184001

R.L. 8810 MOINA - ANNUAL REPORT
for the period to 21.10.94 - TASMANIA

Author: D.J. Borton
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from D Borton of Acacia requires Restricted file status for this report
Go 24/11/94

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1. INTRODUCTION

R.L. 8810 was granted to the Shell Company of Australia Ltd and CRA Exploration on 21.10.88 for a 3 year term. It was renewed for a further 3 year term until 20.10.94 in 1991.

The licence covers a 2km^2 area of which the greater part is Crown Land. A 0.6km^2 segment is private land. The title was granted to cover probably Australia's largest resource of fluorite-tin and tungsten bearing wrigglite skarn comprising 26.5Mt of 18% CaF_2, 0.1% Sn 0.1% W and some significant zinc intersections for which a pre resource figure of 1 million tonnes of 8% Zn had been indicated with some interesting gold intersections.

During the second 3 year term no work has been conducted on the fluorite-tin-tungsten resource other than very limited market review. However, east of the Bismuth Creek fault the zinc pre resource and associated gold mineralisation was attractive to Goldstream Mining NL and Titan Resources NL who entered into a joint venture agreement with the holders commencing on the 9th September 1993.

Under the terms of the agreement Shell and CRA will each dilute to a 25% equity and Goldstream and Titan will each earn a 25% equity by the expenditure of $600,000 over the period to 9th September 1998. Titan and Goldstream were committed under the agreement to spend $75,000 by 9th September 1994. Goldstream and Titan seek to test the Zinc, Gold potential of skarns adjacent to the east of the Bismuth Creek and Hugo's Faults.

2. WORK CONDUCTED - MOINA JOINT VENTURE

As indicated above no work has been conducted during the term on the fluorite resource. The annual report of Randell JP No. 08.5593 Sept 1991 reviewed resource, marketing and financial implications of the project. Because there has been no field work, clearly the resource data has not changed.

On the marketing front the 1994 Metals and Minerals Annual Review States "World Fluorspar output in assessed to have declined slightly to 3.83Mt during 1993 from a 1992 total of 3.88Mt thus extending a drop from the 1989 record of 5.48Mt and keeping the amount at its lowest since 1968..... The further slight decline in output reflected a continuation of relatively low and soft demand for acidspar ..... coupled with a similar situation about requirements for metallurgical grade fluorspar. Thus highly competitive business conditions continued to prevail, especially as record volumes of material at unrealistic low prices come on the export market from China". Under OUTLOOK they report "No major improvement in total world fluorspar consumption is expected in the immediate future".

Because of this scenario there has been no formal review of the financial aspects of the project.

3. WORK CONDUCTED - HUGO J.V.

Work on the 1Mt zinc pre resource commenced in April 1994 and has been supervised by Lyndsay Newnham of Newnham Exploration and Mining Services on behalf of Goldstream Mining NL and Titan Resources NL. 4 diamond drill holes have tested the zinc and associated gold bearing skarns.

Details of the work conducted and the results achieved and expenditure are presented as Appendix I.

4. EXPENDITURE - MOINA J.V. 1.7.93 to 31.8.93

Staffing and support costs	758
General administration	76
Total	$834

5. PROPOSED WORK

At the time of writing the Moina J.V. partners wished to extend the Retention Licence for a further 3 year term in order to retain the fluorite resource and to continue review of the market for and development opportunities for fluorite. In the event that development opportunities were seen to be favourable the resource would need to be converted to a reserve with substantial additional drilling. In addition metallurgical test work would need to be conducted.

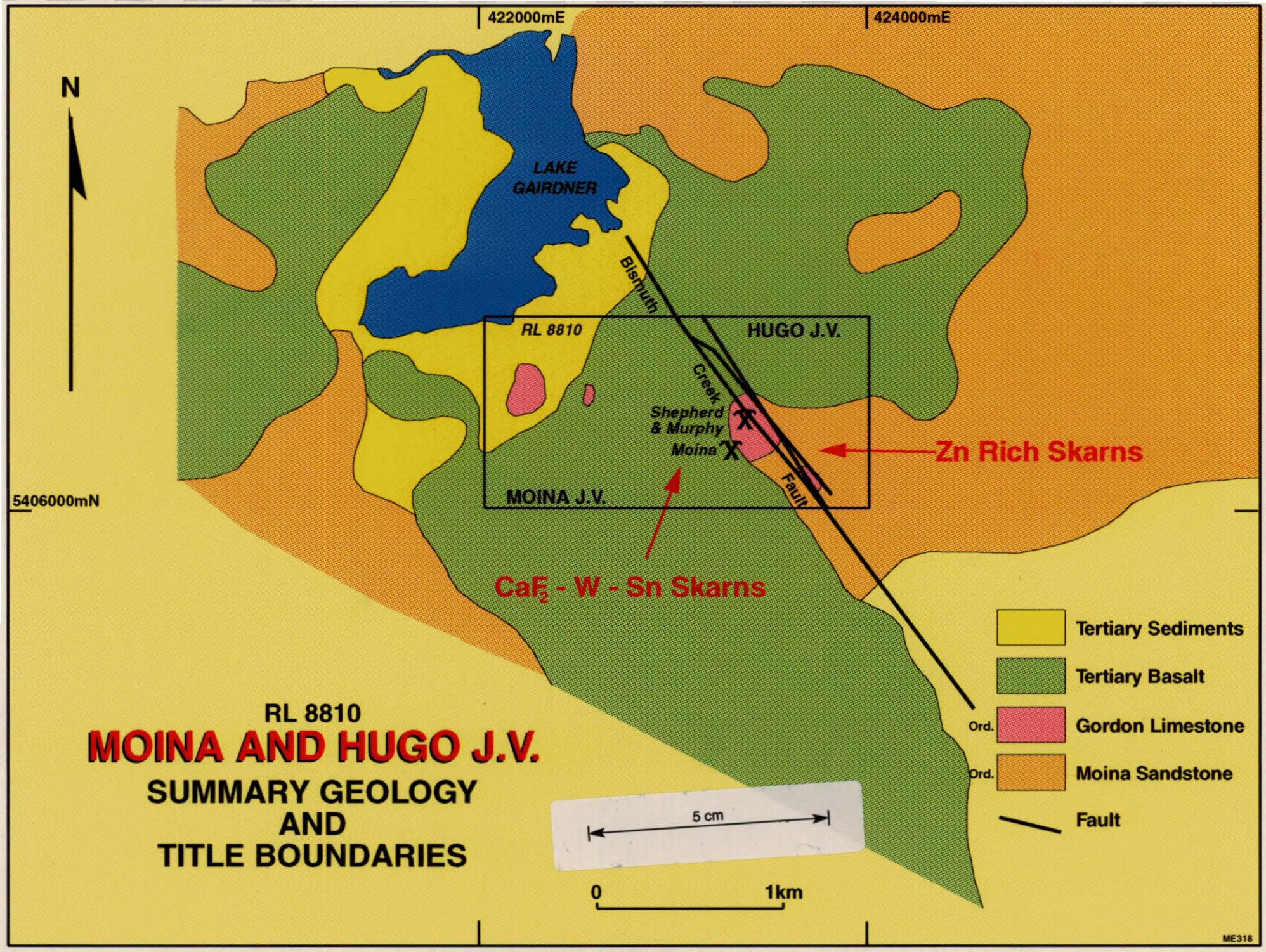
On the Hugo JV at the time of writing Lynsday Newnham (on behalf of Goldstream and Titan), was compiling geological sections and results for the 4 hole diamond drill programme conducted during mid 1994 and aimed at further testing the Zn-Au anomalous skarns east of the Bismuth Creek Fault.

It is highly likely that this drill programme will require additional follow up which would entail further drilling. Proposed work is presented on Appendix 1.

6. REFERENCES

Randell, J.P. Sept 1991 Moina Joint Venture R.L. 8810. 1991 Annual Status Report

Hodge, B.L. 1994 Fluorspar in "Metals and Minerals Annual Review 1994" p. 101-102.



RL 8810

MOINA AND HUGO J.V.

SUMMARY GEOLOGY AND TITLE BOUNDARIES

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18466

BILLITON AUSTRALIA - METALS INFORMATION UNIT

MIUREP DATA INPUT SHEET

TITLE
R.L. 8810 - MOINA ANNUAL REPORT FOR THE PERIOD TO 21/10/94

DATE 20/9/94 (Publication date in Format dd/mm/yy)

AUTHOR
D.J. BORTON

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PROSPECT/PROJECT
MOINA/HUGO JOINT VENTURE

KEYWORDS
FLUORITE, SKARN, ZINC, GOLD, TIN, TUNGSTEN

STATE
TASMANIA

REGION
WEST COAST

SHEET NAME (1:250,000)
BURNIE

REPORT NUMBER
08.7292

NEWNHAM EXPLORATION & MINING SERVICES

~~EL 20/92~~ & RL 8810

MOINA AREA

REPORT ON DRILLING PROGRAM

May - July 1994
Attachment to Annual Report

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12 SEPTEMBER 1994

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1. SUMMARY

RL 8810 and the surrounding EL 20/92 are underlain by a sequence of Ordovician sediments, extensively folded and faulted and then intruded by the Devonian Dalcoath Granite. The granite outcrops east of Moina and forms a long subsurface spine to the west.

Sediments above this spine were intensely altered by fluorine and iron rich metasomatic fluids, resulting in wide spread formation of skarned limestones and silicification-pyritisation of sandstones and conglomerates.

Various base and precious metals, including Sn, W, Zn, Bi, Mo, Au, accompanied the metasomatic fluids and accumulated as metal deposits in a range of structural and strata-bound repositories.

One such deposit is the **Hugo Skarn**, formed by the alteration of a thick section of limestone occurring within a faulted synclinal structure on the east side of the northwest trending Bismuth Creek Fault.

The Hugo Skarn is mineralogically complex and previous drilling intersected deposits of fluorite, magnetite, bismuthinite, molybdenite, sphalerite, gold, scheelite, tin (?cassiterite) within the skarn.

It is partially concealed to the north, beneath an older sequence of sandstones and conglomerates thrust over the skarn along a shallow dipping fault known as the Hugo Fault.

Of special interest within the Hugo Skarn were several zones of Au-Zn intersected in previous drilling programs. A re-interpretation of this drilling suggested these intersections were of potential economic interest, and scope existed for the mineralised zones to extend north and east. To undertake an initial test of this interpretation, a four hole core drilling program totalling 790 metres was completed between May-July 1994, at a cost of $90,000.

Two holes (HS 001 and HS 002) were drilled to infill between mineralised intersections in previous holes, whilst two holes (HS 003 and HS 004) were drilled to test for northern extensions of the Au-Zn skarn.

Results indicate the following:

(a) the skarn is disrupted by a set of steeply dipping north south trending faults. Uplift on these faults to the east appears to eliminate skarn development in that direction.

(b) skarn potential to the north is limited to a block adjacent to the Bismuth Creed Fault, where depth to the top of the skarn is in excess of 150 metres.

(c) potential remains for the skarn to continue south of the drilled area at a shallow depth.

Best mineralised intersections were:

HS 001: 17 m 0.32 Au, 0.36 Bi, including 10 m 0.40 Au, 0.52 Bi
HS 002: 5 m 1.73 Zn.

HS 001 was drilled 50 metre south of SMD 13, which intersected 17 metres 8.6 Zn of which the hanging wall 10 metres assayed 1 g/t Au.

HS 002 was drilled 60 metres west of SMD 13, and 90 metres north of SMD 16, which intersected three zones of zinc mineralisation:

4 m 4.2 Zn, 1.67 Au
13 m 4.4 Zn, 0.47 Au
5 m 10.7 Zn

Holes HS 003 and HS 004 failed to intersect skarn.

Potential remains for the mineralised skarn zone intersected to SMD 13, SMD 16, HS 001 and HS 002 to extend to the south. The magnitude of this potential will be determined by the rate of convergence of the north south faults in that direction, and the dip of stratigraphy.

A limited program of 2-3 drill holes would be required to better define both the tonnage and mineralisation potential in that direction. Such a program would total 500 metres and cost $60,000.

2. TENURE

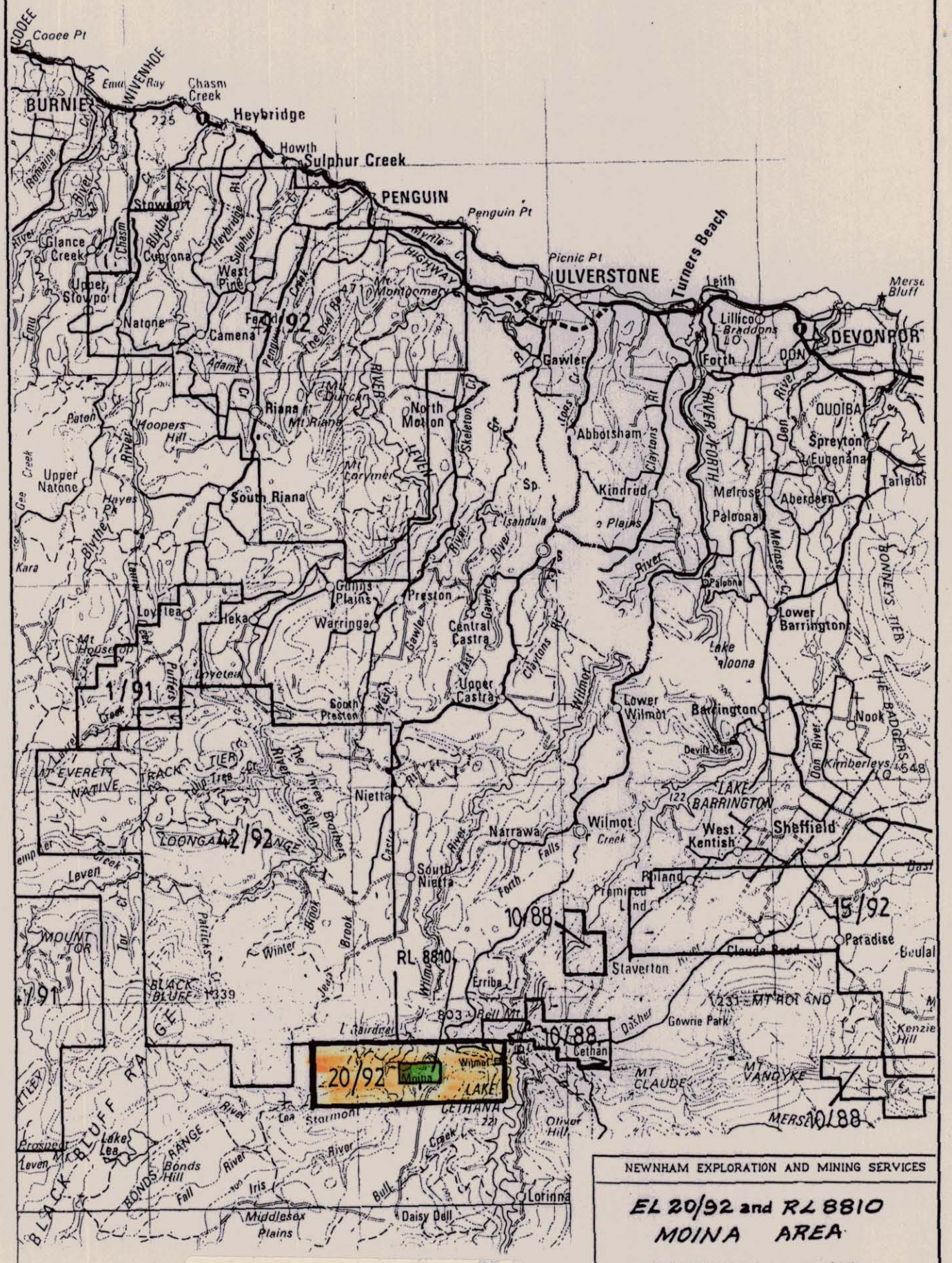
(Location Map, Figure 1)

Retention Licence (RL) 8810 of two square kilometres, is held jointly by the Shell Company of Australia Ltd and CRA Exploration Pty Ltd.

The eastern half of the licence area is currently explored under a joint venture agreement, dated 9 September 1993, between those companies, Titan Resources NL, and Goldstream Mining NL. The tenement is due for renewal in October 1994.

RL 8810 is surrounded by Exploration Licence (EL) 20/92 of 24 square kilometres, held jointly by Titan Resources NL and Goldstream Mining NL. It is due for renewal on 11 September 1994.

184012



5 cm

NEWNHAM EXPLORATION AND MINING SERVICES

EL 20/92 and RL 8810
MOINA AREA
LOCATION MAP

0km 10 | Scale: 1:250,000.

Drawn: L.A. Newnham | Date: 02 Aug 94 | Figure: 1

3. DISTRICT GEOLOGY

(Geological Map 1:25,000, Figure 2)

The accompanying geological map is a direct photocopy of the relevant area of the 1:25,000 Winterbrook geological map, produced by Mineral Resources Tasmania.

It portrays clearly those geological factors considered important to the development of mineral deposits within the tenement areas.

Most of the area is underlain by a graded sequence of shallow marine sediments collectively known as the Denison and Gordon Groups, represented in this region by Roland Conglomerate, transitional into Moina Sandstone, transitional into Gordon Limestone. The formations are several hundred metres thick and have been broadly folded in an eastwest direction and more sharply in a later northwest-southeast direction.

Faulting accompanied (?) this later phase of folding and resulted in development of several significant northwest trending faults (eg. Bismuth Creek Fault, Kauri and Stormont Faults).

These sedimentary formations are underlain by various felsic and rhyolitic members of the Cambrian Mt Read Volcanics, but their outcrop is restricted to relatively small areas in the southern section of the EL.

In the upper Devonian-lower Carboniferous, the Cambrian volcanics and Ordovician sediments were intruded by the highly fractionated Dalcoath Granite, which outcrops east of Moina and forms an eastwest elongated spine at shallow depths to the west of that outcrop. This spine is well defined by gravity surveys.

Large volumes of metasomatic fluids emanated from this granite spine and migrated along structures and favourable stratigraphy, resulting in widespread alteration of the Ordovician sediments, in particular the Gordon Limestone. These fluids appear to have been locally iron and fluorine rich, and either carried a metalliferous component from the granite (eg. Sn, W, Mo, Bi) or leached metals from the Cambrian volcanics on their upward passage into the Ordovician sediments.

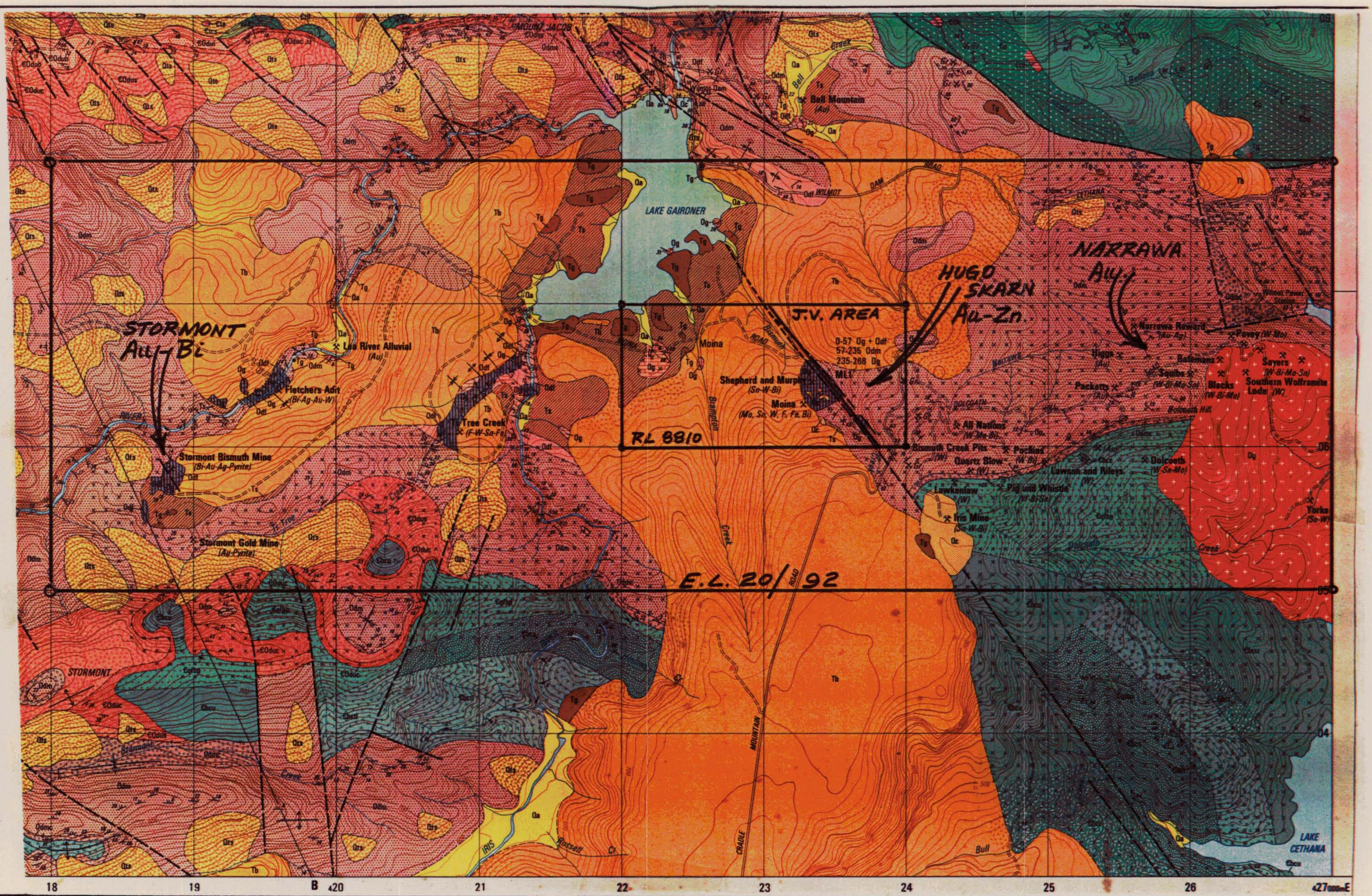
Various deposit styles resulted including vein swarms, fault infillings and metalliferous skarn assemblages.

The region has been affected by several phases of significant post(?)-mineralisation faulting including low angled thrusting (eg. Hugo Fault) and continued movement on earlier structures (eg. Bismuth Creek and Stormont Faults), resulting in dislocation and fragmentation of some deposits.

In the tertiary, localised patches of silicified sediments developed prior to much of the area being concealed beneath basalt flows.

A more detailed geological description of the Hugo Skarn, which lies under the eastern end of RL 8810, is presented in section 4.3.

184014



Hugo Fault projected outcrop
Hugo Skarn Au-Zn mineralisation
Possible skarn extensions beneath Basalt.

Tb	Tertiary Basalt
Tg, Ts	Tertiary sediments and gravels
Og	Gordon Limestone (Vertical stripes = skarn)
Odm	Moina Sandstone
Odmc	Roland Conglomerate
ЄV+X	Various Cambrian Volcs + Seds
Dg	Dolcoath Granite
x x	Contact alteration zone around Dg.

Map is a photocopied section of the State 1:25,000 Winterbrook-Moina Geol. Map. (MRVP Map 9.)

5 cm

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MOINA AREA REGIONAL GEOLOGY

0 km 0.5 km 1 — Scale 1:25000

Drawn: LAN — Date: APR 92 — Figure: 2

184015

4. HUGO SKARN

4.1 PREVIOUS WORK

The intensity and diversification of mineralisation in the alteration aureole surrounding the Dalcoath Granite has attracted substantial small-medium scale mining and a considerable amount of exploration effort.

Mining has been directed principally at Sn, W, Mo, Bi narrow vein deposits (eg. Shepherd and Murphy, All Nations mines, and alluvial Sn, W).

Exploration programs have been directed at a number of targets:

- extensions of the narrow high grade Sn, W veins;
- lode and alluvial Au and Sn;
- skarn hosted Sn, W;
- skarn hosted Zn, Au;
- skarn hosted fluorite.

Because of the enormous quantity of skarned limestone developed above the Dalcoath Granite spine, considerable recent exploration has been directed at the skarn.

This work has often been hampered firstly by extensive tertiary basalt flows, and secondly by widespread thrusting of older sedimentary formations over the limestone/skarn units. These two factors of concealment have often hampered and disrupted exploration.

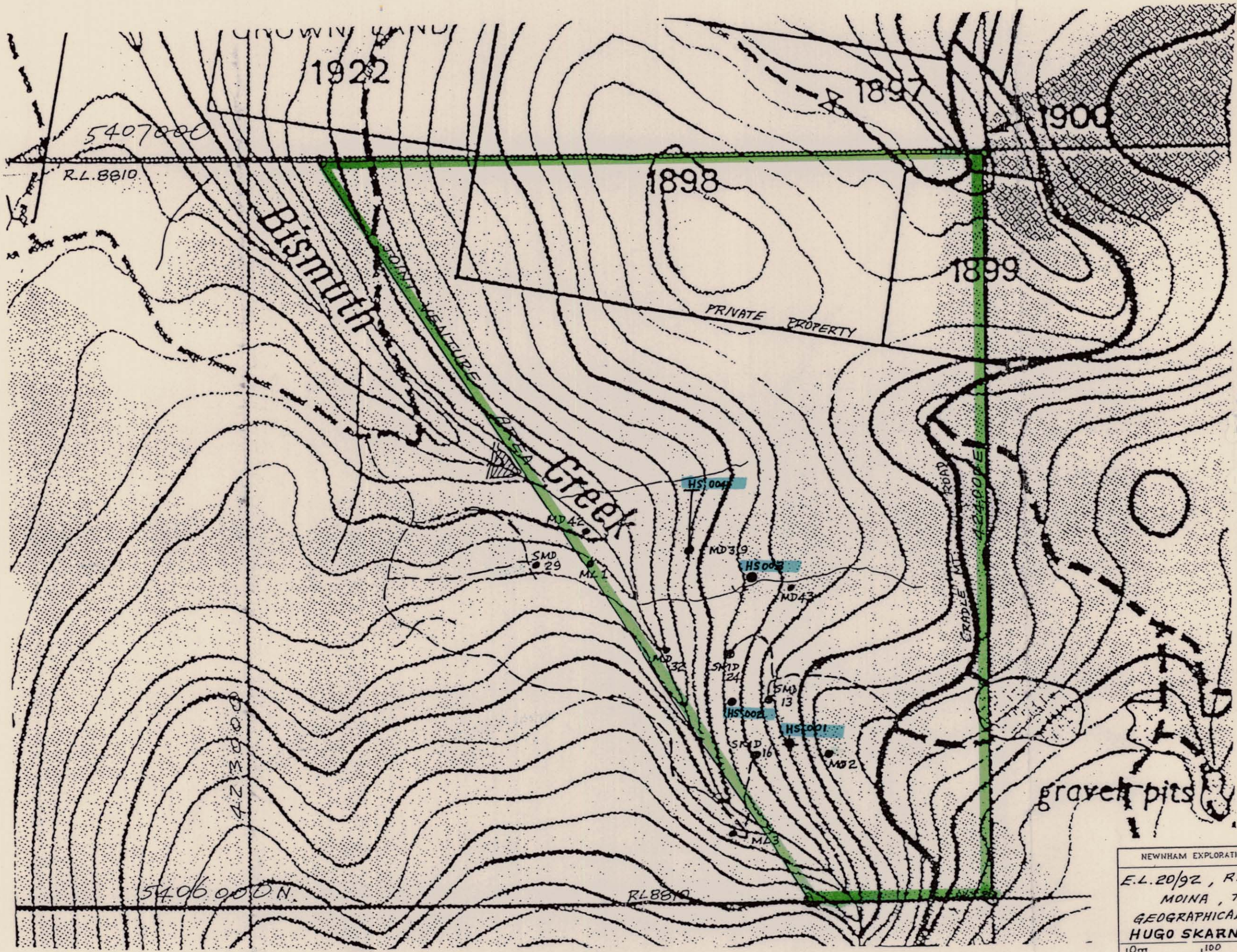
Because of their typically high (but not always so) magnetite content, airborne and ground magnetic surveys have been favoured exploration tools in defining skarn areas. However, there are a few traps with this. Firstly, the tertiary basalts are often magnetic; secondly, deep burial of skarn beneath thrust slices of siliceous (non-magnetic) sediments can confuse; thirdly, and probably most importantly, those skarns with the highest precious metal-base metal potential are magnetite poor.

Several programs of core drilling have been completed into the Hugo Skarn:

- Mt Lyell Mining & Railway Co in the late 1960's, searching for extensions of the Shepherd and Murphy veins;

- Comalco in the mid 1970's, defining a large fluorite resource;

- Shell in the early 1980's, exploring for large tonnage, low grade Sn, W deposits, and Au-Zn mineralisation;



J.V. AREA - GREEN

184017

NEWNHAM EXPLORATION AND MINING SERVICES

E.L. 20/92, R.L. 8810
MOINA, TASMANIA
GEOGRAPHICAL LOCATION OF
HUGO SKARN DRILL HOLES

0m	100	200	Scale 1:5000
Drawn LAN	Date Sept 94		Figure 3

- CRA in late 1980's, testing for easterly extensions of the Hugo Skarn.

The combined results of these exploration efforts were the successful definition of a large metallurgically complex fluorite deposit, a large low grade Sn, W and magnetite deposit, and a relatively small deposit of Zn-Au mineralisation known as the Hugo Skarn, concealed beneath a thrust block of older siliceous sediments lying east of the Bismuth Creek Fault.

4.2 EXPLORATION MODEL

In 1992, the existing exploration data in the Moina area was re-assessed by Titan/Goldstream.

On a regional/district scale, the initial approach involved stripping off the tertiary basalt and creating a pre-tertiary basement map, which sought to highlight the principal features associated with metallogenesis in the district.

This approach highlighted the potential of receptive host rock formations adjacent to substantial north northwest trending structures developed across the Dalcoath Granite spine.

The Hugo Skarn was identified as an area of such potential due to the coincident presence of firstly, a number of substantial northwest faults, including the Bismuth Creek Fault; secondly, a thick sequence of Gordon Limestone; and thirdly, massive alteration of this limestone by fluorine-iron enriched metasomatic fluids.

Of special interest was the fact that these fluids, upon emanating from the granite, probably had access to substantial thicknesses of Cambrian volcanics. Any base or precious metals in the volcanics adjacent to the migrating metasomatic fluids may have teen leached out and redeposited in skarned and faulted limestone.

This concept was supported by several drill intersections of sphalerite-gold bearing skarn, concealed beneath older siliceous sediments thrust over the top of the limestone.

These intersections indicated potential existed at shallow depths in the Hugo Skarn for medium sized deposit of Au-Zn mineralisation.

4.3 1993-94 DRILLING PROGRAM

To evaluate this Au-Zn potential in the Hugo Skarn, four cored holes totalling 790 metres were drilled between May-July 1994, at a total cost of $90,000. An expenditure statement is attached as appendix (a).

184018

The holes were drilled by Diamond Drilling Tasmania Pty Ltd and supervised by this writer. Full drill logs appear as appendix (b).

Holes were cored HQ-NQ and recoveries were excellent. Down hole surveys were undertaken with single shot camera. Collar locations were not surveyed by a registered surveyor, but were located by their relative positions to known holes, and tape traverses on detailed contour plans.

All core was logged and photographed, and is currently stored in a shed in Devonport hired by this writer.

Core for assay (usually NQ) was split in one metre intervals on a diamond saw, and submitted to Amdel in Adelaide for assay.

Assay sample preparation involved total fine pulverising in a mixer mill. Gold was fire assayed; Zn, Bi, Mo, Sn, W was by ICP analysis with a lithium metaborate fusion; and fluorine as fluorite was by sodium peroxide fusion and specific ion electrode determination. Some Sn and W analyses were XRF. (Assay sheets appear as appendix (d) and results are shown in the drill logs.)

A number of selected samples were submitted to Central Mineralogical Services for petrological description and their report appears as appendix (c).

Below is a brief description of each hole, followed by an overall interpretation of results.

4.3.1 Drill Hole Description

HS 001:

Drilled to test the easterly and southerly extensions of the sphalerite skarn intersected in SMD 16 and SMD 13. It passed from Moina Sandstone through a fault into a silicified sediment, then a 50 vertical metre skarn zone before ending in Moina Sandstone.

Within the diopside-chlorite-garnet skarn was a 17 metre zone of 0.32 Au; 0.36 Bi which included a 10 metre zone 0.40 Au; 0.52 Bi. Zn values were low throughout.

Of interpretative importance was the fact that the skarn FW was almost at the same level as in SMD 13, but some 56 metres above that in SMD 16.

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HS 002:

Drilled to test the extent of the gold-sphalerite skarn zone between SMD 13, 16 and 24. Again the hole passed from Moina Sandstone, through a fault into a 103 vertical metre skarn zone, before ending in Moina Sandstone. The middle section of the skarn was represented by a massive wrigglite unit (fluorite-magnetite skarn).

Again of interest, is the fact that the skarn FW in HS 002 was at about the same level as SMD 16, 100 metres to the south.

HS 003:

Drilled to test the Au potential of the skarn between MD 39 and MD 43.

It intersected a thick sequence of broken Moina Sandstone and Roland Conglomerate before passing through a probable fault zone into Moina Sandstone.

No skarn zone was intersected.

HS 004:

Once it became apparent from HS 003 that skarn development was structurally limited to the northeast, the fourth hole was resighted to test the northerly extension of the thick auriferous skarn unit intersected in MD 39.

Again, Moina Sandstone and Roland Conglomerate were intersected prior to passing through a fault into Moina Sandstone.

4.3.2. Interpretation of Results

An interpretation of the data from this and previous drilling program is presented on the accompanying figures 4 and 5.

The Hugo Skarn is interpreted as a block of mineralised Gordon Limestone which lies east of the major Bismuth Creek Fault. It dips gently to the north, has been broadly folded around a north plunging synclinal axis and has been disrupted by two north northwest trending faults named Fault A and Fault B, which approximately parallel the Bismuth Creek Fault.

The Hugo Skarn is essentially concealed beneath a north dipping and similarly folded sequence of older sandstones and conglomerates, which have been trust over the skarn by the east-west trending Hugo Fault which dips north at a slightly greater angle than the sediments.

Prior to the last drilling program, the Hugo Skarn was interpreted as a simple, tightly folded syncline which was concealed beneath the Hugo Fault.

The latest drilling, however, suggests the skarn is only gently folded, faulted by north northwest trending faults rather than being tightly folded, but still dips at approximately 40° to the north.

Support for this interpretation is derived from firstly contouring of the skarn foot wall; secondly, the observed high BCA angles in the core; and thirdly, the existence of a sequence of small cliffs co-incident with the proposed Fault 'A' outcrop.

Faults A and B appear to have caused only minimum disruption to the Hugo Fault, thereby suggesting that the Hugo Fault either postdated the major movements on A and B, or much of the movement on Faults A and B was lateral and not vertical (as is the case with the Bismuth Creek Fault).

The principal outcomes of this **structural** interpretation are:

- there is no development of skarn below the Hugo Fault east of Fault B;

- there is no development of skarn between Faults A and B north of a position midway between SMD 13 and HS 003. This is because the skarn in this block appears flat dipping and is therefore truncated by the Hugo Fault to the north;

- the skarn block between Fault A and the Bismuth Creek Fault extends north of existing drill patterns, because it dips slightly steeper than the Hugo Fault in this direction and is therefore not truncated;

- the Hugo Fault outcrops south of SMD 16 and HS 001. However, because the skarn appears to be dipping at a very shallow angle to the south, then the skarn may extend several hundreds of metres south before it also outcrops.

This last point is important to understand in the context of the resource potential of the area. If the

skarn was to rise rapidly to the south, then tonnage potential would be severely limited in that direction.

However, SMD 16 intersected the Hugo Fault at a shallow depth (30 metres), then 130 vertical metres of skarn. This depth of skarn was confirmed by the adjacent hole ML 13. Hence the skarn FW is 160 vertical metres below surface. It is therefore likely that this skarn block extends at least 200-300 metres south of SMD 16.

Similarly, the skarn FW in HS 001 between Faults A and B was 135 metres below surface. Shallow skarn dips therefore again suggest the skarn FW will outcrop 200-300 metres south of HS 001.

This potential skarn tonnage south of SMD 16 and HS 001 appears substantial, but could be severely limited if Faults A and B converged on the Bismuth Creek Fault at a sharper angle than shown on figure 4.

The other area where significant tonnages of skarn may be developed is northwest of SMD 42 and MD 39, between the Bismuth Creek Fault and Fault A. SMD 42 intersected 50 vertical metres skarn beneath the Hugo Fault. An 18 metre zone around the fault averaged 1.8 Zn. SMD 39 intersected approximately 100 vertical metres skarn including a 15 metre zone 0.7 Au. Hole HS 004 drilled to the north of MD 39, is interpreted as passing through Fault A before intersecting skarn.

The negative feature associated with this northern block is its depth. Depth to the top of skarn in SMD 42 and MD 29 is approximately 160 metres, and will increase north of these holes.

Mineralisation in the four recently completed holes was disappointing.

Apart from minor pyrite associated with faulted and brecciated sandstones, HS 003 and HS 004 failed to intersect any significant mineralisation.

HS 001 failed to intersect the sphalerite skarn intersected 50 metres north in SMD 13 (17 metres 8.6 Zn). However, it did intersect significant Au-Bi mineralisation in a stratigraphically equivalent zone (17 metres 0.36 Bi, 0.32 Au), thereby suggesting a mineralised horizon 17 metres thick does exist in the skarn between Faults A and B, and may extend north and south of SMD 13 and HS 001 respectively.

The existing two hole test of such a block is not considered adequate and further drilling is justified.

HS 002 was designed to test the northern extension of the three Zn-Au zones intersected in SMD 16. Only one zone (5 metres 1.7 Zn) was intersected which may relate stratigraphically with a 5 metre 10.7 Zn zone in SMD 16. As with the mineralised zone between Faults A and B, this mineralised zone between the Bismuth Creek Fault and Fault A is approximately 30-40 metres above the skarn FW. This suggests mineralisation intersected in those four holes may be correlatable, and therefore continuous in a strata-bound context between the four holes.

Further drilling of this mineralised skarn block between Fault A and the Bismuth Creek Fault is recommended, northwest and southeast of SMD 16.

5. ENVIRONMENTAL CONSIDERATIONS

In order to complete the recent four hole drilling program, access tracks were developed by reopening existing drill tracks and constructing short extensions off these with an excavator.

Another existing drill track was reopened to access a water supply.

On completion of the program, the tracks were left open in anticipation of further near-term drilling programs. Cross drains were developed on several steep sections.

In the event that further drilling does not take place, rehabilitation of these tracks will be undertaken. This will not be a difficult task as there was no side cutting or top soil removal during track construction.

6. FUTURE EXPLORATION

Skarn development within RL 8810 to the **east** of Fault 'B' appears unlikely.

North of the existing drill pattern, skarn may be developed both at shallow depth above Hugo Fault and beneath tertiary basalt, and at depths in excess of 150 metres beneath the Hugo Fault, between the Bismuth Creek Fault and Fault 'A'.

Little is known of the shallow skarn potential beneath the basalt.

The only encouragement in the deeper skarn block is hole SMD 42, which intersected 18 metres 1.8 Zn. Some justification exists to follow up this intersection, but the increasing depth to the north is a substantial negative factor.

Greatest potential for a shallow, higher grade Au-Zn resource exists to the **south**. Holes SMD 13, SMD 16, HS 002, HS 001 indicate a strata-bound and mineralised zone in the skarn in that area, bounded to the west by the Bismuth Creek Fault, to the east by Fault B and disrupted by Fault A.

Contouring of structures and stratigraphy in that area suggest the skarn may continue south a further 200-300 metres prior to either outcrop or pinching out due to the convergence of Fault B and the Bismuth Creek Fault.

As such, this area represents a good exploration opportunity to locate medium tonnage extensions of the significant Au-Zn mineralisation intersected further north in the same geological environment.

This potential could be further tested by way of a three hole core drilling program as shown on figures 4 and 5.

These holes would total 500 metres and cost approximately $60,000 to drill (total program costs).

APPENDICES

APPENDIX (a)

Expenditure

184028

22/09/94 GOLDSTREAM EXPLORATION : 1/7/93 - 30/6/94 PAGE

ACCOUNT-NAME	QUARTER-1	QUARTER-2	QUARTER-3	QUARTER-4	CURRENT-YEAR	PROJECT-TOTAL
****KOINA****	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation	0.00	0.00	102.66	172.00	274.66	274.66
Drafting & Maps	30.00	0.00	0.00	0.00	30.00	30.00
Geological Consultants	700.00	550.00	410.00	205.00	1865.00	4085.00
Legal / stamp Duty	0.00	0.00	305.00	0.00	305.00	305.00
Office Expenditure/consumables	45.00	0.00	0.00	0.00	45.00	45.00
Salaries	0.00	0.00	367.50	1427.50	1795.00	1795.00
Small Tools & Equipment	0.00	0.00	0.00	2008.00	2008.00	2008.00
Tenement Costs	660.00	0.00	0.00	0.00	660.00	1635.20
Travel	0.00	0.00	819.50	711.00	1530.50	1530.50
	1435.00 *	550.00 *	2004.66 *	4523.50 *	8513.16 *	11708.36
****HUGO JOINT VENTURE****	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation	0.00	0.00	0.00	517.35	517.35	517.35
Drilling	0.00	0.00	0.00	49242.58	49242.58	49242.58
Field Expenditure/Consumables	0.00	0.00	0.00	0.00	0.00	0.00
Food and Messing	0.00	0.00	0.00	0.00	0.00	0.00
Geological Consultants	0.00	0.00	0.00	11184.00	11184.00	11184.00
	0.00 *	0.00 *	0.00 *	60943.93 *	60943.93 *	60943.93

12/09/94 GOLDSTREAM EXPLORATION - 1/7/94 - 30/6/95 PAGE 1

ACCOUNT-NAME	QUARTER-1	QUARTER-2	QUARTER-3	QUARTER-4	CURRENT-YEAR	PROJECT-TOTAL
****KOINA****	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation	0.00	0.00	0.00	0.00	0.00	274.66
Drafting & Maps	497.53	0.00	0.00	0.00	497.53	527.53
Geological Consultants	1210.00	0.00	0.00	0.00	1210.00	5295.00
Legal / stamp Duty	0.00	0.00	0.00	0.00	0.00	305.00
Office Expenditure/consumables	0.00	0.00	0.00	0.00	0.00	45.00
Salaries	262.50	0.00	0.00	0.00	262.50	2057.50
Small Tools & Equipment	0.00	0.00	0.00	0.00	0.00	2008.00
Tenement Costs	660.00	0.00	0.00	0.00	660.00	2295.20
Travel	0.00	0.00	0.00	0.00	0.00	1530.50
	2630.03 *	0.00 *	0.00 *	0.00 *	2630.03 *	14338.39 *
****HUGO JOINT VENTURE****	0.00	0.00	0.00	0.00	0.00	0.00
Accommodation	0.00	0.00	0.00	0.00	0.00	517.35
Analysis	5140.00	0.00	0.00	0.00	5140.00	5140.00
Drafting & Maps	497.52	0.00	0.00	0.00	497.52	497.52
Drilling	13733.10	0.00	0.00	0.00	13733.10	62975.68
Field Expenditure/Consumables	0.00	0.00	0.00	0.00	0.00	0.00
Food and Messing	0.00	0.00	0.00	0.00	0.00	0.00
Freight & cartage	349.00	0.00	0.00	0.00	349.00	349.00
Geological Consultants	7268.00	0.00	0.00	0.00	7268.00	18452.00
Legal / stamp Duty	308.10	0.00	0.00	0.00	308.10	308.10
Salaries	1312.50	0.00	0.00	0.00	1312.50	1312.50
	28608.22 *	0.00 *	0.00 *	0.00 *	28608.22 *	89552.15 *

APPENDIX (b)

Drill Logs

COMPANY: GOLDSTREAM MINING NL/TITAN RESOURCES NL
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 001

Commenced:	06May94
Completed:	18May94
Logged By:	L A Newnham
Drilled By:	Dia. Drill Tas.

Purpose of Hole

To test the Au-Zn potential of the Hugo Skarn adjacent to previously drilled holes SMD 13 and SMD 16.

Comments on Completion

No significant Zn mineralisation intersected. However, the skarn unit between 76.0-124.0m contained a significant Au-Bi zone with miner moly.

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5406210	423730	640	-90	-

Length (m)
152m

Hole Size	
To (m)	**Size**
3.0	HW
66.0	HQ
152.0	NQ

Significant Core Loss Zones		
From	**To**	**%Rec.**
47.0	52.0	32
75.0	76.0	0

Hole Condition on Completion

All rods and casing removed from hole.

Summary of Results

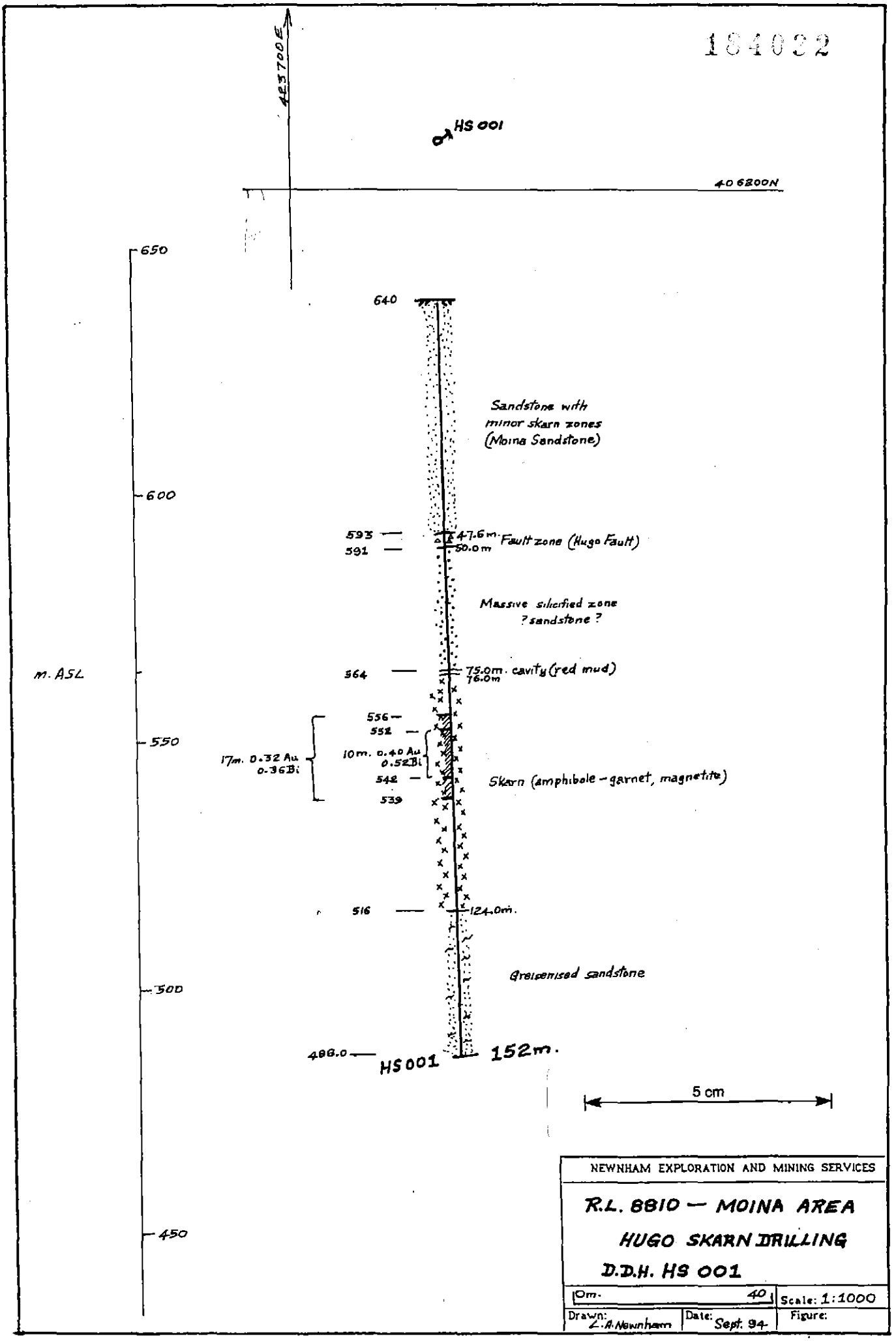
Depth		Recovery	Description	Assays							
From	**To**	**%**		**Length**	**Au(g/t)**	**An**	**Mo**	**Bi%**	**Sn**	**W**	**F(CaF_2)**
84.0	101.0	98	Diopside-chlorite-garnet? skarn	17m	0.32			0.36			
Including:											
87.0	97.0	100		10m	0.40			0.52			

DOWN HOLE SURVEY DATA

COMPANY: Goldstream Mining- Titan Resources
PROJECT: Moina - Hugo Skarn
HOLE NUMBER: HS 001

Depth	Dip	Bearing	Interval		Length	Vertical Distance		Horizontal Distance		Co-ordinates			
(m)		(AMG)	From	To	(D)	D.sin dip	R.L.	D. cos dip (HD)	Cumulative HD	N. distance HD. cos brg.	N. co-ordinate	E. distance HD. sin brg.	E. co-ordinate
COLLAR	-90	0					640.00		0.00		5,406,210.0		423,730.0
0	-90	0	0	37.5	37.5	37.50	602.50	0.00	0.00	0.00	5,406,210.0	0.00	423,730.0
75	-88.5	47	37.5	112.5	75	74.97	527.53	1.96	1.96	1.34	5,406,211.3	1.44	423,731.4
150	-88.2	61	112.5	151	38.5	38.48	489.04	1.18	3.14	0.57	5,406,211.9	1.03	423,732.5
152	-88	61	151	152	1	1.00	488.04	0.03	3.17	0.02	5,406,211.9	0.03	423,732.5
152													

184032


425700E
HS 001
6206000N
650
600
550
500
450
m. ASL
640
Sandstone with minor skarn zones (Moina Sandstone)
593
591
47.6m
50.0m
Fault zone (Hugo Fault)
Massive silicified zone ? sandstone ?
564
75.0m
76.0m
cavity (red mud)
556
552
542
539
17m. 0.32 Au 0.36Bi
10m. 0.40 Au 0.52Bi
Skarn (amphibole – garnet, magnetite)
516
124.0m.
Greisenised sandstone
488.0
HS 001
152m.
5 cm
NEWNHAM EXPLORATION AND MINING SERVICES
R.L. 8810 — MOINA AREA
HUGO SKARN DRILLING
D.D.H. HS 001
0m.
40
Scale: 1:1000
Drawn: L.A. Newnham
Date: Sept. 94
Figure:

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 001

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au(g/t)	Zn	Mo	Bi	Sn	W
		SUMMARY LOG														
0	3.0	HW casing.														
3.0	47.5	Silicified sandstone with minor skarn zones.														
47.5	50.0	Fault zone.														
50.0	75.0	Massive silicified zone.														
75.0	76.0	Cavity containing red mud.														
76.0	124.0	Skarn, variably amphibole and garnet rich, with some magnetite zones.														
124.0	152.0	Greisenised sandstone, gradational with unit above.														
		DETAILED LOG														
0	3.0	HW casing, no core.	0	3.0	0											
3.0	33.2	**Sandstone-Siltstone Broken & Pyritic:**					%F as									
		Generally light grey sandstone with darker fine grain siltstone beds; sandstone matrix weathering to brown clay in part.	3.0	32.0	100		CaF2									
							0.02		27.0	28.0	<0.005	1250	<20	7	<50	<10
							0.11		31.5	32.5	<0.005	400	<20	5	<50	15
		1% pervasive pyrite as fine disseminations and aggregates; numerous thin fractures often filled with pyrite and micaceous material.														
		Several blebs and veinlets of dark brown mineral between 6-8m, hard with brown streak.														
		Greenish colour due to weathering of sandstone clay matrix.														
		Below 10m, sandstone cut by network dark microveins, often with dendritic appearance; veinlets filled with pyrite and dark mica.														

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 001

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au(g/t)	Zn	Mo	Bi	Sn	W
		Pyrite increasing down hole to 1-2% below 10m, and 2-3% below 20m.														
		Several 1-10mm quartz veins cut core, and contain minor blebs of a soft brown mineral.														
		Some sections of sandstone between 20-33m are conglomeratic.														
							%F as CaF2									
		Core generally very broken.														
33.3	36.2	**Mottled Skarn:**	32.0	35.0	100											
		Mottled dark grey-green-pink unit with minor magnetite.	35.0	37.7	93		0.17		34.5	35.5	<0.005	150	<20	6	<50	<10
							0.19		35.5	36.0	<0.005	200	<20	<4	<50	<10
		Pyrite in clots up to 10mm and in dark fine vein network.														
		Unit hard and competent.														
36.2	40.0	**Silicified Sandstone:**														
		Light grey, hard sandstone, intensely silicified and cut by network 1-2mm quartz veins.	37.7	42.5	100		0.04		39.9	40.9	<0.005	150	<20	<4	<50	<10
		1-2% pervasive pyrite, often concentrated along thin dark veinlets and on quartz vein margins; core broken towards base.														
40.0	41.4	**Mottled Skarn:**														
		Similar to skarn unit above but only trace magnetite. Greenish areas are hard/ ?epidote.														
41.4	47.5	**Sandstone:**	42.5	44.0	87											
		Dark grey-greenish mottled appearance in top half grading into light grey-white near base.	44.0	47.0	93											
		1-2% disseminated pyrite.														

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 001

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au(g/t)	Zn	Mo	Bi	Sn	W
		Unit broken, becoming rubbly below 44m, limonite common on fractures.														
47.5	50.0	**Pug-Fault Zone:**	47.0	48.0	40											
		Clays, brown-yellow-white.	48.0	49.0	0											
			49.0	49.5	80	%F as CaF2										
		Poor recoveries.	49.5	50.0	0											
50.0	75.0	**Silicified Sandstone-Siltstone:**	50.0	50.5	20		0.27		63.5	64.5	<0.005	<50	<20	8	<50	<10
		Light grey, massive silicified unit, generally featureless with patchy texture and ghosted quartz veins; several narrow soft beds (mudstone?).	50.5	50.9	50											
			50.9	51.7	50											
			51.7	61.8	100											
			61.8	63.5	94											
			63.5	66.0	100											
		Several 5-15mm quartz veins almost obliterated by silicification.	66.0	68.0	90											
			68.0	75.0	100											
		Trace pyrite and limonitic coating on some joint surfaces.														
		Core very broken to 57m but then becomes more competent.														
		High angled jointing 60-70° CA.														
		Probable bedding 70° CA.														
		Running sand in tray 50.9-54.7m, probably cave from higher in hole. 20cm clay zone 63.3m.														
		Reduced HQ-NQ at 66m.														
		(Unit looks like hydrothermal silicification in trap zone below fault at 50m.														
75.0	76.0	**Cavity:**	75.0	76.0	0											
		Driller reports bright red mud in water return.					%F as CaF2									

COMPANY: GOLDSTREAM-TITAN
PROJECT: *MOINA RL 8810*
HOLE NUMBER: HS 001

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au(g/t)	Zn	Mo	Bi	Sn	W
76.0	124.0	**Skarn:**					0.88		76.0	77.0	0.285	150	<20	820	200	25
		Massive skarn unit.	76.0	84.9	100		0.72		77.0	78.0	0.125	100	<20	600	200	15
			84.9	86.0	90		1.01		78.0	79.0	0.210	100	<20	420	250	10
			86.0	98.0	100		1.40		79.0	80.0	0.085	100	<20	320	250	20
		76.0-82.6:					1.58		80.0	81.0	0.265	100	<20	940	250	20
		Pink (garnet-diopside?) skarn with sugary texture. Mottled green appearance in places (chlorite, epidote?), sometimes fibrous (?actinolite).					1.94		81.0	82.0	0.030	100	<20	340	250	15
							0.66		82.0	83.0	0.046	1700	20	250	150	15
							0.41		83.0	84.0	0.105	50	<20	770	350	<10
							0.19		84.0	85.0	0.715	50	<20	1860	400	10
		Several zones massive pink feldspar.														
		82.6-82.9:														
		Dark grey skarn with magnetite.														
		82.9-89.8:					0.89		85.0	86.0	0.125	100	<20	1420	450	15
		Massive green-pink skarn, with large patches chlorite.					0.37		86.0	87.0	0.315	50	<20	1420	550	<10
							0.36		87.0	88.0	0.240	100	<20	3900	450	<10
							0.51		88.0	86.0	0.265	100	20	4100	650	10
		Bismuthinite as large blebs and coarse disseminations; ?scheelite associated with bismuthinite.					0.60		89.0	90.0	0.285	100	50	1620	850	20
							0.46		90.0	91.0	0.230	150	320	6800	900	30
							0.42		91.0	92.0	0.230	200	1350	1.26%	900	10
							0.49		92.0	93.0	0.200	150	1400	0.92%	1000	15
							3.53		93.0	94.0	0.145	100	120	2150	800	25
		89.8-92.9:					1.65		94.0	95.0	1.3	100	40	5800	700	35
		Magnetite skarn with common bismuthinite and minor *molybdenite*.														
		Garnet-diopside skarn with abundant *disseminated magnetite in bands*.														
		Abundant bismuthinite as aggregates, *clusters either in skarn ground mass or* associated with magnetite.	98.0	101.0	90											
			101.0	107.0	100											
				110.0	91		%F as									
		92.9-94.5:		113.0	96		CaF2									
		Light brown diopside skarn with several zones of very dark amphibole.		124.0	100											

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 001

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au(g/t)	Zn	Mo	Bi	Sn	W
		94.5-97.5:					0.69		95.0	96.0	0.755	150	30	3700	500	10
		Dark grey-green skarn with large patches of very dark green chlorite.					0.46		96.0	97.0	0.440	50	<20	2050	300	<100
							0.68		97.0	98.0	0.090	150	20	1220	300	20
		Minor bismuthinite as coarse disseminations, grains and clusters.														
		97.5-98.3:					0.29		98.0	99.0	0.200	150	<20	950	350	10
		Soft brown-grey skarn, leached near base with some core loss.					0.19		99.0	100.0	0.022	50	<20	1080	450	<10
							0.22		100.0	101.0	0.030	50	<20	1380	450	<10
							0.40		101.0	102.0	0.070	50	<20	195	250	25
		Minor disseminated bismuthinite.					1.99		102.0	103.0	0.230	100	20	330	100	10
							1.66		103.0	104.0	0.013	50	<20	400	100	<10
		98.3-111.0:					1.24		104.0	105.0	<0.005	50	<20	40	200	<10
		Grey-green skarn, large patches dark green chlorite set in lighter green-grey ground mass.					0.37		105.0	106.0	0.090	50	20	25	250	160
							0.25		106.0	107.0	0.008	50	<20	50	100	10
							0.31		107.0	108.0	<0.005	100	<20	65	150	15
							0.25		108.0	109.0	<0.005	100	20	260	150	<10
		Significant bismuthinite to 100.8m, then only trace; no magnetite and core competent.					0.36		109.0	110.0	0.560	50	<20	750	250	<10
							0.36		110.0	111.0	0.080	50	40	840	450	80
		111.0-124.0:					0.25		111.0	112.0	<0.005	100	<20	25	500	10
		Buff brown-pink calc silicate; patches of actinolite needles; softer brown honey coloured patches with harder light grey sandstone.					0.22		112.0	113.0	0.005	50	<20	700	500	<10
							0.24		113.0	114.0	<0.005	50	<20	170	450	20
							0.37		114.0	115.0	<0.005	50	<20	50	300	20
							0.24		115.0	116.0	<0.005	50	20	135	400	10
							0.24		116.0	117.0	<0.005	50	20	1620	400	<10
							%F									
124.0	125.8	**Interbedded Skarn-Sandstone:**					0.24		117.0	118.0	0.022	<50	<20	8	500	<10
		Dark green mottled skarn and light grey sandstone cut by thin dark greisen veins.	124.0	134.0	100		0.24		118.0	119.0	<0.005	50	20	20	450	10
							0.28		119.0	120.0	<0.005	50	30	20	500	<10
							0.24		120.0	121.0	<0.005	100	30	15	500	<10
		Unit generally competent but broken near base.					0.27		121.0	122.0	<0.005	50	30	4	550	30
							0.30		122.0	123.0	0.050	150	40	150	450	15
							0.36		123.0	124.0	0.310	6900	90	550	150	10
							1.00		124.0	125.0	0.010	4750	40	30	150	25
							0.84		125.0	126.0	0.005	300	50	15	150	30

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 001

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au(g/t)	Zn	Mo	Bi	Sn	W
125.8	152.0	**Greisenised Sandstone:**	134.0	137.0	84											
			137.0	152.0	100											
		Generally dark grey sandstone with thin mudstone beds, strongly greisenised and cut by numerous less than 2 mm quartz-biotite greisen veins.					1.20		136.0	137.0	<0.005	200	50	15	150	90
							0.70		141.5	142.5	<0.005	100	200	5	100	380
		133.5m quartz-biotite vein semi parallel CA.					1.63		150.0	151.0	<0.005	100	90	4	150	220
		Thin mudstone beds altered to cream-fawn sericite-quartz material.														
		Some pink feldspar on joints and fractures.														
		Pervasive pyrite 0.5-1% disseminated and clusters in sandstone, and in greisen veins and as selvages on veins.														
		Core generally competent but some zones intensely brittle fractured.														
		**** END OF HOLE ****														

COMPANY: GOLDSTREAM MINING NL/TITAN RESOURCES NL
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 002

Commenced:	19May94
Completed:	30May94
Logged By:	LA Newnham
Drilled By:	Dia. Drill Tas.

Purpose of Hole

To test the Au-Zn potential of the Hugo Skarn between previously drilled holes, SMD 24 and SMD 16 to the west of SMD 13.

Comments on Completion

A vertical thickness of 105 metres of calc silicate skarns and wrigglite skarns was intersected. The skarn was strongly Sn-W anomalous, but only moderately Au anomalous. A zone of significant sphalerite intersected in lower half of skarn.

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5406270	423650	610	-90	-

Length (m)
157.4

Hole Size

To (m)	Size
1.0	HW
	HQ
157.4	NQ

Significant Core Loss Zones

From	To	%Rec.

Hole Condition on Completion

All rods and casing removed from hole.

Summary of Results

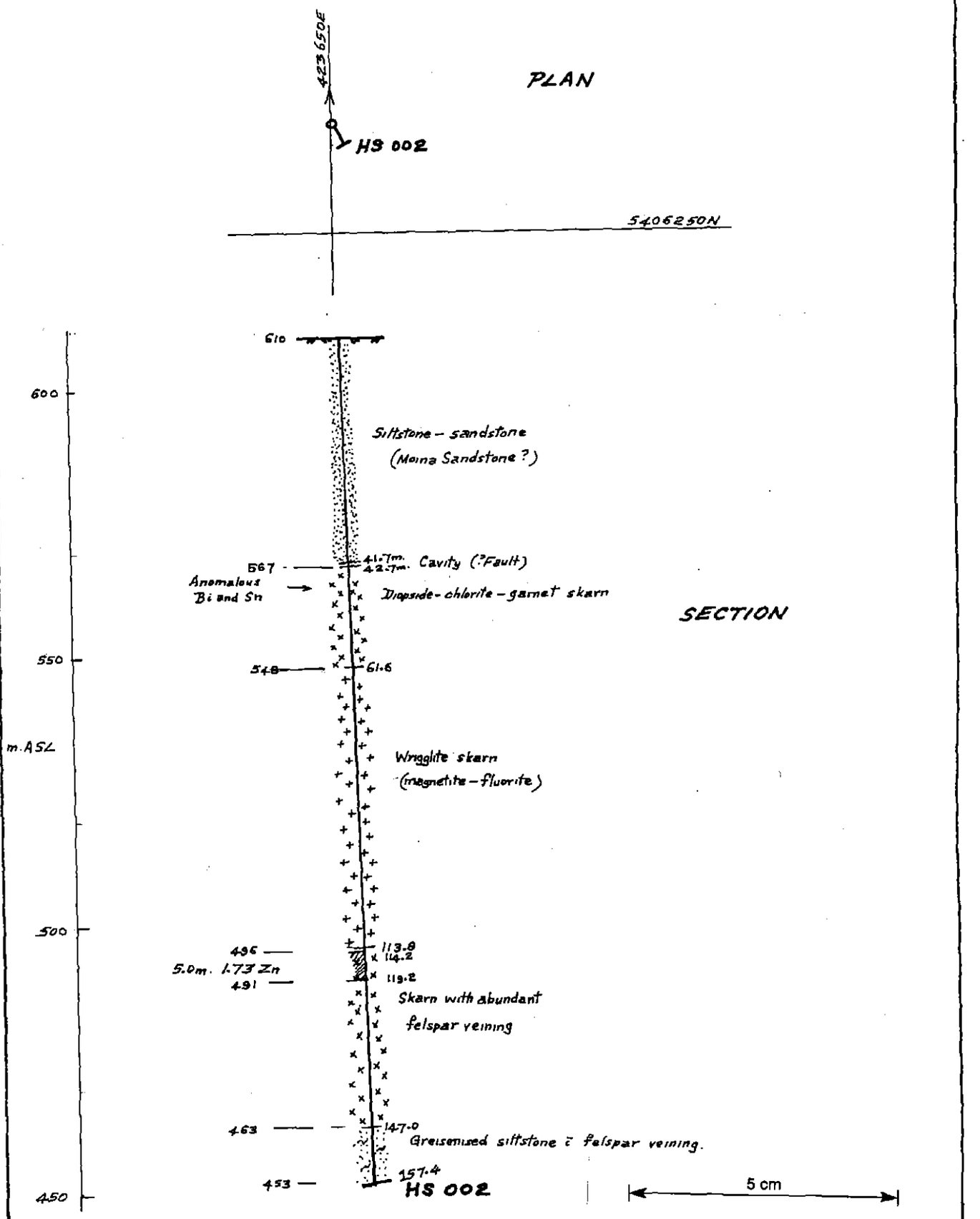
Depth		Recovery	Description	Assays							
From	To	%		Length	Zn						
114.2	119.2	100	Feldspar veined skarn.	5.0	1.73						

DOWN HOLE SURVEY DATA

COMPANY: *Goldstream - Titan*
PROJECT: Moina - Hugo Skarn
HOLE NUMBER: HS 002

Depth	Dip	Bearing	Interval		Length	Vertical Distance		Horizontal Distance		Co-ordinates			
(m)		(AMG)	From	To	(D)	D.sin dip	R.L.	D. cos dip (HD)	Cumulative HD	N. distance HD. cos brg.	N. co-ordinate	E. distance HD. sin brg.	E. co-ordinate
COLLAR	-90	0					610.00		0.00		5,406,270.0		423,650.0
0	-90	0	0	31.5	31.5	31.50	578.50	0.00	0.00	0.00	5,406,270.0	0.00	423,650.0
63	-88	119	31.5	85.5	54	53.97	524.53	1.88	1.88	-0.91	5,406,269.1	1.65	423,651.6
108	-87.8	193	85.5	130.5	45	44.97	479.57	1.73	3.61	-1.68	5,406,267.4	-0.39	423,651.3
153	-88	156	130.5	155.2	24.7	24.68	454.88	0.86	4.47	-0.79	5,406,266.6	0.35	423,651.6
157.4	-88	156	155.2	157.4	2.2	2.20	452.68	0.08	4.55	-0.07	5,406,266.5	0.03	423,651.6
157.4													

184011



NEWNHAM EXPLORATION AND MINING SERVICES

R.L. 8810 – MOINA AREA
HUGO SKARN DRILLING
DDH HS 002

0m	40	Scale: 1:1000
Drawn: L.A. Newnham	Date: Sept 94	Figure:

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 002

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Zn	Mo	Bi	Sn	W
		SUMMARY LOG:														
0	1.0	HW tricone														
1.0	42.7	Siltstone-sandstone														
42.7	61.6	Diopside-chlorite-garnet skarn					%F as CaF2									
61.6	113.8	Wrigglite skarn														
113.8	147.0	Skarn with abundant feldspar veining														
147.0	157.4	Greisenised siltstone with feldspar veining														
		DETAILED LOG:														
0	1.0	HW *tricone - no core.*	0	1.0	0											
1.0	41.7	**Sandstone-Siltstone:**	1.0	4.0	7											
			4.0	6.9	85											
		Bleached, buff brown siltstone and fresher dark grey siltstone and sandstone.	6.9	8.7	50											
			8.7	10.5	10											
		Anastomosing network < 1 mm veinlets and fractures.	10.5	12.0	40											
			12.0	12.9	55											
			12.9	13.8	80											
		Minor fine grained pyrite less than 0.5% disseminated in fresher units and leading to limonite in weathered equivalents.	13.8	16.5	90											
			16.5	18.5	70											
			18.5	19.5	30											
			19.5	20.3	75		0.26		31.0	32.0	<0.005	740	3	8	20	<10
		Generally very broken and rubbly with occasional harder, more competent beds.	20.3	21.3	40		0.22		32.0	33.0	<0.005	550	3	6	15	45
			21.3	25.0	90		0.12		33.0	34.0	<0.005	640	4	7	5	25
			25.0	26.1	75		0.08		34.0	35.0	<0.005	330	6	6	5	15
			26.1	27.8	100											
		Some worm casts up to 4 mm long.	27.8	28.3	80											
			28.3	28.9	60											
		Softer green sericite material on fractures.	28.9	30.9	50											
			30.9	32.7	80											
		Virtually sandstone rubble 18 - 42 metres.	32.7	34.5	100											
			34.5	40.3	90											
		30-35: strongly pyritic, semi massive in placed, disseminated in sandstone and abundant in thin veins and fracture filling.	40.3	40.8	80											
			40.8	41.7	80											

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 002

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Zn	Mo	Bi	Sn	W
		Stretched boudins in places, typically containing abundant pyrite (not a conglomerate).					%F as CaF2									
		Becoming very dark and siliceous below 40 metres, with abundant pyrite.														
41.7	42.7	**Cavity:**	41.7	42.7	0											
		Containing red mud (?hematite).														
42.7	61.1	**Hematitic Skarn & Skarn Breccia:**	42.7	43.5	75		0.30		42.7	43.5	<0.005	770	4	15	40	240
			43.5	45.1	50		0.22		43.5	45.1	0.012	510	13	260	340	260
		Mottled green-black skarn, impressively brecciated 46.8 - 52.5 metres.	45.1	46.3	66		3.05		45.1	46.1	0.008	800	<2	480	1980	100
			46.3	56.7	100		10.20		46.1	46.8	0.017	580	2	390	2050	470
		42.7-46.3: decomposed green-black skarn with soft red hematite veins and patches.	56.7	58.5	90											
			58.5	61.3	100											
		46.3-46.8: wrigglite cut by thin pink feldspar veins.					2.80		46.8	47.8	0.070	670	3	500	2650	230
							0.16		47.8	48.8	<0.005	510	9	1.61%	3300	140
							0.22		48.8	49.8	0.055	750	8	1580	3450	130
		46.8-52.6: breccia zone with large (to 10 cm) fragments of carbonate and skarn set in mottled green-black matrix. Hematite abundant as large blood red patches and veinlets; bismuthinite common as blebs and aggregates; magnetite common in ground mass.					0.12		49.8	50.8	0.055	580	4	990	4050	145
							0.18		50.8	51.8	0.036	1420	2	460	1950	120
							0.08		51.8	52.8	0.019	1020	<2	300	3850	110
		52.6-55.3: brecciated dark grey-black wrigglite unit with abundant white calcite? in fractures; hematite clots common.					0.12		52.8	53.8	<0.005	550	<2	15	35	90
							0.06		53.8	54.8	<0.005	780	<2	15	40	105
							0.18		54.8	55.3	<0.005	130	<2	15	210	260
		55.3-58.6: green-black mottled calcareous skarn, brecciated appearance in places; abundant blood red hematite clots; minor bismuthinite and magnetite.					0.28		55.3	56.7	0.080	470	<2	550	1880	230
							0.16		56.7	57.7	0.014	300	4	175	300	240
							0.14		57.7	58.6	0.040	610	<2	350	390	175

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 002

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Zn	Mo	Bi	Sn	W
		58.6-60.3: black skarn with flecks of green mineral and white carbonate throughout. Minor magnetite and hematite.					%F as CaF2									
							0.16		58.6	59.6	0.013	630	<2	290	190	105
							0.08		59.6	60.3	0.024	650	<2	200	1240	90
		60.3-61.1: soft green calcareous skarn with abundant dark patches of semi massive magnetite; some hematite.					0.30		60.3	61.3	0.022	460	6	165	5700	65
							0.12		61.3	62.3	0.046	640	8	600	1800	85
							0.20		63.3	64.3	0.100	390	5	580	2750	110
		Skarn generally becoming more competent with depth.					8.80		64.3	65.3	0.046	240	8	570	980	160
							14.40		65.3	66.3	0.030	230	8	350	1850	490
							7.50		66.3	67.3	0.026	210	9	630	3000	320
61.6	113.8	**Wrigglite Skarn:**					7.02		67.3	68.3	0.038	155	4	950	2450	410
							5.52		68.3	69.2	0.017	115	5	135	670	510
		66.1-69.2: weathered and bleached wrigglite; dark grey-black magnetite wrigglite in top half of unit cut by feldspar veins degraded to soft green sericite. Bottom half of unit lighter coloured calcareous skarn with minor wrigglite component and cut by numerous pink feldspar veins and veinlets blood red soft hematite. Unit generally broken.					8.10		69.2	70.2	0.022	140	15	340	2150	550
			61.3	63.5	40		10.90		70.2	71.2	0.044	125	7	610	2250	380
			63.5	115.5	100		10.0		71.2	72.2	0.105	165	5	650	3050	320
							9.60		72.2	73.2	0.180	125	5	1720	3750	610
							9.32		73.2	74.2	0.060	160	5	570	1900	420
							12.70		74.2	75.2	0.120	175	19	1220	1640	790
							12.20		75.2	76.2	0.050	250	40	540	1440	1220
							7.60		76.2	77.2	0.046	100	9	390	2800	460
							9.85		77.2	78.2	0.110	185	20	660	2300	1340
							12.2		78.2	79.2	0.022	130	25	310	1500	1240
							10.3		79.2	80.2	0.017	105	12	220	1320	570
		69.2-113.8: classic magnetite-fluorite wrigglite skarn cut by numerous 1 -100 mm pink feldspar veins, randomly orientated; some minor zones of mottled light green weakly calcareous skarn; wrigglite moderately competent but some intervals broken with brittle fracturing associated with strong multidirectional jointing.					11.5		80.2	81.2	0.034	115	12	380	1160	390
							13.2		81.2	82.2	0.060	220	65	360	1340	590
							13.9		82.2	83.2	0.055	220	15	590	1680	1120
							12.4		83.2	84.2	0.050	230	65	940	2000	960
							13.8		84.2	85.2	0.034	190	13	500	1120	650
							12.1		85.2	86.2	0.044	230	14	490	960	830
							14.4		86.2	87.2	0.065	230	16	550	1000	1000
							11.2		87.2	88.2	0.044	220	8	440	1140	720
							12.2		88.2	89.2	0.034	210	10	460	1380	610
							11.2		89.2	90.2	0.110	450	18	710	1020	530
							12.4		90.2	91.2	0.048	240	20	530	1020	1500
							14.0		91.2	92.2	0.110	180	19	660	1200	710
							13.0		92.2	93.2	0.075	150	15	660	1080	650
							13.0		93.2	94.2	0.060	180	35	460	1150	870
							14.7		94.2	95.2	0.048	120	30	600	1200	1120

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 002

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Zn	Mo	Bi	Sn	W
							%F as CaF2									
113.8	117.5	**Feldspar Veined Skarn:**	115.5	118.5	100											
							13.1		95.2	96.2	0.090	145	35	530	1100	950
		Grey-green calc silicate with zones softer green skarn; cut by abundant 5-50mm pink quartz-feldspar veins 60 - 70° CA and a fine network < 1 mm veinlets parallel to feldspar veins filled with magnetite.					11.3		96.2	97.2	0.050	220	20	470	1780	1120
							11.7		97.2	98.2	0.070	340	16	570	980	720
							10.2		98.2	99.2	0.048	600	17	490	980	680
							10.6		99.2	100.2	0.075	410	10	630	990	770
							10.5		100.2	101.2	0.048	230	30	380	1050	520
							8.0		101.2	102.2	0.028	210	17	210	1500	370
		Magnetite and ?sphalerite? common as selvages along quartz-feldspar veins, which are themselves occasionally zoned with quartz centres.					7.6		102.2	103.2	0.100	240	3	770	2200	350
							9.1		103.2	104.2	0.040	230	20	500	1360	2050
							11.9		104.2	105.2	0.038	195	4	590	2050	620
							11.3		105.2	106.2	0.080	150	140	610	1380	1.03%
		Disseminated and aggregate pyrite commonly associated with magnetite.					12.4		106.2	107.2	0.070	240	12	660	1300	790
							11.5		107.2	108.2	0.085	210	11	670	1620	1160
							12.5		108.2	109.2	0.090	370	45	660	1680	1580
		Unit competent.					11.0		109.2	110.2	0.065	310	15	420	1200	900
							13.4		110.2	111.2	0.065	260	17	550	1500	930
117.5	147.0	**Skarns:**	118.5	147.0	100		14.5		111.2	112.2	0.210	370	75	630	1460	870
							14.5		112.2	113.2	0.080	220	12	520	1240	970
		Pyroxene-epidote-garnet skarn, mottled pink and green; interbedded with a hard pink skarn.					8.2		113.2	114.2	0.040	0.69%	30	210	1580	590
							1.9		114.2	115.2	0.030	2.3%	35	15	370	280
							1.9		115.2	116.2	0.015	1.64%	40	35	240	1180
		Only minor magnetite; mottled green-pink skarn to 134 m, then hard pink skarn with patches dark green amphibole/epidote and softer light green mineral, and red garnets.					1.2		116.2	117.2	0.085	2.95%	20	40	420	220
							1.2		117.2	118.2	<0.005	0.53%	9	45	750	140
							0.9		118.2	119.2	0.009	1.23%	25	35	700	330
							0.5		119.2	120.2	<0.005	380	2	45	670	50
							0.3		120.2	121.2	<0.005	200	4	4	700	10
		Near top of unit, several thin veins (< 2 mm) of sphalerite.					1.2		121.2	122.2	<0.005	155	4	4	670	<10
							0.5		122.2	123.2	<0.005	135	100	<4	620	2450
							0.5		123.2	124.2	<0.005	115	<2	5	520	15
		Generally competent - few broken zones.					0.8		124.2	125.2	<0.005	195	100	4	510	175
							0.3		125.2	126.2	<0.005	135	2	7	640	20
		Grades into hornfelsed siltstone and sandstone with minor limestone beds.					0.5		126.2	127.2	<0.005	100	<2	4	760	25
							0.4		127.2	128.2	<0.005	100	<2	4	760	30
							1.1		128.2	129.2	<0.005	105	<2	6	760	35
							1.1		129.2	130.2	<0.005	85	60	10	590	340
							0.6		130.2	131.2	<0.005	85	<2	15	570	<10
							0.5		131.2	132.2	<0.005	95	2	15	480	<10

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 002

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Zn	Mo	Bi	Sn	W
							%F as CaF2									
147.0	153.8	**Greisenised Siltstone, Minor Skarn, with Feldspar Veining:** Mottled dark grey-green hornfelsed and greisenised siltstone with occasional pink-light grey calc silicate beds. Pink feldspar veining common to 151 m then gradually diminishes. Veins typically have magnetite along margins, with or without pyrite.	147.0	157.4	100											
							?		132.2	133.2	<0.005	105	<2	10	430	30
							0.90		133.2	134.2	<0.005	110	<2	20	390	20
							0.55		134.2	135.2	<0.005	70	<2	15	350	20
							0.75		135.2	136.2	<0.005	70	<2	25	330	<10
							0.35		136.2	137.2	<0.005	100	2	6	440	<10
							0.85		137.2	138.2	<0.005	65	2	20	310	35
							0.20		138.2	139.2	<0.005	55	2	4	310	25
							0.55		139.2	140.2	<0.005	60	<2	30	360	<10
							0.25		140.2	141.2	0.01	320	<2	8	270	15
							0.25		141.2	142.2	<0.005	105	3	4	300	<10
153.8	157.4	**Hornfelsed Siltstone (Greisenised):** Dominantly dark grey-black hornfelsed siltstone cut by numerous thin veins filled with magnetite or quartz with magnetite or pyrite selvages. Disseminated pyrite also in hornfelses (2-3%). Occasional pink feldspar veins with quartz centres and magnetite rims. Unit hard and competent. ---- END OF HOLE ----					0.20		142.2	143.2	<0.005	75	4	8	340	<10
							0.25		143.2	144.2	<0.005	75	<2	5	440	20
							0.25		144.2	145.2	<0.005	80	<2	6	440	25
							0.15		145.2	146.2	0.005	125	<2	<4	470	20
							0.15		146.2	147.2	0.016	210	<2	<4	250	10
							3.50		153.0	154.0	<0.005	150	95	6	320	450
							3.00		156.0	157.0	<0.005	95	35	<4	140	980

COMPANY: GOLDSTREAM MINING NL/TITAN RESOURCES NL
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 003

Commenced:	01Jun94
Completed:	21Jun94
Logged By:	LA Newnham
Drilled By:	Dia. Drill Tas.

Purpose of Hole

To test the eastern margin of the Hugo Skarn between MD 39 and MD 43.

Comments on Completion

Hole passed through Moina Sandstone and Rowland Conglomerate to 134 metres, then into unit of intensely silicified sediments.
If these were Moina Sandstone again, then the hole must have passed beneath an upturned skarn unit to the south.

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5406430	423680	610	-90	-

Length (m)
199.6

Hole Size

To (m)	Size
4.0	HW
50.8	HQ
199.6	NQ

Significant Core Loss Zones

From	To	%Rec.

Hole Condition on Completion

All rods and casing withdrawn from hole.

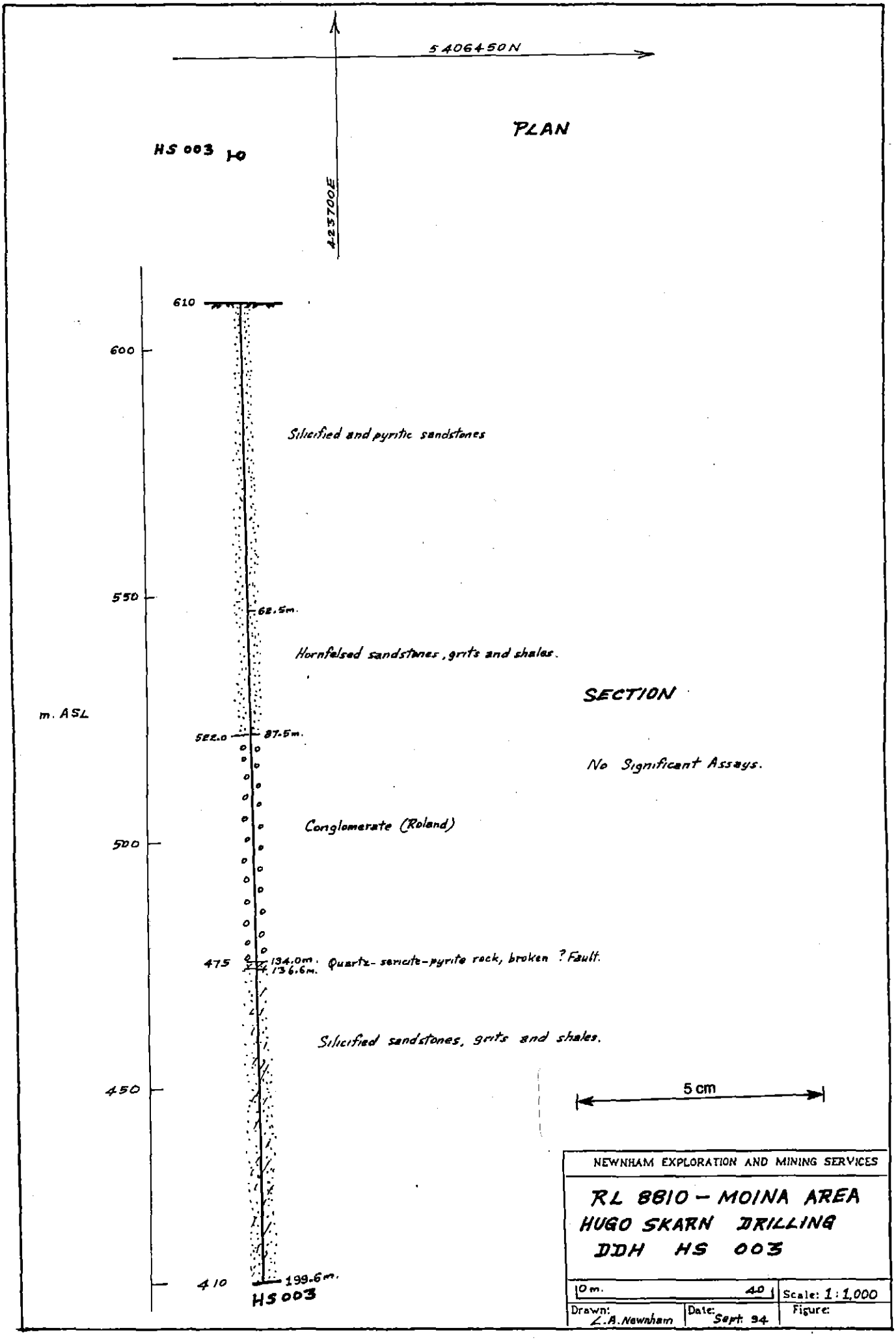
Summary of Results

Depth		Recovery	Description	Assays							
From	To	%		Length	Au	Ag	Cu	Pb	Zn	As	S
			No significant mineralisation.								

DOWN HOLE SURVEY DATA

COMPANY: Goldstream Mining - Titan Resources
PROJECT: Moina Hugo Skarn
HOLE NUMBER: HS 003

Depth	Dip	Bearing	Interval		Length	Vertical Distance		Horizontal Distance		Co-ordinates			
(m)		(AMG)	From	To	(D)	D.sin dip	R.L.	D. cos dip (HD)	Cumulative HD	N. distance HD. cos brg.	N. co-ordinate	E. distance HD. sin brg.	E. co-ordinate
COLLAR	-90	0					610.00		0.00		5,406,430.0		423,680.0
0	-90	0	0	25	25	25.00	585.00	0.00	0.00	0.00	5,406,430.0	0.00	423,680.0
50	-89.2	310	25	75	50	50.00	535.00	0.70	0.70	0.45	5,406,430.4	-0.53	423,679.5
100	-89.2	234	75	125	50	50.00	485.01	0.70	1.40	-0.41	5,406,430.0	-0.56	423,678.9
150	-89	275	125	174.8	49.8	49.79	435.22	0.87	2.27	0.08	5,406,430.1	-0.87	423,678.0
199.6	-89	275	174.8	199.6	24.8	24.80	410.42	0.43	2.70	0.04	5,406,430.2	-0.43	423,677.6
199.6													


5406450N
PLAN
HS 003
423700E
610
600
550
500
475
450
410
m. ASL
Silicified and pyritic sandstones
62.5m.
Hornfelsed sandstones, grits and shales.
SECTION
562.0
87.5m.
No Significant Assays.
Conglomerate (Roland)
134.0m.
136.6m.
Quartz-sericite-pyrite rock, broken ? Fault.
Silicified sandstones, grits and shales.
199.6m.
HS 003
5 cm
NEWNHAM EXPLORATION AND MINING SERVICES
RL 8810 – MOINA AREA
HUGO SKARN DRILLING
DDH HS 003
0 m.
40
Scale: 1:1,000
Drawn: L.A. Newnham
Date: Sept 94
Figure:

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 003

Description			Core Recovery			RQD			Assays				
From	**To**		**From**	**To**	**%**	**From**	**To**	**%**	**From**	**To**	**Au**	**Sn**	**W**
		SUMMARY LOG											
0	4.0	No core.											
4.0	62.5	Silicified and pyritic sandstone.											
62.5	87.5	Hornfelsed sandstones, grits, shales.											
87.5	134.0	Rowland Conglomerate.											
134.0	199.6	Silicified siltstones, sandstones, shales.											
		DETAILED LOG											
0	4.0	HW casing; no core.	0	4.0	0								
4.0	62.5	**Silicified Pyritic Sandstone:**	4.0	4.6	100								
			4.6	13.4	90				9.6	10.6	<0.01	4	<10
		Light grey-cream sandstone becoming gritty towards base.	13.4	16.6	80				12.2	13.2	<0.01	<4	<10
			16.6	24.8	90				16.2	17.2	<0.01	4	<10
			24.8	32.8	100				26.6	27.6	<0.01	<4	<10
		Intensely silicified and some shaley units reduced to softer creamy coloured clay seams.	32.8	34.6	90				30.8	31.8	<0.01	<4	<10
			34.6	62.5	100				36.3	37.3	<0.01	<4	<10
									38.8	39.8	<0.01	<4	<10
		Gradational with unit below which gradually becomes coarser grained down hole.							40.3	41.3	<0.01	5	<10
									41.3	42.3	<0.01	4	<10
									49.3	50.3	<0.01	<4	<10
		Some zones contain significant pyrite 5-10% as large aggregates, blebs, veins and semi massive on joint surfaces.							53.6	54.6	<0.01	4	<10
		Hard and broken but improving below 30 metres. Strongly jointed.											
		Reduced to NQ at 50.8 metres.											
62.5	87.5	**Hornfelsed Sandstones-Grits-Shales:**	62.5	85.6	100								
			85.6	88.6	90				70.6	71.6	0.01	<4	<10
		Light grey-white silicified sandstones and grits with softer light grey-green sericitic clay material, possibly after shale beds.							79.6	80.6	<0.01	<4	<10

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 003

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Sn	W			
		0.5-1% disseminated pyrite in sandstone beds and on joint and fracture surfaces.														
		Core moderately broken along steep joints in sandstones and softer bedding planes in clay beds.														
87.5	134.0	**Rowland Conglomerate:**	88.6	93.6	100											
			93.6	94.8	80				104.6	105.6	0.01	9	10			
		Course quartz conglomerate with hard siliceous matrix, occasionally hematitic. 1-2% pyrite common in thin veinlets, disseminated in matrix and on joint surfaces.	94.8	97.6	100											
			97.6	100.6	90											
			100.6	121.6	100											
			121.6	124.6	30											
			124.6	136.6	100											
		Generally very hard and quite competent except for several narrow intervals (eg. 93.7-95.0).														
		Base of unit marked by dark grey grit unit.														
134.0	136.6	**Quartz-Sericite-Pyrite Rock:**														
		Grey fragmental rock, mainly quartz and grey-green sericite.														
		Highly fractured; some zones intensely pyritic, in fracture and disseminated as blebs and aggregates.														
136.6	190.6	**Silicified Sediments:**	136.6	138.6	70											
		To 145 m, massive white siliceous rock with irregular light green patches; quartz spotty in places.	138.6	163.4	100				144.6	145.6	<0.01	<4	<10			
			163.4	166.3	97				154.6	155.6	<0.01	<4	<10			
			166.3	167.3	80				157.2	158.2	<0.01	<4	<10			
			167.3	169.2	75				163.8	164.8	<0.01	5	15			
		Pyrite 2-3% disseminated in quartz and sericite, veinlets and as course in-filling on joint fracture surfaces.	169.2	184.6	100				170.8	171.8	<0.01	30	35			
			184.6	187.8	84				174.4	175.4	<0.01	4	15			
			187.8	190.6	100				182.6	183.6	<0.01	7	20			
									183.6	184.6	<0.01	4	10			
		Below 145 m, massive siliceous rock with minor disseminated pyrite and trace							184.6	185.6	<0.01	10	10			
									185.6	186.6	<0.01	8	<10			

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 003

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To						
		chalcopyrite; brittle fracturing in several directions. Below 151 m, soft green material reappears and pyrite becomes common veinlets, fracture filling, and disseminated in both siliceous and soft green materials. Fragmental?/conglomeratic appearance in places. Below 157 m, strongly silicified sandstone with sericitic fracture surfaces; pyrite 1-3% as veinlets, blebs and on fracture surfaces amount of sericite decreases below 160 m, 20 cm chlorite-garnet zone 163.9 m, course *brown-red garnet clots.* Sandstone creamy appearance 168-170; cut by numerous 2-10 mm white quartz veins. Below 170 m, sericite on fracture surfaces less common. Below 174 m, more fragmented and sericitic; 5-20 mm quartz veining common; pyrite 1-2% in fractures and veinlets in sandstone. Below 183 m, intensely fractured and brecciated sandstone with abundant 3-5% pyrite, occasionally up to 10%(near fault?). Sericite common along fractures and surrounding pebbles. Quartz veins common but post-date pyrite.														
190.6	193.6	**Altered Shale:** Grey-buff brown soft altered unit; minor weathered/leached pyrite; 90 cm cavity.	190.6	193.6	66											

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 003

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To						
193.6	199.6	**Siltstone-Sandstone:**														
			193.6	196.6	30											
		Orange-grey sandstone-siltstone; spotty alteration in place.	196.6	199.6	100											
		Minor pyrite.														
		Core very broken.														
		---- END OF HOLE ----														

COMPANY: GOLDSTREAM MINING NL/TITAN RESOURCES NL
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 004

Commenced:	22Jun94
Completed:	19Jul94
Logged By:	LA Newnham
Drilled By:	Dia. Drill Tas.

Purpose of Hole
To test the Hugo Skarn north of MD 39.

Comments on Completion
Hole failed to intersect skarn. Moina Sandstone and Rowland Conglomerate to 196 metres appears to be thrusted over greisenised Moina Sandstone to 280 metres, suggesting skarn has been folded up to west of hole.

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5406460	423600	590	-70	360

Length (m)
279.7

Hole Size	
To (m)	**Size**
4.0	HW
39.6	HQ
279.7	NQ

Significant Core Loss Zones		
From	**To**	**%Rec.**

Hole Condition on Completion
All rods and casing removed from hole.

Summary of Results

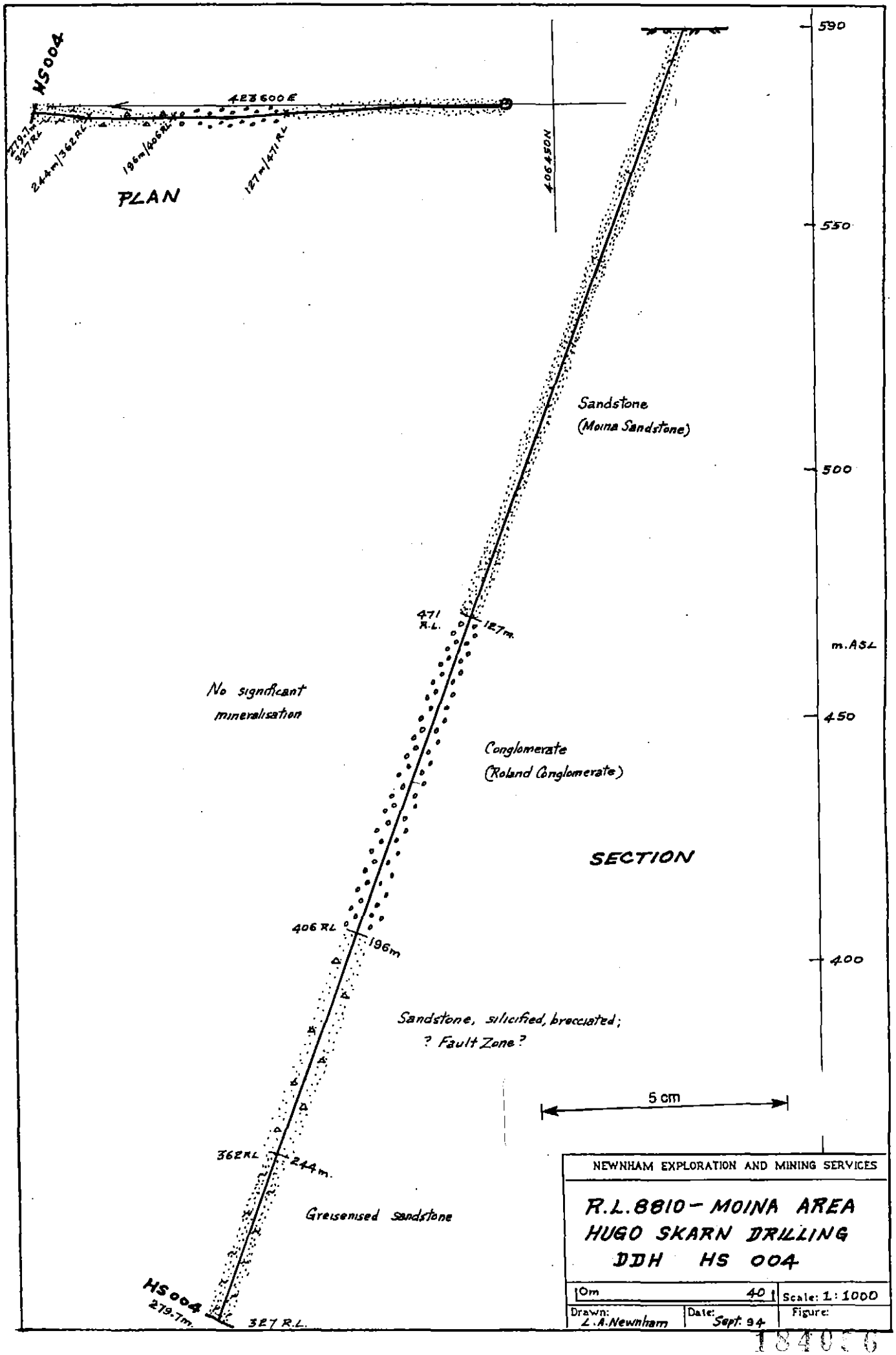
Depth		Recovery	Description	Assays							
From	**To**	**%**		***Length***	**Au**	**Ag**	**Cu**	**Pb**	**Zn**	**As**	**S**
			No significant mineralisation.								

DOWN HOLE SURVEY DATA

COMPANY: Goldstream Mining - Titan Resources
PROJECT: *Moina - Hugo Skarn*
HOLE NUMBER: HS 004

Depth	Dip	Bearing	Interval		Length	Vertical Distance		Horizontal Distance		Co-ordinates			
(m)		(AMG)	From	To	(D)	D.sin dip	R.L.	D. cos dip (HD)	Cumulative HD	N. distance HD. cos brg.	N. co-ordinate	E. distance HD. sin brg.	E. co-ordinate
COLLAR	-70	360					590.00		0.00		5,406,460.0		423,600.0
0	-70	360	0	50	50	46.98	543.02	17.10	17.10	17.10	5,406,477.1	0.00	423,600.0
100	-69.5	357	50	163	113	105.84	437.17	39.57	56.67	39.52	5,406,516.6	-2.07	423,597.9
226	-70	360	163	250.5	87.5	82.22	354.95	29.93	86.60	29.93	5,406,546.5	0.00	423,597.9
275	-70.5	3	250.5	277.35	26.85	25.31	329.64	8.96	95.56	8.95	5,406,555.5	0.47	423,598.4
279.7	-70.5	3	277.35	279.7	2.35	2.22	327.42	0.78	96.35	0.78	5,406,556.3	0.04	423,598.4
279.7													

184055


HS004
423600E
406450N
279.7m
327RL
244m/362RL
196m/406RL
127m/471RL
PLAN
590
550
500
m.ASL
450
400
Sandstone
(Moina Sandstone)
471
R.L.
127m.
No significant
mineralisation
Conglomerate
(Roland Conglomerate)
SECTION
406 RL
196m
Sandstone, silicified, brecciated;
? Fault Zone ?
5 cm
362RL
244m.
Greisenised Sandstone
HS004
279.7m.
327 R.L.
NEWNHAM EXPLORATION AND MINING SERVICES
R.L.8810 – MOINA AREA
HUGO SKARN DRILLING
DDH HS 004
0m
40
Scale: 1:1000
Drawn: L.A.Newnham
Date: Sept 94
Figure:

184056

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 004

184057

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Sn	W			
		SUMMARY LOG														
0	4.0	No core.														
4.0	127.0	Sandstone.														
127.0	196.4	Rowland Conglomerate.														
196.4	244.0	Silicified and brecciated sandstone and grit (possible fault zone).														
244.0	279.7	Greisenised sandstone.														
		DETAILED LOG														
0	4.0	HW tricone, no core.	0.0	4.0	0											
			4.0	7.5	95											
4.0	127.0	**Sandstone:**	7.5	39.6	100											
			39.6	43.5	98				38.0	39.0	<0.01	<4	10			
		Limonitic sandstone and clay zones; (after shale?), becoming darker grey and fresher below 10 m, limonite probably after pyrite.	43.5	46.5	95				41.0	42.0	<0.01	<4	<10			
			46.5	100.0	100				44.0	45.0	<0.01	<4	<10			
			100.0	101.1	90				52.0	53.0	<0.01	<4	<10			
		14.2 m, possible BCA 40°.	101.1	103.5	100				58.0	59.0	<0.01	<4	<10			
			103.5	106.3	90				64.0	65.0	<0.01	8	15			
		Minor quartz veins with pyrite below 13 m.	106.3	118.5	100				68.0	69.0	0.01	5	15			
			118.5	121.5	95				74.0	75.0	<0.01	5	10			
		Generally friable and broken; dominant joints 30, 70 CA.	121.5	127.0	100											
		Below 17 m, silicified and cut by suite of < 5 mm quartz veins.														
		1-2% pyrite disseminated in sandstone and associated with quartz veins.														
		BCA at 23 m, 35°.														
		Possible fine grained hematite in sandstone matrix.														
		Below 34.5 m, silceous sandstone with boudinaged or stretched quartz veins with														

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 004

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To						
		common pyrite; core very broken in some intervals. Below 38 m, strongly pyritic 3-5%; boudinaged quartz veins; pyrite as large clots, veinlets and disseminated in sandstone. Reduced to NQ at 39.6 m. Sandstone cut by intense network of microveins with abundant pyrite; some clots amphibole and pyrite. 45.7-46.3 m: Soft white featureless bed with disseminated pyrite and 1-2 mm quartz veins. Below 46.3 m, silicified sandstone and siltstone and altered shales; stretched and broken quartz veins common, often rimmed by pyrite. Pyrite 2-5% but up to 10% in some intervals as clots, disseminated and abundant in "dendritic" microveins. BCA 50.5 m: 50°. Core generally competent but occasional narrow very broken zones; several joint directions; becoming more silicified and greisenised with depth. 81.2-84.5 m: banded and well bedded grey-reddish brown sandstone with minor chlorite skarn zones; BCA 50. Below 85 m, mixed dark grey and softer orange-cream sandstone (limonitic matrix); 1-2% pyrite as veinlets, clots, and dendritic patches; sandstone becoming coarser down hole.								81.0	82.0	<0.01	5	<10			
									95.0	96.0	0.01	10	<10			
									103.0	104.0	<.01	<4	10			
									110.0	111.0	<.01	<4	<10			
									116.0	117.0	<.01	6	<10			

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 004

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Sn	W			
		Sericite common component as grit ground mass and on joint surfaces; below 107 m, intensely silicified sandstone and grit. Below 122 m, becoming pebbly and gradational with conglomerate below; softer cream-green partings common; cut by network very fine short veinlets filled with pyrite.														
127.0	196.4	**Quartz-Cobble-Conglomerate (Rowland Conglomerate):** Quartz pebbles-cobbles set in dark grey ground mass. Minor disseminated pyrite in ground mass and in-filling vags. Some pyrite on joint surfaces; reasonably competent but some very broken zones and two strong joint sets 20-30 CA. Unit gradational with sandstone above. 149-157.0: sandy-gritty beds; BCA gradually diminishing down hole; 156 m BCA 35-40°. Below 157 m, conglomerate very coarse with cobbles up to 5-6 cm. Core very broken below 183 m. BCA 196 m in dark grey sandstone 55°.	127.0	196.4	100											
196.4	244.0	**Sandstone-Grit, Silicified & Brecciated *(fault zone?)*:** Dark grey sandstone, extensively broken and silicified. Green-yellow sericite (clay) on fracture surfaces.	196.4	244.0	100				200.0	201.0	<0.01	8	15			
									206.0	207.0	<0.01	15	100			
									215.0	216.0	<0.01	8	15			
									219.0	220.0	<0.01	20	25			
									226.0	227.0	<0.01	9	45			
									228.0	229.0	0.01	4	50			

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 004

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Sn	W			
		1-2% pyrite throughout as disseminated grains and aggregates.							230.0	231.0	<0.01	20	670			
									232.0	233.0	<0.01	10	60			
		212.5-214.5 m: some 1-10 mm quartz veining.							234.0	235.0	<0.01	9	35			
									236.0	237.0	<0.01	4	40			
		216-218 m: darker (hematitic?) zones below 218 m, intense spotting of sandstone (see petrological description 220 m).							238.0	239.0	<0.01	7	30			
									240.0	241.0	<0.01	20	45			
		223 m: quartz veining common - major fault?; some greisen veins with dark selvages.							242.0	243.0	<0.01	6	15			
		Intensely silicified and greisenised below 226 m, dark grey, abundant quartz veins, lighter silicified zones;														
		Biotite/mica common on quartz vein margins.														
		Clots and aggregates pyrite common (see petrological description 228.4).														
		Below 243 m, silicification is intense and obliterates all original rock textures.														
		244 m: minor Bi/Mo? in quartz veins.														
244.0	279.7	**Greisenised Sandstone:**	244.0	279.7	100				244.0	245.0	<0.01	5	10			
									246.0	247.0	<0.01	9	<10			
		Gradational contact with unit above; intensely fractured and silicified sandstone.							248.0	249.0	<0.01	6	10			
									250.0	251.0	<0.01	10	10			
		Dark grey-white with some orange-brown *zones (limonitic after sulfides).*							252.0	253.0	0.01	7	<10			
									254.0	255.0	0.010	<4	10			
									256.0	257.0	0.010	<4	30			
		1-3 cm quartz veins common, often with microveins component.							257.0	258.0	0.010	4	95			
									258.0	259.0	<0.01	<4	55			
									260.0	261.0	<0.01	5	115			
		Greisenisation intense below 260 m, greisen-quartz veins common consisting of quartz-							264.0	265.0	<0.01	5	<10			
									269.0	270.0	<0.01	4	10			
									272.0	273.0	<0.01	4	<10			

COMPANY: GOLDSTREAM-TITAN
PROJECT: MOINA RL 8810
HOLE NUMBER: HS 004

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Sn	W			
		dark fine grained mica-soft green mineral and abundant pyrite as blebs and veinlets.							275.0	276.0	<0.01	<4	<10			
									277.0	278.0	0.01	7	<10			
		The greisen veins cause intense brecciation and fracturing of sandstone.														
		Pyrite 1-3% in-filling joints and fractures and accompanying quartz veins, and disseminated throughout; some zones of red-brown mineral occurring as small disseminated grains in sandstone (eg. 257.5-258.5 m (?sphalerite?)).														
		Core very broken. (Petrological descriptions 252.6 m, 277.6 m.)														
		Below 277 m, core becomes very dark (intense greisenisation), and quartz veins contain some cream feldspar; thin clay seams after feldspar common.														
		Some magnetite and hematite associated with quartz veins and greisen 277.5-277.8.														
		BCA approximately 30, but variable.														
		----END OF HOLE----														

APPENDIX (c)

Petrological Report

184063

Central Mineralogical Services

8 Bradshaw Avenue, Crafers, S.A. 5152
Telephone (08) 370 9779 Fax (08) 370 9788
International: Telephone + 618 370 9779 Fax + 618 370 9788

16 August 1994

Mr L.A. Newnham
Newnham Exploration & Mining Services
PO Box 40
LEGANA TAS 7277

REPORT CMS 94/8/4

YOUR REFERENCE: Letter 3 August 1994

DATE RECEIVED: 5 August 1994

SAMPLE NO'S: HS001 - HS004

SUBMITTED BY: L.A. Newnham

WORK REQUESTED: Petrology

H.W. Fander, M.Sc.

REPORT CMS 94/8/4

MOINA DD CORE SAMPLES HS001-HS004

Seven drill core slabs were received for petrographic study; thin sections were prepared (two from HS002/52.5m because of the apparent variability) and were examined; the descriptions are attached.

The rocks comprise garnet skarns - some are brecciated and altered, and various metaquartzites which are believed to be thermally metamorphosed sandstones (orthoquartzites) showing little effect except recrystallisation. Such rocks are unreactive and thus unlikely to undergo much chemical change.

The last rock (HS004/277.6m) is a quartz-magnetite rock or brecciated metaquartzite in which magnetite was deposited together with other minerals, including a trace of fine sphalerite.

Several of the rocks have undergone a series of changes from the original sediment through contact-metamorphism, brecciation, one or more replacive events, and younger fracturing and veining.

CENTRAL MINERALOGICAL SERVICES'
REPORT CMS 94/8/4 16 AUGUST 1994
NEWNHAM EXPLORATION & MINING SERVICES

SAMPLE NO: HS001/90.8m **(T.S.** 64399) **Page 1**

CLASSIFICATION: Garnet Skarn.

COMPOSITION: Dominantly granular to subhedral grossularite garnet, with patches and streaks of magnetite, many small inclusions of carbonate (?ankerite), interstitial quartz and hastingsite needles.

FABRIC: Granular textures, medium-grained. Weak relict banding or layering (?bedding). Fairly uniform, featureless.

MINOR MINERALS: Fine diopside enclosed in garnet. Shreds of phlogopite-biotite.

INTERPRETATION/COMMENTS: Thought to be a metasomatised carbonate rock, as the carbonate inclusions in garnet form parallel lines suggesting bedding. Silica-Fe metasomatism with minor Mg, Na.

SAMPLE NO: HS002/52.3m **(T.S.** 64400/64400A)

CLASSIFICATION: Chloritised Skarn Breccia.

COMPOSITION: Large and small angular fragments of garnet skarn, extensively replaced by carbonate (calcite) set in a mass of dark chlorite and fine-grained quartz with earthy hematite in places.

FABRIC: Tectonic breccia fabric, with fragments up to 10-20mm or more. Fragments have medium-grained granular fabrics.

MINOR MINERALS: A few magnetite-rich skarn fragments. Scattered small pyrite aggregates associated with chlorite. Quartz-carbonate veinlets.

INTERPRETATION/COMMENTS: The skarn fragments can be correlated with HS001/90.8m; they were replaced by calcite prior to chlorite-quartz emplacement, possibly before brecciation. Thus the rock has a complex history of skarn formation, replacement by calcite, brecciation and cementing by chlorite-quartz.

SAMPLE NO: HS002/56.4m **(T.S. 64401)** **Page 2**

CLASSIFICATION: Altered Skarn.

COMPOSITION: Individual crystals, small and large clusters and parallel lenses of garnet, variably replaced by calcite, which in turn is partly replaced by chlorite, in a mass of chlorite and coarse quartz.

FABRIC: Random fabric, but garnet-rich patches are vaguely banded. Varied and complex replacive textures; quartz is porphyroblastic.

MINOR MINERALS: Late-stage calcite veinlets cutting all other minerals, with associated micaceous hematite. Trace pyrite.

INTERPRETATION/COMMENTS: Probably originally a more compact garnet skarn, progressively altered and silicified.

SAMPLE NO: HS004/220m **(T.S. 64402)**

CLASSIFICATION: Spotted Sericite-Metaquartzite.

COMPOSITION: Bands and lenses of silt-sized quartz grains with interstitial sericite, and thicker bands of matted sericite with subordinate quartz. Small ovoid spots and thin bands of fine phlogopite.

FABRIC: *Good preferred orientation verging on schistosity. Quartzose* bands are finely folded, stretched and lensed out, probably due to soft-sediment deformation.

MINOR MINERALS: Scattered patches of pyrite. Very small grains of detrital heavy minerals and of authigenic tourmaline.

INTERPRETATION/COMMENTS: Originally a slumped argillaceous siltstone which was indurated and mildly contact-metamorphosed, then patchily metasomatised by replacive phlogopite and associated traces of quartz.

SAMPLE NO: HS004/228.4m **(T.S.** 64403) **Page 3**

CLASSIFICATION: Metaquartzite.

COMPOSITION: Almost entirely composed quartz, as irregular large and small interlocking grains and as patches and interstitial areas of fine, clear mosaic quartz. A few irregular phlogopite veinlets.

FABRIC: Many grains are stressed, fractured, some are cloudy. They are thought to be modified clastic grains, up to 3mm across. Much quartz is recrystallised.

MINOR MINERALS: A few chlorite patches, with carbonate needles. Scattered pyrite crystals. Isolated ?chert grains with apatite inclusions.

INTERPRETATION/COMMENTS: Originally a poorly sorted gritty sandstone (orthoquartzite), extensively recrystallised, then penetrated by phlogopite veinlets.

SAMPLE NO: HS004/252.6m **(T.S.** 64404)

CLASSIFICATION: Metaquartzite.

COMPOSITION: Grains of cloudy, milky quartz cemented by a mosaic of clear quartz, with a few grit - to pebble sized patches of milky quartz believed to have been coarse vein-quartz material.

FABRIC: Some relict clastic textures preserved but recrystallisation has obliterated features. This process has 'clarified"the milky quartz.

MINOR MINERALS: Scattered pyrite crystals with associated minor chlorite and muscovite.

INTERPRETATION/COMMENTS: Appears to have been a pebbly, gritty sandstone composed mainly of milky quartz; extensively recrystallised as a result of thermal metamorphism.

SAMPLE NO: HS004/277.6m **(T.S.** 64405)

CLASSIFICATION: Quartz-Magnetite Rock (with Sphalerite)

COMPOSITION: Mainly coarse, stressed, platy interlocking quartz, and patches/lenses of granular magnetite with fine interstitial siderite. Scattered traces of sphalerite.

FABRIC: Strongly stressed, originally coarser fabric but now fractured and partly recrystallised. No relict features. Sphalerite is <0.1mm.

MINOR MINERALS: Minor chlorite intergrown with the magnetite; traces of associated muscovite. Small patches of pyrite.

INTERPRETATION/COMMENTS: Apparently a quartz rock, possibly vein quartz, which was stressed, fractured; the other minerals were then deposited; they show no evidence of stress/deformation.

APPENDIX (d)

Assay Reports

amdel

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ANALYTICAL SERVICES

184070

Amdel Laboratories Limited
Brown Street, Thebarton, 5031
Telephone: (08) 416 5300 Facsimile: (08) 234 0321

Mr Lindsay Newnham
Newnham Exploration And Mining Services
PO Box 40
LEGANA
TAS 7977

F I N A L A N A L Y S I S R E P O R T

Your Order No: Our Job Number : 4AD2397

Samples received : 15-JUN-1994 Results reported : 05-JUL-1994
No. of samples : 59
Report comprises a cover sheet and pages 1 to 4

This report relates specifically to the samples tested in so far as that the samples as supplied are truly representative of the sample source.

Note:
If you have any enquiries please contact Mr Alan Ciplys quoting the above job number.

Approved Signatory:

Chris Altmann

for Trevor Francis
Marketing Manager

CC Goldstream Mining West Perth

Report Codes:
N.A. - Not Analysed.
L.N.R. - Listed But Not Received.
I.S. - Insufficent Sample.

Distribution Codes:
CC - Carbon Copy
EM - Electronic Media
MM - Magnetic Media

amdel

184071

ANALYTICAL REPORT

Job: 4AD2397
O/N:

Sample	Mo	Sn	Zn	Au Dp1	Au Dp2	Bi	W
HS001 27.0-28.0	<20	<50	1250	2	1	7	<10
HS001 31.5-32.5	<20	<50	400	1	--	5	15
HS001 34.5-35.5	<20	<50	150	1	--	6	<10
HS001 35.5-36.0	<20	<50	200	1	--	<4	<10
HS001 39.9-40.9	<20	<50	150	1	--	<4	<10
HS001 63.5-64.5	<20	<50	<50	2	--	8	<10
HS001 76.0-77.0	<20	200	150	285	--	820	25
HS001 77.0-78.0	<20	200	100	125	--	600	15
HS001 78.0-79.0	<20	250	100	210	--	420	10
HS001 79.0-80.0	<20	250	100	85	--	320	20
HS001 80.0-81.0	<20	250	100	265	--	940	20
HS001 81.0-82.0	<20	250	100	30	--	340	15
HS001 82.0-83.0	20	150	1700	46	--	250	15
HS001 83.0-84.0	<20	350	50	105	--	770	<10
HS001 84.0-85.0	<20	400	50	715	610	1860	10
HS001 85.0-86.0	<20	450	100	125	--	1420	15
HS001 86.0-87.0	<20	550	50	315	--	1420	<10
HS001 87.0-88.0	<20	450	100	240	--	3900	<10
HS001 88.0-89.0	20	650	100	265	--	4100	10
HS001 89.0-90.0	50	850	100	285	--	1620	20
HS001 90.0-91.0	320	900	150	230	240	6800	30
HS001 91.0-92.0	1350	900	200	230	250	1.26%	10
HS001 92.0-93.0	1400	1000	150	200	180	9200	15
HS001 93.0-94.0	120	800	100	145	--	2150	25
HS001 94.0-95.0	40	700	100	1300	990	5800	35
HS001 95.0-96.0	30	500	150	755	--	3700	10
HS001 96.0-97.0	<20	300	50	440	--	2050	<10
HS001 97.0-98.0	<20	300	150	90	--	1220	20
HS001 98.0-99.0	<20	350	150	200	230	950	10
HS001 99.0-100.0	<20	450	50	22	--	1080	<10
HS001 100.0-101.0	<20	450	50	30	--	1380	<10
HS001 101.0-102.0	<20	250	50	70	--	195	25
HS001 102.0-103.0	20	100	100	230	220	330	10
HS001 103.0-104.0	<20	100	50	13	--	400	<10
HS001 104.0-105.0	<20	200	50	4	--	40	<10
HS001 105.0-106.0	20	250	50	90	--	25	160
HS001 106.0-107.0	<20	100	50	8	--	50	10
HS001 107.0-108.0	<20	150	100	2	--	65	15
HS001 108.0-109.0	20	150	100	6	--	260	<10
HS001 109.0-110.0	<20	250	50	560	390	750	<10
HS001 110.0-111.0	40	450	50	80	90	840	80
HS001 111.0-112.0	<20	500	100	2	--	25	10
HS001 112.0-113.0	<20	500	50	5	--	700	<10
HS001 113.0-114.0	<20	450	50	2	--	170	20
HS001 114.0-115.0	<20	300	50	2	--	50	20
Units	ppm	ppm	ppm	ppb	ppb	ppm	ppm
DL	20	50	50	1	1	4	10
Scheme	IC4E	IC4E	IC4E	FA3	FA3	XRF1	XRF1
Upper Scheme						XRF2	

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184072

Job: 4AD2397
O/N:

ANALYTICAL REPORT

Sample	Mo	Sn	Zn	Au Dp1	Au Dp2	Bi	W
HS001 115.0-116.0	20	400	50	2	--	135	10
HS001 116.0-117.0	20	400	50	9	--	1620	<10
HS001 117.0-118.0	<20	500	<50	22	--	8	<10
HS001 118.0-119.0	20	450	50	1	--	20	10
HS001 119.0-120.0	30	500	50	<1	--	20	<10
HS001 120.0-121.0	30	500	100	1	--	15	<10
HS001 121.0-122.0	30	550	50	<1	--	4	30
HS001 122.0-123.0	40	450	150	50	--	150	15
HS001 123.0-124.0	90	150	6900	310	290	550	10
HS001 124.0-125.0	40	150	4750	10	--	30	25
HS001 125.0-126.0	50	150	300	3	--	15	30
HS001 136.0-137.0	50	150	200	<1	--	15	90
HS001 141.5-142.5	200	100	100	<1	--	5	380
HS001 150.0-151.0	90	150	100	<1	--	4	220
Units	ppm	ppm	ppm	ppb	ppb	ppm	ppm
DL	20	50	50	1	1	4	10
Scheme	IC4E	IC4E	IC4E	FA3	FA3	XRF1	XRF1

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134073

Job: 4AD2397
O/N:

ANALYTICAL REPORT

Sample	F
HS001 27.0-28.0	0.02
HS001 31.5-32.5	0.11
HS001 34.5-35.5	0.17
HS001 35.5-36.0	0.19
HS001 39.9-40.9	0.04
HS001 63.5-64.5	0.27
HS001 76.0-77.0	0.88
HS001 77.0-78.0	0.72
HS001 78.0-79.0	1.01
HS001 79.0-80.0	1.40
HS001 80.0-81.0	1.58
HS001 81.0-82.0	1.94
HS001 82.0-83.0	0.66
HS001 83.0-84.0	0.41
HS001 84.0-85.0	0.19
HS001 85.0-86.0	0.89
HS001 86.0-87.0	0.37
HS001 87.0-88.0	0.36
HS001 88.0-89.0	0.51
HS001 89.0-90.0	0.60
HS001 90.0-91.0	0.46
HS001 91.0-92.0	0.42
HS001 92.0-93.0	0.49
HS001 93.0-94.0	3.53
HS001 94.0-95.0	1.65
HS001 95.0-96.0	0.69
HS001 96.0-97.0	0.46
HS001 97.0-98.0	0.68
HS001 98.0-99.0	0.29
HS001 99.0-100.0	0.19
HS001 100.0-101.0	0.22
HS001 101.0-102.0	0.40
HS001 102.0-103.0	1.99
HS001 103.0-104.0	1.66
HS001 104.0-105.0	1.24
HS001 105.0-106.0	0.37
HS001 106.0-107.0	0.25
HS001 107.0-108.0	0.31
HS001 108.0-109.0	0.25
HS001 109.0-110.0	0.36
HS001 110.0-111.0	0.36
HS001 111.0-112.0	0.25
HS001 112.0-113.0	0.22
HS001 113.0-114.0	0.24
HS001 114.0-115.0	0.37
Units	%
DL	0.01
Scheme	SIE2

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184074

Job: 4AD2397
O/N:

ANALYTICAL REPORT

Sample	F
HS001 115.0-116.0	0.24
HS001 116.0-117.0	0.24
HS001 117.0-118.0	0.24
HS001 118.0-119.0	0.24
HS001 119.0-120.0	0.28
HS001 120.0-121.0	0.24
HS001 121.0-122.0	0.27
HS001 122.0-123.0	0.30
HS001 123.0-124.0	0.36
HS001 124.0-125.0	1.00
HS001 125.0-126.0	0.84
HS001 136.0-137.0	1.20
HS001 141.5-142.5	0.70
HS001 150.0-151.0	1.63
Units	%
DL	0.01
Scheme	SIE2

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ANALYTICAL SERVICES

184075

Amdel Laboratories Limited
Brown Street, Thebarton, 5031
Telephone: (08) 416 5300 Facsimile: (08) 234 0321

Mr Lindsay Newnham
Newnham Exploration And Mining Services
PO Box 40
LEGANA
TAS 7977

F I N A L A N A L Y S I S R E P O R T

Your Order No: Our Job Number : 4AD2661

Samples received : 01-JUL-1994 Results reported : 25-JUL-1994
No. of samples : 110
Report comprises a cover sheet and pages 1 to 3, G1 to G4

This report relates specifically to the samples tested in so far as that the samples as supplied are truly representative of the sample source.

Please note detection limits for XRF on some samples may be elevated due to spectral interferences.

Note:
If you have any enquiries please contact Mr Alan Ciplys quoting the above job number.

Approved Signatory:

for Trevor Francis
Marketing Manager

CC Goldstream Mining WA

Report Codes:
N.A. - Not Analysed.
L.N.R. - Listed But Not Received.
I.S. - Insufficent Sample.

Distribution Codes:
CC - Carbon Copy
EM - Electronic Media
MM - Magnetic Media

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184078

ANALYTICAL REPORT

Job: 4AD2661
O/N:

Sample	Bi	Mo	Sn	W	Au Dp1	Au Dp2	Zn
HS002 31.0-32.0	8	3	20	<10	4	4	740
HS002 32.0-33.0	6	3	15	45	1	--	550
HS002 33.0-34.0	7	4	5	25	1	--	640
HS002 34.0-35.0	6	6	5	15	1	--	330
HS002 42.7-43.5	15	4	40	240	3	--	770
HS002 43.5-45.1	260	13	340	260	12	--	510
HS002 45.1-46.1	480	<2	1980	100	8	--	800
HS002 46.1-46.8	390	2	2050	470	17	--	580
HS002 46.8-47.8	500	3	2650	230	70	60	670
HS002 47.8-48.8	1.61%	9	3300	140	<1	--	510
HS002 48.8-49.8	1580	8	3450	130	55	--	750
HS002 49.8-50.8	990	4	4050	145	55	--	580
HS002 50.8-51.8	460	2	1950	120	36	--	1420
HS002 51.8-52.8	300	<2	3850	110	19	--	1020
HS002 52.8-53.8	15	<2	35	90	2	--	550
HS002 53.8-54.8	15	<2	40	105	2	--	780
HS002 54.8-55.3	15	<2	210	260	2	--	1300
HS002 55.3-56.7	550	<2	1880	230	80	75	470
HS002 56.7-57.7	175	4	300	240	14	--	300
HS002 57.7-58.6	350	<2	390	175	40	--	610
HS002 58.6-59.6	290	<2	190	105	13	17	630
HS002 59.6-60.3	200	<2	1240	90	24	--	650
HS002 60.3-61.3	165	6	5700	65	22	--	460
HS002 61.3-62.3	600	8	1800	85	46	--	640
HS002 63.3-64.3	580	5	2750	110	100	110	390
HS002 64.3-65.3	570	8	980	160	46	--	240
HS002 65.3-66.3	350	8	1850	490	30	--	230
HS002 66.3-67.3	630	9	3000	320	26	--	210
HS002 67.3-68.3	950	4	2450	410	38	--	155
HS002 68.3-69.2	135	5	670	510	17	--	115
HS002 69 .2-70 .2	340	15	2150	550	22	--	140
HS002 70 .2-71 .2	610	7	2250	380	44	--	125
HS002 71 .2-72 .2	650	5	3050	320	105	--	165
HS002 72 .2-73 .2	1720	5	3750	610	180	150	125
HS002 73 .2-74 .2	570	5	1900	420	60	--	160
HS002 74 .2-75 .2	1220	19	1640	790	120	120	175
HS002 75 .2-76 .2	540	40	1440	1220	50	--	250
HS002 76 .2-77 .2	390	9	2800	460	46	--	100
HS002 77 .2-78 .2	660	20	2300	1340	110	100	185
HS002 78 .2-79 .2	310	25	1500	1240	22	--	130
HS002 79 .2-80 .2	220	12	1320	570	17	14	105
HS002 80 .2-81 .2	380	12	1160	390	34	--	115
HS002 81 .2-82 .2	630	65	1340	590	60	65	220
HS002 82 .2-83 .2	590	15	1680	1120	55	--	220
HS002 83 .2-84 .2	940	65	2000	960	50	--	230
Units	ppm	ppm	ppm	ppm	ppb	ppb	ppm
DL	4	2	4	10	1	1	2
Scheme	XRF1	XRF1	XRF1	XRF1	FA3	FA3	AA3
Upper Scheme	XRF2						

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184077

ANALYTICAL REPORT

Job: 4AD2661
O/N:

Sample	Bi	Mo	Sn	W	Au Dp1	Au Dp2	Zn
HS002 84 .2-85 .2	500	13	1120	650	34	46	190
HS002 85 .2-86 .2	490	14	960	830	44	--	230
HS002 86 .2-87 .2	550	16	1000	1000	65	--	230
HS002 87 .2-88 .2	440	8	1140	720	44	--	220
HS002 88 .2-89 .2	460	10	1380	610	34	50	210
HS002 89 .2-90 .2	710	18	1020	530	110	--	450
HS002 90 .2-91 .2	530	20	1020	1500	48	--	240
HS002 91 .2-92 .2	660	19	1200	710	110	110	180
HS002 92 .2-93 .2	660	15	1080	650	75	--	150
HS002 93 .2-94 .2	460	35	1150	870	60	--	180
HS002 94 .2-95 .2	600	30	1200	1120	48	--	120
HS002 95 .2-96 .2	530	35	1100	950	90	--	145
HS002 96 .2-97 .2	470	20	1780	1120	55	--	220
HS002 97 .2-98 .2	570	16	980	720	70	--	340
HS002 98 .2-99 .2	490	17	980	680	48	--	600
HS002 99 .2-100.2	630	10	990	770	75	70	410
HS002 100.2-101.2	380	30	1050	520	48	--	230
HS002 101.2-102.2	210	17	1500	370	28	--	210
HS002 102.2-103.2	770	3	2200	350	100	--	240
HS002 103.2-104.2	500	20	1360	2050	40	--	230
HS002 104.2-105.2	590	4	2050	620	38	--	195
HS002 105.2-106.2	610	140	1380	1.03%	80	--	150
HS002 106.2-107.2	660	12	1300	790	70	--	240
HS002 107.2-108.2	670	11	1620	1160	85	--	210
HS002 108.2-109.2	660	45	1680	1580	90	140	370
HS002 109.2-110.2	420	15	1200	900	65	--	310
HS002 110.2-111.2	550	17	1500	930	65	--	260
HS002 111.2-112.2	630	75	1460	870	210	150	370
HS002 112.2-113.2	520	12	1240	970	80	--	220
HS002 113.2-114.2	210	30	1580	590	44	--	6900
HS002 114.2-115.2	15	35	370	280	30	--	2.30%
HS002 115.2-116.2	35	40	240	1180	15	--	1.64%
HS002 116.2-117.2	40	20	420	220	85	85	2.95%
HS002 117.2-118.2	45	9	750	140	4	--	5300
HS002 118.2-119.2	35	25	700	330	9	--	1.23%
HS002 119.2-120.2	45	2	670	50	2	2	380
HS002 120.2-121.2	4	4	700	10	2	--	200
HS002 121.2-122.2	4	4	670	<10	1	--	155
HS002 122.2-123.2	<4	100	620	2450	2	--	135
HS002 123.2-124.2	5	<2	520	15	<1	--	115
HS002 124.2-125.2	4	100	510	175	1	--	195
HS002 125.2-126.2	7	2	640	20	<1	--	135
HS002 126.2-127.2	4	<2	760	25	<1	--	100
HS002 127.2-128.2	4	<2	760	30	<1	--	100
HS002 128.2-129.2	6	<2	760	35	1	--	105
Units	ppm	ppm	ppm	ppm	ppb	ppb	ppm
DL	4	2	4	10	1	1	2
Scheme	XRF1	XRF1	XRF1	XRF1	FA3	FA3	AA3
Upper Scheme				XRF2			AA4

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184073

ANALYTICAL REPORT

Job: 4AD2661
O/N:

Sample	Bi	Mo	Sn	W	Au Dp1	Au Dp2	Zn
HS002 129.2-130.2	10	60	590.	340	2	--	85
HS002 130.2-131.2	15	<2	570	<10	1	--	85
HS002 131.2-132.2	15	2	480	<10	2	--	95
HS002 132.2-133.2	10	<2	430	30	1	--	105
HS002 133.2-134.2	20	<2	390	20	<1	--	110
HS002 134.2-135.2	15	<2	350	20	1	--	70
HS002 135.2-136.2	25	<2	330	<10	<1	--	70
HS002 136.2-137.2	6	2	440	<10	1	--	100
HS002 137.2-138.2	20	<2	310	35	1	--	65
HS002 138.2-139.2	<4	<2	310	25	1	--	55
HS002 139.2-140.2	30	<2	360	<10	2	4	60
HS002 140.2-141.2	8	<2	270	15	10	12	320
HS002 141.2-142.2	4	3	300	<10	1	--	105
HS002 142.2-143.2	8	4	340	<10	<1	--	75
HS002 143.2-144.2	5	<2	440	20	1	--	75
HS002 144.2-145.2	6	<2	440	25	3	--	80
HS002 145.2-146.2	<4	<2	470	20	5	--	125
HS002 146.2-147.2	<4	<2	250	10	16	13	210
HS002 153.0-154.0	6	95	320	450	<1	--	150
HS002 156.0-157.0	<4	35	140	980	<1	--	95
Units	ppm	ppm	ppm	ppm	ppb	ppb	ppm
DL	4	2	4	10	1	1	2
Scheme	XRF1	XRF1	XRF1	XRF1	FA3	FA3	AA3

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184099

ANALYTICAL REPORT

AMDEL Report 4AD2661

Sample ID Code Results in		F SIE 3 %
HS 002	31.0-32.0	0.26
	32.0-33.0	0.22
	33.0-34.0	0.12
	34.0-35.0	0.08
	42.7-43.5	0.30
	43.5-45.1	0.22
	45.1-46.1	3.05
	46.1-46.8	10.2
	46.8-47.8	2.80
	47.8-48.8	0.16
	48.8-49.3	0.22
	49.8-50.8	0.12
	50.8-51.8	0.18
	51.8-52.8	0.08
	52.8-53.8	0.12
	53.8-54.8	0.06
	54.8-55.3	0.18
	55.3-56.7	0.28
	56.7-57.7	0.16
	57.7-58.6	0.14
	58.6-59.6	0.16
	59.6-60.3	0.08
	60.3-61.3	0.30
	61.3-62.3	0.12
	63.3-64.3	0.20
	64.3-65.3	8.80
	65.3-66.3	14.4
	66.3-67.3	7.50
	67.3-68.3	7.02
	68.3-69.2	5.52

ANALYTICAL REPORT

AMDEL Report 4AD2661

Sample ID / Code / Results in		F SIE 3 %
HS 002	69.2-70.2	8.10
	70.2-71.2	10.9
	71.2-72.2	10.0
	72.2-73.2	9.60
	73.2-74.2	9.32
	74.2-75.2	12.7
	75.2-76.2	12.2
	76.2-77.2	7.60
	77.2-78.2	9.85
	78.2-79.2	12.2
	79.2-80.2	10.3
	80.2-81.2	11.5
	81.2-82.2	13.2
	82.2-83.2	13.9
	83.2-84.2	12.4
	84.2-85.2	13.8
	85.2-86.2	12.1
	86.2-87.2	14.4
	87.2-88.2	11.2
	88.2-89.2	12.2
	89.2-90.2	11.2
	90.2-91.2	12.4
	91.2-92.2	14.0
	92.2-93.2	13.0
	93.2-94.2	13.0
	94.2-95.2	14.7
	95.2-96.2	13.1
	96.2-97.2	11.3
	97.2-98.2	11.7
	98.2-99.2	10.2

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184081

ANALYTICAL REPORT

AMDEL Report 4AD2661

Sample ID		F
Code		SIE 3
Results in		%
HS 002	99.2-100.2	10.6
	100.2-101.2	10.5
	101.2-102.2	8.00
	102.2-103.2	7.60
	103.2-104.2	9.12
	104.2-105.2	11.9
	105.2-106.2	11.3
	106.2-107.2	12.4
	107.2-108.2	11.5
	108.2-109.2	12.5
	109.2-110.2	11.0
	110.2-111.2	13.4
	111.2-112.2	14.5
	112.2-113.2	14.5
	113.2-114.2	8.20
	114.2-115.2	1.93
	115.2-116.2	1.90
	116.2-117.2	1.26
	117.2-118.2	1.22
	118.2-119.2	0.99
	119.2-120.2	0.58
	120.2-121.2	0.36
	121.2-122.2	1.21
	122.2-123.2	0.51
	123.2-124.2	0.51
	124.2-125.2	0.88
	125.2-126.2	0.39
	126.2-127.2	0.53
	127.2-128.2	0.47
	128.2-129.2	1.15

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184002

ANALYTICAL REPORT

AMDEL Report 4AD2661

Sample ID / Code / Results in		F SIE 3 %
HS 002	129.2-130.2	1.19
	130.2-131.2	0.63
	131.2-132.2	0.50
	133.2-134.2	0.90
	134.2-135.2	0.55
	135.2-136.2	0.75
	136.2-137.2	0.35
	137.2-138.2	0.85
	138.2-139.2	0.20
	139.2-140.2	0.55
	140.2-141.2	0.25
	141.2-142.2	0.25
	142.2-143.2	0.20
	143.2-144.2	0.25
	144.2-145.2	0.25
	145.2-146.2	0.15
	146.2-147.2	0.15
	153.2-154.2	3.50
	156.2-157.2	3.00

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ANALYTICAL SERVICES

134033

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Mr Lindsay Newnham
Newnham Exploration And Mining Services
PO Box 40
LEGANA
TAS 7277

F I N A L A N A L Y S I S R E P O R T

Your Order No: Our Job Number : 4AD3223

Samples received : 09-AUG-1994 Results reported : 15-AUG-1994
No. of samples : 65
Report comprises a cover sheet and pages 1 to 2

This report relates specifically to the samples tested in so far as that the samples as supplied are truly representative of the sample source.

Note:
If you have any enquiries please contact Mr Alan Ciplys quoting the above job number.

Approved Signatory:

for Trevor Francis
Marketing Manager

CC Goldstream Mining NL West Perth

Report Codes:
N.A. - Not Analysed.
L.N.R. - Listed But Not Received.
I.S. - Insufficent Sample.

Distribution Codes:
CC - Carbon Copy
EM - Electronic Media
MM - Magnetic Media

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184084

ANALYTICAL REPORT

Job: 4AD3223
O/N:

Sample	Au Avg	Au	Au Rpl	AuSS	Sn	W
HS003 9.6-10.6	<0.01	<0.01	--	<0.01	4	<10
HS003 12.2-13.2	<0.01	<0.01	--	--	<4	<10
HS003 16.2-17.2	<0.01	<0.01	--	--	4	<10
HS003 26.6-27.6	<0.01	<0.01	--	--	<4	<10
HS003 30.8-31.8	<0.01	<0.01	--	--	<4	<10
HS003 36.3-37.3	<0.01	<0.01	--	--	<4	<10
HS003 38.8-39.8	<0.01	<0.01	--	--	<4	<10
HS003 40.3-41.3	<0.01	<0.01	--	--	5	<10
HS003 41.3-42.3	<0.01	<0.01	--	--	4	<10
HS003 49.3-50.3	0.01	0.01	--	--	<4	<10
HS003 53.6-54.6	<0.01	<0.01	--	--	4	<10
HS003 70.6-71.6	0.01	0.01	--	--	<4	<10
HS003 79.6-80.6	<0.01	<0.01	--	--	<4	<10
HS003 104.6-105.6	0.01	0.01	--	--	9	10
HS003 144.6-145.6	<0.01	<0.01	--	--	<4	<10
HS003 154.6-155.6	<0.01	<0.01	--	--	<4	<10
HS003 157.2-158.2	<0.01	<0.01	--	--	<4	<10
HS003 163.8-164.8	<0.01	<0.01	--	--	5	15
HS003 170.8-171.8	<0.01	<0.01	--	--	30	35
HS003 174.4-175.4	<0.01	<0.01	--	--	4	15
HS003 182.6-183.6	<0.01	<0.01	--	<0.01	7	20
HS003 183.6-184.6	<0.01	<0.01	--	--	4	10
HS003 184.6-185.6	<0.01	<0.01	--	--	10	10
HS003 185.6-186.6	<0.01	<0.01	--	--	8	<10
HS004 38-39	<0.01	<0.01	--	--	<4	10
HS004 41-42	<0.01	<0.01	--	--	<4	<10
HS004 44-45	<0.01	<0.01	--	--	<4	<10
HS004 52-53	<0.01	<0.01	--	--	<4	<10
HS004 58-59	<0.01	<0.01	--	--	<4	<10
HS004 64-65	<0.01	<0.01	--	--	8	15
HS004 68-69	0.01	0.01	--	--	5	15
HS004 74-75	<0.01	<0.01	--	--	5	10
HS004 81-82	<0.01	<0.01	--	--	5	<10
HS004 95-96	0.01	0.01	--	--	10	<10
HS004 103-104	<0.01	<0.01	--	--	<4	10
HS004 110-111	<0.01	<0.01	--	--	<4	<10
HS004 116-117	<0.01	<0.01	--	--	6	<10
HS004 200-201	<0.01	<0.01	--	--	8	15
HS004 206-207	<0.01	<0.01	--	--	15	100
HS004 215-216	<0.01	<0.01	--	--	8	15
HS004 219-220	<0.01	<0.01	--	<0.01	20	25
HS004 226-227	<0.01	<0.01	--	--	9	45
HS004 228-229	0.01	0.01	--	--	4	50
HS004 230-231	<0.01	<0.01	--	--	20	670
HS004 232-233	<0.01	<0.01	--	--	10	60
Units	ppm	ppm	ppm	ppm	ppm	ppm
DL	0.01	0.01	0.01	0.01	4	10
Scheme	FA1	FA1	FA1	FA1	XRF1	XRF1

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Job: 4AD3223
O/N:

ANALYTICAL REPORT

Sample	Au Avg	Au	Au Rpl	AuSS	Sn	W
HS004 234-235	<0.01	<0.01	--	--	9	35
HS004 236-237	<0.01	<0.01	--	--	4	40
HS004 238-239	<0.01	<0.01	--	--	7	30
HS004 240-241	<0.01	<0.01	--	--	20	45
HS004 242-243	<0.01	<0.01	--	--	6	15
HS004 244-245	<0.01	<0.01	--	--	5	10
HS004 246-247	<0.01	<0.01	--	--	9	<10
HS004 248-249	<0.01	<0.01	--	--	6	10
HS004 250-251	<0.01	<0.01	--	--	10	10
HS004 252-253	0.01	0.01	--	--	7	<10
HS004 254-255	0.01	0.01	--	--	<4	10
HS004 256-257	0.01	0.01	--	--	<4	30
HS004 257-258	0.01	0.01	--	--	4	95
HS004 258-259	<0.01	<0.01	--	--	<4	55
HS004 260-261	<0.01	<0.01	--	--	5	115
HS004 264-265	<0.01	<0.01	--	<0.01	5	<10
HS004 269-270	<0.01	<0.01	--	--	4	10
HS004 272-273	<0.01	<0.01	--	--	4	<10
HS004 275-276	<0.01	<0.01	--	--	<4	<10
HS004 277-278	0.01	0.01	--	--	7	<10
Units	ppm	ppm	ppm	ppm	ppm	ppm
DL	0.01	0.01	0.01	0.01	4	10
Scheme	FA1	FA1	FA1	FA1	XRF1	XRF1

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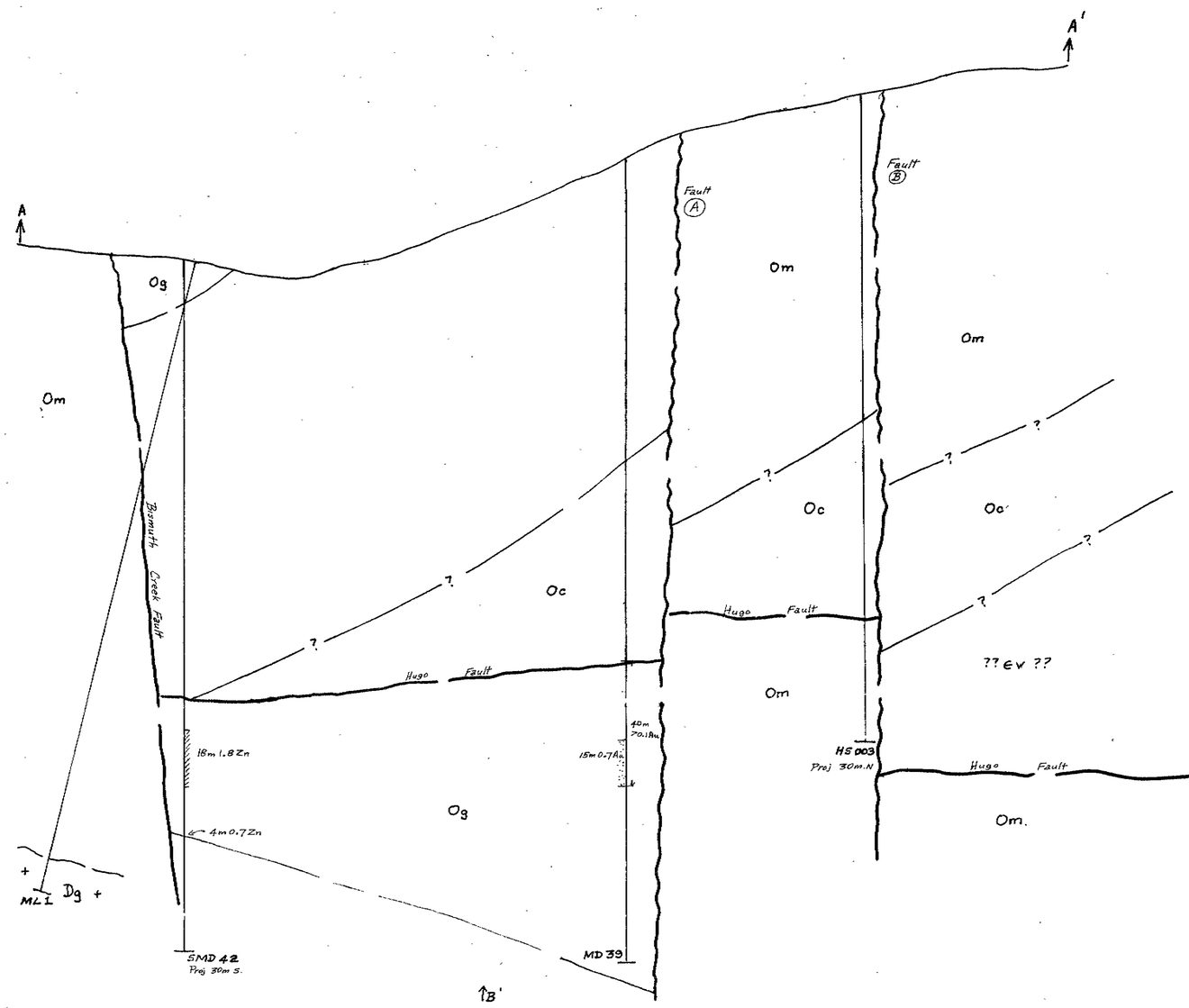
EAST-WEST SECTION A-A'

Illustrates the result of the Hugo Fault dipping more steeply to the N than the stratigraphy. This results in lower formations being present above Hugo Fault, and less skarn below Hugo Fault.

Further N of this section, skarn/limestone will appear above Hugo Fault (see section D-D')

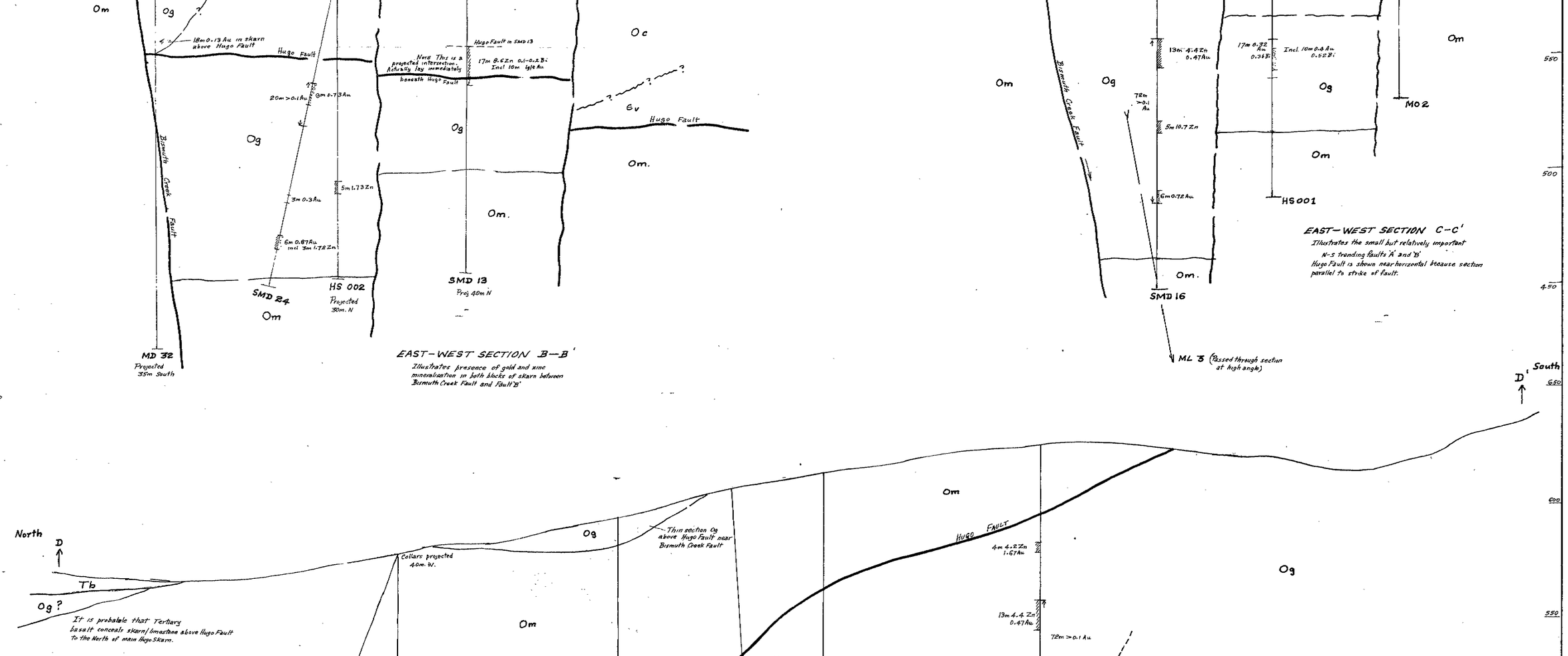


EAST-WEST SECTION B-B'

Illustrates presence of gold and zinc mineralization in both blocks of skarn between Bismuth Creek Fault and Fault 'B'

EAST-WEST SECTION C-C'

Illustrates the small but relatively important N-S trending faults 'A' and 'B'.
Hugo Fault is shown near horizontal because section parallel to strike of fault.



NORTH-SOUTH SECTION D-D'

Illustrates southerly continuation of skarn zone which lies between Bismuth Creek Fault and Fault 'A' (see 1:1000 plan)

A similar but higher zone may exist between Fault 'A' and Fault 'B'

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NEWNHAM EXPLORATION AND MINING SERVICES	
CLIENT: GOLDSTREAM MINING N.L. – TITAN RESOURCES N.L.	
R.L. 8810 – MOINA AREA HUGO SKARN INTERPRETED CROSS SECTIONS	
0m 50m	SCALE: 1:1000
DRAWN: L.A. Newnham	DATE: September 94 / FIGURE: 5

5 cm

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