0.5	83.5	3.0	30m		with depth; alteration diminishes		758	65.0	66.6	1.6	5	30	55	x	9	x			
3.5	86.2	2.8	↓		from small patches every 0.5m to		759	66.6	67.7	1.1	5	25	50	x	70	x			
					thin veinlets and discrete zones every		760	67.7	69.0	1.3	35	35	55	x	40	x	0.050		
					1m, then gradually becomes more		761	69.0	70.3	1.3	175	15	55	x	x	x			
					sporadic. Disruption and brecciation		869976	70.3	76.3	6.0	12	11	48	<1	<4	30		Grind	samp
					decreases, and bedding becomes		977	76.3	80.2	3.9	19	18	50	<1	<4	25			
					progressively more parallel to LCA viz:		877762	80.2	82.0	1.8	5	15	35	x	5	x			
					37.0 Bedding 20°		763	82.0	82.9	0.9	5	10	30	x	x	x			
					45.2 Bedding 20°		764	82.9	83.7	0.8	x	15	45	x	3	x	0.033		
					49.8 Bedding 13°		765	83.7	84.7	1.0	x	15	35	x	6	x			
					49.6 – 55.0 Brownish patch of		766	84.7	85.5	0.8	90	15	50	x	10	x			
					siltstone? Bedding at higher angles														
					to core. White alteration is still present		932302	12.3	}										
					along fractures and in small bands.		303	60	}	THIN SECTION SAMPLES.									
					52.5 ? Bedding 45°	58.5 – 60.4 Zone of green alteration	304	70.5	}										
					56.2 ? Bedding 55°	– mottled diopside ± with traces py, po tremolite	305	88	}										
					60.4 contact 40°		932316	19.6m	– Mineragraphic Sample.										
					64.4 Bedding 50°	65.0 – 65.9 Mottled pale green crystalline													
						tremolite/diopside.													
						65.9 – 69.9 Traces po, py disseminated													
				↓	Contact 30°	blebs along or around small cracks.													
				9/(9s)	69.9 – 85.0 QUARTZITE?	69.9 – 80.2 Barren – no mineralisation.													
					White rock with coarse qtz grains	80.2 – 82.0 Disseminated epidote 10%.													
					in a white f.gr sericitic? matrix	82.0 – 82.9 Barren – f.gr. 'calc silicate'													
					Originally and impure quartzsandstone?	thin epidote stringers.													
					Massive and featureless, some	82.9 – 83.7 Disseminated epidote in qtzite, 10%.													
					qtz segregations and occasional	83.7 – 85.0 Minor epidote stringers.													
				↓	thin cherty beds of altered sed's.														

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

SHEET No. 3
TENEMENT NAME TENTH LEGION No. 5IM/15
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH 119.5m HOLE No. TLC5
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	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.....) Cu	Pb	Zn	Ag	Sn	W	Au	
·2	89·5	3·3			83·7 - Alteration at 35° LCA		877767	85·5	86·9	1·4	15	10	20	×	×	×		
·5	92·5	3·0			Bedding at 25° to LCA		768	86·9	88·3	1·4	10	15	30	×	15	×	0·017	
·5	95·5	3·0			84·1 - 85·0 Contact b/w qtzite and ?calc		769	88·3	89·6	1·3	×	5	20	×	5	×		
5	98·3	2·8			silicate rocks – 2°.		770	89·6	91·2	1·6	×	10	20	×	4	×		
·3	101·2	2·9		?Cst	85·0 - 89·5 ? Calc Silicate Rock or	85·0 - 85·5 py - po - epidote - chlorite	771	91·2	92·4	1·2	×	10	25	×	10	×		
·2	104·3	3·0		ss/ch?	Siltstones/cherts.	stringers 10%.	772	92·4	94·0	1·6	85	10	60	×	9	×	0·017	
·3	107·2	2·9			Pale brown finely bedded rock, as	85·5 - 89·5 traces po, py as blebs	773	94·0	95·4	1·4	240	20	75	0·5	6	×		
·2	110·5	3·3			above 40·7 - 69·9m, minor qtzite	assoc with fractures. Thin epidote veinlets.	774	95·4	96·2	0·8	35	10	40	×	5	×		
·5	113·5	2·8			interbeds.		775	96·2	97·2	1·0	40	15	45	×	10	×		
·5	116·5	3·0			85·6 Bedding 30°		776	97·2	98·0	0·8	×	25	125	×	80	×	0·142	
·5	119·5	3·1			Contact 15°		869978	98·0	102·9	4·9	50	9	81	<1	4	60		Grid Samples
				q	89·5 - 91·7 QUARTZITES	89·5 - 91·7 Traces dissem epidote,	979	102·9	109·3	6·4	60	59	24	<1	18	75		
					See above, 69·9 - 85·0 for description.	barren.	980	109·3	119·5	10·2	170	12	122	<1	6	110		
					Contact 80°, faulted.													
				?Cst	91·7 - 112·4 ? CALC SILICATE ROCK	91·7 - 92·4 Barren pink and green												
					Green and pale brown l.gr. rock	calc silicate rock, bedding 2 - 10° LCA												
					as above, 40·7 - 69·9. Some thin	92·4 - 97·6 Deformed and brecciated												
					qtzite interbeds to 5 cm thick	with alteration along breccia paths												
					92·5 Bedding <5°	and 1-2% py and po as interstitial												
					103·0 Bedding <5°.	blebs, rarely dissem along quartzite												
					Contact 80°, brecciated	interbeds. Qtz - epidote veinlets and												
				q	112·4 - 116·2 QUARTZITE	stringers.												
					As above, but with some pinkish	97·6 - 104·1 Sparse thin qtz - epidote												
					and greenish minerals - originally	stringers with 2-3m white bleached												
					carbonate rich?	alteration haloes.												
					Contact 4° – – – –	104·1 - 105·6 Breccia zone - qtz epidote	877777	104·1	105·6	1·5	40	90	195	1·5	100	40		
				?Cst	116·2 - 119·5 ? CALC SILICATE ROCK	stockwork (10%)	778	112·4	113·2	0·8	15	40	105	0·5	15	×		
					See above, 40·7 - 69·9, for description	105·6 - 112·4 See 97·6 - 104·1	779	113·2	114·8	1·6	15	30	60	×	20	×		
					118·0 Bedding 25°	112·4 - 116·2 Sparse dissem epidote and	780	114·8	116·2	1·4	×	25	55	×	20	×	0·017	
						a pinkish mineral - garnet(?)m.? idocrase												
					END OF HOLE 119·5 m.	116·2 - 119·5 Minor qtz - epidote stringers.												

045

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

SHEET No. 1

TENEMENT NAME TENTH LEGION No 54M/15

PLAN – MAP REFERENCE TASH 2 TASH 18

CO-ORDINATES 4273·19N 5630·54E AZIMUTH 210° GRID DRILLERS S RIMAK COMMENCED 31·3·81

DEPTH 208·5 m. HOLE No. TLC6

RL COLLAR 260·15 m INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 10·4·81

CASING LEFT NIL DPO No(s) 26670, 26672

DEPTH From (M)	DEPTH To (M)	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) GRINDS: /ZINC CORP/COM Cu	Pb	Zn	Ag	Sn	W	Au
3	4·4	4·1	NQ	nC	TRICONED TO 0·3 m – NO CORE		877798	0·3	1·6	1·3	×	10	500	×	25	×	
4	7·5	3·0	to	S/M	0·3–2·05 SERPENTINITE WITH MAGNETITE.		799	1·6	2·05	0·45	×	10	750	×	30	×	
5	10·5	2·8	77·4m		Yellow and green serpentinite, with grey		800	2·05	4·30	2·25	×	5	410	×	15	×	0·017
·5	13·5	3·0			rounded patches & talc throughout 20%		932001	4·3	5·9	1·6	×	10	190	×	15	15	
3·5	16·5	3·0			and 20% magnetite. Mottled random fabric		002	5·9	7·2	1·3	×	20	280	×	5	×	
·5	19·5	3·0			-the talc appears to be almost interstitial.		003	7·2	8·4	1·2	×	20	225	×	10	20	
9·5	22·5	2·8			Gradual Change.		004	8·4	9·0	0·6	5	15	205	×	9	15	0·017
2·5	25·5	2·9		lst/M	2·05–17·7 LIMESTONE WITH MAGNETITE	2·05–8·35 Mag 10-15% in fine grained	005	9·0	10·4	1·4	×	80	270	0·5	60	35	×
5·5	28·5	3·0			Mottled grey and white rock- white	irregular bands, small patch of haematite	932006	10·4	11·0	0·6	×	40	445	×	170	50	×
8·5	31·4	2·9			calcite, coarsely crystalline, with bands	at 4·4 m	007	11·0	12·2	1·2	×	20	160	×	15	×	×
1·4	34·5	3·1			and swirls of serpentinite alteration	8·35–10·4 Mag largely altered to reddish	008	12·2	13·2	1·0	×	15	170	×	10	×	1·34
					and/or fine grained magnetite rich	haematite – fg- and cherry red patches	009	13·2	14·6	1·4	10	25	185	×	5	10	×
					bands. Yellowish and partially altered	which are still magnetic 5-7%	010	14·6	16·2	1·6	40	30	415	0·5	6	×	×
					to bernolite/serpentine in places.	10·4–11·0 Reddish maghemite 30%	011	16·2	17·7	1·5	5	15	200	×	9	×	×
					8·35–10·4 Pale grey dolomitic lst with	11·0–17·7 Black magnetite, and an	012	17·7	18·9	1·2	20	75	420	0·5	30	15	0·10
					irregular lenses and patches of bright	unidentified dark green hexagonal mineral	013	18·9	19·5	0·6	10	50	670	×	30	10	
					yellow serpentinite, and distinctive reddish	around later calcite veining. apatite?	014	19·5	21·0	1·5	×	20	190	×	20	10	
					haematitised magnetite.	Mag 20%	015	21·0	22·5	1·5	×	25	300	×	20	10	
					11·0–17·7 Distinctive white and black	17·7–19·5 Mag 10-15%	016	22·5	23·9	1·4	5	20	545	×	15	15	×
					calcite and magnetite, cuddly banded	19·5–25·4 Mag 10%, abundant serpentine	017	23·9	25·4	1·5	5	25	560	×	15	×	
					35° LCA. Some patches of yellow	veinlets and stringers with white	018	25·4	26·2	0·8	5	10	250	×	40	10	
					serpentinite at top of interval	colloform remobilised calcite.	019	26·2	27·1	0·9	30	100	270	×	30	20	
				S/M	17·7–19·5 Green serpentinised carbonates		020	27·1	27·9	0·8	115	335	450	×	35	×	×
					with 10-15% mag, banded 45°		021	27·9	29·6	1·7	15	20	370	×	30	×	
				lst/M	19·5–25·4 Serpentinised pale grey		022	29·6	30·9	1·3	20	170	515	0·5	30	×	
					dolomitic limestone, as above.		932023	30·9	32·3	1·4	10	190	655	×	30	×	
				M/S	Contact 40° 25·4–32·3 MAGNETITE WITH SERPENTINITE	25·4–27·9 Mag 25%	034	32·3	33·2	0·9	125	230	1800	×	×	×	
					Massive black magnetite in a pale	27·9–29·6 Mag 35-40%	035	83·2	34·3	1·1	60	85	640	×	20	15	
					green → dark bottle green serpentine	29·6–32·3 Mag 80%, last 30 cm 20%	036	34·3	35·8	1·5	25	50	250	×	8	×	×
					matrix.		037	35·8	36·7	0·9	10	30	215	×	8	20	
							038	36·7	38·2	1·5	75	40	385	×	15	15	

050

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

SHEET No. 2

TENEMENT NAME TENTH LEGION No 54M/75

PLAN – MAP REFERENCE

CO-ORDINATES ... AZIMUTH ... DRILLERS ... COMMENCED ... DEPTH ... HOLE No. THC6

RL COLLAR ... INCLINATION ... DRILL TYPE ... COMPLETED ... CASING LEFT ... DPO No(s)

DEPTH From (M)	DEPTH To (M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization
					Contact 40°	
34.5	37.0	2.5	NQ	Css/M	32.3-33.2 CALC SILICATE SKARN ROCK	Mag 25-35%
37.0	40.5	3.5	to 77.4		Grey fibrous tremolite, heavily impregnated	
40.5	43.3	2.8			with magnetite and with blebs translucent	
43.3	46.1	2.7			green serpentine.	
46.1	49.2	3.2			Contact 60°	
49.2	52.5	3.3		S/M	33.2-40.6 SERPENTINITE WITH MAGNETITE	33.2-34.3 f.gr. mag 30% in a grey
52.5	55.5	3.0			Dark green serpentinite with approx 50%	partially serpentinised gangue.
55.5	58.5	2.6			mag dissem throughout and small white	34.3-35.8 Mag 30%-35%.
58.5	61.5	3.0			2mm clots of refractory minerals from	35.8-36.7 Mag 10%
61.5	64.5	2.9			serpentinisation.	36.7-40.6 Mag 50-60%, appears to
64.5	67.5	3.0				be brecciated in lower 1.1 m. 1% pyrite
					Contact 35°	in small aggregates to 3x1 cm.
				Css/M	40.6-44.2 CALC SILICATE WITH MAGNETITE	40.6-41.1 Mag 10-15%
					Hard yellowish grey calc silicate (skarn)	41.1-42.0 Mag 40%
					tremolite rock, with serpentinised	42.0-42.9 Mag 30% in olive green
					intervals, and pervasive fine veinlets	serpentinite
					and stringers of yellowish green serpentine.	42.9-44.2 Alternating 20-50 cm bands of
					Magnetite occurs throughout, as bands,	mag 40-50% is either serp or calc silicate
					fine stringers or finely disseminated.	with bands of barren calc silicates, average 20-25%
					Contact irregular.	
				Css	44.2-52.2 CALC SILICATE SKARN	44.2-48.1 Mag 1-2%, locally 5-10%
					Irregularly banded massive grey	for a few cm.
					tremolite rock with minor dissem	48.1-49.1 Mag 10-15%
					mag (2-5%) associated with dark	49.1-50.1 Mag 25-35%
					green-grey alteration.	
						50.1-52.2 Mag 2-3%, Cindy dissem. in
					Contact 50°	altered chloritic rock.
				Cst	52.2-62.7 CALC SILICATE ROCK	52.2-54.8 Epidote-qtz veins 15-20%
					Green and white highly altered banded	54.8-55.5 Minor epidote-qtz veins.
					coloured fine grained rock with	55.5-59.3 Epidote up to 40% of rock.
					pink Mn silicates and abundant epidote	with qtz and some black chloritic material.

Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ...) Cu	Pb	Zn	Ag	Sn	W	Au
932039	38.2	39.6	1.4	240	20	190	x	15	20	
040	39.6	40.6	1.0	10	50	325	x	20	15	x
041	40.6	42.0	1.4	55	65	265	x	20	x	
042	42.0	42.9	0.9	30	45	235	0.5	15	x	
043	42.9	44.5	1.6	45	45	150	0.5	15	x	
044	44.5	45.2	0.7	85	50	160	x	10	10	x
045	45.2	46.4	1.2	5	10	100	x	10	x	
046	46.4	48.1	1.7	x	15	110	x	20	x	
047	48.1	49.1	1.0	20	10	75	x	x	x	
048	49.1	50.1	1.0	35	20	115	x	15	x	0.008
049	50.1	51.1	1.0	x	95	555	x	15	x	
050	51.1	52.1	1.0	x	25	140	x	5	x	
051	52.1	52.8	0.7	x	20	140	0.5	20	x	
052	52.8	53.5	0.7	x	165	430	0.5	60	x	0.008
053	53.5	54.8	1.3	x	180	870	0.5	65	20	
054	54.8	55.5	0.7	x	130	440	x	30	x	
055	55.5	56.7	1.2	5	610	935	1.0	110	490	
056	56.7	58.0	1.3	x	65	545	0.5	70	x	x
057	58.0	58.6	0.6	x	110	290	0.5	100	x	
058	58.6	60.2	1.6	10	100	300	0.5	120	x	
059	60.2	61.0	0.8	45	1100	6900	2.0	15	200	
060	61.0	62.1	1.1	210	1350	2950	2.0	25	30	0.033
061	62.1	62.7	0.6	410	40	155	0.5	20	x	

051

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

SHEET No. 3
TENEMENT NAME TENTH LEGION No 54 M/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC6.
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH om M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
.5	70.5	2.8	NQ to		65.3 Banding 65°	59.3-60.2 Barren, minor qtz-calcite stringers	932023	62.7	64.0	1.3	275	15	190	x	10	x	
.5	73.5	2.8	77.4			60.2-60.4 Mag 40°%	024	64.0	65.1	1.1	455	30	135	x	8	x	0.092
.5	76.5	3.0				60.4-62.7 Mag, disseminated 2-3% associated with	025	65.1	65.9	0.8	180	15	120	x	20	x	
.5	79.5	3.0			Contact irregular.	pale green clots of serpentinous alteration.	026	65.9	66.4	0.5	255	30	165	x	10	x	
.5	82.5	2.9		S/M	62.7 – 71.2 SERPENTINITE WITH MAGNETITE	62.7-64.0 Mag 15%, finely disseminated py 2-3%	027	66.4	67.9	1.5	65	10	110	x	35	x	
.5	85.0	2.4			Dark green-grey and bottle green	as large blebs.	028	67.9	69.7	0.8	100	20	220	x	25	x	0.025
.0	88.5	3.3			serpentinite with disseminated mag. in bands	64.0-65.1 Finely disseminated mag 25-30%	029	69.7	71.2	1.5	65	5	140	x	25	x	
.5	91.5	3.0			and irregular patches. Rare grey	py 1%.	030	71.2	72.5	1.3	60	25	170	x	20	x	
					patches of incompletely serpentinised calc-	65.1-71.2 mag 40-50%, banded, traces	031	72.5	72.9	0.4	30	5	70	x	20	20	
					silicate rock.	py. 67.9-71.2 mag 60%.	032	72.9	74.0	1.1	155	5	110	x	30	x	x
				M/S	71.2-74.7 MAGNETITE WITH SERPENTINITE	71.2-72.5 mag 70-80%, massive and	932062	74.0	74.7	0.7	1150	20	45	0.5	10	x	
					As above mag > serp.	crystalline, coarse granular texture, py 2%.	063	74.7	75.5	0.8	85	75	70	x	6	x	
						72.5-72.9 White calc-silicate rock, with mag	064	75.5	75.8	0.3	65	20	130	0.5	15	x	0.017
						15-20%	065	75.8	77.5	1.7	15	230	750	0.5	30	x	
						72.9-74.0 Mag 70%, py 2-3%, white	066	77.5	78.0	0.5	25	35	65	0.5	65	180	
						grey talc.	067	78.0	78.9	0.9	15	15	45	x	20	x	
					74.5 Banding 55°	74.0-74.7 Transition zone - banded mag	068	78.9	79.8	0.9	15	25	75	x	45	20	x
					74.7 Contact 50°	10-75%, py 10%, po 2-3%, serp decreases	069	79.8	81.1	1.3	650	135	365	6.5	45	320	
			BQ	Css	74.7-83.6 CALC SILICATE SKARN ROCK	74.7-75.5 White barren refracting rock	070	81.1	82.1	1.0	1550	120	330	1.5	20	x	
			77.4		Grey and green crystalline massive rock	(? magnesite)	071	82.1	83.6	1.5	55	35	75	0.5	60	x	
			-2095		- tremolite - diopside, with green epidote	75.5-75.8 black serpentinite with mag 30%	072	83.6	85.1	1.5	75	15	140	0.5	15	x	0.008
					rich patches with garnets, then virtually		073	85.1	86.9	1.8	35	25	210	0.5	30	25	
					a massive green (diopside + epidote?)	77.5-78.0 Epidote - qtz rock with 20% brown	074	86.9	88.3	1.4	10	10	205	x	20	25	
					rock with white barren qtz	garnets.	075	88.3	89.4	1.1	10	20	345	0.5	20	x	
					segregations from 78.0-79.8	79-81.1 Epidote-qtz rock with 20% garnet.	076	89.4	90.5	1.1	385	15	270	0.5	30	30	x
						81.1-82.1 Magnetite 40°; po 20%, py 1-2%											
						with black serp 20%.											
					Contact irregular	82.1-83.6 Mag in discrete band 10-15%.											
				M/S	83.6-90.5 MAGNETITE with SERPENTINITE	83.6-85.1 Mag 70-80%, trace py											
					Black crystalline mag 50%, in a matrix	85.1-90.5 Mag 40%, trace py.											
					of almost black serp, minor calcite												

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

SHEET No. 4

TENEMENT NAME. TENTH LEGION No. 54 M/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. THC6

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	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.....) Cu	Pb	Zn	Ag	Sn	W	Au
					Contact irregular.												
91.5	94.5	3.0		Lst	90.5 – 143.6 LIMESTONE.	90.5 – 90.9 py, po 60% of rock, as	932077	90.5	90.9	0.4	1700	65	95	1.0	x	x	
94.5	97.5	3.0			Grey limestone, recrystallised and	massive aggregates	078	90.9	92.6	1.7	165	25	175	0.5	x	x	
97.5	100.5	3.0			with a brecciated fabric, marked by	90.9 – 92.6 Fine gr mag 5-7%, py, po in	079	92.6	93.2	0.6	950	125	765	0.5	7	x	
00.5	103.5	3.0			fine black bands of recrystallised	veinlets and dissem. 2-3%	080	93.2	94.8	1.6	40	35	135	0.5	6	x	0.008
03.5	106.5	3.0			magnetite. Veins of green and black	92.6 – 93.2 Mag 5-7%, po in 2-3cm bands	GRIND	SAMPLES.									
06.5	109.5	3.0			serpentinite alteration permeate the	10%; py 1-2%	869981	94.8	97.7		10	33	122	1	4	10	
09.5	112.5	3.0			rock, up to 1 cm thick - 5%.	93.2 – 97.7 Mag 2-3%, po, py 5-7%, in	982	97.7	100.7		5	36	96	1	<4	10	
12.5	115.5	3.0			Green serpentinite decreases with depth	thin veinlets and finely dissem. Some	983	100.7	106.6		7	32	81	1	<4	<10	
15.5	118.5	3.0			becomes rare after 96 m approx.	bands to 5 cm thick py or po.	984	106.6	109.6		5	31	110	1	<4	<10	
18.5	121.5	3.0			109.7 Banding 80°	99.7 – 103.0 Mag 5-7%, py, po 1-2%.	985	109.6	113.4		6	26	57	<1	<4	<10	
21.5	124.5	3.0			124.0 Banding 65°	locally 3-5% for a few m.	CUT	SAMPLES									
24.5	127.5	3.0			136.6 " 80°	103.0 – 106.0 Py 10%; po 2-3% in	932081	103.0	103.6	0.6	10	30	150	0.5	x	x	
27.5	130.5	3.0				discrete bands to 2 cm thick, trace mag	082	103.6	104.3	0.7	5	15	30	0.5	10	x	
30.5	133.5	3.0			111.1 – 111.7 Calc silicate rock - pale	106.0 – 111.1 Po, Py dissem as discrete	083	104.3	105.0	0.7	15	65	185	1.0	3	x	
33.5	136.5	3.0			buff coloured fgr. tremolite rock (Cst)	blebs along black alteration paths	084	105.0	106.0	1.0	15	110	190	1.5	4	x	x
36.5	139.5	3.0				mag diminishes to 2-3%. Total 5-7%	085	111.1	111.7	0.6	25	15	75	0.5	4	x	
39.5	142.5	3.0			111.7 – 122.2 Spacing and intensity of	111.7 – 122.2 As above 111.1 – 122.2, gradually diminishes.	086	111.7	112.1	0.4	35	20	3650	0.5	x	15	
42.5	145.5	3.0			black alteration/segregation becomes	122.2 – 137.1 Traces po, py as discrete	GRIND	SAMPLES									
45.5	148.5	2.9			variable - some patches slightly serpentinite	blebs. Mag? possibly 1%, associated	869986	113.4	116.3		6	27	74	1	<4	10	
					rich, others more graphitic. Mag	with pale green serpentinite alteration.	987	116.3	119.0		7	30	50	1	<4	10	
					decreases, slightly more po.	137.1 – mag 2-5%, very finely	988	119.0	122.2		6	39	72	1	<4	<10	
					122.2 – 137.1 More massive, only weakly	dissem, associated with serp, graphitic	989	122.2	125.2		3	28	29	1	<4	<10	
					foliated grey marble, gradually becomes	films. po, py 1%, thin stringers and blebs.	990	125.2	128.1		2	28	36	1	<4	10	
					more altered, with distinct serpentinite		991	128.1	131.1		2	32	50	1	4	<10	
					zones etc from 132 m approx.		992	131.1	134.1		1	26	44	1	<4	<10	
					137.1 – 143.6 As above 90.5 – 96 m.		993	134.1	137.1		2	28	62	1	<4	<10	
				ss/Do	Contact 70° 143.6 – 145.9 SILTSTONES/DOLOMITES	143.6 – 145.9 No obvious mineralisation.	994	137.1	140.1		4	24	81	<1	<4	<10	
					Thinly bedded brown silty rock with		995	140.1	143.1		2	29	158	<1	<4	10	
					sericite alteration, some qtz segregations		996	143.1	145.9		18	28	137	<1	<4	20	
					and white recrystallised dolomitic		997	145.9	149.1		3	36	50	1	4	<10	
					carbonate. Bedding 70-80°.		998	149.1	151.9		2	25	56	1	4	<10	

053

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 5

TENEMENT NAME TENTH LEGION No. 54M/15

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. T.L.C.6.

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH From (M)	DEPTH To (M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization
					Contact 75°	
48.5	151.5	3.0		Lst	145.9 - 147.1 LIMESTONE	145.9-147.1 trace py, po as diosem.
51.5	154.5	3.0			As above 90.5 - 143.6	6/e6s
54.5	157.5	3.0		Dol/S.	Contact 75° 147.1 - 149.0 SERPENTINISED DOLOMITE	147.1 - 149.0 No Mineralisation
157.5	160.5	3.0			Brilliant white dolomitic carbonate with	
160.5	163.5	3.0			minor calcite and qtz, strikingly interbanded	
163.5	166.5	3.0			with yellow and green serpentine (50-60%)	
166.5	169.3	2.9			Contact 80°	
69.3	172.5	3.0		Lst	149.0 - 156.4 LIMESTONE	149.0 - 156.4 Py, Po 5-7%, mag 2-3%
172.5	175.5	3.2			As above 90.5 - 143.6 m, partially quickly to acid	along black alteration paths.
175.5	178.5	3.0			dolomitic - does not react,	156.4 - 160.0 - Trace py, po
178.5	181.5	3.0		Dol	156.4 - 178.9 DOLOMITE	160.0 - 162.5 py 2-3%, trace po.
181.5	184.5	3.0			Massive grey dolomitic carbonate	f.gr. mag 1-2%.
184.5	187.5	3.0			with minor calcite - same in hand	162.5 - 164.4 py 1-2%, po 1%, mag 2-3%
187.5	190.5	3.0			specimen as the above.	164.4 - 168.2 po 1%, mag 5-7%,
190.5	193.5	3.0			Gradual change. 178.9 – LIMESTONE	trace py.
193.5	196.5	3.0			See 149.0 - 156.4 for description	168.2 - 173.4 f.gr. mag 1%, trace po, py
196.5	199.5	3.0				173.4 - 174.9 po, py 10-15%, trace mag.
199.5	202.5	3.0				174.9 - 176.5 1% po, 2-3% f.gr. mag.
202.5	205.5	3.0				176.5 - 177.5 po 2-3%; mag 2-3%; py 1%
205.5	208.5	2.8				177.5 - 177.9 Serpentinised and altered
						mag 7%.
					182.0 - 189.5 Serpentinised - 30-40%	177.9 - 182.0 mag 3-5%, po 1-2%, trace py
					green and yellow brown pervasive	182.0 - 189.5 Mag 1-2%, trace po
					serpentine alteration.	
					189.5 - 202.6 Grey partially recrystallised	189.5 - 202.6 trace po, 1-2% mag on
					and altered lst - black and green	margins of alteration zones around
					alteration along 2-3mm breccia fractures	fractures.
					(widely spaced cm - cm.)	202.6 - 206.0 traces diosem mag, po.
					202.6 - 208.5 As for 156.4 - 178.9	206.0 - 208.5 Mag diosem 2-3%, po
					- partially dolomitic in places.	2-3%.
					END OF HOLE 208.5m.	

Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by .....) Cu	Pb	Zn	Ag	Sn	W	Au	
869999	151.9	154.9		1	24	56	<1	<4	<10		
870000	154.9	156.4		1	24	69	1	4	<10		
CUT SAMPLES.											
932087	156.4	158.1	1.7	5	10	55	×	×	×		
088	158.1	160.0	1.9	5	10	50	×	×	×	×	
089	160.0	161.4	1.4	10	10	35	0.5	×	×		
090	161.4	162.5	1.1	10	10	40	×	×	×		
091	162.5	164.4	1.9	5	20	45	0.5	×	×		
092	164.4	166.2	1.8	5	15	55	0.5	×	×	×	
093	166.2	167.0	0.8	5	15	30	×	×	×		
094	167.0	168.2	1.2	5	10	25	×	×	×		
095	168.2	169.2	1.0	5	10	25	×	×	×		
096	169.2	170.2	1.0	5	10	25	×	×	×	×	
097	170.2	172.1	1.9	5	15	20	×	×	×		
098	172.1	173.4	1.3	5	15	40	×	×	×		
099	173.4	174.9	1.5	10	20	150	0.5	5	×		
100	174.9	176.5	1.6	5	10	50	×	×	×	×	
101	176.5	177.5	1.0	10	15	105	0.8	×	×		
102	177.5	177.9	0.4 (1M)	10	15	95	0.5	×	×		
932701	177.9	182.3		1	7	45	<1	6	<10		GRIND SAMPLE
702	182.3	185.3		<1	8	41	2	<4	<10		
703	185.3	188.3		<1	12	51	2	<4	<10		
704	188.3	191.2		2	5	58	1	<4	10		
705	191.2	194.3		2	2	38	1	<4	<10		
706	194.3	197.2		<1	4	58	1	<4	<10		
707	197.2	200.2		<1	1	44	2	<4	<10		
708	200.2	202.6		<1	5	49	1	<4	<10		
932103	202.6	203.6	1.0	5	15	65	×	×	×		
104	203.6	205.1	1.5	10	15	35	0.5	×	×	×	
105	205.1	207.0	1.9	5	10	65	×	×	×		
106	207.0	208.5	1.5	5	15	35	×	5	×		

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1

TENEMENT NAME TENTH LEGION No. S2 M/75

PLAN – MAP REFERENCE TASH 2 TASH 19

CO-ORDINATES 4080·43N 5478·25E AZIMUTH 220° GRID DRILLERS S. RIMAK COMMENCED 10·4·81 DEPTH 200·10 m HOLE No. TLC7

RL COLLAR 241·62 INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 23·4·81 CASING LEFT NIL DPO No(s) 26671, 26672 30101

DEPTH From (M)	DEPTH To (M)	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 D.P.O. 26672 GRINDS x 21 INCCORP/COM Cu	Pb	Zn	Ag	Sn	W	Au
					TRICONED TO 6·0m - NO CORE.												
·0	7·5	0·2	NQ to	?M Lst	6·0 – ?19·4 ?WEATHERED LIMESTONE WITH MAG	6·0-19·4? 5-10% magnetite dissem. in	932121	6·0	7·5	0·2	355	120	2950	x	10	15	
·5	10·3	0·3	51·0m		Soft ochreous brown and yellow	yellow clay.	122	7·5	10·3	0·3	360	250	2500	x	8	25	
·3	13·5	0·2			weathered rock		123	10·3	13·5	0·2	275	120	4100	x	15	50	
3·5	16·5	0·3		Css?	?19·4 – ?21·3 ?CALC SILICATE SKARN.	?19·4-21·3 Py 20% of recovered core	124	13·5	16·5	0·3	170	85	4300	x	15	50	0·017
6·5	19·5	0·5			White and yellow altered rock - originally	, mag 3-5% in irregular bands.	125	16·5	19·4	0·4	195	60	6000	5·5	7	45	
9·5	20·7	0·4			Lst? , with abundant pyrite.		126	19·4	21·3	0·5	70	15	1150	1·5	15	x	
0 7	28·5	7·4		Lst	?21·3 – 127·1 LIMESTONE	21·3-24·4 Granular texture with blebs	127	21·3	22·7	1·4	50	5	125	1·0	5	x	
8 5	31·5	3·0			Grey limestone, weakly silicified, minor	py in irregular stringers 10-15%, po 3-5%	128	22·7	23·8	1·1	90	10	100	0·5	x	x	x
1·5	34·5	2·9			black alteration, and heavily impregnated	, finely dissem mag? 10% - 15%.	129	23·8	24·4	0·6	150	20	1300	x	x	10	
4·5	37·5	3·1			with pyrrhotite and pyrite to 24·4 m.	24·4-29·4 po 7-10%, finely dissem.	130	24·4	25·9	1·5	25	10	95	x	x	x	
7·5	40·5	3·0			24·4 - 33·2 Grey oyctalline limestone	throughout; finely dissem mag 2-3%	131	25·9	27·5	1·6	55	10	70	x	8	x	
0·5	43·5	3·0			with extensive brecciation and black	29·4 – 33·2 po, py 5% in thin irregular	132	27·5	28·8	1·3	50	10	120	0·5	x	x	x
3·5	46·5	3·0			alteration (ultrabasic mag) along fractures	veinlets and stringers. Ultrabasic mag 1-2%	133	28·8	29·4	0·6	15	15	105	x	x	x	
6·5	49·5	3·0			, some portions almost black.	33·2 – 39·3 po, trace → 1%, weak trace	134	29·4	30·1	0·7	10	15	50	0·5	x	x	
9·5	51·0	1·5			33·2 - 39·3 Pale grey brecciated Lst, less	magnetite, pyrite. Occasional blebs py to	GRIND SAMPLES										
1·0	52·5	1·4			black alteration than the above. Rare	2 x 3 cm.	932709	30·1	33·2		6	1	53	2	<4	<10	
2·5	55·5	3·0			thin fractures filled with grey-green serp.	39·3 – 52·6 po 5-7%, dissem along	710	33·2	36·2		4	5	138	2	<4	<10	
5·5	58·5	3·0			39·3 - 59·6 As for 24·4 - 33·2	black fractures; some ultrabasic mag?	711	36·2	39·0		3	5	193	2	<4	<10	
8·5	61·5	3·0			48·6 - 49·0 Hard white intervals to 5cm	po locally 15%, variable down to 2%	712	39·0	42·0		7	10	92	1	6	15	
1·5	64·5	3·0			, contacts 70 - 80° CA. - calc silicate	Mag seems to replace po in the more	713	42·0	44·9		5	4	41	1	<4	<10	
4·5	67·5	3·0			alteration, has some black serpentinite bands	altered dark serpentinous beds. Pyrite is	714	44·9	47·8		2	18	198	1	<4	<10	
7·5	70·5	3·0	51·0		51·0 Banding (bedding?) 50°	variable, usually intergrown with pyrrhotite	715	47·8	50·7		3	12	240	1	<4	15	
			↓ 200·10 BQ core		52·2 – 55·8 Patches of hard creamy	52·6 – 59·6 po, py 2-3%, ultrabasic mag	716	50·7	54·5		4	11	640	1	6	15	
					coloured dolomite interbanded with calcite	2% - 5%? - rock is weakly and slightly	717	54·5	56·6		9	9	920	1	<4	10	
					59·6 – 68·3 As for 33·2 - 39·3, gradually	magnetic.	718	56·6	59·6		9	5	860	1	6	10	
					becomes harder and more dolomitic	59·6-68·3 po, py 2-3% as irregular	719	59·6	62·6		18	9	153	1	4	25	
					- less reactive to acid. Some white and	veinlets and stringers, trace ultrabasic mag	720	62·6	65·6		5	7	53	1	4	<10	
					62·7 Banding 60° pale green bands of	in darker portions of the rock.	721	65·6	68·6		7	6	143	1	<4	<10	
					? calc silicate rock to 10-15cm												
					appear sporadically.												

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

SHEET No. 2

TENEMENT NAME TENTH LEGION No. 52 M/75

PLAN – MAP REFERENCE

CO-ORDINATES ... AZIMUTH ... DRILLERS ... COMMENCED ... DEPTH ... HOLE No. THC7

RL COLLAR ... INCLINATION ... DRILL TYPE ... COMPLETED ... CASING LEFT ... DPO No(s) ...

DEPTH From (M)	DEPTH To (M)	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 ...) Cu	Pb	Zn	Ag	Sn	W	Au
70.5	73.5	3.0	BQ		68.3-78.2 Gradually becomes darker grey- uniform massive pale grey rock with thin films of black and green(serp) along brecciation paths.	68.3-78.2 po 1-2%, py <1% as veinlets and stringers. Traces f.gr. mag.	932722	68.6	71.4		12	6	150	1	<4	10	
73.5	76.5	3.0	↓				723	71.4	74.3		26	7	150	1	<4	15	
76.5	79.5	3.0					724	74.3	77.4		30	333	410	2	<4	25	
79.5	82.5	3.0					725	77.4	80.3		4	5	32	1	4	<10	
82.5	85.5	3.0			70.4? Bedding 57°		726	80.3	83.3		1	5	26	1	<4	<10	
85.5	88.5	3.0			78.2-84.5 Light grey massive type;	78.2-81.1 po, finely disem 1%	727	83.3	86.2		7	2	29	1	<4	15	
88.5	91.5	2.9			as for 33.2-39.3	, weak pyrite veinlets, finely disem	728	86.2	89.3		6	20	56	1	<4	10	
91.5	94.5	3.0			84.5-88.1 See 68.3-78.2 for description	mag 5-7%.	729	89.3	92.3		33	3	75	2	<4	10	
94.5	100.0	0.3			88.1-94.7 See 78.2-84.5, 33.2-39.3	81.1-84.5 po in veinlets and stringers	730	92.3	100.5		2	6	107	2	4	<10	
100.0	100.5	0.40				2% blebs along brecciation paths. Trace	731	100.5	103.6		2	3	39	2	<4	10	
100.5	103.5	2.8				py, fine gr mag in black halloes	732	103.6	106.6		4	9	47	1	<4	<10	
103.5	106.5	3.0				84.5-88.1 po 3-5%, mag 2-3%	733	106.6	109.6		3	1	42	1	<4	<10	
106.5	109.5	3.0				88.1-94.7 As for 68.3-78.2	734	109.6	112.6		2	1	18	1	<4	<10	
109.5	112.5	3.0		nc	CAVITY 94.7m - 100.1m.		735	112.6	117.0		2	5	24	1	<4	<10	
112.5	115.5	3.0		Lst	100.1-112.1 Pale grey fine grained	100.1-106.8 Very finely disem po	736	117.0	121.5		3	4	40	1	6	<10	
115.5	118.5	3.0			limestone, with lighter coloured	in matrix 1-2%, occasional blebs.	737	121.5	124.6		9	4	58	1	6	20	
118.5	121.5	3.0			recrystallised patches. Finely bedded;	106.8-112.1 Trace f.gr. po.	738	124.6	127.5		27	4	43	1	<4	10	
121.5	124.5	3.0			minor green and black serpentinite												
124.5	127.5	3.0			alteration in fractures to 5mm, widely												
					spaced. Becomes lighter coloured after 106.8m												
					106.8 Bedding 35°.												
					111.9 Bedding 80°.												
					112.1-119.0 Pale grey massive crystalline	112.1-119.0 po, 1% as veinlets and											
					lst, as above 33.2-39.3, minor	blebs; trace magnetite.											
					10cm-0.4m of pale grey limestone												
					(unaltered), as for 100.1-112.1.												
					119.0-127.1 pale grey massive lst with	119.0- po 2-3%, some blebs to											
					more abundant black alteration, more	2x3cm., f.gr disem mag 5-7%.											
					distinct alteration zones. Some minor												
					intervals of pyrite and pink/green calc												
					silicates.												

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

SHEET No. 3
TENEMENT NAME TENTH LEGION No 52M/15
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC 7.
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
127.5	130.5	3.0			122.0 Bedding 65°			GRIND	SAMPLES								
130.5	133.5	3.0		Cst/lst	Contact 55° 127.1 – 132.6 ALTERNATING CALC	127.1 – Pink garnets and traces	932739	127.5	130.5		19	7	69	1	10	10	
133.5	136.5	3.0			SILICATES AND LIMESTONE.	of epidote in calc silicate bands	740	130.5	133.5		27	5	53	1	8	15	
136.5	139.5	3.0			Tough white and bone coloured	, trace po, f.gr. mag. in lst.	741	133.5	136.5		10	10	35	0.5	×	×	
139.5	142.5	3.0			calc silicate intervals 10cm–1.0m		742	136.5	139.5		5	10	65	×	×	×	
142.5	145.5	3.0			with thin interbeds of grey crystalline		743	139.5	142.5		5	10	40	×	×	×	
145.5	148.5	3.0			limestone		744	142.5	145.5		×	15	50	×	6	10	
148.5	151.0	2.5			Contact 70°		745	145.5	148.5		×	10	50	×	×	×	
151.0	154.1	3.1		Lst	132.6 – 142.6 LIMESTONE	132.6 – 142.6 po 3%, f.gr. mag 2%	746	148.5	151.5		×	10	30	×	×	×	
154.1	156.9	2.8			As above 119.0 – 127.1	, rare trace py.	747	151.5	154.5		×	15	20	0.5	×	×	
156.9	157.7	0.8			135.0 Bedding 40°		748	154.5	157.5		×	10	20	×	×	×	
157.7	160.5	2.8			Contact 55°		749	157.5	160.5		×	5	15	×	5	×	
160.5	163.5	3.0		S	142.6 – 145.1 SERPENTINITE.	142.6 – 145.1 No mineralisation	750	160.5	163.5		×	5	25	0.5	×	×	
163.5	166.5	3.0			Pale yellow and green massive	except for 143.7 – 144.3 po 2%, f.gr.	751	163.5	166.5		5	5	50	0.5	×	10	
166.5	169.5	2.8			serpentinite, with bands of remnant	mag 2%.	752	166.5	169.5		×	10	40	×	×	×	
					carbonate												
					143.7 – 144.3 limestone as above												
					132.6 – 142.6.												
					Contact 50°												
				Dol	145.1 – 161.0 DOLOMITE	145.1 – 161.0 1-2% pyrite dissem.											
					Massive coarsely crystalline pale	with black margins around grains.											
					grey dolomite, with minor thin												
					serpentinite stringers.												
					Contact 60°	161.0 – 165.1 po 1-2%, fine grained											
				Lst	161.0 – 168.8 LIMESTONE.	mag 1%.											
					161.0 – 165.1 Grey crystalline lst, with	165.1 – 167.1 po 1-2%, very fine											
					abundant black alteration and minor	grained dissem mag 5-7%.											
					serpentinite along fractures												
				Lst/S	165.1 – 167.1 Black and green altered												
					limestone – mostly serpentinous material												
					with f.gr. dissem. mag throughout and green calcite remnants.												

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

SHEET No. 4

TENEMENT NAME TENTH LEGION No. 52M/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T.L.C.7

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	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 .....) Cu	Pb	Zn	Ag	Sn	W
169·5	172·5	3·0			167·1-168·8 transition zone - segregated white	167·1 - 168·8 trace po, mag 5%		GRIND	SAMPLES							
172·5	175·5	3·0			dolomitic carbonates and black material		932753	169·5	172·5		×	10	10	1·0	×	×
175·5	178·5	3·0			as above.		754	172·5	175·5		×	5	15	1·0	×	×
178·5	181·2	2·6			Contact 50°		755	175·5	178·5		5	10	55	0·5	4	×
181·2	184·3	3·1		Dol	168·8 - 185·2 DOLOMITE 40°	168·8 - 177·1 po, py finely dissem 1-2%	756	178·5	181·2		×	5	20	1·0	×	×
184·3	187·4	3·1			Pale grey crystalline massive	177·1 - 177·4 zone with magnetite 30-40%	757	181·2	184·3		×	10	10	1·0	4	×
187·4	190·5	3·1			dolomite, as for 145·1 - 161·0	177·4 - 185·2 po, py finely dissem 1-2%	758	184·3	187·4		5	10	25	1·0	×	×
190·5	193·5	3·0		Bss/Lst	185·2 - 188·8 Breccia zone - clasts	185·2 - 188·8 Breccia zone - grey	759	187·4	190·5		×	15	25	1·0	×	×
193·5	196·5	3·0			of grey fine grained soft grey	and black breccia clasts with 10%	760	190·5	193·5		×	15	35	1·0	×	×
196·5	199·5	3·0			siltstone in a calcite rich matrix	combined po and magnetite.	761	193·5	196·5		×	10	30	0·5	×	×
199·5	200·1	0·8		Lst	188·8 - 196·3 LIMESTONE	188·8 - 192·1 traces po, py - 1%	762	196·5	200·1		×	15	30	0·5	×	20
					Grey massive limestone - variable	192·1 - 196·3 dk grey rock with traces										
					bands of black serpentinite/mag	dissem mag - prob 1-2%, traces po, py.										
					alteration. 194·7 banding 65°.											
					Contact 45°											
				Lst/S	196·3 - 200·1 SERPENTISED LIMESTONE	196·3 - 200·1 No mineralisation.										
					Yellow and white rock, banded 2mm-1cm											
					scale - the yellow is serpentinite?											
					with the white patches being almost											
					pure calcite. Medium hard, tough											
					crystalline rock - calc - silicate affinities?											
					199·8 Banding 65°.											
					END OF HOLE 200·1 m.											

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1

TENEMENT NAME TENTH LEGION No SM/15

PLAN – MAP REFERENCE TASH 2 TASH 15

3688·7N

CO-ORDINATES 5268·20E AZIMUTH 330° GRID DRILLERS S. RIMAK COMMENCED 23·4·81 DEPTH 150·9m HOLE No. TLC8

RL COLLAR 229·34m INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 6·5·81 CASING LEFT NIL DPO No(s) 30102, 30103

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	Au		
				nc	TRICONED TO 6.0m - NO CORE														
6·0	7·0	0·1	NQto	?M	6·0 – 15·0 MAGNETITE	6·0 - 15·0 Extremely weathered -	932178	8·1	10·5	0·7	200	25	800	2·5	10	×			
7·0	8·0	0·1	47·0m		Only core recovered fragments of	residual magnetite, porous with													
8·0	10·5	0·7			washed magnetite - probably surface	red and brown interstitial clay.													
10·5	13·0	—			rubble for the major part, but some														
13·0	15·0	0·2			in situ material that has been	Weathered and broken with high													
15·0	16·5	0·9			cored, and the clay matrix washed	core losses to ≑ 38·6 m.													
16·5	18·0	0·4			away.														
18·0	19·5	0·5		?Css	15·0 - 16·5 CLAY WITH MAGNETITE		179	15·0	16·5	0·9	525	25	1575	2·5	20	140			
19·5	21·0	0·6			Brown banded extremely weathered														
21·0	22·5	0·3			rock - some Mn and ~2% very														
22·5	24·0	0·3			fine grained magnetite Banding 60° LCA														
24·0	25·5	0·4			16·5 - 18·0 CLAY		180	16·5	18·0	0·4	425	25	675	×	60	100	0·125		
25·5	27·0	0·9		?Css	Yellow soft, crumbly, silty clay.														
27·0	28·5	1·5		M	18·0 - 22·5 MAGNETITE		181	18·0	19·5	0·5	475	125	500	×	10	×			
28·5	30·0	1·4			Black massive soft crumbly		182	19·5	21·0	0·6	425	25	450	×	10	×			
30·0	31·5	1·5			weathered magnetite, some hard		183	21·0	22·5	0·3	75	25	600	2·5	25	×			
31·5	33·0	1·5			crystalline intervals.														
33·0	34·5	1·5			21·0 - 22·5 Black soft friable														
					magnetite with ? Mn oxides 5·5%														
				Css	22·5 - 53·6 WEATHERED CALC		184	22·5	24·0	0·3	550	100	1450	×	35	×	0·025		
					SILICATE		185	24·0	25·5	0·4	450	25	1725	2·5	30	×			
					22·5 - 28·2 Dark brown ochreous	22·5 - 28·2 Dark brown colour due	186	25·5	27·0	0·9	825	25	7950	2·5	20	×			
					weathered rock, some ?Mn oxides	to Mn oxides.? Has 2-3% finely	187	27·0	28·5	1·5	250	×	1·47%	2·5	4	×			
					, weakly banded - poorly defined	disseminated mag.	188	28·5	30·0	1·4	50	×	9400	2·5	×	×	0·008		
					parting at 70° LCA.														
					28·2 - 33·4 Pale brown/cream friable	28·2 - 33·4 traces magnetite, some	189	30·0	31·5	1·5	75	25	1·26%	×	×	×			
					sandy textured weathered rock	extremely weathered ? serpentinite	190	31·5	32·9	1·4	200	×	7550	2·5	7	×			
					- granular calc-silicate skarn analogous	stringers and traces weathered ?epidote.	191	32·9	33·6	0·7	750	×	9650	×	30	20			
					to that beneath the upper magnetite														
					lens in TLC3?														

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 2

TENEMENT NAME TENTH LEGION No 5IM/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC 8

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	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..... Cu	Pb	Zn	Ag	Sn	W	Au
34·5	35·8	0·4			31·4 – 33·4 Interbedded brown/cream		932192	33·6	34·5	0·9	625	×	6750	2·5	5	×	0·008
35·8	37·3	0·3			sandy textured material and thinly		193	34·5	35·8	0·4	300	×	5950	2·5	×	×	
37·3	38·6	0·8			laminated dark chocolate brown		194	35·8	36·1	0·3	150	25	1725	2·5	×	×	
38·6	39·8	0·6			manganiferous clay as for 22·5 – 28·2		195	36·1	38·6	0·8	100	×	2100	2·5	3	×	
39·8	41·0	1·2			- originally Css/Cst, interbedded?		196	38·6	40·4	1·2	25	300	650	2·5	20	×	0·017
41·0	44·0	2·8			33·4 – 45·2 White calc silicate rock	33·4 – 45·2 patches & coarsely	197	40·4	41·9	1·5	25	25	525	2·5	8	×	
44·0	47·0	3·0			extensively altered, with irregular patches	crystalline chlorite, and epidote	198	41·9	43·8	1·9	25	×	425	×	15	×	
47·0	48·5	1·4			& chloritic alteration and epidote	veinlets. Traces mag, sp?	199	43·8	45·2	1·4	25	×	275	×	10	×	
48·5	51·5	3·0			- similar rocks occur in TLE 3 28 – 45m		200	45·2	47·0	1·8	50	×	375	2·5	9	×	×
51·5	54·5	3·0			and the upper part of TLC 4.												
54·5	57·5	3·0			45·2 – 47·0 Distinct breccia fabric	45·2 – 47·0 – No obvious mineralisation											
57·5	60·5	3·0			- rounded clasts of calc silicate in a	47·0 – 51·4 – Minor chlorite-epidote											
60·5	63·5	3·0			grey chloritic matrix with a hard	veining											
					black mineral in interstices. 5-7%.	50·9 – 51·2 Zone of po, py, marcasite	GRIND SAMPLES.										
					47·0 – 51·4 As above 33·4 – 45·2, but	with mag and chlorite : trace sp, 70° LCA.	932763	47·0	50·6		400	65	570	0·8	×	×	
					the alteration acquires a distinctly		764	50·6	53·6		790	21	6400	0·5	×	55	
					banded character – 5mm – 25cm												
					bands at 70° LCA.												
					51·4 – 53·6 Massive crystalline mottled	51·4 – 53·6 traces py, chlorite, one											
					green and white calc silicate skarn	magnetite zone – 3cm at 51·7m.											
					rock. – dense and heavy.												
					Contact 80°		CUT SAMPLES										
				S/M	53·6 – 63·2 ? SERPENTINITE WITH MAGNETITE		932135	53·6	54·9	1·5	600	200	3·01%	×	10	×		
					Pale yellow-green(?) serpentinised dgr	53·6 – 58·0 Mag dissem 30-40%;	136	54·9	55·6	0·7	175	150	9600	×	15	×	×
					calc silicate matrix with bands of	variable 10-15% to 80-90% for a few	137	55·6	56·5	0·9	825	75	22%	×	8	×	
					crystalline black magnetite distributed	cm. Sp variable throughout trace – 10%,	138	56·5	58·0	1·5	750	100	2·71%	×	10	×	
					throughout 30-40%.	2-3% overall.	139	58·0	58·9	0·9	700	125	4·26%	2·5	10	×	
						58·0 – 58·9 Dark green serpentinite	140	58·9	60·1	1·2	625	125	2·38%	×	15	×	×
						matrix, mag and sp as above.	141	60·1	61·5	1·4	350	100	1·35%	×	15	×	
						58·9 – 63·2 As above, sparse calcite	142	61·5	62·4	0·9	575	250	1·68%	2·5	20	×	
						stringers.	143	62·4	63·1	0·7	200	175	82m	2·5	15	×	

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

SHEET No. 3

TENEMENT NAME TENTH LEGION No. 6M/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T.L.C.8.

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	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 ..... Cu	Pb	Zn	Ag	Sn	W	Au
					Contact 60°												
63·5	66·3	2·8		Csd	63·2-65·3 CALC SILICATE ROCK	63·2-64·6 mag 2-3%, trace sp, in blebs	932144	63·1	64·6	1·5	25	50	1375	×	×	×	×
66·3	69·0	2·6			Green, brown and white banded calc	and stringers.	145	64·6	65·0	0·4	175	125	3·81%	×	6	×	
69·0	72·5	3·4			silicate rock, which has been subjected	64·6-65·0 Serpentinite band with	146	65·0	65·3	0·3	575	100	4300	×	×	×	
72·5	75·5	3·5			to minor alteration/metasomatism - some	40% mag, sp 2-3% in central											
75·5	78·5	3·0			serpentinite bands and stringers	65·0-65·3 trace mag. garnets.											
78·5	81·0	2·7			Contact 65°												
					65·3-68·2 SERPENTINISED CALC SILICATES												
					WITH MAGNETITE.												
				S/M	65·3-66·1 Dark green serpentine with	65·3-66·1 py 1%; trace sp.	147	65·3	66·0	0·7	250	75	8200	×	8	×	
					black magnetite 30%. Banded 65°		148	66·0	66·9	0·9	150	100	1400	×	9	×	×
				Cst/S	66·1-68·2 Bone white calc silicate	66·1-68·2 - Py 3·5%, in irregular bands	149	66·9	68·2	1·3	575	75	6150	×	9	×	
					with green/grey serpentinised intervals: mag.	to 2cm thick.											
					10%. Banded 60°												
					Contact 70°												
				Css	68·2-72·7 CALC SILICATE SKARN	68·2-70·6 mag 1%, py 1-2%, strong	150	68·2	69·0	0·8	250	150	5750	2·5	×	×	
					White fine grained rock with irregular	trace sp → 1%	151	69·0	70·6	1·6	75	175	5900	×	×	×	
					bands and patches to 2cm of dark	70·6-72·7 Sp locally in 10 cm intervals											
					green serpentinite or white calcite.	to 15%, overall 1-2%, mag 2-3% assoc.	152	70·6	71·6	1·0	75	100	1·41%	×	3	×	×
					'Altered 'Cst' type of calc-silicate.	with serpentine, blebs disseminated py. to 1%.	153	71·6	72·1	0·5	×	75	1600	×	7	×	
					72·7-85·7 CALC SILICATE ROCK	72·7-73·9 magnetite 1-2% in fine stringers	154	72·1	72·7	0·6	50	325	5400	×	×	×	
					Bone white fgr. rock with weak	, sp 1-2%											
					sporadic serpentinite alteration.	73·9-75·0 Finely disseminated mag 5-7%	155	72·7	73·9	1·2	25	50	1975	×	5	×	
				Cst/Lst	73·9-75·0 Altered limestone - remnant 2×1cm	in limestone; trace sp.	156	73·9	75·0	1·1	25	50	2500	×	4	×	0·008
					lenses of grey limestone surrounded by												
					bands of green serpentinite and white calc-silicates.												
				Cst	75·0-75·8 Bone and cream calc silicate	75·8-75·8 trace magnetite, garnet.	157	75·0	75·8	0·8	25	50	225	×	6	×	
					as above.		158	75·8	77·4	1·6	50	450	725	5·0	4	×	
				Css	75·8-77·6 Qtz-epidote-garnet rock	75·8-77·6 Epidote 30% along fractures	159	77·4	78·8	1·4	25	1175	375	5·0	10	×	
					-alteration stockwork.	, with garnet 10% and residual white and	160	78·8	79·1	0·3	100	275	1·36%	2·5	7	×	0·008
				Cst	77·6-81·3 Bone and greyish white calc	greyish pink qtz. Traces disseminated mag.	161	79·1	80·2	1·1	75	×	425	×	10	20	
					silicate rock with minor serp/mag banding to 30°	77·6-81·3 mag 1-2% with black serp; trace sp	162	80·2	81·3	1·1	25	300	3600	×	5	×	

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

SHEET No. 4

TENEMENT NAME TENTH LEGION No. 51M/15

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T.L.C.8

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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 ..... Cu	Pb	Zn	Ag	Sn	W	Au
81.0	84.0	3.0		M/s.	81.3 – 82.0 Magnetite 40% associated with dark green, almost black serpentinite, some remnant patches white calc silicates	81.3-82.0 Sp 1%, associated with mag.	932163	81.3	82.0	0.7	50	×	1.1%	×	9	×	
84.0	87.1	3.1					164	82.0	82.6	0.6	25	×	1.03%	×	10	×	0.017
87.1	89.9	2.7					165	82.6	83.3	0.7	25	175	6300	2.5	25	×	
89.9	92.9	3.0			82.0 – 85.7 White calc silicate rock with	82.0-85.7 Mag 15-20% in bands with	166	83.3	83.9	0.6	50	50	4250	2.5	4	×	
92.9	95.9	3.0			0.5 cm → 10 cm bands of mag/serpentinite	serpentinite; trace sp.	167	83.9	84.2	0.3	150	×	1.31%	2.5	55	×	
95.9	99.0	3.1			as above 81.3-82.0, 30%. Some sparse		168	84.2	85.7	1.5	75	100	4975	×	6	×	0.017
99.0	102.4	3.4			bands grey 1st near base of interval.												
102.4	105.4				Contact 60°		GRIND SAMPLES.										
105.4	108.4	3.0		lst/Cst	85.7–97.9 ALTERED LIMESTONE	85.7-95.7 Mag diss 2-3% throughout	932765	85.7	88.8		26	30	470	0.3	×	20	
					Banded grey and white rock – the	lst, overall 1-2%, traces po, py and rare	766	88.8	91.6		47	22	710	0.3	4	15	
					grey is a crystalline impure limestone	Sp in small zones to 3 cm.	767	91.6	95.7		18	18	90	0.2	×	×	
					with finely disseminated mag, frequently		CUT SAMPLES										
					with green 2-8 mm serpentinite rims	95.7-97.5 po, py disseminated in bands	932169	95.7	97.0	1.3	175	×	1925	2.5	7	×	
					surrounding irregular bands and intervals	97.5 - 97.9 10% Mag in serpentinised limestone	170	97.0	97.5	0.5	×	50	425	×	7	×	
					of bone white calc silicate rock, which	trace py	171	97.5	97.9	0.4	150	×	4475	2.5	7	50	
					may be up to 1.2 m thick.												
					Contact 55°		GRIND SAMPLES										
				ss/Cst	97.9 – 101.4 BLACK SILTSTONES/CALC SILICATES	97.9-101.4 No obvious mineralisation	932768	97.9	101.2		64	18	148	1.0	×	110	
					Thinly bedded black siltstones which	, traces py in some calc-silicate intervals.											
					alternate with, and have been invaded												
					by, white and pink calc-silicates.												
					Hard, hornfelsed; bedded 50-60°												
					Contact 70°												
				Cst	101.4 – 104.6 Calc Silicate Rock.	101.4 – 104.6 minor epidote and pale	769	101.2	104.6		38	27	640	1.0	25	75	
					Bone white calc silicate, with greyish	brown garnets, mostly in the greyish	932308	104.8	THIN SECTION SAMPLE								
					coarser grained intervals	crystalline intervals.											
					Contact 50°		CUT SAMPLES										
				lst/Cst	104.6 – 106.7 ALTERED LIMESTONE	104.6-106.7 f.gr. mag 2-3%, traces	932172	104.6	105.4	0.8	25	100	725	2.5	6	×	0.042
					As above 85.7-97.0, but lesser	po, py. Some mag has been	173	105.4	106.7	1.3	75	25	175	5.0	×	×	
					intervals of calc-silicates	partially converted to reddish											
						haematite											

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 5

TENEMENT NAME TENTH LEGION No SM175

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T.L.C.8

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization
					Contact 30°	
08·4	111·4	3·0		Cst	106·7 – 114·9 CALC SILICATE ROCK	106·7 – 109·3 Black magnetite and sp
1·4	113·9	2·5			As for 101·4 – 104·6, some epidote	diosem in clots throughout, some
3·9	117·4	3·7			-garnet rich intervals, and bands	bands f.gr. mag – segregation due to
7·4	120·4	3·0			and pebbles of remnant limestone and	recrystallisation. 10-15%.
20·4	123·4	2·9			carbonates.	109·3 – 112·2 Green epidote stockwork and
23·4	126·4	3·0			109·4 Bedding 35°	pinkish brown ? garnets, 20-30%.
26·4	129·4	3·0			Contact irregular	(idocrase?) Traces banded and diosem mag.
29·4	132·4	3·0		Lst/Cst	114·9 – 150·9 Altered LIMESTONE.	112·2 – 114·9 Trace diosem mag.
32·4	135·4	3·0			As above 85·7 – 97·9, but darker	114·9 – 117·4 Traces diosem. mag. – almost
35·4	138·4	3·0			grey and finely banded – greater	1-2% in places.
38·4	141·2	2·8			serpentinisation and lesser calc-silicate	117·4 – 123·5 po diosem. 1-2% as
41·2	144·3	3·1			alteration. Little calc silicate alteration	blebs and very fine grains, trace
44·3	147·4	3·1			after 118·3 m, to 124·6	fine pg. diosem magnetite.
47·4	150·4	3·0			124·7 Banding 55°	123·5 – 124·6 very black – f.gr mag 2-3%
50·4	150·9	0·6			Gradually becomes lighter in colour	, trace po.
					with stronger calc-silicate alteration	124·6 – 142·1 traces f.gr. mag, po, pg.
					124·6 m → 142·1	142·1 – 145·9 F.gr mag 1-2%, very fine
					138·2 Banding 35°	pyrite 1-2%
					142·1 – 145·9 Darker in colour – more	145·9 – 150·9 1-2% f.gr. mag concentrated
					magnetite	in limestone intervals; trace very fine
					145·9 – 150·9 As above, 124·6 – 142·1	pyrite.
					150·8 Banding 52°.	
					END OF HOLE 150·9m!	

Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....) Cu	Pb	Zn	Ag	Sn	W	Au
GRIND	SAMPLES									
932770	106·7	109·7		47	94	1220	1·4	×	45	
771	109·7	112·6		51	19	135	0·9	7	75	
772	112·6	115·5		19	22	440	0·5	3	20	
773	115·5	117·4		47	25	250	0·5	×	20	
774	117·4	120·4		15	11	120	0·2	×	20	
775	120·4	123·5		7	15	90	0·1	×	×	
776	124·6	127·6		7	23	73	0·2	×	×	
777	127·6	130·6		10	21	75	0·1	×	×	
778	130·6	133·6		12	48	138	0·3	×	10	
779	133·6	136·6		11	33	390	0·2	3	15	
780	136·6	138·9		17	18	230	0·1	5	×	
* CUT	SAMPLE									
932174	133·5	124·6	1·1	25	25	100	2·5	×	×	
CUT	SAMPLES									
932175	142·1	142·7	0·6	50	25	100	×	×	×	
176	142·7	144·3	1·6	25	25	225	×	10	×	0·008
177	144·3	145·9	1·6	25	25	275	×	×	×	
GRIND	SAMPLES									
932781	138·9	142·1		34	11	150	0·2	6	15	
782	145·9	148·5		58	53	620	1·1	20	55	
783	148·5	150·9		109	13	140	0·4	×	20	

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

SHEET No. 1

TENEMENT NAME TENTH LEGION No 53M/75

PLAN – MAP REFERENCE TASH 2 TASH 13

CO-ORDINATES 4982.3 N 5261. E AZIMUTH 180° GRID DRILLERS S. RIMAK COMMENCED 7.5.81 DEPTH 163.0m. HOLE No. TLC9

RL COLLAR 249.3m INCLINATION -48.5° DRILL TYPE BOYLES 37 COMPLETED 19.5.81 CASING LEFT NIL DPO No(s) 30105 30196

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	Au
0.0	1.5	1.4	HQ		0-1.8 Surface rubble - magnetite and												
1.5	2.0	0.3	to 24m		limonite scree.												
2.0	5.0	3.0			1.8 - QUARTZITES AND SILTSTONES	1.8-2.5 Yellow soft gungy clay with siltstone											
5.0	8.5	3.5			Yellow - brown weathered impure	frags - highly weathered. No mineralisation.											
8.5	12.0	3.5			quartzite, fine bedding laminations	2.5-7.5 Quartzite beds, weak qtz veinlets											
12.0	15.0	3.0			with thin siltstone interbeds.	may have been some py, but now											
15.0	18.0	3.0			3.5 ? Bedding 60°.	leached, bleached, fractured and weathered.											
18.0	21.0	3.0			4.3 Bedding 75°	7.5 - 21.0 Minor qtz veins, pitted, leached											
21.0	23.5	2.5			7.7 Bedding 50°	and weathered.											
23.5	25.5	2.0			9.1 Bedding 45° ; 13.0 Bedding 60°												
25.5	28.5	3.0			Mostly quartzite to 7.5m												
28.5	31.5	2.9			Then mostly siltstones with some thin												
31.5	34.5	3.0			shale laminae and thin qtzite interbeds												
34.5	37.5	2.9			to 14.2												
					14.2 - 16.7 Massive pisoid brown qtzites												
					16.7 - 18.5 Siltstones ash as for 7.5-14.2												
					18.5 - Thinly bedded f.gr. quartzites	21.0 - 21.6 Epidote - qtz veining at											
					, pale grey in places, minor siltstones.	low angles to core, pronounced											
					18.4 Bedding 45°	bleached/brown alteration haloes around											
					24.6 Bedding 70°	veinlets 2-3 mm.											
						21.6 - 30.4 Qtz veins and segregations											
			Change to NQ core 24m ↓		30.9-35.6 Breccia zone - qtz - calcite	to 6 mm thick, traces py.											
					- rhodochrosite - py veining to 32.1m.	30.4 - 30.9 Qtz stockework in breccia	932201	30.4	30.9	0.6	50	25	75	7.5	65	20	
					32.1 - 35.6 highly altered, minor veining	zone, py 1-2%, some chlorite	202	30.9	32.1	1.2	25	25	75	2.5	80	x	
					of the above with magnetite rich	Contact 60° 30.9 - 31.35 Vein - qtz, with pink											
					intervals that have been partially	rhodochrosite, greenish chloritic material											
					altered to haematite.	and 10% crystalline py to 5x5mm.											
						Contact 70° 31.6 - 32.1 Vein - calcite - qtz - pink											
						rhodochrosite, and green chloritic											
						material with py in coarse crystals 10%.											

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

SHEET No. 2

TENEMENT NAME TENTH LEGION No 53M/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TKC9

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	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 ..... Cu	Pb	Zn	Ag	Sn	W	Au	
37·5	40·5	2·9				Contact 65°	932203	32·1	34·5	2·4	200	25	175	5·0	130	30		
40·5	43·5	3·0				32·1 – 34·5 Highly altered and metasomatised rock ? – Chloritic matrix, coarse grained with qtz – rhodochrosite – calcite – py veining as above. Up to 10·5% disseminated f.gr. mag, that has been converted to haematite. Pyrite disseminated throughout 5–7%.												
43·5	46·5	3·0																
46·5	49·0	2·5																
49·0	52·5	3·5																
52·5	58·5	6·0																
						Contact 20° → 34·5 – 34·7 Massive chlorite with 30% magnetite.	204	34·5	35·6	1·1	175	50	800	5·0	95	30	0·025	
						Contact 70° → 34·7 – 35·6 Massive chloritic rock with spots of white minerals and 10% magnetite												
					Contact 45°?													
				95	35·6 – 54·8 ALTERED SILTSTONES? Dark muddy maroon – browns and greeny grey rock, extensively deformed, silicified and altered. Up to 60 cm patches of remobilised qtz with greyish white fine grained ?sericite, s histrose fabric, which decrease in size and abundance with depth.	35·6 – 38·3 Py 1-2% as disseminated blebs and in veinlets with qtz.	205	35·6	38·3	2·7	75	×	50	2·5	×	×		
						38·3 – 38·5 White bleached zone with 10% py	206	38·3	38·5	0·2	525	×	50	2·5	×	×		
						38·5 – 39·8 Trace py as interstitial blebs	207	38·5	39·8	1·3	25	×	25	5·0	×	×		
						– no qtz – sericite alteration. 2-3% as thin veinlets.	932306	36·0	THIN SECTION SAMPLE.									
							GRIND SAMPLE											
					7 cm qtz – carbonate vein on contact													
					39·8 – 44·3 Gradually becomes lighter in colour – pale brown ? sericitic rock, quite well bedded with minor disruption and contortion of beds – originally a clay rich siltstone?	39·8 – 43·9 Py, po 10% combined as veinlets and disseminations in some thin beds < 5 mm.	932784	39·8	43·9		113	24	87	1·1	10	95		
							CUT SAMPLES											
						43·9 – 44·3 Spots of green chlorite and black (:) actinolite in a bleached matrix	932208	43·9	44·3	0·4	×	×	150	2·5	80	×	×	
							932307	43·2	THIN SECTION SAMPLE.									
					42·4 Bedding 65°	Py 1-2%												
					44·3 – 44·7 Mag – chlorite assemblage, massive	44·3 – 44·7 Disseminated mag 50%, with chlorite and ? tremolite	209	44·3	44·7	0·4	×	50	725	2·5	140	×	×	
					44·7 Contact 45°													

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

SHEET No. 3
TENEMENT NAME TENTH LEGION No 539/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC9
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	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..... Cu	Pb	Zn	Ag	Sn	W	Au
58.5	64.5	6.0			44.7-45.9 Green (chlorite) hornblende, actinolite? alteration; matrix	44.7-45.9 Alte-epidote veining, trace py	932210	44.7	45.9	1.2	×	25	175	2.5	140	×	0.025
4.5	67.5	3.0			is pink and white, hard and silicified.	45.9-46.6 Mag. dissem. and in veinlets	211	45.9	46.6	0.7	25	×	850	2.5	160	×	×
					45.9-46.6 Black serpentinite with dissem	with dark green serpentinite, 10%-15%											
					mag and sediment inclusions – originally												
					an impure carbonate rich shale?												
					Contact 75° 46.6-47.5 See 44.7-45.9, above	46.6-47.5 Dark green crystalline? hornblende	212	46.6	47.5	0.9	×	×	125	5.0	200	×	0.383
					Contact 58°? irregular. 47.5-52.9 Pinkish brown and pale	-chlorite – ? actinolite alteration and veining	GRIND	SAMPLES									
					brown qtz-sericite rock. Totally	47.5-52.9 Traces very fine dissem. py.	932785	47.5	50.0		98	13	103	1.3	5	170	
					altered, schistose fabric, disrupted	talcy material on sheared partings.	786	50.0	52.9		49	12	73	0.9	10	110	
					48.8 Bedding 62° and brecciated; some	52.9-54.8 As above 46.6-47.5, lesser	CUT	SAMPLES									
					weak bedding visible.	dark green minerals, 1% py in veinlets.	932213	52.9	54.2	1.3	×	50	100	2.5	60	×	× 0.032
					Contact 75°		214	54.2	55.1	0.9	×	50	150	5.0	230	×	0.042 0.008
				M	54.8-85.2 MAGNETITE												
					54.8-55.1 Pale green serpentinised												
					carbonates with 10-15% mag.		932310	56.2m	Mineragraphic	Sample.							
					Contact 70° 55.1-59.1 Massive magnetite with		215	55.1	56.6	1.5	25	75	350	5.0	5350	×	× 0.008
					3-5% interstitial dark green serpentinite		216	56.6	58.1	1.5	×	100	450	5.0	310	×	0.017 0.008
					and traces of white refractory		217	58.1	59.1	1.0	×	50	450	7.5	240	×	0.008
					minerals as small remnant clots.												
					59.1-60.5 Yellow-green serpentinite	59.1-60.5 Trace interstitial pyrite.	218	59.1	60.5	1.4	50	50	525	5.0	700	×	0.008
					with white refractory minerals and												
					magnetite dissem throughout 40%												
					60.5-62.8 Massive mag. with grey and	60.5-62.8 Py dissem throughout, 3%	219	60.5	61.9	1.4	100	50	3250	5.0	1550	×	0.008
					green serpentinite 3-5%.	some fine interstitial pyrrhotite?	220	61.9	62.8	0.9	250	50	800	5.0	1750	×	0.025 0.008
					62.8-64.1 Black shaly-looking		221	62.8	64.1	1.3	75	25	375	2.5	2600	×	×
					serpentinite with 10-70% dissem mag		932311	63.4m	Mineragraphic	Sample							
					and white speckles and bands												
					of calcite												
					64.1-64.9 Yellow-green serpentinised		222	64.1	64.9	0.8	25	300	625	2.5	210	×	0.008
					refractory residual minerals, with 30%												
					mag dissem in bands and as clasts.												

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

SHEET No. 4
TENEMENT NAME TENTH LEGION No. 58M/15
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T.L.C.9.
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	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 ..... Cu	Pb	Zn	Ag	Sn	W	Au
67.5	70.5	3.0			64.9-65.9 Mag 70%, in dark green serpentinite; trace white calcite.		223	64.9	65.9	1.0	50	100	500	2.5	480	x	0.008
70.5	73.5	3.0			65.9-67.2 Massive mag 95%; small veinlets grey sep(?), py, mesnite as veinlets in last 30 cm, 20%.	- hard veinlets bluish grey f.gr. material - associated with Sn mineralisation? Present through most of the interval to 72.6 m.	224	65.9	67.2	1.3	150	75	500	2.5	9100	x	0.017 x
73.5	76.5	3.0					932312	66.1m			Mineragraphic Sample.						
76.5	79.5	3.0					225	67.2	67.7	0.5	100	75	800	2.5	2250	x	x
					67.2-67.7 Mag 35% in crystalline white calcite												
					67.7-68.1 Yellow green serpentinised calc silicate minerals, white residual minerals, and py, dissem 5-7%.		226	67.7	68.1	0.4	250	150	3500	2.5	320	x	x
					68.1-70.6 Mag 40-50%, in crystalline white calcite mottled in places with minor green serpentinite. Py 1-2%, patchy.		227	68.1	69.6	1.5	150	25	1450	2.5	2700	x	0.008
							228	69.6	70.6	1.0	175	75	5500	2.5	1400	x	0.008 x
							932313	70.0			Mineragraphic Sample.						
					70.6-71.65 Mag 60-65% in calcitic gangue which has been partially serpentinised; 1% py; 3-5% sp throughout	Some unusual fine bluish-grey material along fractures - f.gr. mag? with calcite.	229	70.6	71.65	1.05	100	150	1.5%	2.5	2600	x	x
					71.65-72.0 Yellow-green serpentinised carbonates + residual minerals; mag 40%		230	71.65	72.0	0.35	25	200	1925	2.5	310	x	x
					72.0-72.6 Mag 50-60%, dissem in grey qtz-carbonate matrix.	trace sp, py.	231	72.0	72.6	0.6	25	175	3025	5.0	2750	x	x
					72.6-73.9 Residual calc silicate minerals and yellowish-green serpentinite alteration; mag dissem 30-40% in places; overall 10-20%, po with grey calc silicates 2-3%, traces py, sp.		232	72.6	73.9	1.3	225	150	5050	2.5	490	x	0.033 x
					73.9-77.0 Mag 30-40% in a grey and green serpentinite matrix, with white clots of residual carbonates and qtz irregularly banded fabric, greyish colour due to incomplete serpentinisation.	py 5-7% as irregular veinlets and stringers	233	73.9	75.5	1.6	475	75	2150	2.5	350	x	x
							234	75.5	77.0	1.5	175	50	2175	2.5	540	x	x

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

SHEET No. 5

TENEMENT NAME TENTH LEGION No 53M/75

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No TL.C.9

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH From (M)	DEPTH To(M)	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 .....) Cu	Pb	Zn	Ag	Sn	W	Au
79.5	82.1	2.6			77.0–78.2 Crystalline mag with dark and	mag 60%, py 1-2%	932235	77.0	78.2	1.2	175	50	2025	2.5	1600	×	×
82.1	85.0	2.9			pale green serpentinite;		932314	78.5 m	Mineragraphic		Sample.						
85.0	88.5	3.0			78.2–79.5 Fine grained bluish green mag	py/morcasite 1-2%	236	78.2	79.5	1.3	25	75	1925	×	3750	×	0.050 ×
88.5	91.5	3.0			in a bottle green serpentinite matrix, some		237	79.5	80.6	1.1	125	25	2600	2.5	1000	×	×
91.5	94.5	3.4			white and brown residual minerals.		238	80.6	82.1	1.5	25	50	2025	2.5	2350	×	×
94.5	97.5	3.0			79.5–85.2 Massive crystalline mag.	Weak calcite veins; minor bluish grey	239	82.1	83.4	1.3	150	100	1450	2.5	4100	×	×
97.5	100.5	2.9			90% interstitial green translucent serp.	magnetite/carbonate veining; trace py.	240	83.4	84.4	1.0	50	75	1075	2.5	2400	×	0.017 ×
				SS/sh	Contact 70° 85.2–91.2 GREY SILTSTONES/SHALES.	85.2–88.1 Carbonate-qtz stockwork	241	84.4	85.2	0.8	50	50	700	2.5	6000	×	×
					Dark grey f.gr. silt rich rock, deformed	, traces py.	242	85.2	86.3	1.1	50	25	9400	2.5	150	×	×
					and brecciated with carbonate veining	88.1–91.2	243	86.3	88.1	1.8	25	25	125	×	120	×	×
					and minor pale coloured calc silicate		244	88.1	89.5	1.4	75	325	75	×	×	×	0.017 ×
					intervals		245	89.5	91.2	1.7	75	200	125	2.5	×	×	×
					Contact 40°		GRIND	SAMPLE									
				Cst	91.2–95.2 CALC SILICATE ROCK.	91.2–94.4 Broken, slightly weathered	932787	91.2	94.4		81	22	113	1.1	30	100	
					Pale pink and white crystalline	trace py in stringers with calcite.	CUT	SAMPLES									
					tremolite rock with patches of	94.4–95.2 Epidote 50-60%, vein	932246	94.4	95.2	0.8	25	50	150	5.0	220	×	
					calcite and minor interbeds to 0.3m	swarm and disem. throughout.	932315	84.0 m	Mineragraphic		Sample.						
					of grey siltstone as above.												
					Contact 55°?												
				Css	95.2–96.3 CALC SILICATE SKARN	95.2–96.3 f.gr. disem. mag.	247	95.2	95.5	0.3	175	250	1200	5.0	190	×	
					Grey granular rock with abundant	10-15%, po in crystalline patches	248	95.5	96.3	0.8	200	500	5600	5.0	330	×	0.042
					epidote, some pink Mn silicates	with serpentinite; py, po 2-3%.											
					partially serpentinised.												
					Contact irregular.												
				M/S	96.3–98.0 MAGNETITE/SERPENTINITE.	Mag 50%, traces py as blebs to	249	96.3	98.0	1.7	125	125	400	2.5	80	×	
					Crystalline magnetite with bottle green	6 mm.											
					serpentinite and yellowish partially												
					serpentinised material.												
					Contact 50°												
				Cst	98.0–99.9 CALC SILICATE ROCK	traces pinkish ? garnets, minor	250	98.0	99.9	1.9	25	75	2025	5.0	120	×	
					As above 91.2–95.2 some greenish patches epidote.. chlorite veining												

C 068

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

SHEET No. 6

TENEMENT NAME TENTH LEGION No 53 M/75

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TL C9

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH From (M)	DEPTH To(M)	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 ..... Cu	Pb	Zn	Ag	Sn	W	Au
00.5	103.5	3.0		Css	99.9 – 101.2 CALC SILICATE SKARN		932251	99.9	101.2	1.3	25	25	225	2.5	250	x	
03.5	106.5	3.0			Grey crystalline rock, greasy feeling soft, talcy and chloritic, minor calcite stringers.												
06.5	109.5	3.4															
09.5	112.5	3.0															
12.5	115.5	3.0			Contact 70°												
				M/S	101.2 – 105.7 MAGNETITE/SERPENTINITE	Patches of brownish interstitial	252	101.2	101.9	0.7	25	50	150	2.5	100	x	0.017
					Crystalline mag 60% in a matrix of	? idocrase, fine calcite veins	253	101.9	102.6	0.7	25	75	250	2.5	50	x	
					bottle green serpentinite, with some	1-2% py in lower 1.5m.	254	102.6	104.2	1.6	25	50	225	5.0	120	x	
					pale grey-green incompletely serpentinised		255	104.2	104.8	0.6	125	x	6800	2.5	270	x	
					patches. 104.6 – 104.8 grey-green Css		256	104.8	105.7	0.9	225	50	4800	2.5	80	x	0.100
					Contact ?70°		GRIND SAMPLES										
				Cst	105.7 – 106.6 CALC SILICATE ROCK	patches green epidote and dark	932788	105.7	110.2		31	30	118	0.7	35	35	
					Bone coloured f.gr rock with greenish	grey ? hornblende											
					epidote veins, and pinkish patches of												
					? idocrase - vesuvianite.												
				qs	106.6 – 110.1 QUARTZ-SERICITE ROCK	Weak trace pyrite, in small											
					Pinkish brown, grey and cream highly	stringers.											
					altered? sedimentary rock. Finely												
					banded (? bedding), disrupted and												
					contorted with qtz segregations and												
					pale buff coloured ? sericite rich												
					patches to 10 cm.												
					Contact ?60°		CUT SAMPLES										
				M	110.1 – 112.0 MAGNETITE	110.1 – 111.2 Mag 30-40%, Sp 1-2%; py	932257	110.2	112.0	1.8	275	500	1.58%	2.5	220	x	
					Black crystalline mag., in a yellowish	1-2% in yellowish green matrix.											
					green partially serpentinised matrix of	111.2 – 111.5 f.gr mag 10%, Sp 2%, py <1% in hard											
					hard grey calc-silicate material.	grey matrix											
					Contact 70°	111.5 – 112.0 As above 110.1 – 111.2.											
				Css	112.0 – 113.8 CALC SILICATE SKARN	112.0 – 113.8 Mottled grey due to finely	258	112.0	112.7	0.7	25	50	1750	x	100	x	
					Hard grey massive fibrous tremolite	disseminated chloritic and serpentinite alteration	259	112.7	113.8	1.1	50	25	2825	x	170	x	
					-actinolite, weak black serpentinite veining	1-2% disseminated weak trace Sp.											

U 063

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

SHEET No. 7

TENEMENT NAME TENTH LEGION No 53M/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC9

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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.....) Cu	Pb	Zn	Ag	Sn	W	Au		
5.5	118.5	3.0		S/M	113.8 – 115.4 SERPENTINITE WITH MAGNETITE.	113.8 – 114.8 Sphalerite 20%, coarsely	932260	113.8	114.8	1.0	550	25	14.1%	x	180	x	0.017		
8.5	121.2	2.7			Dark green serpentinite, with dissem mag	crystalline and intergrown with magnetite													
1.2	124.0	2.7			15-20% and abundant sphalerite.	, py 1-2% dissem throughout.													
4.0	127.0	3.0			Some minor grey calc-silicate interbeds at	114.8 – 115.4 Mag 10-15%, sp 1-2%, in dark	261	114.8	115.4	0.6	75	75	2525	x	130	x			
7.0	129.9	2.9			base of interval.	green serpentinite. Transition zone to next rock type.													
29.9	133.0	3.1			Contact ?65°	- overall only 50% mag-sep in interval.	GRIND SAMPLES												
33.0	136.0	3.0		ss	115.4 – 116.2 SILTSTONES		932789	115.4	118.1		15	21	89	0.4	35	15			
					Brown hard hornfelsed sediment, disrupted	Weak trace pyrite as thin stringers													
					and contorted with some grossular calc-silicate														
					patches to 2x1 cm.														
				Cst/Css	116.2 – 135.6 CALC SILICATE ROCK	116.2 – 118.1 Weak epidote qtz veining.	CUT SAMPLES												
					White and pink rock, exceedingly	118.1 – 119.4 Stockwork of dark greenish grey	932262	118.1	119.4	1.3	25	250	1000	x	30	x			
					altered, with minor greenish (diopside?)	chloritic alteration – no obvious min.													
					patches. The pink mineral is ? Mn	119.4 – 121.2 As above 116.2 – 118.1	263	119.4	121.2	1.8	25	125	600	x	15	x			
					silicate (rhodonite?). Crudely banded														
					structure – alteration has proceeded along														
					brecciation fractures. Bedding is recognisable														
					but not measurable – too brecciated.														
					Contact ?60° 121.2 – 122.2 Dark green chlorite – serpentinite	121.2 – 122.2 Mag 1-2%, py – marcasite 2-3%	264	121.2	122.2	1.0	200	75	625	x	25	x	0.017		
					zone.	, trace sp.													
					122.2 – 135.6 Rock becomes more grey/ish	122.2 – 124.7 Po 2-3%, mag 1%, py 1%	265	122.2	123.1	0.9	175	x	575	x	45	x			
					green and massive – pink Mn minerals	associated with green sep. alteration in	266	123.1	124.7	1.6	25	25	300	2.5	45	x			
					disappear. – tremolite – diopside assemblage?	small clots to 2x1 cm throughout the													
						rock.													
						124.7 – 126.5 Epidote stockwork 10%, minor	267	124.7	126.5	1.8	25	25	150	x	80	x			
						garnets.													
						126.5 – 135.6 Weak veinlets epidote and	268	126.5	127.7	1.2	25	50	150	x	50	x	x		
					Contact ÷60°	rare pinkish garnets.	269	127.7	128.5	0.8	25	25	75	x	15	x			
				q/s	135.6 – 136.5 ALTERED SILTSTONE/CHERT	135.6 – 136.5	932790	128.5	131.4		11	65	139	0.3	50	x		GRIND	
					Brown and white finely bedded altered		791	131.4	134.4		6	43	75	0.4	65	x		SAMPLE	
					sediment – segregations of qtz, sericite in discrete bands to 5mm		792	134.4	137.4		31	21	90	0.4	9	15			

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 8

TENEMENT NAME TENTH LEGION No 53M/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T6C9

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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.....) Cu	Pb	Zn	Ag	Sn	W	As		
36·0	137·7	1·7		Cst	136·5 – 137·4 CALC SILICATE ROCK														
37·7	139·5	1·8			As above 116·2 – 135·6		CUT	SAMPLES											
39·5	142·5	3·0		Css	137·4 – 139·8 CALC SILICATE SKARN	137·4 – 139·8 Mag 15–20%, po 1–2%	932270	137·4	138·7	1·3	25	×	850	×	70	×			
42·5	145·5	2·9			Grey mottled siliceous tremolite rock, with	, trace py ; in veinlets with blackserp.	271	138·7	139 8	1·1	50	50	2625	×	120	×			
45·5	148·5	2·9			mag-serpentinite banding and a stockwork														
48·5	151·3	2·8			of mag-po veinlets.														
51·3	154·5	3·2			Contact 75°														
54·5	157·4	2·9		M/S	139·8 – 141·3 MAGNETITE	139·8 – 141·3 Mag 30–40%,	272	139·8	141·3	1·5	75	50	475	×	25	×	0·008		
57·4	160·5	3·1			Black crystalline mag, finely banded and														
60·5	163·0	2·5			in blebs to 5×3 cm, in a matrix of yellow														
					-green serpentinised calc silicate rock.														
					Contact 70°														
				Css	141·3 – 145·0 CALC SILICATE SKARN	141·3 – 141·8 Py 1–2%, mag 1–2%, very	273	141·3	141·8	0·8	125	×	4600	×	360	×			
					As above 137·4 – 139·8.	finely dissem.													
						141·8 – 142·1 Mag 50%, py 1–2%, in sap.	274	141·8	142·1	0·3	400	25	350	×	×	×			
						142·1 – 142·7 Mag 2–3% in veinlets.	275	142·1	142·7	0·6	25	25	100	×	20	×			
						142·7 – 143·1 Mag 10–15%, py veinlets 1–2%	276	142·7	143·1	0·4	25	25	850	×	40	×	0·017		
						143·1 – 143·9 Py 1%, mag 1–2%, dissem	277	143·1	143 9	0·8	25	×	2150	×	130	×			
					Contact Gradual and Transitional	143·9 – 145·0 Mag dissem in 2mm irregular	278	143·9	145·0	1·1	25	25	1775	2·5	130	×			
				qs	145·0 – 168·0 QUARTZ SERICITE ROCK	bands, 15% – 20%, trace py, po, sp.	GRIND	SAMPLES												
					Gradual change from grey-green	145·0 – 161·7 Weak epidote-qtz veining	932793	145·0	148·2		50	19	103	0·6	×	25			
					massive calc silicate rock to a pinkish	, minor dark green-grey ? chloritic	794	148·2	151·0		53	20	108	0·9	6	65			
					brown siltstone interbedded with a	alteration. Traces py, marcasite, rare po	795	151·0	154·0		72	85	160	1·3	10	75			
					white and grey recrystallised weakly	as irregular blebs to 3×7 mm.	796	154·0	157·0		69	15	101	1·0	6	110			
					schistose quartz-sericite rock (originally	Weak calcite-serpentinite veinlets.	797	157·0	159·9		65	15	82	0·9	3	65			
					an impure qtzite ?). Crudely foliated	161·7 – 162·4 Greenish bleached zone	798	159·9	163·0		141	19	63	0·6	60	620			
					60–70° CA, sericitic matrix with grey	with py/marcasite 10–15%, and one													
					and white qtz segregations to 2cm×1cm,	large ? wolframite crystal at 161·8m.													
						162·4 – 163·0 As above, 145·0–161·7.													
					END OF HOLE 163·0M.														

DRILL CORE LOG

TENEMENT NAME [illegible] No 53/125

PLAN - MAP REFERENCE TASh 2

CO-ORDINATES 4984·73 N 5150·55 E AZIMUTH -55° Grid South DRILLERS PARRY COMMENCED 11·3·82 DEPTH 134·0 m HOLE No. T.L.C.10

RL COLLAR 252·76 INCLINATION -55° DRILL TYPE BOYLES 37 COMPLETED 16·3·82 CASING LEFT PVC Pipe DPO No(s) 30135 30136, 26674

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	As	Sn	W	Au
3·0	6·5	0·3			0-3·0m TRICONE DRILLED - NO CORE.													
·5	7·0	0·5					CUT											
·0	9·5	0·7	NQ	(b)sh	3·0-6·3 BLACK SHALE/SILTSTONE.	3·0-6·3 - finely sheared, with	973406	?6·1	6·3	0·2	105	175	235	1·5		1030	35	
·5	12·5	0·8			Dark grey→black, hard, weakly	abundant 1-2m pyrite veins												
2·5	14·0	1·5			hornfelsed shale/siltstone rock.	approx 30° to CA ; 5%→7%.												
±·0	16·0	1·9			Finely laminated 2-5m, disrupted and													
,·0	18·5	1·2			brecciated													
8·5	21·5	2·8			Contact Broken.													
1·5	24·5	1·9		M	6·3-?7·8 MAGNETITE		407	6·3	7·4	1·1	55	75	395	<0·5		110	62	
					6·3-7·4 Hard black massive crystalline													
					magnetite, weath. with brownish? serpentine veinlets.													
				M/CSS	7·4-7·8 Magnetite 30-40%, in a fibrous		408	7·4	7·8	0·4	65	70	1150	<0·5		87	320	
					textured Fe stained matrix of ?tremolite													
					Contact sheared													
				SS	7·8-15·3 SILTSTONE	7·8-12·5 Highly leached and weathered	409	7·8	12·5	0·7	55	55	665	<0·5		7	<10	
					Finely laminated grey siltstone (1-2mm),	- buff coloured, soft and crumbly, minor	GRIND											
					minor disruption and contortion. Minor	remnant pyrite veins.	973801	12·5	15·3	2·6	175	10	750	1·5	83	<4	33	
					thin brownish (pyritic?) porous sandy	12·5-15·3 Sparse small shear zones 1-2cm												
					laminae.	with pyrite ; overall trace→1%.												
					13·0 Bedding 75°													
				(b)sh	15·3-18·4 BLACK SHALE	15·3-18·4 trace→2% py, finely disseminated	802	15·3	18·4	1·9	185	15	290	1·0	24	<4	38	
					F.gr. black shale, finely veined	minor thin calcth. ? serpentine veinlets.												
					with white ? carbonates, disrupted	Some blebs py up to 1cm.												
					+ sheared, minor thin grey siltstone													
					laminae. Graphitic films on partings.													
				ss/q	18·4-24·3 SILTSTONE/f.gr. QUARTZITE.	18·4- Sheared and broken	803	18·4	21·5	2·9	110	10	395	4·5	48	<4	20	
					Hard pale grey finely laminated	, limonite in cavities, prob after 2·3%	804	21·5	24·5	1·9	115	10	465	1·0	66	<4	22	
					siltstone, interbedded with white/grey	/ pyrite. Trace Mn oxides, minor serpentine												
					fine grained quartz, bedding disrupted and contorted	veinlets.												

DRILL CORE LOG

TENEMENT NAME. ..... No .....

PLAN – MAP REFERENCE .....

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC10.

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH (From M)	DEPTH To(M)	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 .....) Cu	Pb	Zn	Ag	As	Sn	W
·5	27·5	2·2	NQ		18·4 - 24·3 cont...												
·5	29·5	2·2			From 22·1 becomes darker grey	24·3 - ?27·1 pyrite 5-10%	973805	24·5	27·5	2·2	170	20	1700	0·5	80	<4	48
·5	32·5	2·9			Brecciated 22·1 - 24·1	disseminated, as blebs, and in thin veinlets											
·5	35·5	2·2		b.sh/ss	24·3 - 27·1 BLACK SHALE + SILTSTONE	with minor carbonates.											
·5	38·5	2·1			As for 15·3 - 18·4												
					Contact Broken												
				cst	27·1 - 27·6 CALC-SILICATE ROCK	27·1 - 27·6 Minor greenish mineral											
					Pinkish brown → grey green calc silicate	in veinlets - ?diopside.											
					rock, finely bedded - prob metasomatised												
					siltstone/shale as above												
					27·2 Bedding 40°												
				b sh/s	27·6 - 30·4 BLACK SHALE + SILTSTONE	27·6 - 29·0 py 1% as small	806	27·5	29·5	2·2	85	5	210	<0·1	23	<4	25
					As for 15·3 - 18·4, brecciated.	blebs in less metasomatised sections.	807	29·5	32·5	2·9	110	15	110	2·5	55	<4	6
					Siltstone/sandstone decreases towards	29·0 - 30·4 py 3-5% as blebs											
					base of interval. Minor hornfelsed	and patches											
					/metasomatised patches 27·6 → 29·0												
				b sh	30·5 - 35·3 BLACK SHALE	30·5 - 35·3 Pyrite 7-10% disseminated	808	32·5	35·3	2·0	150	15	190	5·0	82	<4	24
					Massive heavy black shale	and as blebs to 3 mm, fine											
					brecciated. From 33 - 35·3 many	veinlets.											
					clasts dark grey sandy siltstone												
					Contact brecciated		CUT SAMPLES										
				css	35·3 - 36·2 CALC SILICATE SKARN	35·3 - 36·2 Trace pyrite, some	973410	35·3	36·2	0·8	30	45	450	<0·5		33	<10
					?Hybrid sediment/calc silicate?	thin serpentinite veining.											
					Pale greeny-grey/pink massive												
					fine grained rock with grossly												
					brecciated fabric.												
					Contact broken												
					36·2 - 37·2 LOST CORE ZONE.												

DRILL CORE LOG

PLAN MAP REFERENCE .....

CO-ORDINATES..... AZIMUTH..... DRILLERS..... COMMENCED..... DEPTH..... HOLE No. TLC10

RL COLLAR..... INCLINATION..... DRILL TYPE..... COMPLETED..... CASING LEFT..... DPO No(s).....

DEPTH From (M)	DEPTH To(M)	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.....) Cu	Pb	Zn	Ag		Sn	W
					Contact ? 50°												
8·5	41·5	2·7	NQ	S/M	37·2-39·8 SERPENTINITE WITH	37·2-38·5 mag 10-15%, py 2-3%	973411	37·2	38·5	1·3	85	40	395	<0·5		23	<10
1·5	47·5	5·4			MAGNETITE	as small veinlets and dissem in 1-2cm	412	38·5	39·8	1·0	35	75	1150	<0·5		53	<10
7·5	50·5	2·8			Dark olive green massive serpentinite	zones.											
0·5	53·0	1·7			with 10% dissem. crystalline magnetite	38·5-39·8 Granular textured, talcose											
3·0	56·0	2·9			Some remnant corestones of white and	serpentinite, trace mag, py.											
6·0	59·0	2·9			bone coloured tremolite rock.												
9·0	62·0	3·2			Contact 43°												
2·0	65·0	2·9		Css	39·8-43·2 CALC SILICATE SKARN	39·8-41·5 Mag, trace py dissem	413	39·8	40·3	0·5	35	40	225	0·5		10	<10
5·0	68·0	3·1			Mottled pale green-grey and bone	throughout in irregular patches, 5%.	414	40·3	41·4	1·0	15	25	60	<0·5		12	<10
					coloured crystalline tremolite-diopside	41·5-42·5 Mag, dissem. as crystalline	415	41·4	42·5	1·05	65	30	45	<0·5		11	<10
					rock, with irregular patches dissem.	aggregates 30%. Py 1-2%; concentrated	416	42·5	43·2	0·7	10	45	50	<0·5		53	<10
					magnetite.	in middle of zone (5%)											
					Contact 45°	42·5-43·2 Trace epidote, magnetite.											
				S/M	43·2-47·2 SERPENTINITE WITH	43·2-47·2											
					MAGNETITE	Granular dissem mag, trace pyrite.	417	43·2	44·6	1·4	35	35	170	<0·5		18	<10
					Almost black massive serpentinite	From 46·1-47·2, less serpentine	418	44·6	46·1	1·5	5	50	85	<0·5		7	<10
					, minor thin carbonate veinlets, magnetite	- irregular remnants green-grey	419	46·1	47·2	0·6	20	35	105	<0·5		9	<10
					disseminated throughout 20-30%	granular diopside. mag 5-10%.											
					Contact 55°												
				Css	47·2-49·6 CALC SILICATE SKARN	47·2-49·6 small thin calcite veinlets	420	47·2	48·4	1·2	15	55	980	<0·5		88	<10
					Mottled and irregularly banded calc	, minor dissem. ? epidote., pinkish Mn	421	48·4	49·6	1·2	55	35	1850	0·5		72	<10
					silicate rock - dominantly tremolite,	silicates and mag dissem in serpentinite											
					with remnant diopside, irregular	zones. Trace pyrite at contacts.											
					serpentinite veining and small zones												
					totally serpentinised & minor magnetite.												
					Contact 50°												
				Dol	49·6-65·8 DOLOMITE	49·6-51·4 Blebs pyrite dissem throughout	422	49·6	51·4	1·8	10	475	110	1·0	As	<3	<10
51·5	52·5	Core Lost			Massive pale mottled grey carbonate	2-3% ; ultramafic magnetite 2-3%.	423	51·4	53·7	1·3	20	40	2450	0·5	37	<4	<10
					rock, totally recrystallised and	51·4-53·7 pyrite 2-3% overall,											
					incipiently serpentinised along fine fractures.	concentrated into discrete zones											
					Some discrete blebs serpentine - developed in situ?	with serpentinite											

DRILL CORE LOG

PLAN MAP REFERENCE

CO-ORDINATES ... AZIMUTH ... DRILLERS ... COMMENCED ... DEPTH ... HOLE No. TLC 10

RL COLLAR ... INCLINATION ... DRILL TYPE ... COMPLETED ... CASING LEFT ... DPO No(s) ...

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	As	Sn	W	Au
68·0	74·0	4·1	NQ	Dol		53·7-54·0 ?Chloritic/serpentine zone with calcite veining, 5-7% dissem. py, trace sp.	424	53·7	54·0	0·3	95	90	3650	1·5	70	<4	49	
74·0	77·0	2·9	↓ to 74m			54·0-55·2 Dark green due to incipient serpentinisation, py dissem. 1-2%, trace mag.	425	54·0	55·2	1·2	30	30	430	1·0	36	<4	105	
						55·2-56·0 Ultrafine dissem. mag 1-2% ± pyrite, finely dissem, 5-7% Tr haematite.	426	55·2	56·0	0·8	15	10	55	0·5	27	<4	<4	
					Contact 30° →	56·0-56·3 Pyrite 10-20%, dissem. in serpentinite.	427	56·0	56·3	0·3	115	30	115	1·0	57	<4	<4	
					Contact 35° →	56·3-58·9 Pyrite 7%, dissem and as blebs along thin serpentinite alteration zones. Trace po, mag, rare sp.	428	56·3	57·7	1·4	40	20	90	<0·5	34	<4	<4	
							429	57·7	58·9	1·2	65	20	200	0·5	37	<4	<4	<0·005
						58·9-59·4 Py 2-3%; mag 5-7%.	430	58·9	59·4	0·5	135	50	1700	1·0	140	14	<4	<0·005
						59·4-59·8 Mag 20% in dark green serpentinite ± minor calcite. Py 3%	431	59·4	59·8	0·4	90	75	2150	<0·5	230	14	11	<0·005
					Banding 60° →	59·8-60·4 Banded carbonate, serpentinite, mag 25%, py 2-3%.	432	59·8	60·4	0·6	45	50	170	1·0	47	<4	13	<0·005
						60·4-60·8 Mag 1-2%, sphaleite 1-2% associated with dark green serpentinite, trace pyrite.	433	60·4	60·8	0·4	175	45	1·4%	1·0	44	<4	<4	<0·005
					61·0 Banding 60°	60·8-61·5 dissem mag 1-2%, locally 10% py 1-2% as small blebs and clots, ± gypsum infill with marcasite. Mn associated with serpentinisation along breccia zones. Thin stringers Mn carbonates.	434	60·8	61·5	0·7	90	240	1200	0·5	33	43	<4	
						61·5-65·9 Serpentinite breccia clasts	435	61·5	62·7	1·2	35	535	3150	1·0	19	<4	<4	
						surrounded by incipiently serpentised	436	62·7	64·2	1·5	10	75	1050	1·0	14	<4	<4	
						recrystallised dolomite. Mag tr-1%, locally 5%; py tr-2%; trace sp	437	64·2	65·8	1·3	150	160	1050	1·0	10	<4	<4	
				S	65·8-66·9 SERPENTINITE. Massive black impure serpentinite, finely fractured, minor remnant carbonate (Css, dol.	65·8-66·9 py dissem throughout as veinlets and stringers, 10%; mag v finely dissem 10%, sp, dissem 1%.	438	65·8	66·9	1·1	210	40	6900	1·0	41	85	<4	

DRILL CORE LOG

TENEMENT NAME ..... No .....

PLAN – MAP REFERENCE .....

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC 10

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH From (M)	DEPTH To(M)	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 ..... Cu	Pb	Zn	Ag	As	Sn	W	Au
77·0	80·0	3·0	NQ	ss/sh	Contact irregular, 65° 66·9 - 74·9 SILTSTONE / SHALE													
80·0	83·0	3·0	to 74m		66·9 - 68·9 Mostly hard green, grey and	66·9 - 68·9 Very hard greenish 5-30 cm	439	66·9	68·0	1·1	190	60	1350	1·0	22	25	<4	
83·0	86·0	3·0	BQ		pink finely laminated sediments with a	calc silicate intervals with minor epidote	440	68·0	68·9	0·9	10	120	240	<0·5	18	<4	<4	
86·0	89·0	2·9	↓		pronounced calc-silicate character - prob	stgr veining and disseminated mag 2-3%, locally 5%												
89·0	92·0	3·0			originally carbonate rich interval? 68·8 Bedding 5°													
92·0	95·0	3·0			68·9 74·9 Hard pinkish brown hornfelsed	68·9 - 74·9 - Patches of dark green	441	68·9	69·9	1·0	60	60	145	1·0	80	<4	<4	
95·0	98·0	3·0			siltstones, some minor qtz-tourmaline veinlets, all	serpentine, in veinlets, minor segregations	442	69·9	70·2	1·3	10	45	105	<0·5	32	<4	7	
					disrupted and deformed. Bedding 50-60°	green epidote.	443	70·2	74·0	0·8	75	70	280	1·0	64	<4	4	
					Contact 60°		444	74·0	74·9	0·9	55	50	175	1·5	69	<4	<4	<0·005
				M	74·9 - 78·9 MAGNETITE	74·9 - 78·9 Mag varies from massive	445	74·9	76·2	1·3	55	1600	3800	3·0	150	<4	<4	<0·005
					Dark grey magnetite / serpentinite rock	for a few cm to 2-3°/o, overall 40%	446	76·2	77·4	1·2	10	350	530	2·0	99	6	<4	<0·005
					mottled with white and grey patches of	Pyrite occurs throughout as blebs to 3mm	447	77·4	78·9	1·5	15	490	550	2·5	89	<4	<4	<0·005
					recrystallised dolomite and calcite	1°/o, frequently with small blebs sphalerite.												
					segregations. Decrease in mag towards	sp ranges from trace → 1°/o.	448	78·9	80·0	1·1	10	20	505	<0·5	87	<4	<4	0·011
					base of interval.		449	80·0	80·4	0·4	30	70	1150	0·5	580	<4	<4	<0·005
					Contact gradual.		450	80·4	81·9	1·5	10	30	450	1·0	87	<4	<4	0·005
				Dol	78·9 - 90·2 DOLOMITE	78·9 - 90·2 Finely dissem. py. 2-3%	451	81·9	83·5	1·6	5	45	40	<0·5	62	<4	5	<0·005
					Massive pale grey recrystallised	also as blebs and in small stringers	452	83·5	85·0	1·5	<5	25	25	1·0	16	<4	5	
					dolomite, brecciated in places, incipiently	and veinlets. Very finely dissem mag 3°/o	453	85·0	85·8	0·8	5	30	70	0·5	12	<4	<4	
					serpentinised, with ultrafine disseminated	makes the rock heavy, and faintly magnetic	454	85·8	88·4	1·6	10	25	25	<0·5	6	<4	4	
					magnetite. As for 49·6 - 65·8.	Rare blebs sp. Some small intervals of	455	88·4	88·7	1·3	5	20	25	1·0	7	<4	<4	
					Contact 35°	pinkish-brown ? vesuvianite along breccia zones	456	88·7	90·2	1·5	10	20	50	0·5	5	<4	<4	
				Cst/ss	90·2 - 94·3 SILTSTONES / CALC SILICATES	90·2 - 94·3 rare veinlets serpentine	457	90·2	91·7	1·5	25	35	90	<0·5	43	<4	<4	
					Hard pinkish brown siltstones alternating	, scarce patches qtz-epidote segregations	458	91·7	93·2	1·5	15	40	70	0·5	24	<4	<4	
					with pale green-grey to bone		459	93·2	94·3	1·1	15	40	175	<0·5	43	<4	<4	
					coloured laminated calc silicate rock													
					(metasomatised reds?). Fabric extensively													
					disrupted, contorted and brecciated.		460	94·3	94·85	0·55	<5	30	530	<0·5	5	<4	<4	
					Contact 60°		461	94·85	96·35	1·5	<5	30	290	<0·5	7	<4	<4	
					94·3 - 97·5 DOLOMITE	94·3 - Less pyrite than 78·9 - 90·2	462	96·35	97·5	1·35	5	25	240	1·0	5	96	5	
					As for 78·9 - 90·2	- trace → 2°/o, mag 1-2°/o												

DRILL CORE LOG

TENEMENT NAME ..... No. .....

PLAN – MAP REFERENCE .....

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC10

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	As	Sn	W	Au
					Contact 45°													
8·0	101·0	3·1		Bst/ss	97·5 – 102·2 SILTSTONES/CALC SILICATES.	97·5 – 98·8 Trace epidote veining	463	97·5	98·8	1·3	10	45	175	1·0	9	11	4	
1·0	104·0	3·0			As for 90·2 – 94·3. From 98·8 – 99·6	98·8 – 99·6 mag. 30%; py 10-15%	464	98·8	99·6	0·8	10	35	120	0·5	44	994	5	
4·0	107·0	3·0			Massive serpentinite with magnetite	99·6 – 102·2 pink Mn silicates 2·3%	465	99·6	101·3	1·7	<5	25	30	<0·5	6	54	<4	
7·0	110·0	3·0			contacts 60°	brown garnet 1-2%, epidote 1%.	466	101·3	102·2	0·9	10	15	40	0·5	8	48	<4	
0·0	113·0	3·0			Contact 65°													
3·0	116·0	3·0		S/M	102·2 – 106·5 SERPENTINITE/MAGNETITE.	102·2 – 106·5 mag 20%, variable from 5-20%	467	102·2	103·6	1·4	220	30	250	0·5	50	31	4	
6·0	119·0	3·0			Mottled pale green/dark green talcy	Rare blebs pyrite (trace)	468	103·6	105·2	1·6	155	25	360	0·5	43	29	17	
9·0	122·0	3·0			serpentinite with irregular crystalline aggregates		469	105·2	106·5	1·3	30	20	130	1·0	54	7	20	
2·0	125·0	3·0			of magnetite													
5·0	128·0	3·0																
8·0	131·0	3·1		Cst	106·5 – 117·4 CALC SILICATE ROCK.	106·5 – 117·4 Minor patches and	470	106·5	106·9	0·4	10	60	70	0·5	13	13	<4	<0·005
1·0	134·0	3·0			Pale mottled green-grey or bone	veins qtz – epidote with rare magnetite.	GRIND	SAMPLES										
					coloured f.gr. calc silicate rock	Some rare blebs pyrite. Thoroughly		↓										
					– mainly tremolite/diopside?. Appears to	disrupted and brecciated – epidote, etc	809	106·9	110·0	3·1	45	45	75	1·0	10	69	16	
					be a thoroughly metasomatised f.gr.	is concentrated in discrete zones	810	110·0	113·0	3·0	30	20	55	1·5	14	21	17	
					sediment. Gradually changes with	with diopside?). Some minor brown	811	113·0	116·0	3·0	20	15	50	<0·1	10	46	<4	
					depth – intervals of brownish f.gr.	garnet rich patches to 5 cm across.	812	116·0	119·0	3·0	25	10	35	1·0	5	59	4	
					hornfelsed siltstone/shale start to	Under uv light rare grains of scheelite												
					appear, may be up to 2m thick	are sporadically visible.												
					Then gradually changes character													
					to qtz-sericite foliated rock													
					– probably hornfelsed impure qtzites													
					and siltstones at 117·4 metres													
					Contact irregular.													
				qS	117·4 – 134·0 QTZ – SERICITE ROCK	117·4 – Pyrite as discrete	813	119·0	122·0	3·0	45	<5	30	<0·5	<1	<4	21	
					Relatively coarse grained sediments	blebs to 3mm, usually concentrated	814	122·0	125·0	3·0	60	15	35	<0·5	4	<4	30	
					– completely hornfelsed, with segregations	in the more crystalline qtz rich	815	125	128·0	3·0	70	25	45	3·0	5	<4	42	
					of pale brownish cream (sericite) minerals	zones. Overall 1-2%. Some minor	816	128·0	134·0	3·0	65	20	35	<0·5	5	<4	43	
					separated by grey more coarse grained	qtz-epidote segregations and rare	817	131·0	134·0	3·0	225	30	135	0·5	2	<4	269	
					qtz rich portions. Bedding variable,	grains scheelite.												
					ranges from 50°–55°.													

DRILL CORE LOG

TENEMENT NAME TENTH LEGION No. 5M/15

PLAN – MAP REFERENCE TAS h 2

CO-ORDINATES 4489.62 N / 5100.10 E AZIMUTH 180° GRID DRILLERS PARRY COMMENCED 17·3·82 DEPTH 119 m. HOLE No. TLC 11

RL COLLAR 252·82 INCLINATION -55° DRILL TYPE BOYLES 37 COMPLETED 24·3·82 CASING LEFT — DPO No(s) 30137 (30136, 30135)

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	As	Sn	W	Au
					TRICONE DRILLED TO 3m - NO CORE	TO 4 m.												
	6·5	3·1			4·0 – SILTSTONES AND SHALES		GRIND SAMPLES											
	9·5	3·0		ss/sh	4·0 – 8·0 - dark grey to almost black f.gr thinly bedded siltstones and shales with minor white bands to 15 cm thick. Extensively brecciated and disrupted intervals alternating with well bedded, less disturbed intervals. Gradually becomes lighter in colour and more bleached after 6·4 m. 6·0 bedding 65°	4·0-6·4 pyrite 2-3% as thin veinlets and stringers and finely disseminated, minor qtz-epidote veining	973818	4·0	6·4	2·4	105	20	185	<0·5	15	<4	64	
	12·5	3·0					819	6·4	9·3	2·9	60	15	230	1·0	28	<4	<4	
	15·5	1·3					820	9·3	11·8	2·5	100	30	205	1·0	20	<4	10	
	18·5	0·2				6·4 – 8·0 Totally brecciated - weak qtz veining with fgr. dissem py 4-5%	821	11·8	13·7	1·9	80	35	220	1·5	34	<4	13	
	27·5	0																
	30·5	2·5			becomes lighter in colour and more bleached after 6·4 m. 6·0 bedding 65°													
	33·5	3·1																
	36·5	3·0		ss/qs	8·0 – 13·2 Pale browns + 10·0 Bedding 40° greys – bleached + weathered, extensively textured + broken, with limonite films along jointing. Slightly more sandy textured and quartzose, with some intervals of segregated grey qtz and pale green-grey sericitic material.	8·0 – 13·2 originally 3-5% pyrite, now totally leached away.												
	39·5	3·0																
	42·5	3·0																
	45·5	3·0					SLUDGE SAMPLES											
	50·0	4·7					973471	18·0	21·0		90	45	700	1·0	150	<4	16	<0·005
							472	21·0	24·0		95	50	900	0·5	170	11	15	<0·005
							473	24·0	27·0		90	50	850	1·0	140	8	19	<0·005
					13·2 – 28·5 LOST CORE ZONE		GRIND SAMPLES											
				ss/qs	28·5 – 32·6 Mottled buff + dark grey / light brown metamorphosed siltstones + quartzites – mostly converted to qtz-sericite rock. Contact 48°?	28·5 – qtz, pyrite veins and segregations / sweat outs. Py 2-3% Minor serpentine films along joints.	822	28·5	30·7	2·5	60	25	45	1·0	38	<4	11	
							823	30·7	32·6	1·8	60	65	65	1·0	74	<4	36	
				Css	32·6 – 33·6 CALC SILICATE SKARN White massive crystalline aggregate of tremolite - poorly banded / foliated	Cut	973474	32·6	33·6	1·0	<5	10	10	1·0	6	<4	<4	
							Grinds ↓											
				qS/ss	33·6 – 49·0 Contact 50° QTZ-SERICITE ALTERED SEDIMENTS Mostly pinkish brown (sericite rich) and grey (qtz rich) laminated f.gr. qtzites and sandy siltstones. After 37·9 m, more dark grey-black shales (hornfelsed), which have resisted segregation to qtz/sericite 40·0 Bedding 45°	33·6 – 37·9 pyrite 3-5% as blebs with qtz and finely disseminated	824	33·6	36·5	2·9	60	30	85	<0·5	23	<4	11	
							825	36·5	39·4	2·9	90	20	50	0·5	30	<4	22	
						37·9 – 49·0 pyrite 3-5%, po 1-3% as dissem. blebs to 2mm	826	39·4	42·3	2·9	85	40	40	1·0	45	<4	6	
							827	42·3	45·3	2·8	60	30	40	1·0	31	<4	<4	
							828	45·3	48·2	2·9	40	35	65	<0·5	33	<4	10	
							829	48·2	49·0	0·8	40	35	100	<0·5	41	<4	<4	

DRILL CORE LOG

TENEMENT NAME TENTH LEGION NO ML 538

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC 11

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	As	Sn	W	Au
					Contact 30° ; Bedding 65°													
0.0	53.0	2.8			49.0 – 50.8 CALC SILICATE / DOLOMITE.		CUT SAMPLES											
3.0	56.0	3.0			49.0 – 49.4 Cst/Css – green and grey diopside	49.0 – 49.4 Po 7% as irregular blebs	973475	49.0	49.4	0.4	135	15	350	1.5	11	34	<4	
6.0	59.0	3.0			tremolite rock, mottled, minor pink Mn silicates	49.4 – 50.2 Finely disseminated	476	49.4	50.2	0.8	45	25	2400	<0.5	31	64	<4	
9.0	62.0	3.1			49.4 – 50.2 Dol – heavily altered and impregnated	magnetite 10-20%; pyrite 10%; sp	477	50.2	50.8	0.6	10	35	80	<0.5	44	7	<4	
2.0	65.0	3.1			with banded f.gr. mag and dissem. py.	2% for 20 cm in centre of zone												
5.0	68.0	3.0			50.2 – 50.8 Cst/Css – bone coloured	50.2 – 50.8 patchy Mn carbonate												
					tremolite rock, f.gr. with epidote clots	in last 20 cm of interval.												
					and sericite/diopside intercalations – sediment rich?													
					Contact brecciated		GRIND SAMPLES											
				b/sb/ss	50.8 – 56.1 BLACK SHALE / GREY SILTSTONE	50.8 –	973830	50.8	53.5	2.9	80	30	225	<0.5	43	<4	73	
					Massive dark grey hornfelsed shale		831	53.5	56.1	2.6	85	40	60	<0.5	68	<4	22	
					brecciated, with minor clasts grey													
					siltstone (chert?). Patches to 30 cm													
					are pale grey – metasomatised to Cst.													
					Contact Broken.		CUT SAMPLES											
					56.1 – 60.1 CALC SILICATE SKARN	56.1 – 56.85 py 1-2%, minor epidote	973478	56.1	56.85	0.75	50	25	45	<0.5	65	9	<4	
					Fine grained mottled grey/bone/green	56.85 – 57.0 po 10-15%, mg 10-15%	479	56.85	57.0	0.15	1350	20	60	<0.5	12	<4	6	
					tremolite/diopside rock, extensively	py 5%.	480	57.0	58.3	1.3	45	20	40	1.5	18	14	<4	
					deformed and brecciated, with zones	57.0 – 58.3 minor epidote, Mn silicates	481	58.3	58.6	0.3	210	20	55	0.5	41	<4	<4	
					up to 0.4m of recrystallised/or	58.3 – 58.6 py/marcasite 20%; po 2-3%	482	58.6	59.6	1.0	350	20	30	0.5	33	<4	<4	
					serpentinised material which carries fine	58.6 – 59.6 po 8-15%, py 3-15%, mag 10%	483	59.6	60.1	0.5	65	75	180	0.5	210	<4	<4	<0.05
					grained magnetite and sulphides.	59.6 – 60.1 py 1%, minor epidote.												
					Contact 40°		GRIND SAMPLES											
				ss/bs	60.1 – 63.8 SILTSTONES / SHALES		973832	60.1	62.8	2.7	70	30	80	0.5	57	<4	28	
					As above, 50.8 – 56.1. Slightly more		833	62.8	65.7	2.6	50	60	95	<0.5	25	<4	32	
					metasomatism – rock is harder and has													
					more pale grey (tremolite?) patches.													
					Contact 30°		CUT SAMPLES											
				qs	63.8 – 67.4 QTZ-SERICITE SEDIMENTS	63.8 – 67.4 pale grey	973484	65.7	67.4	1.5	35	10	50	0.5	59	<4	<4	
					Sericite rich highly hornfelsed shale													
					rock – little segregated qtz.													

[redacted] C.R.A. EXPLORATION PTY. LIMITED [redacted] SHEET No. 3 of 4

DRILL CORE LOG

TENEMENT NAME TENTH LEGION No. 53M/75

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC 11

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH From (M)	DEPTH To (M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization
					Contact 70°	
68.0	71.0	3.1		Dol	67.4 – 89.0 DOLOMITE	67.4 – 67.8 pyrite 3-5% mag 3-5%
71.0	74.0	3.0			Recrystallised massive grey dolomite,	67.8 – 68.4 py 2-3%, mag 2-3% disseminated
74.0	77.0	3.0			in places with heavily disseminated	68.4 – 69.5 mag disseminated 15-20%, py 1-2%
77.0	80.0	3.0			magnetite, also small leases serpentinite/magnetite	69.5 – 70.2 White calcite, mag 1-2%
80.0	83.0	3.0		S	70.2 – 70.8 Dark green serpentinite with	70.2 – 70.8 Mag 5-7%.
83.0	86.0	3.0		Dol	bands of ? vesuvianite or ?idocrase.	
86.0	89.0	3.0			70.8 – pale grey dolomite marble	70.8 – 76.3 mag 3-5%, associated with
89.0	92.0	3.0			with irregular thin films + bands of serpentine.	thin serpentinite veining.
92.0	95.0	3.0				
						76.3 – 76.7 Serpentine 30%, mag 10%
						76.7 – 77.1 Unusual pale pinkish green talc
						+ serpentine.
						77.1 – 78.3 Breccia zone – cemented with
						v. pale green talcy serpentine, mag 1%
						78.3 – 83.3 Mag 7-12%, finely dissem.
						throughout, py 1-2% as blebs to 1mm.
						83.3 – 86.2 py 2-5%, also po
						and mag 3-5%.
						86.2 – 89.0 mag 2-3%, py 1-2%
					Contact irregular.	
				Css	89.0 – 91.7 CALC SILICATE SKARN	89.0 – 89.5 py 1%, mag 2-3%
					Pale green, grey + brown mottled	with sep
					Cst + Css rock, with thin (to 0.2m)	89.5 – 91.7 trace pyrite, minor epidote
					serpentine bands. Totally brecciated	
					and metasomatised – multiple phases	
					Gradual change over 10cm.	
				bsh	91.7 – 92.7 HORNFELSED BLACK SHALE	91.7 – 92.7 mag 3-5%, py 5-7%
					Black and hard, with brownish patches	strong trace ? sp.
					& ?idocrase and thin serpentinite veining	

Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by .....) Cu	Pb	Zn	Ag	As	Sn	W	Au
973485	67.4	68.8	1.4	10	10	30	1.0	7	<4	<4	
486	68.8	69.5	0.7	5	15	20	<0.5	7	<4	<4	
487	69.5	70.2	0.7	5	10	15	0.5	6	<4	<4	
488	70.2	70.8	0.6	20	20	65	1.0	69	<4	49	
489	70.8	71.2	0.6	15	20	70	1.0	31	<4	7	
490	71.2	72.7	1.5	5	20	20	<0.5	41	<4	<4	
491	72.7	74.1	1.5	5	20	20	<0.5	140	<4	<4	<0.005
492	74.1	75.6	1.4	5	20	15	0.5	12	<4	4	
493	75.6	76.3	0.8	5	30	20	<0.5	12	<4	5	
494	76.3	76.7	0.4	<5	15	20	<0.5	27	<4	7	
495	76.7	77.1	0.4	<5	25	40	0.5	19	<4	6	
496	77.1	77.6	0.5	5	15	35	<0.5	11	<4	<4	
497	77.6	78.3	0.7	10	5	20	1.0	7	<4	<4	
498	78.3	79.7	1.4	5	10	10	1.0	4	<4	<4	
499	79.7	81.2	1.5	<5	10	20	<0.5	3	<4	<4	
500	81.2	82.6	1.4	5	10	20	<0.5	4	<4	<4	
501	82.6	83.3	0.7	10	10	20	0.5	4	<4	<4	
502	83.3	83.85	0.55	5	15	70	0.5	24	<4	<4	
503	83.85	84.75	0.9	15	30	55	1.5	18	<4	<4	
504	84.75	86.2	1.45	10	10	20	1.0	12	<4	<4	
505	86.2	87.6	1.4	10	15	35	1.5	12	<4	<4	
506	87.6	89.0	1.4	20	15	180	<0.5	10	<4	<4	
507	89.0	89.5	0.5	55	25	435	0.5	60	14	<4	
508	89.5	90.0	0.5	10	35	60	1.0	11	7	<4	
509	90.0	91.1	1.1	60	85	150	1.0	29	62	<4	
510	91.1	91.6	0.5	15	30	70	1.5	33	86	<4	
511	91.6	92.7	1.1	135	40	120	1.5	87	16	10	

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 4/4

TENEMENT NAME TENTH LEGION No 59M/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T.L.C. 11

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	As	Sn	W
5·0	98·0	3·0	NQ	Css	Contact 55°. 92·7–95·9 CALC SILICATE SKARN	92·7–93·1 finely disseminated py 2-5%, po 1-2%	512	92·7	93·1	0·4	145	25	115	1·0	13	69	<4
8·0	101·0	3·0			Mostly fine grained bone coloured Cst	93·1–93·35 py 3-5%, mag 2-3%	513	93·1	93·35	0·25	50	20	120	1·0	33	4	<4
1·0	104·0	3·0			Hat has been recrystallised to varying	93·35–93·9 Minor epidote :- 2·5%	514	93·35	93·9	0·55	10	45	270	1·0	6	228	<4
4·0	107·0	3·0			degrees. 93·1–93·35 black hornfels as above	93·9–95·0 patches fgr Mn silicates	515	93·9	95·0	1·1	10	15	50	1·0	4	123	<4
1·0	110·0	3·0			Gradual change over approx 1m. - Grossly bedded fabric.		GRIND	SAMPLES									
1·0	113·0	3·0		qs	95·9 – 119·0 ALTERED SEDIMENTS	95·9–119·0 trace pyrite, epidote %	973834	95·0	98·0	3·0	35	20	45	<0·5	9	24	4
3·0	116·0	3·0			pale pinkish brown sericitic (clay rich)	associated with qtz remobilisation.	835	98·0	101·0	3·0	15	15	40	<0·5	13	<4	13
·0	119·0	2·8			material with lenses and bands of		836	101·0	104·0	3·0	20	5	30	<0·5	7	<4	12
					grey segregated quartz up to 5cm		837	104·0	107·0	3·0	40	10	30	<0·5	4	<4	17
					thick, but mostly 3–9 mm.		838	107·0	110·0	3·0	160	10	160	<0·5	4	<4	255
					Some pinkish-grey 100·0 Bedding 55°		839	110·0	113·0	3·0	20	10	40	<0·5	7	<4	19
					massive quartzite beds 108·5 Bedding 55°		840	113·0	116·0	3·0	45	20	180	<0·5	6	<4	13
					up to 1·0 m thick.		841	116·0	119·0	2·8	30	25	120	<0·5	31	<4	6
					END OF HOLE 119 m.												

DRILL CORE LOG

4769·72 N

CO-ORDINATES 5702·33E AZIMUTH -50° to 18 3rd DRILLERS PARRY COMMENCED 2·3·82 DEPTH 120·2 m HOLE No. TLC

RL COLLAR 297·66 m INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 3·4·82 CASING LEFT 30 m NW (27 m PVC) DPO No(s) 3013

PLAN MAP REFERENCE TAs h 2

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W
0·0	5·0	1·3	HQ	Cst	0 - 11 m Yellow brown soft clay											
5·0	8·0	0·4	to 11m		-weathered calc silicate rock											
8·0	11·0	0·7	NQ		11 - 13·8 Yellow-grey bleached											
11·0	14·0	1·9	↓		weathered calc silicates.											
14·0	17·0	1·5	E.O.H	Css	13·8 - ?14·9 CALC SILICATE SKARN?	13·8-14·9 Patches remnant disseminated pyrite -										
17·0	20·0	0·75			Totally weathered fibrous aggregate	poss. originally 10%.										
20·0	23·0	1·4			& ? hematite - yellowish brown											
23·0	26·0	0·5														
26·0	29·0	1·3		q/Cst	14·9 - ?20·0 INTERBEDDED QUARTZITES/CALC SILICATES											
29·0	32·0	3·0			Pale soft f.gr ?Cst interbedded											
32·0	35·0	2·8			with brown limonite stained orig.											
35·0	38·0	3·0			sulphidic quartzites.											
38·0	44·0	2·8														
44·0	47·0	3·0		bxb/ss	?20·0 - 44·6 INTERBEDDED SILTSTONES/SHALES		973573	?22·1	?23·0	0·9	145	240	225	<0·5	<4	<10
					20·0 - 23·0 Dark grey to black bleached											
					weathered shale rock - brecciated.											
					Hornfelsed and orig v finely laminated											
					23·0 - 28·8 fault breccia? - totally	28·8 End of oxidised zone	GRIND SAMPLES									
					crushed siltstones and intervals black		973842	28·8	32·0	2·8	90	130	640	<0·5	<4	185
					shale as above.	28·8 - 36·2 Trace pyrite, minor	843	32·0	35·0	2·7	130	60	345	<0·5	<4	251
					28·8 - 44·6 Dark grey shales	qtz sweat outs. Core extensively	844	35·0	38·0	3·0	100	50	265	<0·5	<4	126
					and paler grey sandy qtzose	fractured and broken	845	38·0	45·8	4·6	75	185	565	<0·5	37	68
					siltstone interbeds. Extensively	36·2 - 36·1 Pyrite 5%, dissem	-									
					disrupted, brecciated and deformed	and as blebs & stringers.										
					-soft sediment deformation?	36·6 bedding 65°										
					36·1 - 37·7 PORPHYRY DYKE?	36·1 - 37·7 Unmineralised										
					Pale grey hard f.gr. rock with cavities	37·7 - 44·6 Pyrite finely dissem.										
					after whitish clots of a f.gr mineral	throughout 10% - rock is heavy.										
					-Felspar? Contacts 55°.	43·9 Bedding 45°										
				Css	44·6 - 45·8 Transition zone - calc	44·6 - 45·8 epidote 10%, abundant										
					silicate skarn - extensive metasomatism	diopside, Mn silicates.										

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 2 of 5

TENEMENT NAME TENTH LEGION No 53 M/7

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC 12

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 3013830

DEPTH From (M)	DEPTH To(M)	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 ANAMES) Cu	Pb	Zn	Ag	As	Sn	W
					Contact 50°		CUT SAMPLES.										
47·0	50·0	2·6		Css	45·8 – 51·1 CALC SILICATE SKARN	45·8 – 46·5 Trace f-gr gn, sp.	973517	45·8	46·5	0·7	10	715	980	7·0	60	23	<4
50·0	53·0	3·0			Chaotically bedded magnetite	46·5 – 49·5 mag 10-15%, serp 20%	518	46·5	48·0	1·5	<5	40	550	0·5	310	59	17
53·0	56·0	3·0			-serpentinite rock, mostly after	in altered tremolite rock - greasy feel-talcose	519	48·0	49·5	1·5	<5	15	400	<0·5	91	64	<4
56·0	59·0	3·0			f-gr. bone coloured tremolite.	49·5 – 49·9 Drab olive green serp. mag 10%	520	49·5	49·9	0·4	<5	20	410	0·5	250	57	<4
59·0	62·0	2·8				49·9 – 50·25 As above, 46·5 – 49·5	521	49·9	50·25	0·35	<5	30	425	<0·5	290	25	<4
62·0	65·0	3·1			Contact ? 70°	50·25 – 51·1 Mag 15% in olive green serpentine	522	50·25	51·1	0·85	<5	30	460	<0·5	170	41	9
65·0	68·0	3·0		Css/gs	51·1 – 55·7 METASOMATISED SEDIMENT	51·1 – 55·7 Patches diosen mag,	523	51·1	51·7	0·7	5	35	130	<0·5	18	15	<4
68·0	71·0	3·1			Segregated qtz-sericite rock, impregnated	overall, trace	524	51·7	52·9	1·2	20	15	840	<0·5	15	5	<4
71·0	74·0	3·0			with diopside, tremolite and weakly		525	52·9	53·3	0·4	<5	15	65	<0·5	5	<4	4
74·0	77·0	3·0			serpentinised in places. Last 0·8 m		526	53·3	53·9	0·6	100	20	85	<0·5	25	<4	<4
77·0	80·0	3·0			gradually changes to:		527	53·9	54·5	0·6	35	20	50	<0·5	44	<4	4
80·0	83·0	3·0					528	54·5	55·7	1·2	30	55	120	<0·5	15	<4	<4
83·0	86·0	3·0		SS	55·7 – 73·0 SILTSTONES	55·7 – 73·0 Disseminated pyrite	GRIND	SAMPLES									
86·0	89·0	2·7			Mid grey thinly bedded/laminated	throughout, varies from 2-10%.	973846	55·7	59·0	3·3	50	30	75	<0·5		<4	30
89·0	92·0	3·0			sandy quartzose siltstone and argillaceous	Also many small zones of	847	59·0	62·0	3·0	35	20	60	<0·5		<4	13
92·0	95·0	3·0			darker grey to almost black more	qtz veining and 'sweat-outs' at	848	62·0	65·0	3·0	65	20	65	<0·5		<4	10
95·0	98·0	2·0			shaley laminae. 56·2 Bedding	35°-60° high angles to LCA.	849	65·0	68·0	3·0	50	15	50	<0·5		<4	24
					Disrupted and deformed, some sections		850	68·0	73·0	5·0	20	35	90	<0·5		6	22
					well bedded 62m So 80°		CUT	SAMPLES.									
					66·3 So 48°		973529	73·0	73·9	0·9	<5	230	105	2·0	8	34	<4
					Contact ? 55° - gradual over 30 cm.		530	73·9	75·3	1·4	<5	125	475	<0·5	200	58	124
				S/M	73·0 – 97·2 SERPENTINITE / MAGNETITE.	73·0 – 73·9 Pale grey tremolite -	531	75·3	76·9	1·6	10	225	560	0·5	180	68	84
					First 0·4 m tremolite/carbonate rock, then	carbonate mixture	532	76·9	78·2	1·3	15	125	710	0·5	100	58	7
					matrix of drab olive green serpentinite	73·9 – 75·3 Mag 20 – 30%.	533	78·2	79·7	1·5	<5	45	420	0·5	41	41	<4
					with crudely and irregularly bedded	75·3 – 77·7 Mag 15 – 25%	534	79·7	81·1	1·4	15	175	770	1·0	52	31	34
					crystalline magnetite disseminated	77·7 – 84·1 Mag 35 – 40%, minor	535	81·1	82·6	1·5	<5	60	215	0·5	44	15	117
					throughout. 73·0 Contact 57°	fibrous green - grey tremolite, traces sp	536	82·6	84·1	1·5	5	80	360	<0·5	93	26	53
						and reddish ? haematite	537	84·1	85·5	1·4	<5	80	240	0·5	150	31	119
						84·1 – 90·8 Serpentine more olive	538	85·5	87·0	1·5	<5	90	160	0·5	120	65	51
						green, magnetite 30 – 40%	539	87·0	88·8	1·5	10	40	300	<0·5	92	62	41
						90·8 – 91·1 tremolite/serp, mag 15 – 20%	540	88·8	90·2	1·4		95					

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 5 / 5

TENEMENT NAME TENTH LEGION No. 53M/15

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC 12.

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) .....

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	As	Sn	W
0	101·0	2·9				91·1 – 94·2 dark green serpentinite, mag	973541	90·2	91·7	1·5	5	175	145	1·5	41	40	12
0	104·0	3·0				50 – 60%.	542	91·7	93·2	1·5	<5	145	410	1·0	10	30	<4
0	107·0	3·2				94·2 – 95·6 Crystalline tremolite/diopside	543	93·2	94·2	1·0	10	110	220	1·0	14	27	<4
0	110·0	2·9				matrix, with swirls serp. Trace Sp, py, mag	544	94·2	95·6	1·4	10	350	580	1·0	45	56	68
2	113·0	3·2				95·6 – 96·6 magnetite 10–15%	545	95·6	96·6	1·0	<5	90	385	0·5	210	108	126
0	116·0	3·0			Contact 30°	96·6 – 97·2 magnetite 20% – 25%.	546	96·6	97·2	0·6	<5	100	405	0·5	100	73	25
,	119·0	3·0		ss	97·2 – 119·0 SILTSTONE.	97·2 – 99·8 finely disseм. pyrite	547	97·2	99·1	1·9	30	30	50	<0·5	47	11	<4
0	122·0	3·0			Massive pinkish grey → brownish	3 – 5%, also minor disseм. mag.	GRIND SAMPLES										
0	125·0	3·0			grey f.gr. argillite – hornfelsed	with the tremolite/diopside patches	973851	99·1	101·0	1·9	40	20	55	<0·5		<4	<4
0	127·0	2·0			and very hard – probably metasomatised	99·8 – 107·3 trace disseм. py, tremolite	852	101·0	104·0	3·0	80	25	45	<0·5		<4	4
					in part – extensive white patches of	alteration gradually decreases	853	104·0	107·0	3·0	80	20	50	<0·5		8	<4
					tremolite and veinlets of diopside.	– rock is a spotted hornfels.	854	107·0	110·0	3·0	145	15	60	<0·5		<4	<4
					The coarser (sandier) beds have	107·3 – 108·0 no mineralisation	855	110·0	113·0	3·0	200	15	60	<0·5		<4	7
					abundant fine white elongate crystals	108·0 – 119·0 traces py finely	856	113·0	116·0	3·0	85	10	45	<0·5		<4	<4
					of some metamorphic mineral – cordierite?	disseм, and as rare blebs to 2mm	857	116·0	119·0	3·0	105	15	50	<0·5		<4	<4
					107·3 – 108·0 – small patch Csd												
					– diopside/tremolite aggregate.												
					112·7 So 80°												
				Csd	119·0 – 127·0 CALC SILICATE ROCK.	119·0 – 127·0 trace epidote,	858	119·0	122·0	3·0	25	15	65	<0·5		12	<4
					Grey – green diopside/tremolite rock	minor late stage qtz veining.	859	122·0	125·0	3·0	45	255	1200	<0·5		28	17
					Massive granular diopside after		860	125·0	127·0	2·0	40	25	65	<0·5		<4	<4
					f.gr bone coloured tremolite rock												
					– replacement has proceeded along												
					small fractures and has left only												
					remnant tremolite rock – itself a												
					metasomatic product, prob after a f.gr.												
					shale. Minor intervals dark grey												
					shale and brownish siltstone hornfels												
					as above at 124·2 – 124·6 and at												
					125·8 – 126·2 m.												
					END OF HOLE 127·0 m												

C.H.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1/4

TENEMENT NAME TENTH LEGION No. 53M/15

4454·57N

PLAN – MAP REFERENCE TAS h 2

CO-ORDINATES 5299·73E AZIMUTH 180° GRID DRILLERS PARRY COMMENCED 4·4·82 DEPTH 200·0 m. HOLE No. THC 13

RL COLLAR 248·69 m. INCLINATION -45° DRILL TYPE Boyles 37 COMPLETED 9·4·82 CASING LEFT PVC Pipe DPO No(s) 30140

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W
			NQ		TRICONE DRILLED TO 9m - No Core											
·0	13·0	0·5	to		9m - 21·5 LOST CORE ZONE.											
2·0	25·0	0·4	56m	Cst	21·5 - ?24·5 WEATHERED CALC SILICATE	21·5 - 24·5 No mineralisation										
5·0	28·0	0·5	BQ		Soft white puggy clay with remnant	frags soft white f.gr. rock - Cst?										
8·0	31·0	1·4	↓	SS/Cst	24·5 - 25·4 INTERBEDDED SILTSTONES + CALC SILICATE.											
·0	34·0	0·7			Pale brown - grey totally weathered soft calc silicate with quartzose											
4·0	47·0	1·0			sandy siltstone interbeds. Bedding 70 - 75°.											
1·0	50·0	0·4			25·4 - 28·0 LOST CORE ZONE.											
1·0	53·0	2·7		SS	28·0 - ?29·0 Pale pinkish brown hornfelsed sediments											
3·0	59·0	1·4		Cst	?29·0 - ?30·8 - White soft weathered calc-silicate											
1·0	62·0	1·7		q	?30·8 - ?31·2 Pale pinkish brown quartzite		CUT									
·0	65·0	2·6		Css	?31·2 - ?31·6 Calc Silicate Skarn.		973548	?31·2	?31·6	0·4	15	30	185	<0·5	<4	<4
·0	68·0	3·0			Highly sheared and faulted serpentine - magnetite - tremolite rock.											
0	71·0	2·8			Poorly banded 70°, magnetite 20-30%, weathered to reddish haematite (sp.?)		GRIND									
				Cst	?31·6 - ?47·0 Calc Silicate Rock.	31·6 - ?47·0 Minor epidote, trace	973875	?31·6	47·0	0·9	25	65	80	<0·5	<4	<4
					Pale grey medium hard massive	Mn. sp. The interval has been										
					tremolite rock, weakly banded 50°	significantly faulted and shattered. high										
						core losses.										
				Css	?47·0 - ?50·0 Calc Silicate Skarn		CUT									
					Banded crystalline skarn rock - tremolite + ?phlogopite mica with		973549	47·0	50·0	0·6	35	40	155	<0·5	8	<4
					10% magnetite which has been degraded to haematite by weathering											
					Banding 65°. Reddish brown "haematite" possibly sphalerite?		GRIND									
				Cst	?50·0 - ?54·3 CALC SILICATE ROCK	50·0 - 54·3 Minor epidote and reddish	973876	50·0	54·3	4·3	10	80	130	<0·5	34	8
					As above, 31·6 - 47·0, 50·0 Bedding 60°	brown Mn garnet.										
					54·3 - 59·0 LOST CORE ZONE		CUT									
				M/Css	?59·0 - 68·7 MAGNETITE SKARN	59·0 - 63·0 Magnetite 20-30%,	973550	59·0	61·0	1·0	75	30	1400	<0·5	16	<4
					White tremolite rock, with abundant	locally massive for 5-10 cm, patches	551	61·0	61·8	0·7	25	35	2100	<0·5	4	<4
					magnetite disseminated, along fractures	sp - locally 2-3%. Minor patches	552	61·8	62·5	0·7	10	15	1950	<0·5	4	<4
					and associated with serpentine	brown idocrase/vesuvianite.	553	62·5	63·0	0·4	15	25	2350	<0·5	6	<4
					alteration.	63·0 - 64·1 Pinkish brown breccia	554	63·0	64·1	0·7	95	40	5350	<0·5	<4	<4
						serpentinised + weathered, trace mag	555	64·1	65·1	1·0	210	30	1200			
						tremolite rock										

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DRILL CORE LOG

TENEMENT NAME TENTH LEGION No 53M/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC13

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s) 30140

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W
71·0	74·0	2·9				64·1 – 67·9 Magnetite 30-40%	973556	65·1	65·9	0·8	235	30	3200	<0·5	4	<4
74·0	76·0	1·6				with serpentinised Cst. Trace sp	557	65·9	66·8	0·9	80	25	2250	<0·5	27	<4
76·0	79·0	2·4				throughout, also minor ?idocrase.	558	66·8	67·2	0·4	30	25	3950	<0·5	<4	<4
79·0	82·0	2·5				67·9 – 68·7 Sphalerite 10-15%, mag 10%	559	67·2	67·9	0·7	30	20	6400	<0·5	8	<4
82·0	85·0	2·4					560	67·9	68·7	0·7	75	25	9600	<0·5	80	<4
				Dol/S	68·7 – 79·9 ALTERED DOLOMITE	68·7 – 69·8 Pyrite diosem as blebs to	561	68·7	69·8	1·1	45	30	225	<0·5	<4	<4
					Massive grey crystalline dolomite	2mm, 10%; magnetite 20%, finely diosem,	562	69·8	71·4	1·7	185	30	850	<0·5	<4	<4
					with segregated serpentine and mag	69·8 – 71·4 1-2% garnet, finely diosem	563	71·4	71·9	0·5	160	30	210	<0·5	<4	<4
					may be up to 10-20% of the rock.	mag 2-3%, trace galena, weak trace sp	564	71·9	73·0	1·1	30	35	250	<0·5	<4	<4
					Crudely foliated/banded 45-60° CA.	; py 1-2% in bone coloured tremolite.	565	73·0	73·4	0·4	25	35	1500	<0·5	<4	<4
					69·8 – 71·4 Cst, minor mag + garnet	71·4 – 71·9 Mag 20%, diosem in serpentine	566	73·4	74·1	0·7	20	50	435	<0·5	<4	<4
					71·4 – 71·9 Serpentinite, remnant tremolite	; pyrite 10%, diosem	567	74·1	75·3	1·2	20	35	125	<0·5	<4	<4
					71·9 – 73·4 Very altered dolomite.	71·9 – 73·4 Dark grey dolomite – serpentinised	568	75·3	77·2	1·6	10	20	210	<0·5	<4	<4
					73·4 – 74·1 serpentine/magnetite	and with diosem mag 10-15% and py 3-5%.	569	77·2	79·4	1·6	35	15	300	<0·5	<4	<4
					74·1 – 79·9 Extent of serpentinisation	73·4 – 74·1 Almost black serpentine	570	79·4	79·9	0·5	45	15	615	<0·5	<4	<4
					and the amount of magnetite gradually	with 25-30% very finely diosem magnetite										
					decreases.	and bands/veinlets pyrite/marcasite 7%										
						74·1 – 79·4 Dark grey crystalline dol.										
						with abundant pyrite 7-10% as veinlets										
						and thin bands to 3mm, also as discrete										
						blebs to 4mm. Trace sp in veinlets.										
						Minor pyrrhotite to 7% in small silicified										
						zones to 20 cm.										
						79·4 – 79·9 Sepentinised zone – mag	GRIND SAMPLES									
						10%, py 8-10%.	973877	79·9	82·2	1·8	15	30	215	<0·5	<4	<4
				Dol	79·9 – 82·2 DOLOMITE, altered	79·9 – 82·2 Mag 5-7%, py as veinlets	CUT									
					Grey dolomite shot through with black	and stringers 3-5%	571	82·2	83·4	0·5	20	20	3000	<0·5	<4	<4
					thin bands of serpentine and ultrabasic mag. Banding 65°											
				S	82·2 – 83·4 FAULTED SERPENTINITE											
					Dark green-brown oxidised faulted											
					serpentine rock, with a trace magnetite											

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 3.14

TENEMENT NAME TENTH LEGION No. 53M/75

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC 13

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s). 30/40

DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W
88.0	0.6		Dol.	83.4-199.2 DOLOMITE	83.4-85.0 mag 3-5%, trace py, po	973878 GRIND SAMPLES	83.4	85.0	1.6	5	25	160	<0.5	<4	<4
91.0	0.8			Massive grey crystalline dolomitic marble shot through with thin bands & dark serpentinite and fine grained disseminated magnetite											
94.0	2.0														
97.0	1.6														
100.0	1.9					CUT									
103.0	1.8			85.0 - ?87.5 faulted serpentinite	85.0 - ?87.5 no mineralisation, faulted	572	85.0	?87.5	0.2	15	15	2000	<0.5	<4	<4
106.0	2.3			88.0 - 90.4 Fault zone - greasy brown friable clay.	87.5 - 88.0 As above	GRIND									
109.0	2.8				88.0 - 90.4 No mineralisation	879	87.5	94.0	3.1	5	20	135	<0.5	<4	<4
112.0	1.0			97.0 ± 3m fault zone - lost core.	90.4 - 115.0 Magnetite 1-2%, pyrite	880	94.0	97.0	1.6	5	20	145	<0.5	<4	<4
115.0	0.8			100.0 ± 2m fault zone - " "	to 5-10% in short intervals as blebs	881	97.0	100.0	1.9	5	25	115	<0.5	<4	<4
118.0	2.2				etc, overall trace - 1%	882	100.0	103.0	1.8	5	30	70	<0.5	<4	<4
121.0	0.5			115.0 - 115.3 Faulted + weathered serpentinite	- no mineralisation	883	103.0	106.0	2.3	<5	25	50	<0.5	<4	<4
124.0	1.6			115.3 - 115.6 - Dyke - f.gr spotted rock - poss Cet	- no mineralisation	884	106.0	109.0	2.8	<5	15	70	<0.5	<4	<4
127.0	2.3					885	109.0	112.0	1.0	5	20	60	<0.5	<4	<4
130.0	2.7			115.6 - 116.6 - Brown fault pug.	- trace magnetite	886	112.0	115.0	0.8	30	20	310	<0.5	<4	<4
133.0	2.6			116.6 - 117.6 Dolomite as above.		887	115.0	118.0	2.2	5	25	130	<0.5	<4	<4
136.0	2.1			117.6 - 118.2? Porphyry Dyke? - Contact 80° - trace magnetite + pyrite.		888	118.0	121.0	0.5	10	20	70	<0.5	<4	<4
139.0	2.8			Sugary textured rock - highly siliceous, with minor brownish spots - probably a quartzite?		889	121.0	124.0	1.6	5	25	70	<0.5	<4	<4
						890	124.0	127.0	2.3	5	20	50	<0.5	<4	<4
						891	127.0	130.0	2.7	<5	25	50	<0.5	<4	<4
				118.2 - 120.8 Serpentine, faulted + sheared - only 10% recovered		892	130.0	133.0	2.6	<5	25	95	<0.5	<4	<4
						893	133.0	136.0	2.1	5	25	55	<0.5	<4	<4
				120.8 - 124.1 highly altered dol - serpentine 30% dolomite is reduced to remnant brownish spots surrounded by black serpentine + magnetite rich material.	120.8 - 124.1 mag 5-7% foliated at 45° approx.	894	136.0	139.0	2.8	<5	20	30	<0.5	<4	<4
				124.1 - 139.0 Massive pale grey dol, less serpentine. Small fault at 127 m.	124.1 - 127.0 pyrite as disseminated blebs 3-5% trace po; mag 1-2%. 127.0 - 139. py 1-2%, mag 2-3%.										

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DRILL CORE LOG

TENEMENT NAME TENTH LEGION No. 53M/15

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC13

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s) 30140

DEPTH (m)	To(M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Vaining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALABS) Cu	Pb	Zn	Ag	Sn	W
.0	142.0	0.8			139.0 – ?141.6 Basic Dyke?	144.6 – 165.7 extensively faulted +	895	139.0	142.0	0.8	<5	40	135	<0.5	<4	<4
2.0	145.0	2.4			F.gr green crystalline micaceous	broken trace pyrite – mostly leached	973896	142.0	145.0	2.4	<5	25	90	<0.5	<4	<4
.0	148.0	0.6			rock which has been serpentinised – v	away. Faint brownish films about	897	145.0	148.0	0.6	10	25	110	<0.5	<4	<4
3.0	151.0	1.1			similar to 115.3 – 115.6	joints. Weak trace magnetite.	898	148.0	151.0	1.1	5	30	45	<0.5	<4	<4
1	154.0	1.6			141.6 – 144.6 Serpentine 20% – Rarely		899	151.0	154.0	1.6	<5	25	50	<0.5	<4	<4
.0	157.0	2.8			banded, mag 10%. Banding 60°.		900	154.0	157.0	2.8	<5	20	45	<0.5	<4	<4
1.0	160.0	1.7			– v similar to holes 3 + 5 – segregated		901	157.0	160.0	1.7	5	20	155	<0.5	<4	<4
.0	163.0	1.8			calcite lenses up to 6 mm thick.		902	160.0	163.0	1.8	5	20	90	<0.5	<4	<4
0	166.0	0.5			144.6 – 178.5 massive faintly mottled	165.7 – 178.5 Slightly darker grey	903	163.0	166.0	0.5	20	20	90	<0.5	<4	<4
.0	169.0	3.1			white + pale grey crystalline	due to increased magnetite – 1-2%	904	166.0	169.0	3.1	5	20	30	<0.5	<4	<4
0	172.0	2.8			dolomite with a sometimes	in places, mostly <1%. Trace po –	905	169.0	172.0	2.8	<5	20	35	<0.5	<4	<4
0	175.0	2.9			'sugary' texture – soft + friable – due	up to 2% – partially degraded to pg.	906	172.0	175.0	2.9	<5	35	30	<0.5	<4	<4
.0	178.0	2.1			to faulting and subsequent leaching	Some of the "magnetite" may be	907	175.0	178.0	2.1	5	20	45	<0.5	<4	<4
0	181.0	2.3				small clots of ultrafine grained po.	908	178.0	181.0	2.3	5	25	45	<0.5	<4	<4
0	184.0	3.1					909	181.0	184.0	3.1	<5	20	45	<0.5	<4	<4
.0	187.0	3.0				176.5 m – 10 cm sap – calcite – ?fluorite	910	184.0	187.0	3.0	<5	25	30	<0.5	<4	<4
.0	190.0	2.9				vein – green mineral. 5° to CA	911	187.0	190.0	2.9	<5	30	25	<0.5	<4	<4
0	193.0	3.0			178.5 – 184.4 Slightly darker grey	178.5 – 184.4 same mag content as	912	190.0	193.0	3.0	<5	30	30	<0.5	<4	<4
0	196.0	3.0			+ more impure – less segregated	above, but more finely disseminated	913	193.0	196.0	3.0	<5	25	30	<0.5	<4	<4
0	199.2	3.2			184.4 – 195.4 Nearly white dolomite	less po/pg										
					with minor pale grey intervals	184.4 – 195.4 1-8% blebs magnetite										
						disseminated along fine fractures, 1% trace pg.										
					195.4 – 197.5 Darker grey coarsely	195.4 – 197.5 ultrafine disseminated mag.										
					crystalline dolomite	1%.										
					197.5 – 199.2 Brecciated magnetite	197.5 – 199.2 f.gr mag rich material										
					rich material – 5-7%, very fine grained	as breccia clasts 5-7%										
					END OF HOLE 199.2 metres.											

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No 1/6

TENEMENT NAME TENTH LEGION No 53M/75

4989.29N

PLAN – MAP REFERENCE TAS h 2

CO-ORDINATES 5321.59E AZIMUTH 180° GRID DRILLERS PARRY COMMENCED 13.4.82 DEPTH 169m HOLE No. TLC 14

RL COLLAR 248.96 INCLINATION -55° DRILL TYPE BOYLES 37 COMPLETED 25.4.82 CASING LEFT PVC pipe to 24m DPO No(s) 30141, 30142

DEPTH From (M)	DEPTH To(M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization
					0-3.0 TRICONED - NO CORE	
3.0	7.0	3.0	NQ	q/ss	3.0 – 18.9 THINLY BEDDED QUARTZITES/SANDY SILTSTONES.	
7.0	8.0	1.0	↓		Thinly bedded (0.5–2 cm) pinkish and	3.0 – ?Weak trace f.gr. disem. py
8.0	11.0	2.7			grey f.gr. gtzose sandstones alternating	spare thin remobilised qtz veinlets.
11.0	14.0	3.0			with mid-dark grey sandy siltstones.	
14.0	17.0	2.8			Well bedded, minor folding + disruption.	
17.0	20.0	3.0			5.6 Bedding 42°	
20.0	23.0	2.7			7.0 Bedding 75°	
23.0	26.0	2.9			Fairly 'spotted' fabric - hornfelsed.	
26.0	29.0	2.8			10.5 So 60°	
29.0	32.0	3.1			Some thicker (to 0.5 m) quartzite beds	
32.0	35.0	3.1			around 12–14 metres.	
35.0	38.0	3.0			Contact 60° 15.5 So 70°	
38.0	41.0	2.9		q	18.9 – 21.6 Massive QUARTZITE	18.9–21.6 No mineralisation
41.0	44.0	3.0			Pale brownish grey massive qtzite	
44.0	47.0	3.1			with creamy-grey sericite rich material	
47.0	50.0	3.1			cementing f.gr. qtz grains.	
50.0	53.0	3.1		q/ss	21.6 – 49.0 QUARTZITES/SILTSTONES	21.6 – Trace po as f.gr.
53.0	56.0	2.7			See above 3.0–18.9 for description	blebby aggregates. Minor thin qtz
56.0	59.0	3.1			- slightly higher proportion of disrupted	± py ± marcasite veins to 5 mm.
					and brecciated material 25.3 So 55°	Minor qtz – diopside? – epidote veins
					Gradually changes character – becomes	begin to appear – one 5–10 mm
					more massive and hornfelsic, with	patch approx every 0.5 m.
					pinkish cream segregations suggesting	
					increased metasomatism? 38.3 So 35°	
					- gradually changes to 'qs' 45.6 So 60°	
					rock type; at approx 49m.	
				qs	49.0 – 57.6 QTZ SERICITE ROCK	49.0 – 57.6 1–2% pyrite in
					- pinkish creamy grey qtzose beds	veinlets ± serpentine + minor diopside
					surrounded by f.gr. sericite rich	+ qtz – epidote veinlets + segregations.
					material.	

Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALABS) Cu	Pb	Zn	Ag	Sn	W	As
GRIND SAMPLES.										
973914	5.1	8.0	2.9	75	50	175	<0.5	<4	35	
915	8.0	11.0	2.7	45	30	175	<0.5	5	<4	
916	11.0	14.0	3.0	85	20	225	0.5	<4	45	
917	14.0	17.0	3.0	60	20	105	0.5	9	<4	
918	17.0	20.0	3.2	80	15	135	0.5	3	20	
919	20.0	23.0	2.8	45	5	105	<0.5	<4	<4	
920	23.0	26.0	3.0	55	15	70	<0.5	<4	<4	
921	26.0	29.0	3.0	475	35	105	<0.5	1/s	1/s	14
922	29.0	32.0	3.0	25	5	60	<0.5	<4	6	9
923	32.0	35.0	3.1	55	<5	60	<0.5	<4	15	9
924	35.0	38.0	3.1	30	<5	55	<0.5	<4	<10	12
925	38.0	41.0	3.0	35	5	60	<0.5	<4	<10	4
926	41.0	44.0	3.0	15	<5	45	<0.5	<4	<10	2
927	44.0	47.0	3.1	25	<5	60	<0.5	5	7	3
928	47.0	50.0	3.0	25	35	295	1.5	1/s	1/s	3
929	50.0	53.0	3.0	15	30	305	<0.5	8	5	3
930	53.0	56.0	2.7	20	10	55	<0.5	4	7	12
931	56.0	57.6	1.6	45	95	230	0.5	1/s	1/s	6

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DRILL CORE LOG

SHEET No 2 of 5

TENEMENT NAME TENNANT CREEK No 5314

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. T.C.1

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 30140, 30

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	As
59·0	62·0	3·0			49·0 – 57·6 Fabric = grossly brecciated + deformed – 50° originel sedimentary layering at middle. Contact 55° 56·3 to 70°		CUT SAMPLES										
62·0	65·0	2·9					973574	57·6	58·3	0·7	15	80	320	<0·5	103	<4	
65·0	68·0	3·0					575	58·3	59·1	0·8	15	50	275	<0·5	56	<4	
68·0	71·0	3·0					576	59·1	60·4	1·3	20	150	345	<0·5	75	<4	
				M/Css	57·6 – 62·4 CALC SILICATE SKARN / MAGNETITE. Dark grey matrix, spotty white grained magnetite – appears to be f.gr. silty sediment that has been hornfelsed and invaded by magnetite. Massive coarsely crystalline magnetite occurs as irregular masses assoc. with black serpentine rich material.	57·6 – 61·6 Mag 20-30%, locally massive for 10-20 cm, pyrite 1-2% trace po, ?sp	577	60·4	60·9	0·5	25	30	655	<0·5	134	<4	
						61·6 – 62·4 = Cst rock – epidote veining.	578	60·9	61·6	0·7	45	25	665	<0·5	213	<4	
							579	61·6	62·4	0·7	15	45	460	<0·5	186	<4	
				Cst	61·6 – 62·4 – Pale grey/mottled pink + green f-gr. calc silicate skarn rock Contact ?50°												
							GRIND										
				qs	62·4 – 66·1 QTZ SERICITE RICH SEDIMENTS. As for 49·0 – 57·6	62·4 – 66·1 Brecciated fabric – extensive segregation and remobilisation of qtz along fractures. Minor epidote / diopside / py veinlets.	973932	62·4	65·0	2·6	35	30	115	1·0	1/5	1/5	5
							933	65·0	683	3·1	20	25	85	<0·5	47	<10	13
					Contact 75° from fragment.		CUT										
				M	66·1 – 67·0 MAGNETITE Massive magnetite with black and grey serpentinite matrix. Banded 65° Contact irregular.	66·1 – 67·0 Mag 80%, Py 2-3%, Sp 1-2%	973580	66·1	67·0	0·1	40	25	155	<0·5	3760	<4	
				qs	67·0 – 68·3 Altered SEDIMENTS. As above 64·4 – 66·1, last 0·5 m gradational to Css. Heavily altered Contact ? 80° 67·6 So 55°	67·0 – 68·3 weak trace pyrite.	581	68·3	68·9	0·6	165	1700	2850	5·5	101	<4	
							582	68·9	69·2	0·3	170	720	2300	1·0	245	<4	
				Css	68·3 – 69·2 CALC SILICATE SKARN massive coarsely crystalline ? tremolite rock – mottled green/white, with calcite segregations	68·3 – 68·9 Trace pyrite, sp, ?gn 68·9 – 69·2 Mag (disem) 60-70%. Py 1-2% trace sp.	GRIND 973934	69·2	71·0	1·8	25	255	2550	2·0	6	<4	21

DRILL CORE LOG

TENEMENT NAME TENTH CESSION No 53 5/7

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC 14

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 30140 30141

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	As
						GRND SAMPLES											
71·0	74·0	3·0		qs	69·2-71·4 ALTERED SEDIMENTS.	69·2-71·4 Calc silicate alteration	973735	71·0	74·4	3·4	15	50	1200	1·0	141	<4	71
74·0	77·0	3·1			As above 49·0-57·6.	very pronounced - the rock has been											
77·0	80·0	3·1				invaded by serpentine and diopside/epidote											
80·0	83·0	3·0			Contact 65°	veins and irregular aggregates	CUT	SAMPLES									
83·0	86·0	3·0		M	71·4-71·9 MAGNETITE SKARN	71·4-71·9 Mag 60-70%, trace py, with	973583	71·4	71·9	0·5	65	75	225	<0·5	118	<4	
86·0	89·0	3·0			Contact 75°	serpentine gangue.											
89·0	92·0	3·0		Css	71·9-74·4 CALC SILICATE SKARN	71·9-74·4 Disseminated mag in small											
92·0	95·0	3·1			Same as 68·3-69·2 - massive xs thin	veinlets + zones with serpentine + ? chlorite											
					tremolite, but has a more 'banded'												
					texture and some patches of												
					pink garnet and green epidote - appears												
					to be a non-carbonate, sandy												
					sediment that has been metasomatised.												
					Contact 60°												
				M	74·4-95·0 MAGNETITE	74·4-75·2 Mag 40% in dark green serp.	973584	74·4	75·2	0·8	215	40	140	<0·5	181	<4	
					Massive magnetite (>50%) with	pyrite 5%.	585	75·2	75·8	0·8	90	20	150	<0·5	210	<4	
					intergrown serpentine, dolomite or calcite	75·2-76·9 Mag 50-60% in white weakly	586	75·8	76·9	1·1	25	30	90	<0·5	1030	39	
						serpentinised carbonates. Granular texture	587	76·9	77·3	0·4	15	15	1350	<0·5	173	57	
						Minor faulting + leaching 76·2-77·8.	588	77·3	77·8	0·5	100	30	240	<0·5	382	51	
						76·9-77·3 ? f.gr. sediment - now Css, finely	589	77·8	78·5	0·7	45	15	115	<0·5	943	49	
						disseminated mag 2-3%, serp 15%, tremolite/diopside	590	78·5	80·0	1·5	10	25	170	<0·5	1510	62	
						matrix.	591	80·0	81·5	1·5	10	100	120	<0·5	1690	44	
						77·7-80·8 Mag 60%, in pale green-grey	592	81·5	82·5	1·0	10	220	125	1·0	58	116	
						serpentinised dolomite. Scarce blebs py to 3mm.	593	82·5	84·5	2·0	35	475	670	3·0	79	282	
						80·8-82·5 Magnetite 80-90% trace py	594	84·5	85·4	0·9	5	25	80	<0·5	382	<4	
						82·5-84·5 Bottle green serpentine	595	85·4	86·9	1·5	5	20	85	<0·5	1850	27	
						with 5-10% c.gr. mag. and 10% po. trace py	596	86·9	87·7	0·8	5	25	90	<0·5	2080	24	
						84·5-85·4 Mag 90%, carbonate gangue	597	87·7	88·6	0·9	15	35	245	<0·5	847	13	
						85·4-87·7 Mag 50%, carbonate gangue.	598	88·6	89·6	1·0	10	15	145	<0·5	298	30	
						87·7-88·6 Mag 70%, serpentinite gangue											
						88·6-89·6 Massive serpentine mag 10%.											

[redacted]

DRILL CORE LOG

TENEMENT NAME [redacted] No. 53M/7

PLAN – MAP REFERENCE

CO-ORDINATES ... AZIMUTH ... DRILLERS ... COMMENCED ... DEPTH ... HOLE No. TLC 14

RL COLLAR ... INCLINATION ... DRILL TYPE ... COMPLETED ... CASING LEFT ... DPO No(s). 3014.0

DEPTH From (M)	DEPTH To(M)	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) Cu	Pb	Zn	Ag	Sn	W	As
95·0	98·0	3·1				89·6 – 95·0 Poorly banded magnetite	973599	89·6	91·1	1·5	10	25	85	<0·5	1590	12	
98·0	101·0	3·1				-calcite - dolomite. Mag 60%, variable	600	91·1	92·5	1·4	<5	20	65	<0·5	584	58	
101·0	104·0	3·0				from 30 – 80%. Dissem py 1-2% trace sp.	601	92·5	93·9	1·4	5	35	155	<0·5	244	69	
104·0	107·0	2·6			Contact 45°.	Mag banding is at 60 – 80° LCA	602	93·9	95·0	1·1	5	30	25	<0·5	401	<4	
107·0	110·0	3·0		Dol.	95·0 – 103·6 DOLOMITE	95·0 – 95·3 Mag dissem v small	GRIND	SAMPLES.									
110·0	113·0	3·0			Massive pale grey recrystallised dolomite	blebs 1-2%. Trace dissem py	973936	95·0	98·0	3·0	20	35	635	<0·5	59	4	67
113·0	116·0	2·9			with minor thin bands magnetite and	95·3 – 95·5 Mag 40%, py 1%	937	98·0	101·0	3·0	35	25	130	0·5	27	<4	160
116·0	119·0	3·1			lesser pyrite to 0·3m thick; at 40°-55°	95·5 – 98·7 As above, 95·0-95·3.	938	101·0	103·6	2·6	25	10	555	<0·5	11	9	60
					LCA.	98·7 – 98·9 Mag 30%, py 20%.											
					Contact irregular.	98·9 – 103·6 As above 95·0 – 95·3	CUT	SAMPLES.									
				S/M.	103·6 – 108·1 SERPENTINITE/MAGNETITE	103·6 – 104·0 Mag 30%, serp 40%, dol 30%	973603	103·6	104·0	0·4	60	45	350	<0·5	186	<4	
					Translucent dark olive green serpentine	104·0 – 105·1 Mag 60%, minor dolomite, py 2-5%	604	104·0	105·1	1·1	100	40	290	<0·5	162	28	
					with yellowish patches (is completely	105·1 – 108·1 Irregularly banded	605	105·1	106·7	1·5	30	30	215	<0·5	94	21	
					serpentinised carbonate) and patches of	massive serpentine with minor mag. 10-15%	606	106·7	108·1	1·4	40	35	710	<0·5	69	17	
					magnetite												
					Contact gradational through dolomite.		GRIND										
				Dol.	108·1 – 112·2 DOLOMITE	108·1 – 112·2 Very finely dissem mag	973939	108·1	112·2	4·2	45	15	230	<0·5	6	<4	
					As above – 95·0 – 103·6.	minor clots + veinlets of serpentine.	CUT										
				M/Dol	112·2 – 112·7 Magnetite/dolomite; mag 40%		973607	112·2	112·7	0·5	10	20	205	1·0	930	7	2300
					Contact ?65°												
				Csd?	112·7 – 114·5 CALC SILICATE SKARN.	112·7 – 114·5 Trace epidote. Minor thin	608	112·7	114·5	1·8	10	5	255	<0·5	333	<10	420
					Mottled pink – pale green-grey	serpentine veinlets.											
					garnet diopside rock												
					Contact 50°												
				S/M	114·5 – 116·4 SERPENTINITE/MAGNETITE	114·5 – 116·4 Mag 10%, finely dissem.	609	114·5	115·7	1·2	55	15	235	<0·5	6	12	89
					As for 103·6 – 108·1, above, with		610	115·7	116·4	0·7	45	20	260	<0·5	19	19	680
					corroded corestones of [illegible] crystalline fibrous		GRIND SAMPLES										
					tremolite.												
					Contact 55°												
				?Csd.	116·4 – 118·6 CALC SILICATE SKARN		973940	116·4	119·0	2·6	95	30	690	0·5	250	<4	
					Garnet – diopside – tremolite rock, as above	112·7 – 114·5. dissem mag/chlorite 5-7%											

DRILL CORE LOG

TENEMENT NAME TENTH LEGION No 53M/1

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC 14

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 30143

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	As	Sn	W
9.0	122.0	3.1		Cst	118.6 – 119.4 CALC SILICATE ROCK. – see below.	118.6 – 119.4 minor epidote veining	973941	119.0	122.8	3.8	30	25	95	<0.5		40	<4
22.0	125.0	3.1			Contact 65°												
25.0	128.0	2.9		b sh	119.4 – 120.4 BLACK SHALE HORNFELS.	119.4 – 120.4 – no mineralisation.											
28.0	131.0	3.0			Brecciated dark grey-black f.gr. hornfels												
31.0	134.0	3.0			partially metasomatised to Cst.												
34.0	137.0	3.0			Contact irregular		973611	122.8	123.8	1.0	55	40	55	<0.5	53	<4	<4
37.0	140.0	3.0		Cst	120.4 – 122.8. CALC SILICATE ROCK.	120.4 – 122.8 Minor epidote – qtz –	973612	123.8	125.0	1.2	35	75	185	<0.5	55	<4	<4
40.0	143.0	3.1			Fine grained pinkish grey amorphic rock.	tremolite veinlets											
				b sh.	122.8 – 125.0 BLACK SHALE HORNFELS	122.8 – 125.0 No Mineralisation.											
					As for 119.4 – 120.4, above.		GRIND										
				Cst	125.0 – 126.4 CALC SILICATE ROCK.	125.0 – 126.4 Minor epidote – qtz veinlets	973942	125.0	127.5	2.3	15	105	140	<0.5		110	<4
					As for 120.4 – 122.8, above.												
					Contact ?70°		C										
				?Csd	126.4 – 127.5 Calc Silicate Skarn.	126.4 – 127.5 Disseminated mag/chlorite 2-3%											
					As for 96.4 – 118.6, above.		CUT	SAMPLES.									
				M	127.5 – 134.2 MAGNETITE.	127.5 – 133.8 Magnetite 60-70%, pyrite	973613	127.5	128.1	0.6	45	<5	250	<0.5	200	687	16
					Massive crystalline magnetite, with	2-3%, locally 10-15% for 10-15cm.	614	128.1	129.6	1.5	30	<5	175	<0.5	21	440	19
					irregular lenses, bands and patches	Trace disseminated sphalerite, with local	615	129.6	130.3	0.7	55	10	255	<0.5	85	253	10
					of dark green serpentinite throughout	high grade patches – 131.4 → 131.7 is	616	130.3	131.7	1.4	95	<5	525	<0.5	35	1130	15
					Contact 70°	< 30% sphalerite, with py and mag.	617	131.7	133.2	1.5	325	15	2.15%	<0.5	27	610	<10
				Css	134.2 – 134.9 CALC SILICATE SKARN	133.8 – 134.2 Pyrite 50%, mag 10%, in dark	618	133.2	134.2	1.0	840	10	205	<0.5	38	197	12
					Massive pale grey coarsely crystalline tremolite	green serp.	619	134.2	134.9	0.7	35	180	555	<0.5	9	38	<4
					with thin serpentine/chlorite veinlets.		620	134.9	135.5	0.6	100	35	475	<0.5	73	11	8
					Contact 65°												
				S	134.9 – 135.5 SERPENTINITE.	134.9 – 135.5 mag 3.5%; py 3-7%.											
					Dark green totally serpentinised Css	trace sp.											
					(Css same as previous interval 134.2 – 134.9)		GRIND	SAMPLES.									
					Contact 65°												
				Cst/Css	135.5 – 141.5 CALC SILICATE SKARN	135.5 – 141.5 Traces magnetite as	973943	135.5	137.0	1.5	20	40	275	<0.5		90	<4
					Mixed zone of pinkish f.gr. Cst	rare blebs. Thin serpentine films	944	137.0	140.0	3.0	20	70	175	0.5		80	<4
					and garnet-epidote Css.	along fractures	945	140.0	141.5	1.5	30	30	195	<0.5		65	<4

C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 6/6

TENEMENT NAME TENTH LEGION No. 53 m/7

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. T.L.C. 14

RL COLLAR ..... INCLINATION ..... DRILL TYPE ..... COMPLETED ..... CASING LEFT ..... DPO No(s) 30142

DEPTH From (M)	DEPTH To (M)	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) Cu	Pb	Zn	Ag	Sn	W	As
					Gradual change												
-3.0	146.0	3.1		M/Cst	141.5 – 143.8 MAGNETITE/CALC SILICATE	SKARN 141.5 – 141.9 mag 50%, py 3%.	973621	141.5	141.9	0.4	115	5	320	0.5	23	6	37
6.0	149.0	3.0			Magnetite and almost black serpentinite	141.9 – 142.5 Massive tremolite – trace mag.	622	141.9	142.5	0.6	20	50	235	<0.5	38	<4	15
9.0	152.0	3.0			surrounding corestones of massive	142.5 – 143.8 mag 30% py 1-2%.	623	142.5	143.8	1.3	55	<5	540	<0.5	34	<4	42
2.0	155.0	3.0			crystalline tremolite rock.	minor bluish grey labradorite?	GRIND SAMPLES										
5.0	158.0	3.0			Contact 70°												
8.0	161.0	3.0		Cst/Css	143.8 – 153.3 CALC SILICATE SKARN	143.8 – Accessory actinolite,	973946	143.8	146.0	2.2	15	90	1300	0.5	100	10	
1.0	164.0	3.0			As for 135.5 – 141.5 mixed Cst and Css	serpentine rare blebs magnetite, chlorite	947	146.0	149.0	2.9	15	50	155	<0.5	95	<4	
4.0	169.0	4.0				sp. py. Films and veinlets of serpentine.	948	149.0	153.3	4.3	25	65	725	<0.5	80	10	
					Contact Gradual		CUT SAMPLES.										
				M/Css	153.3 – 158.0 MAGNETITE/CALC SILICATE	SKARN 153.3-154.2 Mag 3-5%, in	973624	153.3	154.2	0.9	15	5	75	<0.5	9	<4	9
					As above, 141.5 – 143.8	massive tremolite.	625	154.2	155.0	0.8	25	<5	245	<0.5	13	19	11
						154.2 – 155.0 mag 30-40%, with black serp.	626	155.0	156.1	1.1	15	<5	165	<0.5	11	<4	10
						155.0 – 156.8 mag 15-20%, alternating with	627	156.1	156.8	0.7	15	<5	280	<0.5	17	6	20
						bands of tremolite, trace py.	628	156.8	158.0	1.2	200	<5	230	<0.5	32	<4	20
						156.8 – 158.0 mag 40%, locally massive;											
					Gradual Change.	with black serpentinite 1-2% py.	GRIND SAMPLES.										
				Css	158.0 – 161.4. CALC SILICATE SKARN	158.0 – 161.4 minor actinolite serp.	973949	158.0	159.6	1.6	45	35	470	0.5	95	<10	
					Mixed pale grey massive tremolite and	chlorite and trace mag in small veinlets	950	159.6	161.4	1.8	45	120	315	1.0	180	<10	
					green and pink epidote/garnet/diopside	etc.	951	161.4	165.0	3.6	30	25	105	0.5	10	<10	
					rock.		952	165.0	169.0	4.0	15	35	130	<0.5	4.0	<10	
					Contact 73°.												
					E.O.H.												
				qs	161.4 – 169 ALTERED SEDIMENTS.	161.4 – 169 Minor qtz – epidote str												
					Pinkish brown sericitic clay rich	veining, and minor pale grey											
					layers separated by 5-10 mm bands	metasomatised calc-silicate											
					of grey crystalline quartz.	intervals in base of interval.											
					END OF HOLE 169 metres.												

Appendix 5

Petrology and mineragraphy of core specimens from Tenth Legion drill holes

635200

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25 October 1999

Mr M. McKeown
McKeown Mining Pty Ltd
PO Box 50
RIDGLEY TAS 7321

REPORT CMS 99/10/8

YOUR REFERENCE: Letter 15.10.99

DATE RECEIVED: 18 October 1999

SAMPLE NO'S: TLC Cores

SUBMITTED BY: M. McKeown

WORK REQUESTED: Petrology, Mineragraphy

H.W. Fander, M.Sc.

REPORT CMS 99/10/8

TENTH LEGION DRILL CORE SAMPLES

Seven drill core samples were received for petrological and mineragraphic study; thin and polished sections were prepared as appropriate, and the results of the examinations are attached.

Only one of the rocks is a serpentinite (TLC 10/66.5m) in terms of its present composition and fabric; however, in the complete absence of primary diagnostic minerals (silicates and chromite) there is some uncertainty as to whether the rock represents a serpentinised ultramafic rock or a serpentinised contact-metasomatic Mg silicate assemblage (derived from carbonate rocks); rocks of this type occur elsewhere in this geological setting. Analyses for chromium may be helpful in resolving this problem (or examining less-serpentinised rocks).

MINERAGRAPHY

TLC3/55.2m

Opaque minerals are fresh pyrrhotite masses containing pyrite/magnetite intergrowths which may represent recrystallised pyrrhotite. There are sphalerite grains, mostly <50μ, in the pyrrhotite, and short branching sphalerite veinlets in gangue. Patches of subradiating-fibrous, poorly-developed graphite occur, and may represent recrystallised carbon in the original rock.

TLC10/66.5m

The sulphides are pyrite and pyritised pyrrhotite, containing small inclusions of chalcopyrite; there are also chalcopyrite grains up to 100μ in gangue. No sphalerite was seen in this particular intersection.

Scattered magnetite crystals have been replaced by ilmenite.

TLC13/71.7m

The opaque minerals are large masses of magnetite with small pyrite inclusions. There is a semi-veinlike distribution of sphalerite patches, up to 200x500μ in size and crowded with minute chalcopyrite inclusions.

SAMPLE NO: TLC10/50m **(T.S.** 68700) **Page 1**

CLASSIFICATION: Tremolite Rock.

COMPOSITION: Almost entirely composed of fine, matted-fibrous tremolite with occasional coarser, prismatic-radiating crystal groups. A few relict carbonate patches.

FABRIC: Randomly-orientated to subradiating tremolite needles. No relict textures to indicate origin.

MINOR MINERALS: A few fine shreds of partly oxidised sulphide (?pyrrhotite).

INTERPRETATION/COMMENTS: The relict carbonate patches, clearly being replaced by tremolite, suggest that this is a metasomatised carbonate rock rather than, say, a tremolitised serpentinite.

SAMPLE NO: TLC10/58.2m **(T.S.** 68701)

CLASSIFICATION: Two-Carbonate-Barite Rock.

COMPOSITION: Irregular crystalline patches and individual crystals of calcite are set in a crystalline mass of cloudy ankerite carbonate, with dispersed grains and subparallel veins of barite.

FABRIC: Fairly fine-grained (<0.2mm) crystalline carbonates, forming a mosaic fabric similar to that of a marble. No relict features.

MINOR MINERALS: Conspicuous small, euhedral crystals of pyrite and magnetite occur throughout.

INTERPRETATION/COMMENTS: Appears to have been a carbonate rock partly replaced by a different carbonate (Ca replaced by Mg-Fe in part) with the addition of bornite, pyrite and magnetite).

SAMPLE NO: TLC10/66.5m **(T.S.** 68702) **Page 2**

CLASSIFICATION: "Serpentinite".

COMPOSITION: Consists almost entirely of fine networks of serpentine minerals (lizardite, antigorite; with evenly-spaced subparallel veinlets of ultrafine chrysotile) dusted with ultrafine magnetite. No relict primary minerals.

FABRIC: Uniform, typical serpentinite fabric; unit cells are small, 0.05 – 0.5mm, and devoid of diagnostic relict textures.

MINOR MINERALS: Small dendritic patches of pyrite are conspicuous; some are semi-continuous veinlets. Later calcite veins.

INTERPRETATION/COMMENTS: In the absence of chromite and relict primary silicates it is uncertain whether this is a true (igneous) serpentinite or a "pseudo-serpentinite" formed by the alteration of metasomatic Mg silicate (eg "Humite" group) as is the case elsewhere in that area.

SAMPLE NO: TLC10/77.1m **(T.S.** 68703)

CLASSIFICATION: Talc-Chlorite-Magnetite Rock.

COMPOSITION: Very fine-grained talc as random, radiating flakes and fibrous masses, extensively impregnated and replaced by ultrafine chlorite associated with magnetite crystals.

FABRIC: Very fine-grained, with random fabric; much of the talc has fine vermiform textures possibly pseudomorphous after a primary feature (?carbonate).

MINOR MINERALS: Magnetite crystals with associated large white calcite crystals. Rare pyrite with brown **sphalerite**. Very small cloudy euhedral apatite crystals throughout.

INTERPRETATION/COMMENTS: May have been a fine-grained carbonate rock which was steatitised, then chloritised (introduction of Fe) when magnetite and calcite were deposited.

SAMPLE NO: TLC10/96.6m **(T.S.** 68704) **Page 3**

CLASSIFICATION: Altered Tremolite (?) Marble.

COMPOSITION: A medium-grained, well-crystallised dolomite marble with random tufts of probable tremolite now replaced by fine calcite and magnetite. Fine calcite has infiltrated the whole rock along dolomite grain boundaries.

FABRIC: Typical marble fabric with random, polygonal carbonate crystals and randomly-orientated fibrous bundles of altered ?tremolite.

MINOR MINERALS: Small euhedral magnetite crystals scattered through the rock; associated trace of fine sphalerite.

INTERPRETATION/COMMENTS: Originally a contact-metamorphosed carbonate rock, later pervaded by calcite; magnetite and sphalerite were possibly introduced at this stage.

Appendix 6

Nickel assay data as received

BU017108	296		34
143601	091199Ni		
UNITS	ppm		
DETECTI	25		
METHOD	I105		
CO			
CO			
TLC2	24.4-26.4	X	
TLC2	26.4-28.1		30
TLC2	36.5-37.2	X	
TLC2	46.5-48.5		100
TLC2	48.5-50.5		155
TLC2	50.5-52.5		130
TLC2	52.5-54.5		120
TLC2	54.5-56.5		145
TLC2	56.5-58.5		125
TLC2	58.5-60.5		115
TLC2	60.5-62.5		92
TLC2	62.5-64.5		105
TLC2	64.5-66.4		52
TLC2	66.4-68.4		150
TLC2	68.4-70.4		160
TLC2	70.4-71.6		88
TLC2	71.6-72.4		46
TLC2	80.4-81.5		46
TLC2	96.0-97.1		80
TLC2	101.2-103.	X	
TLC2	103.7-104.	X	
TLC3	16.1-16.4		46
TLC3	16.4-18.1		82
TLC3	18.1-19.0		88
TLC3	47.4-49.0		42
TLC3	49.0-49.8		28
TLC3	49.8-51.4		30
TLC3	51.4-54.0		26
TLC3	54.0-55.2		190
TLC3	55.2-56.4		98
TLC3	56.4-57.2	X	
TLC3	57.2-57.8		120
TLC3	57.8-60.0		48
TLC3	60.0-61.3		105
TLC3	61.3-62.0	X	
TLC4	55.4-56.1		54
TLC4	56.1-56.9		115
TLC4	68.0-68.9		30
TLC4	68.9-69.6		120
TLC4	69.6-70.1		78
TLC4	70.1-71.7		28
TLC4	71.7-73.0		26
TLC4	73.0-73.4	X	
TLC4	73.4-75.1		44

TLC4	75.1-76.2		60
TLC4	76.2-77.5		155
TLC4	77.5-78.3		140
TLC4	78.3-78.9		46
TLC4	78.9-79.4	X	
TLC4	79.4-80.2	X	
TLC4	80.2-80.9		32
TLC4	80.9-82.3	X	
TLC4	89.9-91.3	X	
TLC4	98.0-99.8		98
TLC4	99.8-101.3		44
TLC4	101.3-102.	X	
TLC4	113.6-114.		46
TLC6	0.3-1.6	X	
TLC6	1.6-2.1		48
TLC6	2.1-4.3		28
TLC6	4.3-5.9	X	
TLC6	5.9-7.2		40
TLC6	7.2-8.4		28
TLC6	26.2-27.1		32
TLC6	27.1-27.9		48
TLC6	27.9-29.6		42
TLC6	29.6-30.9		74
TLC6	30.9-32.3		64
TLC6	32.3-33.2		42
TLC6	33.2-34.3		50
TLC6	34.3-35.8		60
TLC6	35.8-36.7		32
TLC6	36.7-38.2		64
TLC6	38.2-39.6		38
TLC6	39.6-40.6		56
TLC6	40.6-42.0		28
TLC6	42.0-42.9		52
TLC6	42.9-44.5		30
TLC6	44.5-45.2		68
TLC6	45.2-46.4		32
TLC6	46.4-48.1		34
TLC6	48.1-49.1		54
TLC6	49.1-50.1		64
TLC6	62.7-64.0		115
TLC6	64.0-65.1		78
TLC6	65.1-65.9		76
TLC6	65.9-66.4		36
TLC6	66.4-67.9		30
TLC6	67.9-69.7		78
TLC6	69.7-71.2	X	
TLC6	71.2-72.5		26
TLC6	72.5-72.9	X	
TLC6	72.9-74.0		74
TLC6	74.0-74.7		38
TLC6	79.8-81.1		40

TLC6	81.1-82.1	X	
TLC6	82.1-83.6	X	
TLC6	83.6-85.1		38
TLC6	85.1-86.9	X	
TLC6	86.9-88.3	X	
TLC6	88.3-89.4	X	
TLC6	89.4-90.5	X	
TLC6	103.0-103.	X	
TLC6	103.6-104.	X	
TLC6	104.3-105.	X	
TLC6	105.0-106.	X	
TLC6	164.4-166.	X	
TLC6	166.2-167.	X	
TLC6	167.0-168.		30
TLC6	168.2-169.	X	
TLC8	53.6-54.9		34
TLC8	54.9-55.6	X	
TLC8	55.6-56.5		28
TLC8	56.5-58.0	X	
TLC8	58.0-58.9	X	
TLC8	58.9-60.1	X	
TLC8	60.1-61.5	X	
TLC8	61.5-62.4	X	
TLC8	62.4-63.1		28
TLC8	63.1-64.6		32
TLC8	64.6-65.0	X	
TLC8	65.0-65.3	X	
TLC8	81.3-82.0	X	
TLC8	82.0-82.6	X	
TLC3	82.6-83.3	X	
TLC8	83.3-84.2	X	
TLC8	84.2-85.7	X	
TLC9	55.1-56.6	X	
TLC9	56.6-58.1	X	
TLC9	58.1-59.1	X	
TLC9	59.1-60.5	X	
TLC9	60.5-61.9	X	
TLC9	61.9-62.8	X	
TLC9	62.8-64.1	X	
TLC9	64.1-64.9		82
TLC9	64.9-65.9		48
TLC9	65.9-67.2	X	
TLC9	67.2-67.7	X	
TLC9	67.7-68.1		30
TLC9	68.1-69.6		28
TLC9	69.6-70.6	X	
TLC9	70.6-71.7	X	
TLC9	71.7-72.0	X	
TLC9	72.0-72.6	X	
TLC9	72.6-73.9		32
TLC9	73.9-75.5		36

TLC9	75.5-77.0		30
TLC9	77.0-78.2		28
TLC9	78.2-79.5	X	
TLC9	79.5-80.6		40
TLC9	80.6-82.1	X	
TLC9	82.1-83.4		36
TLC9	83.4-84.4	X	
TLC9	84.4-85.2	X	
TLC9	85.2-86.3		40
TLC9	96.3-98.0		36
TLC9	98.0-99.9		46
TLC9	99.9-101.2		30
TLC9	101.2-101.	X	
TLC9	101.9-102.	X	
TLC9	102.6-104.		36
TLC9	104.2-104.		36
TLC9	104.8-105.		32
TLC9	110.2-112.	X	
TLC9	112.0-112.	X	
TLC9	112.7-113.		36
TLC9	113.8-114.	X	
TLC9	114.8-115.	X	
TLC9	137.4-138.	X	
TLC9	138.7-139.	X	
TLC9	139.8-141.	X	
TLC9	141.3-142.		32
TLC10	41.4-42.5	X	
TLC10	42.5-43.2	X	
TLC10	43.2-44.6	X	
TLC10	44.6-46.1	X	
TLC10	46.1-47.2	X	
TLC10	58.9-59.4	X	
TLC10	59.4-59.8		30
TLC10	76.2-77.4	X	
TLC10	77.4-78.9	X	
TLC10	78.9-80.0		48
TLC10	80.0-80.4	X	
TLC10	80.4-81.9		28
TLC10	94.3-94.9	X	
TLC10	94.9-96.4	X	
TLC10	96.4-97.5	X	
TLC10	102.2-103.		46
TLC10	103.6-105.		44
TLC10	105.2-106.		34
TLC11	49.0-49.4		32
TLC11	49.4-50.2		28
TLC11	50.2-50.8		30
TLC11	67.4-68.8	X	
TLC11	68.8-69.5	X	
TLC11	69.5-70.2	X	
TLC11	70.2-70.8		30

TLC11	70.8-71.2	X	
TLC11	71.2-72.7	X	
TLC11	72.7-74.1	X	
TLC11	74.1-75.5	X	
TLC11	75.5-76.3	X	
TLC11	76.3-76.7	X	
TLC11	76.7-77.1	X	
TLC11	77.1-77.6	X	
TLC11	77.6-78.3		28
TLC11	78.3-79.7		44
TLC11	79.7-81.2		32
TLC11	81.2-82.6	X	
TLC11	82.6-83.3	X	
TLC11	83.3-83.9	X	
TLC11	83.9-84.8	X	
TLC11	84.8-86.2	X	
TLC11	86.2-87.6		28
TLC11	87.6-89.0	X	
TLC12	46.5-48.0	X	
TLC12	48.0-49.5	X	
TLC12	49.5-49.9	X	
TLC12	49.9-50.3	X	
TLC12	50.3-51.1	X	
TLC12	73.9-75.3		30
TLC12	75.3-76.9	X	
TLC12	76.9-78.2		38
TLC12	78.2-79.7	X	
TLC12	79.7-81.1		28
TLC12	81.1-82.6		26
TLC12	82.6-84.1	X	
TLC12	84.1-85.5	X	
TLC12	85.5-87.0	X	
TLC12	87.0-88.8	X	
TLC12	88.8-90.2	X	
TLC12	90.2-91.7	X	
TLC12	91.7-93.2	X	
TLC12	93.2-94.2	X	
TLC12	94.2-95.6	X	
TLC12	95.6-96.6	X	
TLC12	96.6-97.2	X	
TLC13	59.0-61.0		46
TLC13	61.0-61.8		88
TLC13	61.8-62.5		60
TLC13	62.5-63.0		70
TLC13	63.0-64.1		40
TLC13	64.1-65.1		70
TLC13	65.1-65.9	X	
TLC13	65.9-66.8	X	
TLC13	66.8-67.2	X	
TLC13	67.2-67.9		36
TLC13	67.9-68.7		52

TLC13	68.7-69.8	X	
TLC13	69.8-71.4		280
TLC13	71.4-71.9		220
TLC13	71.9-73.0		48
TLC13	73.0-73.4		44
TLC13	73.4-74.1	X	
TLC13	74.1-75.3	X	
TLC14	57.6-58.3		26
TLC14	58.3-59.1	X	
TLC14	59.1-60.4	X	
TLC14	60.4-60.9	X	
TLC14	74.4-75.2		52
TLC14	75.2-75.8	X	
TLC14	75.8-76.9	X	
TLC14	76.9-77.3		40
TLC14	77.3-77.8		26
TLC14	77.8-78.5	X	
TLC14	78.5-80.0	X	
TLC14	80.0-81.5	X	
TLC14	81.5-82.5		255
TLC14	82.5-84.5		395
TLC14	84.5-85.4		26
TLC14	85.4-86.9		38
TLC14	86.9-87.7	X	
TLC14	87.7-88.6	X	
TLC14	88.6-89.6	X	
TLC14	89.6-91.1	X	
TLC14	91.1-92.5	X	
TLC14	92.5-93.9	X	
TLC14	93.9-95.0	X	
TLC14	103.6-104.	X	
TLC14	104.0-105.	X	
TLC14	105.1-106.	X	
TLC14	106.7-108.	X	
TLC14	114.5-115.		32
TLC14	115.7-116.		46
TLC14	127.5-128.	X	
TLC14	128.1-129.	X	
TLC14	129.6-130.	X	
TLC14	130.3-131.	X	
TLC14	131.7-133.		30
TLC14	133.2-134.		62
TLC14	134.2-134.	X	
TLC14	134.9-135.		84
TLC14	154.2-155.		26
TLC14	155.0-156.	X	
TLC14	156.1-156.	X	
TLC14	156.8-158.	X	

APPENDIX 3

ASSAY RESULTS OF LITHOGEOCHEMICAL SAMPLING

635214

A N A L A B S

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St. Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

Our reference : BU017000
Your reference : **128507**
Project code : Rock
Date received : 18/10/99
Date reported : 27/10/99

Lindsay Newnham
Managing Geologist

Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Number of pages of results : 2
Number of Samples : 70
First Sample : 16801
Last Sample : 16872

Invoice to:
Lindsay Newnham
Managing Geologist

Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Electronic Data Transmission :

Modem		Y 27/10/99
Facsimile		/ /
Disk Report	Y	/ /

Results to:

Results to:

Remarks :

Authorised by .....
On behalf of:

Rob Chapman
Laboratory Manager

The results in the following analytical report pertain to the samples provided to this laboratory for preparation and/or analysis as requested by the client.

635215

ANALABS

Our reference : BU017000
Your reference : **128507**
Project code : Rock
Report date : 27/10/99
Report status : Final
Page : 1 of 2

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Cu	Pb	Zn	As	Ni
*Blk BLANK	<2	<3	2	<50	<3
16801	13	47	55	<50	41
16802	13	10	36	<50	54
16803	7	15	40	<50	4
16804	8	<3	8	<50	<3
16805	3	3	7	<50	<3
16806	203	77	410	135	21
16807	223	115	785	440	36
16808	178	394	275	190	<3
16809	42	38	127	<50	6
16810	17	64	186	<50	<3
*SS 16810	16	60	179	<50	<3
16811	42	55	336	135	6
16812	<2	<3	5	<50	3
16813	58	36	175	<50	<3
16814	84	12	637	<50	<3
16815	100	384	888	345	11
16816	136	35	281	740	<3
16817	32	31	1510	190	13
*Std BM15	30	96	1020	<50	6
16818	2	<3	12	<50	3
16819	4	<3	31	<50	4
16820	73	9	23	<50	23
16821	<2	23	9	<50	6
16822	25	11	39	<50	23
16823	4	14	26	<50	26
16824	9	11	27	<50	21
16825	48	3	347	<50	<3
16826	74	13	240	<50	4
16827	70	48	936	<50	3
16828	19	63	161	300	<3
16829	19	19	159	250	11
16830	22	45	155	415	4
16831	17	61	159	760	4
16832	16	47	484	60	<3
16833	15	67	371	<50	<3
16834	21	164	349	<50	<3
16835	30	97	406	<50	<3
*SS 16835	30	103	400	<50	<3
16836	15	34	247	<50	<3
16837	20	42	124	<50	<3
16838	29	73	817	240	<3
16839	35	231	353	270	<3
16840	28	520	469	165	5
16841	3	83	132	<50	3
16842	55	166	303	<50	<3
16843	105	393	162	<50	3
*Rep 16827	67	48	986	<50	<3
*Rep 16831	16	58	155	730	<3
*Std AAL1	153	466	2060	80	11
Method	A102	A102	A102	A102	A102
Units	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	3	2	50	3

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635216

ANALABS

Our reference : BU017000
Your reference : **128507**
Project code : Rock
Report date : 27/10/99
Report status : Final
Page : 2 of 2

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Cu	Pb	Zn	As	Ni
*Blk BLANK	2	<3	2	<50	<3
16844	76	293	166	<50	<3
16845	11	39	27	<50	<3
16846	88	158	230	755	<3
16847	9	21	21	<50	11
16848	10	14	19	<50	6
16849	10	<3	185	<50	5
16850	104	11	798	55	<3
16851	64	<3	371	55	<3
16852	271	64	53	80	10
16853	5	12	21	<50	3
16854	23	79	54	<50	3
16855	43	1195	695	700	<3
16856	79	174	192	<50	3
16857	22	236	76	<50	10
16858	26	134	136	<50	3
16859	137	219	403	190	<3
16860	328	423	979	515	12
*SS 16860	324	417	957	495	10
*Std BM15	31	100	1030	<50	6
16861	9	53	80	<50	5
16864	31	243	231	<50	8
16865	999	648	154	<50	10
16866	809	466	144	<50	19
16867	16	691	25	290	69
16868	212	92	31	<50	<3
16869	161	603	858	<50	5
16870	32	215	29	<50	12
16871	14	29	34	<50	9
16872	26	131	11	<50	9
*Rep 16851	62	<3	358	<50	<3
*Rep 16856	76	176	186	<50	<3
*Std AAL1	151	466	2030	90	8
Method	A102	A102	A102	A102	A102
Units	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	3	2	50	3

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635217

A N A L A B S

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

Our reference : BU017027
Your reference : **128509**
Project code : Rock Samples
Date received : 22/10/99
Date reported : 04/11/99

Lindsay Newnham
Managing Geologist

Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Number of pages of results : 9
Number of Samples : 108
First Sample : 17501
Last Sample : 16900

Invoice to:
Lindsay Newnham
Managing Geologist

Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Electronic Data Transmission :

Modem		Y 04/11/99
Facsimile		/ /
Disk Report	Y	/ /

Preliminary Reports :
03/11/99 Report
03/11/99 Report

Results to:

Results to:

Remarks :

Authorised by .....
On behalf of:

Rob Chapman
Laboratory Manager

The results in the following analytical report pertain to the samples provided to this laboratory for preparation and/or analysis as requested by the client.

ANALABS

Our reference : BU017027
Your reference : **128509**
Project code : Rock Samples
Report date : 04/11/99
Report status : Final
Page : 1 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Cu	Pb	Zn	Ag	Ni	As
*Blk BLANK	<2	<3	2	<1	<3	<50
17501	41	99	212	<1	12	185
17502	137	214	159	<1	6	<50
17503	102	106	351	<1	24	150
17504	128	61	232	<1	<3	160
17505	731	162	546	<1	9	620
17506	83	45	197	<1	6	<50
17507	220	67	180	<1	3	80
17508	177	58	187	<1	19	55
17509	16	37	33	<1	28	<50
17510	220	168	496	<1	<3	220
*SS 17510	221	170	489	<1	<3	200
17511	179	121	442	<1	<3	220
17512	190	128	319	<1	<3	355
17513	45	138	874	<1	16	<50
17514	39	135	855	<1	11	70
17515	207	395	2010	<1	12	<50
17516	78	69	1265	<1	10	<50
17517	24	59	470	<1	4	<50
*Std BM15	30	92	1005	<1	4	<50
17518	1160	27	145	3	90	<50
17519	67	18	219	<1	9	<50
17520	54	1900	331	<1	40	<50
17521	163	12	812	<1	46	<50
17522	73	59	127	<1	17	<50
17523	45	36	456	<1	15	<50
17524	12	10	452	<1	51	<50
17525	8	25	50	<1	21	<50
17526	6	16	58	<1	20	<50
17527	7	5	43	<1	60	<50
17528	12	8	32	<1	64	<50
17529	10	17	43	<1	41	<50
17530	74	79	698	<1	132	<50
17531	133	>5000	>5000	<1	7	1740
17532	12	63	139	<1	1540	<50
17533	18	91	114	<1	29	<50
17534	95	10	172	<1	15	60
17535	207	52	443	<1	25	195
*SS 17535	201	54	454	<1	22	180
17536	7	36	263	<1	<3	425
17537	7	23	398	<1	6	460
17538	12	26	83	<1	5	<50
17539	389	34	661	<1	23	<50
17540	118	19	423	<1	40	180
17541	47	5	178	<1	30	55
17542	93	26	674	<1	26	95
17543	814	68	678	<1	37	110
*Rep 17521	162	14	805	<1	45	<50
*Rep 17532	10	58	135	<1	1520	<50
*Std AAL1	155	471	2060	<1	11	95
Method	A102	A102	A102	A102	A102	A102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	3	2	1	3	50

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

ANALABS

Our reference : BU017027
Your reference : 128509
Project code : Rock Samples
Report date : 04/11/99
Report status : Final
Page : 2 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Cu	Pb	Zn	Ag	Ni	As
*Blk BLANK	<2	<3	2	<1	<3	<50
17544	238	11	330	<1	71	<50
17545	74	8	213	<1	26	75
17546	331	55	218	<1	26	70
17547	52	9	202	<1	27	70
17548	46	6	412	<1	17	<50
17549	68	6	398	<1	30	<50
17550	67	8	213	<1	70	<50
17551	18	<3	315	<1	50	<50
17552	22	3	293	<1	85	<50
17553	17	3	430	<1	51	<50
17554	6	4	51	<1	10	<50
17555	3	9	53	<1	9	<50
17556	8	8	90	<1	30	<50
17557	22	23	646	<1	18	<50
17558	25	35	1625	<1	39	<50
17559	7	4	32	<1	20	<50
17560	72	6	261	<1	70	<50
*SS 17560	73	6	256	<1	74	<50
*Std BM15	28	97	1020	<1	5	<50
17561	20	10	44	<1	43	<50
17562	32	14	60	<1	43	<50
17563	6	13	51	<1	76	<50
17564	17	12	32	<1	16	<50
17565	7	9	36	<1	53	<50
17566	8	9	37	<1	49	<50
17567	3	8	39	<1	5	<50
17568	105	3	471	<1	6	80
17569	123	278	885	<1	10	235
17570	243	206	340	<1	10	255
17571	13	30	343	<1	38	<50
17572	16	22	88	<1	20	<50
17573	550	15	4810	<1	40	<50
17574	70	8	>5000	<1	44	<50
17575	62	<3	>5000	<1	39	<50
17576	12	<3	90	<1	15	<50
17577	23	12	86	<1	6	<50
17578	136	6	987	<1	25	<50
17579	4	10	35	<1	8	<50
17580	19	9	>5000	<1	34	<50
16873	70	231	416	<1	17	<50
16874	32	99	1030	<1	18	340
16875	14	307	1015	<1	23	<50
16876	4	30	149	<1	14	<50
16877	13	8	43	<1	13	<50
*SS 16877	12	11	41	<1	15	<50
16878	11	10	50	<1	24	<50
*Rep 17550	69	6	221	<1	68	<50
*Rep 17579	6	8	38	<1	10	<50
*Std AAL1	150	456	2070	<1	14	95
Method	A102	A102	A102	A102	A102	A102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	3	2	1	3	50

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635220

A N A L A B S

Our reference : BU017027
Your reference : **128509**
Project code : Rock Samples
Report date : 04/11/99
Report status : Final
Page : 3 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Cu	Pb	Zn	Ag	Ni	As
*Blk BLANK	<2	<3	3	<1	<3	<50
16879	<2	5	9	<1	3	<50
16880	16	530	191	<1	<3	90
16881	51	102	125	<1	15	<50
16882	6	12	98	<1	81	<50
16883	4	26	119	<1	108	<50
16884	4	17	169	<1	101	<50
16885	193	811	2200	4	25	70
16886	22	55	215	<1	34	<50
16887	11	151	290	<1	229	<50
16888	11	277	255	<1	166	<50
16889	21	4	49	<1	106	<50
16890	8	64	80	<1	16	<50
16891	<2	11	37	<1	11	<50
16892	22	18	26	<1	12	<50
16893	3	11	26	<1	<3	<50
16894	7	13	34	<1	37	<50
16895	4	26	55	<1	41	<50
16896	<2	85	160	<1	21	<50
*Std BM15	30	93	1000	<1	6	<50
16897	42	226	675	<1	35	410
16898	6	62	114	<1	11	105
16899	42	186	69	<1	122	75
16900	6	22	57	<1	<3	65
*Rep 16896	3	82	166	<1	18	<50
*Std AAL1	155	503	2090	1	13	100
Method	A102	A102	A102	A102	A102	A102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	3	2	1	3	50

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

ANALABS

Our reference : BU017027
Your reference : **128509**
Project code : Rock Samples
Report date : 04/11/99
Report status : Final
Page : 4 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Sb					
*Blk BLANK	<10					
17501	<10					
17502	<10					
17503	<10					
17504	<10					
17505	<10					
17506	<10					
17507	<10					
17508	<10					
17509	<10					
17510	<10					
*SS 17510	--					
17511	<10					
17512	<10					
17513	<10					
17514	<10					
17515	<10					
17516	<10					
17517	<10					
*Std BM15	--					
17518	<10					
17519	<10					
17520	<10					
17521	<10					
17522	<10					
17523	<10					
17524	<10					
17525	<10					
17526	<10					
17527	<10					
17528	<10					
17529	<10					
17530	<10					
17531	<10					
17532	<10					
17533	<10					
17534	<10					
17535	<10					
*SS 17535	--					
17536	<10					
17537	<10					
17538	<10					
17539	<10					
17540	<10					
17541	<10					
17542	<10					
17543	<10					
*Rep 17521	--					
*Rep 17532	--					
*Std AALI	--					
Method	A102					
Units	ppm					
Detection Limit	10					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635222

ANALABS

Our reference : BU017027
Your reference : **128509**
Project code : Rock Samples
Report date : 04/11/99
Report status : Final
Page : 5 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Sb					
*Blk BLANK	--					
17544	<10					
17545	<10					
17546	<10					
17547	<10					
17548	<10					
17549	<10					
17550	<10					
17551	<10					
17552	<10					
17553	<10					
17554	<10					
17555	<10					
17556	<10					
17557	<10					
17558	<10					
17559	<10					
17560	<10					
*SS 17560	--					
*Std BM15	--					
17561	<10					
17562	<10					
17563	<10					
17564	<10					
17565	<10					
17566	<10					
17567	<10					
17568	<10					
17569	<10					
17570	<10					
17571	<10					
17572	<10					
17573	<10					
17574	<10					
17575	<10					
17576	<10					
17577	<10					
17578	<10					
17579	<10					
17580	<10					
16873	<10					
16874	<10					
16875	<10					
16876	<10					
16877	<10					
*SS 16877	--					
16878	<10					
*Rep 17550	--					
*Rep 17579	--					
*Std AAL1	--					
Method	A102					
Units	ppm					
Detection Limit	10					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

ANALABS

Our reference : BU017027
Your reference : **128509**
Project code : Rock Samples
Report date : 04/11/99
Report status : Final
Page : 6 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Sb					
*Blk BLANK	--					
16879	<10					
16880	<10					
16881	<10					
16882	<10					
16883	<10					
16884	<10					
16885	<10					
16886	12					
16887	23					
16888	<10					
16889	<10					
16890	<10					
16891	<10					
16892	<10					
16893	<10					
16894	<10					
16895	<10					
16896	<10					
*Std BM15	--					
16897	<10					
16898	<10					
16899	<10					
16900	<10					
*Rep 16896	--					
*Std AAL1	--					
Method	A102					
Units	ppm					
Detection Limit	10					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

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ANALABS

Our reference : BU017027
Your reference : **128509**
Project code : Rock Samples
Report date : 04/11/99
Report status : Final
Page : 7 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Pb	Zn				
*Blk BLANK	N.A.	N.A.				
17501	N.A.	N.A.				
17502	N.A.	N.A.				
17503	N.A.	N.A.				
17504	N.A.	N.A.				
17505	N.A.	N.A.				
17506	N.A.	N.A.				
17507	N.A.	N.A.				
17508	N.A.	N.A.				
17509	N.A.	N.A.				
17510	N.A.	N.A.				
*SS 17510	N.A.	N.A.				
*Std 3024	N.A.	N.A.				
17511	N.A.	N.A.				
17512	N.A.	N.A.				
17513	N.A.	N.A.				
17514	N.A.	N.A.				
17515	N.A.	N.A.				
17516	N.A.	N.A.				
17517	N.A.	N.A.				
17518	N.A.	N.A.				
17519	N.A.	N.A.				
17520	N.A.	N.A.				
17521	N.A.	N.A.				
17522	N.A.	N.A.				
17523	N.A.	N.A.				
17524	N.A.	N.A.				
17525	N.A.	N.A.				
17526	N.A.	N.A.				
17527	N.A.	N.A.				
17528	N.A.	N.A.				
17529	N.A.	N.A.				
17530	N.A.	N.A.				
17531	1.40	0.66				
17532	N.A.	N.A.				
17533	N.A.	N.A.				
17534	N.A.	N.A.				
17535	N.A.	N.A.				
*SS 17535	N.A.	N.A.				
17536	N.A.	N.A.				
17537	N.A.	N.A.				
17538	N.A.	N.A.				
17539	N.A.	N.A.				
17540	N.A.	N.A.				
17541	N.A.	N.A.				
17542	N.A.	N.A.				
*Rep 17505	N.A.	N.A.				
*Rep 17527	N.A.	N.A.				
*Std MGS3	N.A.	N.A.				
*Std MP1A	N.A.	N.A.				
Method	A103	A103				
Units	%	%				
Detection Limit	0.01	0.01				

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635225

ANALABS

Our reference : BU017027
Your reference : **128509**
Project code : Rock Samples
Report date : 04/11/99
Report status : Final
Page : 8 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Pb	Zn				
*Blk BLANK	N.A.	N.A.				
17543	N.A.	N.A.				
17544	N.A.	N.A.				
17545	N.A.	N.A.				
17546	N.A.	N.A.				
17547	N.A.	N.A.				
17548	N.A.	N.A.				
17549	N.A.	N.A.				
17550	N.A.	N.A.				
17551	N.A.	N.A.				
17552	N.A.	N.A.				
17553	N.A.	N.A.				
17554	N.A.	N.A.				
17555	N.A.	N.A.				
17556	N.A.	N.A.				
17557	N.A.	N.A.				
17558	N.A.	N.A.				
17559	N.A.	N.A.				
17560	N.A.	N.A.				
*SS 17560	N.A.	N.A.				
17561	N.A.	N.A.				
17562	N.A.	N.A.				
*Std 3024	N.A.	N.A.				
17563	N.A.	N.A.				
17564	N.A.	N.A.				
17565	N.A.	N.A.				
17566	N.A.	N.A.				
17567	N.A.	N.A.				
17568	N.A.	N.A.				
17569	N.A.	N.A.				
17570	N.A.	N.A.				
17571	N.A.	N.A.				
17572	N.A.	N.A.				
17573	N.A.	N.A.				
17574	N.A.	0.67				
17575	N.A.	0.79				
17576	N.A.	N.A.				
17577	N.A.	N.A.				
17578	N.A.	N.A.				
17579	N.A.	N.A.				
17580	N.A.	0.70				
16873	N.A.	N.A.				
16874	N.A.	N.A.				
16875	N.A.	N.A.				
16876	N.A.	N.A.				
16877	N.A.	N.A.				
*Rep 17565	N.A.	N.A.				
*Rep 17570	N.A.	N.A.				
*Std MGS3	N.A.	N.A.				
*Std MP1A	N.A.	N.A.				
Method	A103	A103				
Units	%	%				
Detection Limit	0.01	0.01				

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

ANALABS

Our reference : BU017027
Your reference : **128509**
Project code : Rock Samples
Report date : 04/11/99
Report status : Final
Page : 9 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Pb	Zn				
*Blk BLANK	N.A.	N.A.				
*SS 16877	N.A.	N.A.				
16878	N.A.	N.A.				
16879	N.A.	N.A.				
16880	N.A.	N.A.				
16881	N.A.	N.A.				
16882	N.A.	N.A.				
16883	N.A.	N.A.				
16884	N.A.	N.A.				
16885	N.A.	N.A.				
*Std 3024	N.A.	N.A.				
16886	N.A.	N.A.				
16887	N.A.	N.A.				
16888	N.A.	N.A.				
16889	N.A.	N.A.				
16890	N.A.	N.A.				
16891	N.A.	N.A.				
16892	N.A.	N.A.				
16893	N.A.	N.A.				
16894	N.A.	N.A.				
16895	N.A.	N.A.				
16896	N.A.	N.A.				
16897	N.A.	N.A.				
16898	N.A.	N.A.				
*Std MGS3	N.A.	N.A.				
16899	N.A.	N.A.				
16900	N.A.	N.A.				
*Rep 16891	N.A.	N.A.				
*Std MP1A	N.A.	N.A.				
Method	A103	A103				
Units	%	%				
Detection Limit	0.01	0.01				

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

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A N A L A B S

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

Our reference : BU017070
Your reference : **128512**
Project code : Rock Samples
Date received : 02/11/99
Date reported : 18/11/99

Lindsay Newnham
Managing Geologist

Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Number of pages of results : 9
Number of Samples : 120
First Sample : 17581
Last Sample : 17300

Invoice to:
Lindsay Newnham
Managing Geologist

Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Electronic Data Transmission :

Modem		Y 18/11/99
Facsimile		/ /
Disk Report	Y	/ /

Results to:

Results to:

Remarks :

Authorised by .....
On behalf of:

Rob Chapman
Laboratory Manager

The results in the following analytical report pertain to the samples provided to this laboratory for preparation and/or analysis as requested by the client.

635225

ANALABS

Our reference : BU017070
Your reference : 128512
Project code : Rock Samples
Report date : 18/11/99
Report status : Final
Page : 1 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Cu	Pb	Zn	Ag	As	Ni
*Blk BLANK	<2	<3	2	<1	<50	<3
17581	20	42	49	<1	<50	14
17582	23	11	38	<1	<50	43
17583	16	6	44	<1	<50	42
17584	31	5	29	<1	<50	36
17585	19	12	32	<1	<50	20
17586	37	17	50	<1	<50	47
17587	12	<3	25	<1	<50	40
17588	19	9	46	<1	<50	72
17589	10	21	26	<1	<50	46
17590	5	13	19	<1	<50	14
*SS 17590	4	14	20	<1	<50	15
17591	8	12	37	<1	<50	68
17592	6	5	30	<1	<50	63
17593	9	7	5	<1	<50	6
17594	9	7	28	<1	<50	72
17595	10	5	297	<1	145	456
17596	8	<3	121	<1	<50	2290
17597	8	<3	123	<1	<50	2870
*Std BM15	29	98	931	1	<50	10
17598	21	8	36	<1	<50	133
17599	31	22	58	<1	<50	78
17600	51	13	31	<1	<50	131
17201	13	8	22	<1	<50	27
17202	5	17	32	<1	<50	23
17203	5	<3	25	<1	<50	71
17204	4	<3	6	<1	<50	<3
17205	3	<3	8	<1	<50	<3
17206	14	95	10	<1	<50	6
17207	15	7	34	<1	<50	60
17208	8	10	44	<1	<50	40
17209	7	5	44	<1	<50	34
17210	8	12	59	<1	<50	41
17211	10	16	69	<1	<50	37
17212	13	16	61	<1	<50	49
17213	12	10	54	<1	<50	74
17214	14	11	54	<1	<50	74
17215	11	14	48	<1	<50	46
*SS 17215	10	12	46	<1	<50	42
17216	47	25	69	<1	<50	57
17217	38	3	47	<1	<50	46
17218	152	3	51	<1	<50	43
17219	10	<3	44	<1	<50	133
17220	9	<3	28	<1	<50	178
17221	4	7	11	<1	<50	4
17222	8	15	83	<1	<50	213
17223	42	49	133	<1	<50	181
*Rep 17590	7	15	18	<1	<50	15
*Rep 17223	40	49	128	<1	<50	176
*Std AAL1	150	484	1960	1	80	12
Method	A102	A102	A102	A102	A102	A102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	3	2	1	50	3

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

ANALABS

Our reference : BU017070
Your reference : **128512**
Project code : Rock Samples
Report date : 18/11/99
Report status : Final
Page : 2 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Cu	Pb	Zn	Ag	As	Ni
*Blk BLANK	<2	3	<2	<1	<50	<3
17224	3	<3	23	<1	<50	97
17225	6	8	33	<1	<50	56
17226	7	9	36	<1	<50	49
17227	7	8	35	<1	<50	37
17228	12	7	42	<1	<50	51
17229	5	10	45	<1	<50	46
17230	6	8	34	<1	<50	45
17231	29	39	187	<1	<50	305
17232	9	97	175	<1	<50	235
17233	7	25	449	<1	<50	281
17234	3	9	77	<1	<50	151
17235	10	20	87	<1	<50	74
17236	7	7	155	<1	<50	43
17237	6	4	56	<1	<50	40
17238	11	14	533	<1	<50	13
17239	65	<3	>5000	<1	<50	33
17240	9	<3	>5000	<1	<50	41
*SS 17240	8	<3	>5000	<1	<50	44
*Std BM15	29	89	978	<1	<50	5
17241	170	<3	>5000	<1	<50	40
17242	6	<3	190	<1	<50	<3
17243	33	4	76	<1	<50	42
17244	6	12	43	<1	<50	9
17245	5	7	121	<1	<50	<3
17246	3	9	27	<1	<50	<3
17247	3	12	33	<1	<50	12
17248	34	5	151	<1	<50	1885
17249	6	<3	67	<1	<50	648
17250	179	11	3120	<1	<50	135
17251	26	14	104	<1	<50	12
17252	50	36	60	<1	<50	26
17253	7	14	51	<1	<50	6
17254	36	3	157	<1	<50	4
17255	75	<3	168	<1	65	161
17256	164	<3	472	<1	<50	162
17257	32	7	165	<1	<50	74
17258	59	16	832	<1	<50	246
17259	1145	171	2880	4	245	180
17260	245	58	2050	2	125	4
17261	33	17	657	2	290	5
17262	130	26	1010	1	90	18
17263	33	10	106	<1	<50	6
17264	8	14	30	<1	<50	28
17265	16	5	68	<1	<50	4
*SS 17265	16	8	67	<1	<50	3
17266	6	<3	19	<1	<50	7
*Rep 17227	12	4	37	<1	<50	33
*Rep 17253	7	14	48	<1	<50	4
*Std AAL1	148	448	1990	1	80	9
Method	A102	A102	A102	A102	A102	A102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	3	2	1	50	3

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

ANALABS

Our reference : BU017070
Your reference : **128512**
Project code : Rock Samples
Report date : 18/11/99
Report status : Final
Page : 3 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Cu	Pb	Zn	Ag	As	Ni
*Blk BLANK	<2	<3	2	<1	<50	<3
17267	6	13	24	<1	<50	13
17268	152	8	1225	<1	<50	<3
17269	171	27	>5000	<1	60	18
17270	13	<3	78	<1	<50	8
17271	15	6	680	<1	95	12
17272	8	43	110	<1	<50	19
17273	38	<3	931	<1	<50	73
17274	36	<3	250	<1	<50	74
17275	54	<3	880	<1	60	79
17276	63	10	50	<1	<50	41
17277	130	9	36	<1	<50	37
17278	307	7	45	<1	<50	27
17279	131	3	30	<1	<50	27
17280	163	20	29	<1	<50	34
17281	212	4	27	<1	<50	39
17282	188	3	25	<1	<50	37
17283	124	6	25	<1	<50	40
17284	90	3	34	<1	<50	41
*Std BM15	30	96	990	<1	<50	7
17285	16	15	83	<1	<50	173
17286	82	<3	44	<1	<50	58
17287	36	<3	64	<1	<50	35
17288	214	4	141	<1	<50	70
17289	132	<3	86	<1	<50	44
17290	43	<3	82	<1	<50	18
*SS 17290	35	<3	80	<1	<50	17
17291	53	<3	31	<1	<50	17
17292	133	12	53	<1	<50	19
17293	142	<3	31	<1	<50	30
17294	115	<3	25	<1	80	35
17295	18	<3	42	<1	<50	18
17296	15	4	36	<1	<50	52
17297	19	11	64	<1	<50	77
17298	38	20	51	<1	<50	50
17299	13	21	51	<1	<50	49
17300	211	3	46	<1	<50	48
*Rep 17287	35	<3	68	<1	<50	34
*Rep 17293	140	<3	31	<1	<50	30
*Std AAL1	146	427	1910	1	80	11
Method	A102	A102	A102	A102	A102	A102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	3	2	1	50	3

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635231

ANALABS

Our reference : BU017070
Your reference : **128512**
Project code : Rock Samples
Report date : 18/11/99
Report status : Final
Page : 4 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Sb					
*Blk BLANK	< 10					
17581	< 10					
17582	< 10					
17583	< 10					
17584	< 10					
17585	< 10					
17586	< 10					
17587	< 10					
17588	< 10					
17589	< 10					
17590	< 10					
*SS 17590	< 10					
17591	< 10					
17592	< 10					
17593	< 10					
17594	< 10					
17595	< 10					
17596	< 10					
17597	< 10					
*Std BM15	--					
17598	< 10					
17599	< 10					
17600	13					
17201	< 10					
17202	< 10					
17203	< 10					
17204	< 10					
17205	< 10					
17206	< 10					
17207	< 10					
17208	< 10					
17209	< 10					
17210	< 10					
17211	< 10					
17212	< 10					
17213	< 10					
17214	< 10					
17215	< 10					
*SS 17215	< 10					
17216	< 10					
17217	< 10					
17218	< 10					
17219	< 10					
17220	< 10					
17221	< 10					
17222	< 10					
17223	< 10					
*Rep 17590	< 10					
*Rep 17223	< 10					
*Std AAL1	--					
Method	A102					
Units	ppm					
Detection Limit	10					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635232

ANALABS

Our reference : BU017070
Your reference : 128512
Project code : Rock Samples
Report date : 18/11/99
Report status : Final
Page : 5 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Sb					
*Blk BLANK	<10					
17224	<10					
17225	<10					
17226	<10					
17227	<10					
17228	<10					
17229	<10					
17230	<10					
17231	12					
17232	<10					
17233	<10					
17234	11					
17235	14					
17236	<10					
17237	14					
17238	<10					
17239	<10					
17240	<10					
*SS 17240	<10					
*Std BM15	--					
17241	<10					
17242	<10					
17243	<10					
17244	<10					
17245	<10					
17246	<10					
17247	<10					
17248	<10					
17249	<10					
17250	<10					
17251	<10					
17252	<10					
17253	<10					
17254	<10					
17255	<10					
17256	<10					
17257	<10					
17258	<10					
17259	<10					
17260	<10					
17261	<10					
17262	<10					
17263	<10					
17264	<10					
17265	<10					
*SS 17265	<10					
17266	<10					
*Rep 17227	<10					
*Rep 17253	<10					
*Std AAL1	--					
Method	A102					
Units	ppm					
Detection Limit	10					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635233

ANALABS

Our reference : BU017070
Your reference : 128512
Project code : Rock Samples
Report date : 18/11/99
Report status : Final
Page : 6 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Sb					
*Blk BLANK	< 10					
17267	< 10					
17268	< 10					
17269	< 10					
17270	< 10					
17271	< 10					
17272	< 10					
17273	< 10					
17274	< 10					
17275	< 10					
17276	< 10					
17277	< 10					
17278	< 10					
17279	< 10					
17280	< 10					
17281	< 10					
17282	< 10					
17283	< 10					
17284	< 10					
*Std BM15	--					
17285	< 10					
17286	< 10					
17287	< 10					
17288	< 10					
17289	< 10					
17290	< 10					
*SS 17290	< 10					
17291	< 10					
17292	< 10					
17293	11					
17294	11					
17295	< 10					
17296	18					
17297	< 10					
17298	< 10					
17299	< 10					
17300	< 10					
*Rep 17287	< 10					
*Rep 17293	< 10					
*Std AAL1	--					
Method	A102					
Units	ppm					
Detection Limit	10					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635234

ANALABS

Our reference : BU017070
Your reference : 128512
Project code : Rock Samples
Report date : 18/11/99
Report status : Final
Page : 7 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Zn					
*Blk BLANK	N.A.					
17581	N.A.					
17582	N.A.					
17583	N.A.					
17584	N.A.					
17585	N.A.					
17586	N.A.					
17587	N.A.					
17588	N.A.					
17589	N.A.					
17590	N.A.					
*SS 17590	N.A.					
17591	N.A.					
17592	N.A.					
17593	N.A.					
17594	N.A.					
17595	N.A.					
17596	N.A.					
17597	N.A.					
17598	N.A.					
17599	N.A.					
*Std 3024	N.A.					
17600	N.A.					
17201	N.A.					
17202	N.A.					
17203	N.A.					
17204	N.A.					
*Std MGS3	N.A.					
17205	N.A.					
17206	N.A.					
17207	N.A.					
17208	N.A.					
17209	N.A.					
17210	N.A.					
17211	N.A.					
17212	N.A.					
17213	N.A.					
17214	N.A.					
17215	N.A.					
*SS 17215	N.A.					
17216	N.A.					
17217	N.A.					
17218	N.A.					
17219	N.A.					
17220	N.A.					
17221	N.A.					
17222	N.A.					
*Rep 17215	N.A.					
*Rep 17220	N.A.					
*Std MP1A	N.A.					
Method	A103					
Units	%					
Detection Limit	0.01					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

ANALABS

Our reference : BU017070
Your reference : 128512
Project code : Rock Samples
Report date : 18/11/99
Report status : Final
Page : 8 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Zn					
*Blk BLANK	N.A.					
17223	N.A.					
*Std 3024	N.A.					
17224	N.A.					
17225	N.A.					
17226	N.A.					
17227	N.A.					
17228	N.A.					
17229	N.A.					
17230	N.A.					
17231	N.A.					
17232	N.A.					
*Std MGS3	N.A.					
17233	N.A.					
17234	N.A.					
17235	N.A.					
17236	N.A.					
17237	N.A.					
17238	N.A.					
17239	1.74					
17240	0.63					
*SS 17240	N.A.					
17241	4.10					
17242	N.A.					
17243	N.A.					
17244	N.A.					
17245	N.A.					
17246	N.A.					
17247	N.A.					
17248	N.A.					
17249	N.A.					
17250	N.A.					
17251	N.A.					
17252	N.A.					
17253	N.A.					
17254	N.A.					
17255	N.A.					
17256	N.A.					
17257	N.A.					
17258	N.A.					
17259	N.A.					
17260	N.A.					
17261	N.A.					
17262	N.A.					
17263	N.A.					
17264	N.A.					
17265	N.A.					
*Rep 17244	N.A.					
*Rep 17260	N.A.					
*Std MP1A	N.A.					
Method	A103					
Units	%					
Detection Limit	0.01					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635286

ANALABS

Our reference : BU017070
Your reference : **128512**
Project code : Rock Samples
Report date : 18/11/99
Report status : Final
Page : 9 of 9

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Zn					
*Blk BLANK	N.A.					
*SS 17265	N.A.					
17266	N.A.					
17267	N.A.					
17268	N.A.					
17269	0.83					
17270	N.A.					
17271	N.A.					
*Std 3024	N.A.					
17272	N.A.					
17273	N.A.					
17274	N.A.					
17275	N.A.					
17276	N.A.					
17277	N.A.					
17278	N.A.					
17279	N.A.					
17280	N.A.					
17281	N.A.					
17282	N.A.					
17283	N.A.					
17284	N.A.					
17285	N.A.					
17286	N.A.					
17287	N.A.					
17288	N.A.					
17289	N.A.					
17290	N.A.					
*Std MGS3	N.A.					
*SS 17290	N.A.					
17291	N.A.					
17292	N.A.					
17293	N.A.					
17294	N.A.					
17295	N.A.					
17296	N.A.					
17297	N.A.					
17298	N.A.					
17299	N.A.					
17300	N.A.					
*Rep 17270	N.A.					
*Rep 17293	N.A.					
*Std MP1A	N.A.					
Method	A103					
Units	%					
Detection Limit	0.01					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

APPENDIX 4

ASSAY RESULTS OF DRILL CORE RE-SAMPLING

635238

A N A L A B S

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

Our reference : BU017159
Your reference : **143603**
Project code : 991103
Date received : 22/11/99
Date reported : 07/12/99

Mick McKeown

McKeown Mining Pty Ltd
Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Number of pages of results : 2
Number of Samples : 71
First Sample : SY010 336.0-337.5
Last Sample : SY014 429.0-429.9

Invoice to:
Mick McKeown

McKeown Mining Pty Ltd
Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Electronic Data Transmission :
Modem Y 07/12/99
Facsimile / /
Disk Report Y / /

Results to:

Results to:

Remarks :

Authorised by .....
On behalf of:

Rob Chapman
Laboratory Manager

The results in the following analytical report pertain to the samples provided to this laboratory for preparation and/or analysis as requested by the client.

635239

ANALABS

Our reference : BU017159
Your reference : **143603**
Project code : 991103
Report date : 07/12/99
Report status : Final
Page : 1 of 2

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Ni					
SY010 336.0-337.5	34					
SY010 512.3-513.5	38					
SY010 513.5-514.5	<25					
SY010 514.5-515.5	<25					
SY010 515.5-516	<25					
SY010 516-517	<25					
SY010 517-518	<25					
SY010 518-519	28					
SY010 547.4-548.4	<25					
SY010 548.4-550.0	<25					
SY010 550-551	<25					
SY010 551-552	28					
SY010 552-553	<25					
SY010 553-554	30					
SY010 554-555	36					
SY010 555-556	42					
SY010 556-557	<25					
SY010 557-558	<25					
SY010 558-559	<25					
SY010 559-560	<25					
SY010 560-561	<25					
SY010 561-562	<25					
SY010 562-563	<25					
SY010 563-564	<25					
SY010 564-565	<25					
SY010 565-566	<25					
SY010 566-567.8	<25					
SY010 570-571	<25					
SY010 571-572	<25					
SY010 572-573	32					
SY010 573-574	<25					
SY010 574-575	<25					
SY014 391-392	<25					
SY014 392-393	<25					
SY014 393-394	<25					
SY014 394-395	<25					
SY014 395-396	<25					
SY014 396-397	<25					
SY014 397-398	<25					
SY014 398-399	<25					
SY014 399-400	<25					
SY014 400-401	<25					
SY014 401-402	<25					
SY014 402-403	<25					
SY014 403-404	<25					
*Rep 010 512.3-513.5	28					
*Rep 010 514.5-515.5	<25					
*Blk BLANK	<25					
*Std SU 1A	1.11%					
*Std GT2A	4550					
Method	I105					
Units	ppm					
Detection Limit	25					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635240

ANALABS

Our reference : BU017159
Your reference : **143603**
Project code : 991103
Report date : 07/12/99
Report status : Final
Page : 2 of 2

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Ni					
SY014 404-405	34					
SY014 405-406	40					
SY014 406-407	48					
SY014 407-408	40					
SY014 408-409	26					
SY014 409-410	<25					
SY014 410-411	<25					
SY014 411-412	<25					
SY014 412-413	<25					
SY014 413-414	<25					
SY014 414-415	<25					
SY014 415-416	<25					
SY014 416-417	<25					
SY014 417-418	<25					
SY014 418-419	<25					
SY014 419-420	<25					
SY014 420-421	<25					
SY014 421-422	<25					
SY014 422-423	<25					
SY014 423-424	<25					
SY014 424-425	<25					
SY014 425-426	<25					
SY014 426-427	<25					
SY014 427-428	<25					
SY014 428-429	<25					
SY014 429.0-429.9	<25					
*SS 010 547.4-548.4	<25					
*SS SY014 392-393	<25					
*SS SY014 417-418	<25					
*Rep SY014 417-418	<25					
*Rep SY014 418-419	<25					
*Blk BLANK	<25					
*Std SU_1A	1.16%					
*Std BM_44	1.35%					
Method	I105					
Units	ppm					
Detection Limit	25					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635241

A N A L A B S

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

Our reference : BU017108
Your reference : **143601**
Project code : 991101
Date received : 09/11/99
Date reported : 03/12/99

Mick McKeown

McKeown Mining Pty Ltd
Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Number of pages of results : 7
Number of Samples : 296
First Sample : TLC2 24.4-26.4
Last Sample : TLC14 156.8-158.0

Invoice to:
Mick McKeown

McKeown Mining Pty Ltd
Allegiance Mining NL
Newnham Exploration and Mining Service
PO Box 132
RIVERSIDE
TAS 7250

Electronic Data Transmission :

Modem		Y 03/12/99
Facsimile		/ /
Disk Report	Y	/ /

Results to:

Results to:

Remarks :

Authorised by .....
On behalf of:

Rob Chapman
Laboratory Manager

The results in the following analytical report pertain to the samples provided to this laboratory for preparation and/or analysis as requested by the client.

635242

ANALABS

Our reference : BU017108
Your reference : 143601
Project code : 991101
Report date : 03/12/99
Report status : Final
Page : 1 of 7

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Ni					
TLC2 24.4-26.4	<25					
TLC2 26.4-28.1	30					
TLC2 36.5-37.2	<25					
TLC2 46.5-48.5	100					
TLC2 48.5-50.5	155					
TLC2 50.5-52.5	130					
TLC2 52.5-54.5	120					
TLC2 54.5-56.5	145					
TLC2 56.5-58.5	125					
TLC2 58.5-60.5	115					
TLC2 60.5-62.5	92					
TLC2 62.5-64.5	105					
TLC2 64.5-66.4	52					
TLC2 66.4-68.4	150					
TLC2 68.4-70.4	160					
TLC2 70.4-71.6	88					
TLC2 71.6-72.4	46					
TLC2 80.4-81.5	46					
TLC2 96.0-97.1	80					
TLC2 101.2-103.7	<25					
TLC2 103.7-104.7	<25					
TLC3 16.1-16.4	46					
TLC3 16.4-18.1	82					
TLC3 18.1-19.0	88					
TLC3 47.4-49.0	42					
TLC3 49.0-49.8	28					
TLC3 49.8-51.4	30					
TLC3 51.4-54.0	26					
TLC3 54.0-55.2	190					
TLC3 55.2-56.4	98					
TLC3 56.4-57.2	<25					
TLC3 57.2-57.8	120					
TLC3 57.8-60.0	48					
TLC3 60.0-61.3	105					
TLC3 61.3-62.0	<25					
TLC4 55.4-56.1	54					
TLC4 56.1-56.9	115					
TLC4 68.0-68.9	30					
TLC4 68.9-69.6	120					
TLC4 69.6-70.1	78					
TLC4 70.1-71.7	28					
TLC4 71.7-73.0	26					
TLC4 73.0-73.4	<25					
TLC4 73.4-75.1	44					
TLC4 75.1-76.2	60					
*Rep TLC2 66.4-68.4	44					
*Rep TLC3 55.2-56.4	66					
*Blk BLANK	<25					
*Std SU 1A	1.25%					
*Std GT2A	4580					
Method	I105					
Units	ppm					
Detection Limit	25					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635243

ANALABS

Our reference : BU017108
Your reference : 143601
Project code : 991101
Report date : 03/12/99
Report status : Final
Page : 2 of 7

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Ni					
TLC4 76.2-77.5	155					
TLC4 77.5-78.3	140					
TLC4 78.3-78.9	46					
TLC4 78.9-79.4	<25					
TLC4 79.4-80.2	<25					
TLC4 80.2-80.9	32					
TLC4 80.9-82.3	<25					
TLC4 89.9-91.3	<25					
TLC4 98.0-99.8	98					
TLC4 99.8-101.3	44					
TLC4 101.3-102.7	<25					
TLC4 113.6-114.3	46					
TLC6 0.3-1.6	<25					
TLC6 1.6-2.1	48					
TLC6 2.1-4.3	28					
TLC6 4.3-5.9	<25					
TLC6 5.9-7.2	40					
TLC6 7.2-8.4	28					
TLC6 26.2-27.1	32					
TLC6 27.1-27.9	48					
TLC6 27.9-29.6	42					
TLC6 29.6-30.9	74					
TLC6 30.9-32.3	64					
TLC6 32.3-33.2	42					
TLC6 33.2-34.3	50					
TLC6 34.3-35.8	60					
TLC6 35.8-36.7	32					
TLC6 36.7-38.2	64					
TLC6 38.2-39.6	38					
TLC6 39.6-40.6	56					
TLC6 40.6-42.0	28					
TLC6 42.0-42.9	52					
TLC6 42.9-44.5	30					
TLC6 44.5-45.2	68					
TLC6 45.2-46.4	32					
TLC6 46.4-48.1	34					
TLC6 48.1-49.1	54					
TLC6 49.1-50.1	64					
TLC6 62.7-64.0	115					
TLC6 64.0-65.1	78					
TLC6 65.1-65.9	76					
TLC6 65.9-66.4	36					
TLC6 66.4-67.9	30					
TLC6 67.9-69.7	78					
TLC6 69.7-71.2	<25					
*Rep TLC4 76.2-77.5	56					
*Rep TLC6 4.3-5.9	<25					
*Blk BLANK	<25					
*Std SU_1A	1.14%					
*Std BM_44	1.25%					
Method	I105					
Units	ppm					
Detection Limit	25					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635244

ANALABS

Our reference : BU017108
Your reference : **143601**
Project code : 991101
Report date : 03/12/99
Report status : Final
Page : 3 of 7

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Ni					
TLC6 71.2-72.5	26					
TLC6 72.5-72.9	<25					
TLC6 72.9-74.0	74					
TLC6 74.0-74.7	38					
TLC6 79.8-81.1	40					
TLC6 81.1-82.1	<25					
TLC6 82.1-83.6	<25					
TLC6 83.6-85.1	38					
TLC6 85.1-86.9	<25					
TLC6 86.9-88.3	<25					
TLC6 88.3-89.4	<25					
TLC6 89.4-90.5	<25					
TLC6 103.0-103.6	<25					
TLC6 103.6-104.3	<25					
TLC6 104.3-105.0	<25					
TLC6 105.0-106.0	<25					
TLC6 164.4-166.2	<25					
TLC6 166.2-167.0	<25					
TLC6 167.0-168.2	30					
TLC6 168.2-169.2	<25					
TLC8 53.6-54.9	34					
TLC8 54.9-55.6	<25					
TLC8 55.6-56.5	28					
TLC8 56.5-58.0	<25					
TLC8 58.0-58.9	<25					
TLC8 58.9-60.1	<25					
TLC8 60.1-61.5	<25					
TLC8 61.5-62.4	<25					
TLC8 62.4-63.1	28					
TLC8 63.1-64.6	32					
TLC8 64.6-65.0	<25					
TLC8 65.0-65.3	<25					
TLC8 81.3-82.0	<25					
TLC8 82.0-82.6	<25					
TLC8 82.6-83.3	<25					
TLC8 83.3-84.2	<25					
TLC8 84.2-85.7	<25					
TLC9 55.1-56.6	<25					
TLC9 56.6-58.1	<25					
TLC9 58.1-59.1	<25					
TLC9 59.1-60.5	<25					
TLC9 60.5-61.9	<25					
TLC9 61.9-62.8	<25					
TLC9 62.8-64.1	<25					
TLC9 64.1-64.9	82					
*Rep TLC6 79.8-81.1	60					
*Rep TLC8 62.4-63.1	92					
*Blk BLANK	<25					
*Std SU 1A	1.24%					
*Std MHO	5660					
Method	I105					
Units	ppm					
Detection Limit	25					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

635245

ANALABS

Our reference : BU017108
Your reference : **143601**
Project code : 991101
Report date : 03/12/99
Report status : Final
Page : 4 of 7

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Ni					
TLC9 64.9-65.9	48					
TLC9 65.9-67.2	<25					
TLC9 67.2-67.7	<25					
TLC9 67.7-68.1	30					
TLC9 68.1-69.6	28					
TLC9 69.6-70.6	<25					
TLC9 70.6-71.7	<25					
TLC9 71.7-72.0	<25					
TLC9 72.0-72.6	<25					
TLC9 72.6-73.9	32					
TLC9 73.9-75.5	36					
TLC9 75.5-77.0	30					
TLC9 77.0-78.2	28					
TLC9 78.2-79.5	<25					
TLC9 79.5-80.6	40					
TLC9 80.6-82.1	<25					
TLC9 82.1-83.4	36					
TLC9 83.4-84.4	<25					
TLC9 84.4-85.2	<25					
TLC9 85.2-86.3	40					
TLC9 96.3-98.0	36					
TLC9 98.0-99.9	46					
TLC9 99.9-101.2	30					
TLC9 101.2-101.9	<25					
TLC9 101.9-102.6	<25					
TLC9 102.6-104.2	36					
TLC9 104.2-104.8	36					
TLC9 104.8-105.7	32					
TLC9 110.2-112.0	<25					
TLC9 112.0-112.7	<25					
TLC9 112.7-113.8	36					
TLC9 113.8-114.8	<25					
TLC9 114.8-115.4	<25					
TLC9 137.4-138.7	<25					
TLC9 138.7-139.8	<25					
TLC9 139.8-141.3	<25					
TLC9 141.3-142.1	32					
TLC10 41.4-42.5	<25					
TLC10 42.5-43.2	<25					
TLC10 43.2-44.6	<25					
TLC10 44.6-46.1	<25					
TLC10 46.1-47.2	<25					
TLC10 58.9-59.4	<25					
TLC10 59.4-59.8	30					
TLC10 76.2-77.4	<25					
*Rep TLC9 82.1-83.4	30					
*Rep TLC9 98.0-99.9	38					
*Blk BLANK	<25					
*Std SU 1A	1.18%					
*Std GT2A	4430					
Method	I105					
Units	ppm					
Detection Limit	25					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

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ANALABS

Our reference : BU017108
Your reference : 143601
Project code : 991101
Report date : 03/12/99
Report status : Final
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Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Ni					
TLC10 77.4-78.9	<25					
TLC10 78.9-80.0	48					
TLC10 80.0-80.4	<25					
TLC10 80.4-81.9	28					
TLC10 94.3-94.9	<25					
TLC10 94.9-96.4	<25					
TLC10 96.4-97.5	<25					
TLC10 102.2-103.6	46					
TLC10 103.6-105.2	44					
TLC10 105.2-106.5	34					
TLC11 49.0-49.4	32					
TLC11 49.4-50.2	28					
TLC11 50.2-50.8	30					
TLC11 67.4-68.8	<25					
TLC11 68.8-69.5	<25					
TLC11 69.5-70.2	<25					
TLC11 70.2-70.8	30					
TLC11 70.8-71.2	<25					
TLC11 71.2-72.7	<25					
TLC11 72.7-74.1	<25					
TLC11 74.1-75.5	<25					
TLC11 75.5-76.3	<25					
TLC11 76.3-76.7	<25					
TLC11 76.7-77.1	<25					
TLC11 77.1-77.6	<25					
TLC11 77.6-78.3	28					
TLC11 78.3-79.7	44					
TLC11 79.7-81.2	32					
TLC11 81.2-82.6	<25					
TLC11 82.6-83.3	<25					
TLC11 83.3-83.9	<25					
TLC11 83.9-84.8	<25					
TLC11 84.8-86.2	<25					
TLC11 86.2-87.6	28					
TLC11 87.6-89.0	<25					
TLC12 46.5-48.0	<25					
TLC12 48.0-49.5	<25					
TLC12 49.5-49.9	<25					
TLC12 49.9-50.3	<25					
TLC12 50.3-51.1	<25					
TLC12 73.9-75.3	30					
TLC12 75.3-76.9	<25					
TLC12 76.9-78.2	38					
TLC12 78.2-79.7	<25					
TLC12 79.7-81.1	28					
*Rep TLC10 77.4-78.9	<25					
*Rep TLC10 80.0-80.4	52					
*Blk BLANK	<25					
*Std SU_1A	1.18%					
*Std BM_44	1.27%					
Method	I105					
Units	ppm					
Detection Limit	25					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

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ANALABS

Our reference : BU017108
Your reference : **143601**
Project code : 991101
Report date : 03/12/99
Report status : Final
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Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Ni					
TLC12 81.1-82.6	26					
TLC12 82.6-84.1	<25					
TLC12 84.1-85.5	<25					
TLC12 85.5-87.0	<25					
TLC12 87.0-88.8	<25					
TLC12 88.8-90.2	<25					
TLC12 90.2-91.7	<25					
TLC12 91.7-93.2	<25					
TLC12 93.2-94.2	<25					
TLC12 94.2-95.6	<25					
TLC12 95.6-96.6	<25					
TLC12 96.6-97.2	<25					
TLC13 59.0-61.0	46					
TLC13 61.0-61.8	88					
TLC13 61.8-62.5	60					
TLC13 62.5-63.0	70					
TLC13 63.0-64.1	40					
TLC13 64.1-65.1	70					
TLC13 65.1-65.9	<25					
TLC13 65.9-66.8	<25					
TLC13 66.8-67.2	<25					
TLC13 67.2-67.9	36					
TLC13 67.9-68.7	52					
TLC13 68.7-69.8	<25					
TLC13 69.8-71.4	280					
TLC13 71.4-71.9	220					
TLC13 71.9-73.0	48					
TLC13 73.0-73.4	44					
TLC13 73.4-74.1	<25					
TLC13 74.1-75.3	<25					
TLC14 57.6-58.3	26					
TLC14 58.3-59.1	<25					
TLC14 59.1-60.4	<25					
TLC14 60.4-60.9	<25					
TLC14 74.4-75.2	52					
TLC14 75.2-75.8	<25					
TLC14 75.8-76.9	<25					
TLC14 76.9-77.3	40					
TLC14 77.3-77.8	26					
TLC14 77.8-78.5	<25					
TLC14 78.5-80.0	<25					
TLC14 80.0-81.5	<25					
TLC14 81.5-82.5	255					
TLC14 82.5-84.5	395					
TLC14 84.5-85.4	26					
*Rep TLC12 91.7-93.2	<25					
*Rep TLC13 59.0-61.0	52					
*Blk BLANK	<25					
*Std SU 1A	1.20%					
*Std MHO	5920					
Method	1105					
Units	ppm					
Detection Limit	25					

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

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ANALABS

Our reference : BU017108
Your reference : **143601**
Project code : 991101
Report date : 03/12/99
Report status : Final
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Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Ni					
TLC14 85.4-86.9	38					
TLC14 86.9-87.7	<25					
TLC14 87.7-88.6	<25					
TLC14 88.6-89.6	<25					
TLC14 89.6-91.1	<25					
TLC14 91.1-92.5	<25					
TLC14 92.5-93.9	<25					
TLC14 93.9-95.0	<25					
TLC14 103.6-104.0	<25					
TLC14 104.0-105.1	<25					
TLC14 105.1-106.7	<25					
TLC14 106.7-108.1	<25					
TLC14 114.5-115.7	32					
TLC14 115.7-116.4	46					
TLC14 127.5-128.1	<25					
TLC14 128.1-129.6	<25					
TLC14 129.6-130.3	<25					
TLC14 130.3-131.7	<25					
TLC14 131.7-133.2	30					
TLC14 133.2-134.2	62					
TLC14 134.2-134.9	<25					
TLC14 134.9-135.5	84					
TLC14 154.2-155.0	26					
TLC14 155.0-156.1	<25					
TLC14 156.1-156.8	<25					
TLC14 156.8-158.0	<25					
*SS TLC2 56.5-58.5	135					
*SS TLC3 60.0-61.3	36					
*SS TLC6 1.6-2.1	34					
*SS TLC6 62.7-64.0	64					
*SS LC6 167.0-168.2	32					
*SS TLC9 62.8-64.1	<25					
*SS LC9 101.2-101.9	<25					
*SS TLC10 80.4-81.9	<25					
*SS TLC11 81.2-82.6	<25					
*SS TLC12 93.2-94.2	<25					
*SS TLC14 60.4-60.9	44					
*SS C14 115.7-116.4	58					
*Rep TLC2 56.5-58.5	140					
*Rep LC9 101.2-101.9	<25					
*Blk BLANK	<25					
*Std SU 1A	1.18%					
*Std GT2A	4560					
Method	1105					
Units	ppm					
Detection Limit	25					

Notes N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received