



265001

R.L. 8810 - MOINA, TASMANIA

Annual Report for the Period to 21 October 1997

Author: C.R. Mackay Report No: 08.9170
Date: August 1997 Copy No: 1 of 3

MICROFILMED
FICHE No. 014405-07



Distribution:

1. Mineral Resources Tasmania
2. Rio Tinto Exploration, Melbourne
3. Acacia Metals Pty. Ltd., Melbourne

CONTENTS

1.0	INTRODUCTION	1
2.0	WORK CONDUCTED	1
2.1	MOINA JOINT VENTURE	1
2.2	HUGO JOINT VENTURE.....	1
3.0	EXPENDITURE	2
4.0	PROPOSED WORK.....	2
5.0	REFERENCES	2

FIGURES

<u>Figure No.</u>	<u>Title</u>	<u>Scale</u>	<u>Size</u>
1	RL8810 - Moina and Hugo JV Summary Geology and Title Boundaries	1:25,000	A4

APPENDICES

<u>Appendix No.</u>	<u>Title</u>
1	RL8810 Moina Area - Northern Tasmania Report on Drilling Program, September - October 1996.

1.0 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 20/10/97 in 1994. Shell's interest in the project was assigned to Acacia Metals Pty. Ltd. late in 1994. CRA's interest was assigned to Rio Tinto Exploration Pty. Ltd. on 1/7/97.

The licence covers a 2km² area of which the greater part is Crown Land. A 0.6km² segment is private land. The title was granted to cover probably Australia's largest resource of fluorite-tin and tungsten bearing wrigglyite skarn comprising 26.5Mt of 18% CaF₂, 0.1% W and some significant zinc and gold intersections.

RL8810 is covered by the Moina Joint Venture between Acacia and Rio Tinto with each party holding a 50% equity and the former managing joint venture interests. From the 9/9/93 to 31/5/97 the eastern part of the title (east of the Bismuth Creek and Hugo faults), which covers a number of interesting Zn-Au intersections in skarns was subject to the separate Hugo Joint Venture (Figure 1). In the Hugo Joint Venture Goldstream NL and Titan Resources NL were to earn a 50% equity with Rio Tinto and Acacia each to dilute to 25%. The Hugo Joint Venture was terminated on 31/5/97 with the withdrawal of Goldstream and Titan.

2.0 WORK CONDUCTED

2.1 MOINA JOINT VENTURE

No work has been conducted during the term on the fluorite resource. The annual report of Randell, J.P. No. 08.5593 in Sept. 1991 reviewed resource, marketing and financial implications of the project which is the most recent appraisal. On the marketing front there have been no significant changes that may impact on the projects viability.

2.2 HUGO JOINT VENTURE

Lyndsay Newnham of Newnham Exploration and Mining Services has supervised exploration in the Hugo joint venture area on behalf of Goldstream Mining and Titan Resources.

A programme of four diamond drillholes was completed during September - October 1996 to further test the Zn-Au potential of the

Hugo Skarn. A report by L. Newnham on the drilling has been incorporated as Appendix 1.

In order to gain a more complete picture of the base-precious metal potential of the remainder of RL8810, Acacia - CRA agreed to allow L. Newnham to conduct a review of exploration data west of the Bismuth Creek Fault. Newnham's conclusions are detailed in Appendix 1.

3.0 EXPENDITURE

Expenditure Statement for RL8810 (1 October 1996 to 30 July 1997)

	\$
Geology	11,981
Geochemistry	2,823
Rehabilitation	- 7,890 *
Drilling	30,024
Administration	4,221
Other	5,372
TOTAL	46,531

* Mineral Resources Tasmania contribution to cover 50% of costs to cap the Shepherd and Murphy mine shafts.

4.0 PROPOSED WORK

The Joint Venture will continue to monitor the economics of fluorite extraction from the Moina deposit with reference to operating/capital costs and market trends. Following a review of all previous exploration data relating to RL8810, for Goldstream/Titan, L. Newnham concluded that an auriferous pyrrhotite skarn intercepted in diamond drillholes SMD9 (8 m @ 1.5 g/t Au) and SMD35 (0.8 m @ 0.4 g/t Au) may have at least 400 m of untested strike potential. Newnham's recommendation to complete 3 diamond drillholes (each 150 m deep) to test the extent of the skarn is presently being considered. The total budget for this 450 m of drilling would be approximately \$55,000.

5.0 REFERENCES

Randell J.P., 1991, Moina Joint Venture - R.L. 8810 : 1991 Annual Progress Report.

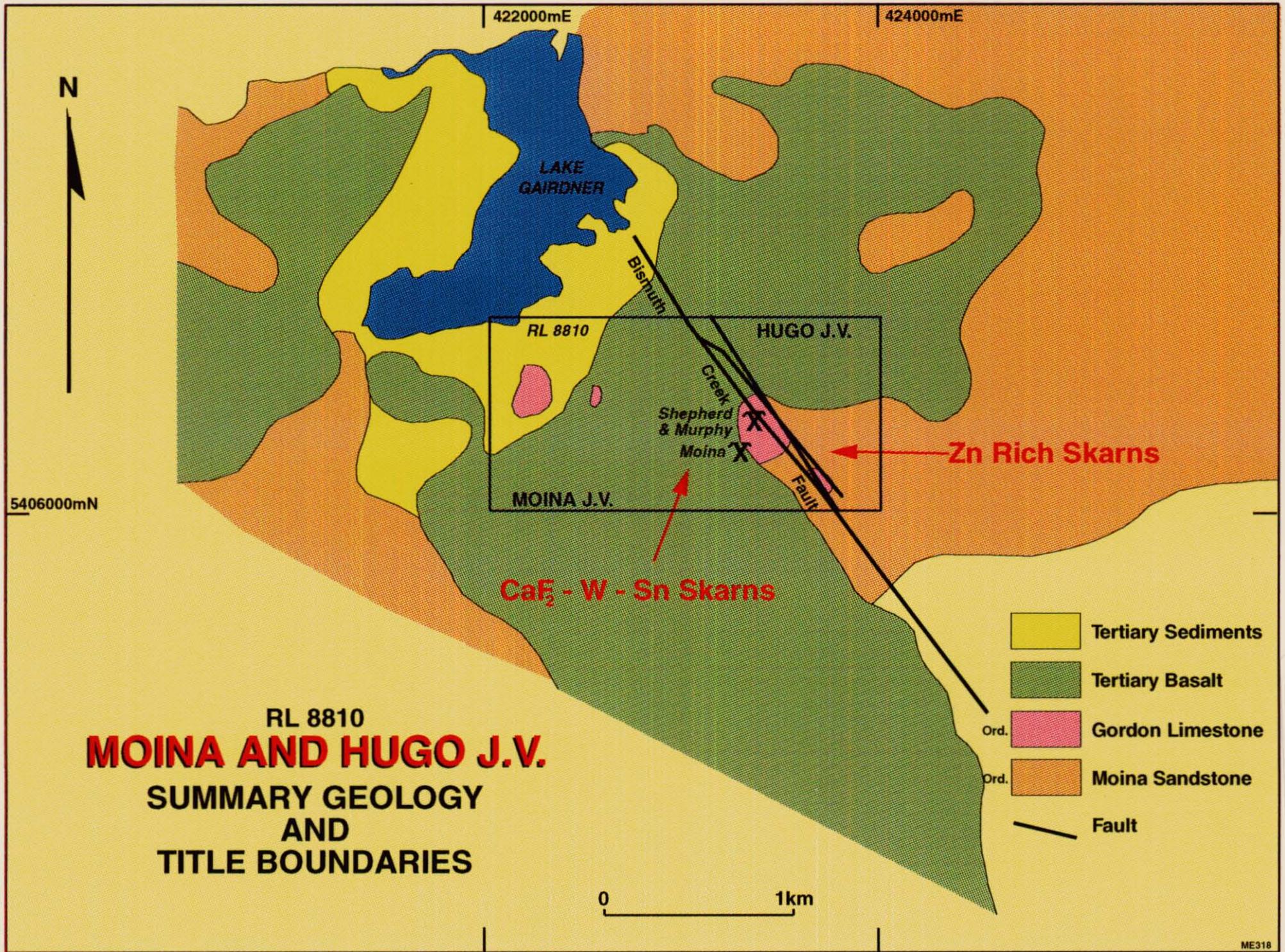


Figure 1

Q7-4055A

265006

APPENDIX I

RL 8810 MOINA AREA - NORTHERN TASMANIA
REPORT ON DRILLING PROGRAM,
SEPTEMBER - OCTOBER 1996

265007

8.8900

NEUNHAM EXPLORATION & MINING SERVICES

R.L. 8810

MOINA AREA - NORTHERN TASMANIA

REPORT ON DRILLING PROGRAM

SEPTEMBER-OCTOBER 1996

Prepared for:

*Goldstream Mining NL
Titan Resources NL
24 Outram Street
West Perth, WA, 6872*

By:

*L A Newnham, B.Sc., F.A.I.M.M.
PO Box 132
Riverside, Tas 7250*



*Ph: (03) 6394 3434
Fax: (03) 6394 3435*

11 February, 1997

Property of Information Unit
Acacia Resources Limited

CONTENTS**TEXT**

1. **SUMMARY**
2. **INTRODUCTION**
3. **GEOLOGY**
4. **1996-97 DRILLING PROGRAM**
5. **RL 8810 REVIEW**

APPENDICES:

- A. **Drill Logs**
- B. **Assay Results**

MAPS:

1. (a) **Locality Plan (in text)**
- (b) **District Geology** **1:25,000**
2. **Hugo Skarn, Plan of Drilling and Geology** **1: 1,000**
3. **RL 8810 - Geology, Drilling, Resources**
4. **Hugo Skarn, Cross Sections** **1: 1,000**

1. SUMMARY

RL 8810 is underlain by a gently folded, strongly faulted section of Ordovician sediments, including a thick section of Gordon Limestone.

These sediments were intruded at shallow depth by the highly fractionated Dalcoath Granite, resulting in extensive skarn development in the limestone.

Fluorine and metal-rich hydrothermal fluids accompanied the skarn development and resulted in the formation of a range of mineral deposits, the principal ones being:

- (i) large fluorine-magnetite skarn west of the Bismuth Creek Fault containing low-level (but significant) Sn-W
- (ii) W-Bi-Mo-Sn vein swarm which was developed as the Shepherd & Murphy Mine
- (iii) Zn-Bi-Au skarn east of the Bismuth Creek Fault (Hugo Skarn)

The drilling program completed in 1996-97 was designed to further test the mineral resource potential of the Hugo Skarn.

The four holes completed established eastern and northern boundaries to the deposit and highlighted the fault-disrupted nature of the deposit.

They indicate the resource potential of the Hugo Skarn to be approximately 0.25-0.3 Mt 5.0% Zn, 0.8 g/t Au, 0.07% Bi.

Drilling data from earlier drilling programs on the RL was reviewed to assess Au potential, especially on the western end of the tenement. Whilst skarn development is widespread, assaying indicates only minor base and precious metal mineralisation.

The one exception to this is an auriferous pyrrhotite skarn developed in drill hole SMD 9, approximately 1 km west of Hugo, which intersected 8 m 1.5 g/t Au at 96 m depth. Nearby MD 35 also intersected minor Au in a similar zone. These two holes suggest there is some potential for the development of a modest sized Au skarn in that area, along a postulated fault, which would be best tested by a 2 - 3 hole drilling program around SMD 9.

Further drilling of the Hugo Skarn is not recommended.

2. INTRODUCTION

RL 8810 is a two square kilometre Retention Licence at Moina in Northern Tasmania. It is jointly held by CRA Exploration Pty Limited and Acacia Resources Limited, primarily for the purposes of retaining an interest in the large refractory fluorite resource west of the Bismuth Creek Fault (Wrigglite resource).

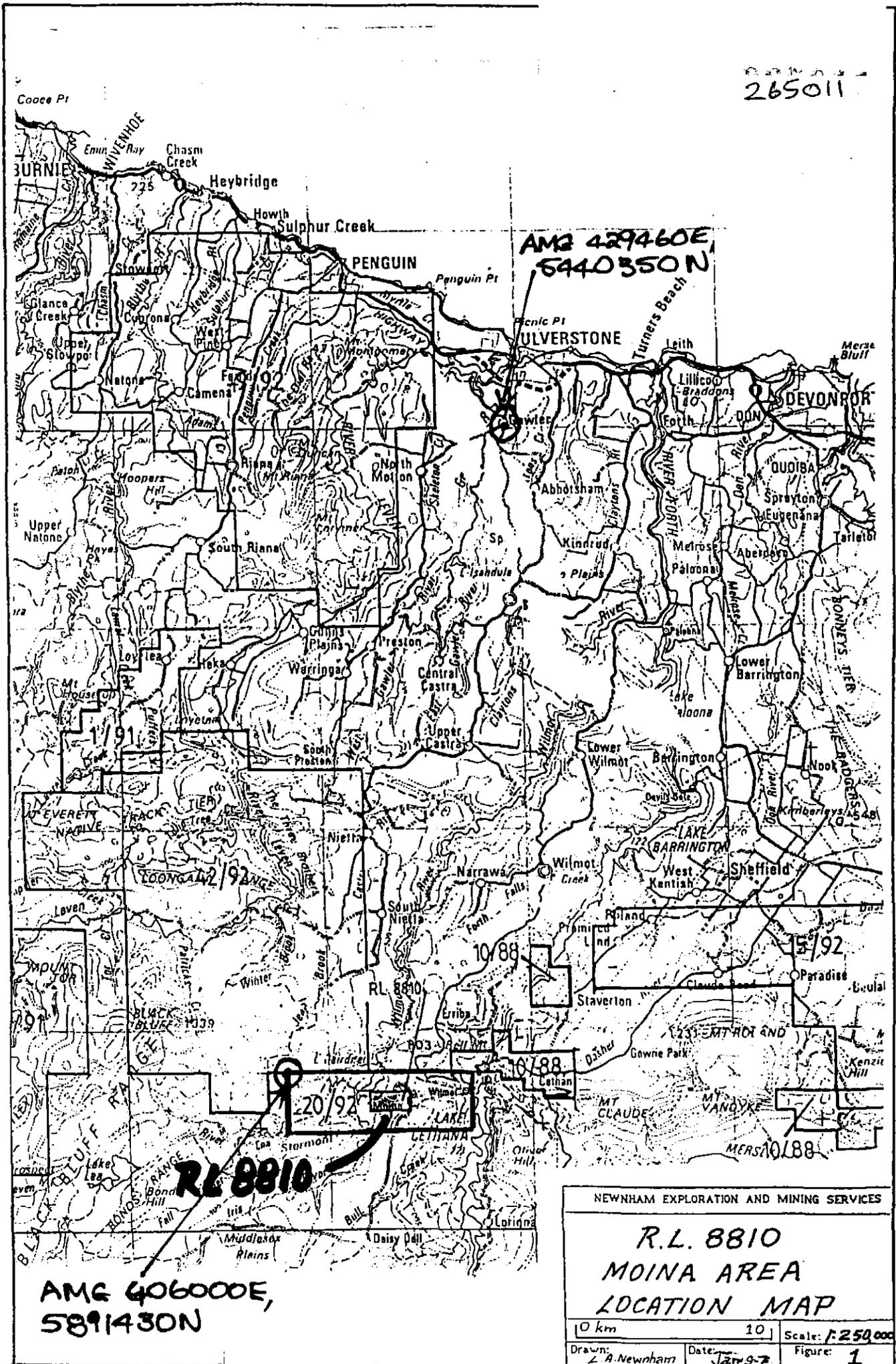
Goldstream Mining NL and Titan Resources NL have entered into a joint venture agreement with CRA and Acacia which enables Goldstream and Titan to explore the area east of the Bismuth Creek Fault, (Hugo Skarn) where the principal target is skarn-hosted Zn-Bi-Au mineralisation.

A further program of drilling on this joint venture area was completed in 1996-97 to better define the resource potential.

Acacia and CRA also agreed to allow Goldstream and Titan to review drilling data from west of the Bismuth Creek Fault to assess the Au and base metal potential of that area.

This report, therefore, addresses the work completed in 1996-97 from both the joint venture area east of the Bismuth Creek Fault and the area west of the Bismuth Creek Fault.

265011



NEWNHAM EXPLORATION AND MINING SERVICES

**R.L. 8810
MOINA AREA
LOCATION MAP**

0 km	10	Scale: 1:250,000
Drawn: L.A. Newham	Date: JAN 97	Figure: 1

3. DISTRICT GEOLOGY

RL 8810 is underlain by a thin sequence of Ordovician sediments, underlain in part by Cambrian volcanics.

The sedimentary package is essentially a graded sequence of shallow water marine sediments grading from Roland Conglomerate at the base, overlain by medium-coarse grained Moyna Sandstone, in turn overlain by Gordon Limestone. These three formations are conformable and gradational. Thus, for example, some calcareous units exist in the top of the Moyna Sandstone and sandy units exist in the top of the Roland Conglomerate.

Each of these formations is relatively thin, being in the range 50-150 metres. The sedimentary package dips gently north and has been disrupted by a number of NW trending normal faults, principal of which is the Bismuth Creek Fault.

The sediments have been intruded in the upper Devonian by the Dalcoath Granite which outcrops to the immediate east of RL 8810.

Gravity data indicates a west trending spine of this granite underlies RL 8810 at shallow depths (< 1 km).

A large zone of hydrothermal alteration which surrounds this granite spine is dominated by iron and fluorine metasomatism of the limestone and calcareous beds in the sandstone. These fluids were accompanied by variable amounts of Sn-W-Bi-Mo leached from the granite and precious metal-base metals leached either from the granite or the Cambrian volcanics which lie between the sediments and the granite.

The hydrothermal fluids extensively skarned the Gordon Limestone and resulted in the formation of a number of known significant mineral deposits, including:

- Shepherd & Murphy vein swarm, consisting of a set of E-W near vertical veins containing significant Sn-W-Bi-Mo mineralisation
- fluorite-magnetite "wrigglite deposit" in the basal section of the Gordon Limestone west of the Bismuth Creek Fault
- Zn-Bi-Au skarns in skarned Gordon Limestone east of the Bismuth Creek Fault
- auriferous pyrrhotite skarn west of the Shepherd & Murphy Mine

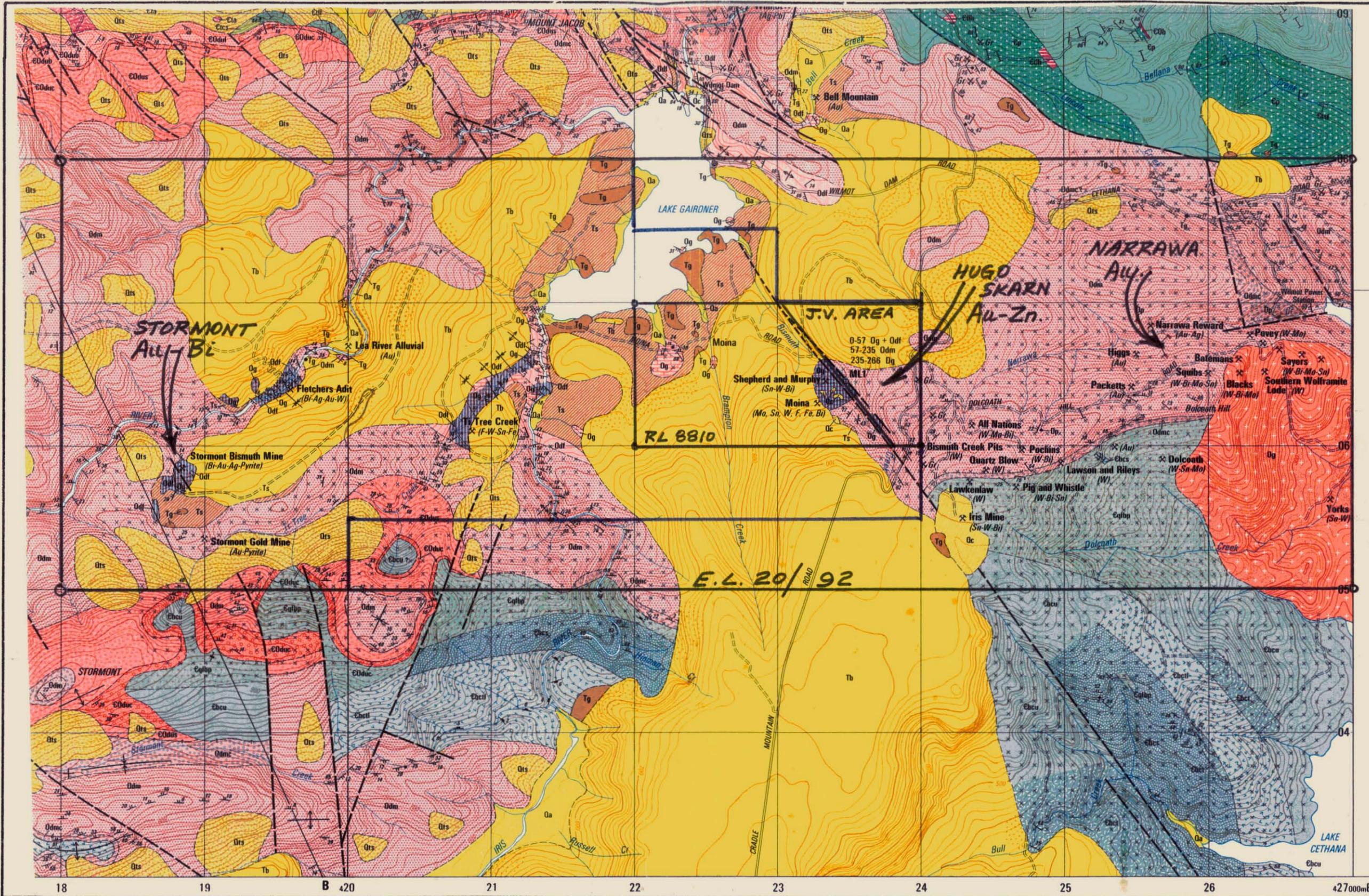
The geology and mineralogy of the Moyna skarns is described in detail in:

"Geology and Genesis of the F-Sn-W (-Be-Zn) Skarn (Wrigglite) at Moyna, Tasmania", by Kwak, TAP, Askins, PW, Econ. Geol. Vol. 76, 1981. pp 439-467.

A late stage fault known as the Hugo Fault has thrust older sediments over the top of the Hugo Skarn to the east of the Bismuth Creek Fault. The Hugo Fault appears to post date the skarn formation and has resulted in removal of the top section of skarn.

A Tertiary erosion surface, characterised by cemented gravels (Graybilly) is patchily developed on the Ordovician sediments.

Tertiary basalts, which are variably magnetic, cover substantial sections of the tenement area.



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

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

NEUNHAM EXPLORATION AND MINING SERVICES

MOINA AREA
REGIONAL GEOLOGY

265014

5 cm

0 km	0.5 km	1	Scale 1:25000
Drawn LAN	Date		Figure 1(b)

4. 1996-97 DRILLING PROGRAM

A four hole core drilling program totalling 576 m was completed between September and October 1996, to further test the Au-Zn-Bi resource potential of the Hugo Skarn east of the Bismuth Creek Fault.

Because of the steep, heavily vegetated nature of the region, and the already substantial number of drill holes in the area, it was decided to accurately survey the collar locations of all previous drill holes prior to this current program.

Surveying was completed by Campbell-Smith, Phelps, Pedley Pty Limited of Launceston.

The objectives of the four holes were to:

- (a) validate high Zn-Au values intersected in previously drilled hole SMD 13
- (b) test the eastern extent of the Zn deposit
- (c) test the northern extent of the Zn deposit
- (d) test continuity of mineralisation between SMD 13 and SMD 16 in the main body of mineralisation

Drilling was undertaken by Diamond Drilling (Tas) Pty Limited using a track mounted Scout 250 rig.

Down hole surveys were completed with an Eastman single shot camera.

Assays were completed by Amdel in Adelaide on fully fine pulverised half NQ core (sawn).

Drill logs and original assay sheets are attached as Appendix A and B respectively.

A summary of each hole follows:

HS 8:

A 144 m vertical hole drilled immediately adjacent to SMD 13 to validate results from that hole.

0	-	82.0 m	:	Moina Sandstone - broken and possibly faulted
82.0	-	82.8 m	:	Hugo Fault
82.8	-	116.3 m	:	Skarn, the top section of which contained abundant dark brown-black sphalerite (marmatite)
116.3	-	144.3 m	:	Silicified and altered Moina Sandstone

The Hugo Fault, which thrusts Moina Sandstone over the top of the sphalerite skarn clearly has truncated the skarn, indicating it is probably a post-mineralisation fault. It has also diminished the thickness of skarn in this area.

Best assay interval in the sphalerite skarn was:

86.5 - 103.5 m : 17.0 m 1.34 g/t Au, 6.7% Zn,
0.10% Bi

which included

86.5 - 95.5 m : 9.0 m 2.34 g/t Au, 8.9% Zn,
0.16% Bi

Core recoveries were 100% in the higher grade interval.

When compared with SMD 13, the Au values in HS 8 were significantly higher and the Zn values lower. Further comparison is difficult because core recoveries, splitting and assays methods for SMD 13 are unknown.

HS 9:

A 150 m vertical hole designed to test the faulted eastern margin of the skarn zone. The hole intersected only Moina Sandstone, containing minor skarn zones. A fault at 89 m may be either the Hugo Fault or the Eastern Fault (see Fig 2).

In combination with other holes in this area, HS 9 places a definitive, faulted eastern boundary on the Zn-Au skarn.

HS 10:

A 147 m vertical hole designed to test the northern extension of the

Hugo Skarn, approximately 90 m north of HS 8.

0	-	68.0 m	:	Moina Sandstone
68.0	-	94.6 m	:	Roland Conglomerate
94.6	-	96.3 m	:	Hugo Fault
96.3	-	115.5 m	:	sandstone-siltstone
115.0	-	125.6 m	:	Skarn
125.6	-	147.3 m	:	Moina Sandstone

This hole is interpreted as indicating that the Hugo Fault dips more steeply north than the Hugo Skarn, hence faulting off the zinc skarn about midway between HS 8 and HS 10.

This hole, combined with other adjacent holes thus effectively defines the northern extent of the zinc skarn below the Hugo Fault.

HS 11:

A 135 m vertical hole designed to test the continuity of the zinc skarn between HS 8 and SMD 16.

0	-	50.0 m	:	Intermixed skarn and sandstone
50.0 m			:	possible fault (Hugo Fault)
50.0	-	108.5 m	:	skarn and limestone
108.5	-	135.0 m	:	Moina Sandstone

This hole intersected skarn above the Hugo Fault which is interpreted as the lower section of the skarn zone which occurs adjacent to the Bismuth Creek Fault above the Hugo (cf MD 32).

The skarn zone below the fault intersected a zinc rich zone as follows:

77.0	-	89.0 m	:	12 m 0.64 g/t Au, 3.38% Zn, 0.08% Bi
				which included
83.0	-	89.0 m	:	6 m 1.15 g/t Au, 3.93% Zn, 0.09% Bi

NEWNHAM EXPLORATION AND MINING SERVICES

Serving the Minerals Industries.

92
265018

Lindsay Newnham B.Sc., F.A.I.M.M.
Consulting Geologist
Trading as Newnham Exploration
and Mining Services

Office: "Elterwater"
West Tamar Highway
Exeter
Tasmania 7275

Postal Address: PO Box 132
Riverside
Tasmania 7250
Phone: (03) 6394 3434
Mobile: (0418) 38 6229
Fax: (03) 6394 3435

14 November, 1997

Therese Taylor
Tenement Management Officer
Mineral Resources Tasmania
P O Box 56
Rosny Park, 7018



Dear Therese

**Annual Report RL 8810 - Moina
(Your Ref: TCR 97-4055)**

Craig Mackay of Acacia has asked that I respond to your fax to him on the above matter.

1. The drill holes SMD 13 and SMD 16 were drilled by Comalco in 1976.

Their AMG co-ordinates are:

SMD 13	-	5,406,252 N 423,703 E 638 RL
SMD 16	-	5,406,180 N 423,682 E 617 RL

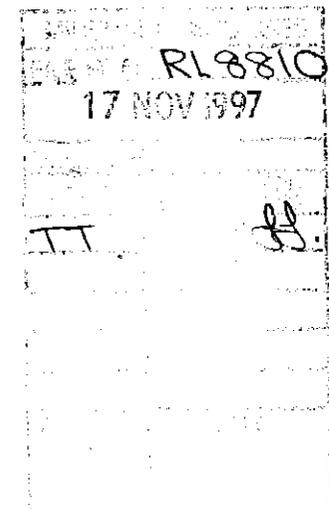
2. Amended map 1(b) attached

Yours faithfully

A handwritten signature in cursive script, appearing to read "Lindsay Newnham".

Lindsay Newnham

cc: Acacia



MRT/Hugo/SMD 13&16

This zone is equated with the zinc skarn in HS 8 but is interpreted as being faulted upward relatively to the zinc skarns in SMD 16 by the Central Fault (see Figs 2 and 4). The equivalent skarn in SMD 16 is probably the zone between RL 543-556 which assayed 13 m 4.4% Zn, 0.47 g/t Au.

Interpretation of Results:

The four drill holes completed in this program have further defined the body of Au-Zn-Bi mineralisation developed in the Hugo Skarn east of the Bismuth Creek Fault.

Hole HS 9, together with HS 7, MD 2, and MD 43 confirm the eastern boundary as a significant normal fault shown on the accompanying plans as the Eastern Fault. It strikes N-S, and dips steeply to the west.

Hole HS 9 confirms that the skarn and the Hugo Fault both have similar E-W strikes but the Hugo Fault dips more steeply to the north than the skarn, resulting in the mineralised skarn being faulted out probably about midway between HS 8 and HS 10.

The mineralised skarn is cut through the middle by the normal Central Fault which strikes semi-parallel to the Bismuth Creek Fault and dips steeply west. The down-thrown block of skarn west of this fault is approximately twice as thick as the skarn on the eastern up-thrown block, due to the influence of the Hugo Fault.

The only hole containing significant mineralisation west of the Central Fault is SMD 16. Holes HS 002, HS 006 and SMD 24 carry substantial widths of anomalous Au, Zn and Bi, but the mineralisation does not appear to have been concentrated into a zone equatable with the zones in SMD 16, HS 8 and HS 11.

Between the Central and Eastern Faults, the mineralised zone is defined by SMD 13, HS 8, HS 11 and HS 001. The latter hole contains significant Bi and Au (17 m 0.32 g/t Au, 0.36% Bi) in a zone equatable with the zone in the other three holes, but is very low in Zn. It is thus regarded as defining the limit of mineralisation to the SE.

Most of the faulting is regarded as post skarn development.

The following mineralisation model is proposed:

A thin sequence of shallow marine sediments including the Gordon Limestone was gently folded and fractured either prior to or during intrusion by the Dalcoath Granite. Intrusion of the granite was accompanied by extensive contact metasomatic effects and the emanation of vast quantities of metal enriched hydrothermal fluids which extensively

skarned the Gordon Limestone. A body of hydrothermal fluids enriched in Zn, Bi, Au concentrated in several skarn horizons to the east of the Bismuth Creek Fault.

Collapse adjustment above the cooling granite spine resulted in the development of both a number of substantial N-S and NNW trending normal faults which disrupted this mineralised body, and E-W fracture sets which were infilled with late stage quartz-tin-tungsten-bismuth mineralisation.

Later regional pressure produced a series of thrust slices through the Moina district. A significant thrusting movement along the eastern side of the Bismuth Creek Fault resulted in the development of the Hugo Fault which removed part of the mineralised skarn and concealed the remainder beneath an overthrust slice of older sediments.

Resource Potential:

The Au-Zn-Bi skarn body east of the Bismuth Creek Fault is defined by the following drill hole intersections:

Hole	Vertical Intersection (m)	g/t Au	% Zn	% Bi
SMD 16	13.0	0.47	4.4	0.05
	Inc. 6.7 m	0.66	6.8	0.07
HS 8	17.0	1.34	6.7	0.1
	Inc. 9.0 m	2.34	8.9	0.16
HS 11	12.0	0.64	3.3	0.07
	Inc. 6.0 m	1.15	3.9	0.09

The deposit is approximately 60 m and 90 m vertically beneath surface in the south and north respectively.

The zinc species is marmatite and the gold association is not known.

The perimeter of the deposit is defined by a number of drill holes and interpreted geology as shown on Fig 2.

The body has a N-S dimension of approximately 130 m and an E-W dimension of approximately 50 m.

Application of an average vertical thickness of 14.0 m and a density of 3.0, results in a tonnage potential of 273,000 tonnes.

The weighted average of the grades of the three drill holes is 0.87 g/t Au, 5.0% Zn, 0.07% Bi.

Whilst each of these holes contains a higher grade section, continuity of these sections between holes is questioned. In SMD 16, the section is in the middle of the main zone, and in SMD 11 and SMD 8 it is in the FW and HW respectively.

In summary:

The resource potential of the Hugo Skarn is estimated as lying in the range of 250,000 - 300,000 tonnes at approximately 0.8 g/t Au, 5% Zn, 0.07% Bi.

5. RL 8810 REVIEW

To date, exploration by Goldstream and Titan has concentrated on the base and precious metal content of the Hugo Skarn east of Bismuth Creek Fault.

In order to gain a more complete picture of the base-precious metal potential of the remainder of RL 8810, Acacia-CRA agreed to a review of relevant data west of the Bismuth Creek Fault.

To date, three styles of mineralisation have been recognised on RL 8810 (Fig 3):

- (a) fluorite (wrigglite) resource in skarned limestone west of Bismuth Creek Fault, estimated at:

26 Mt 18% Ca F₂, 0.1% Sn, 0.1% W

- (b) base-precious metal skarn (Hugo Skarn) east of Bismuth Creek Fault:

0.27 Mt 0.8 g/t Au, 5% Zn, 0.07% Bi

- (c) tin-tungsten vein swarm in Shepherd & Murphy Mine west of Bismuth Creek Fault:

0.28 Mt 0.23% Sn, 0.18% W

The majority of the Shepherd & Murphy resource has already been mined.

The fluorite resource remains unmined because of metallurgical difficulties with extraction of both the fluorite and tin-tungsten.

The Hugo Skarn is unmined and is defined by only three (3) drill holes.

Twenty (20) drill holes have been drilled east of the Bismuth Creek Fault and twenty-six (26) west of the fault.

The majority of those drilled east of the fault were designed to test the base-precious metal resources in the Hugo Skarn.

Most of those west of the fault were designed to test the fluorite potential of the skarn.

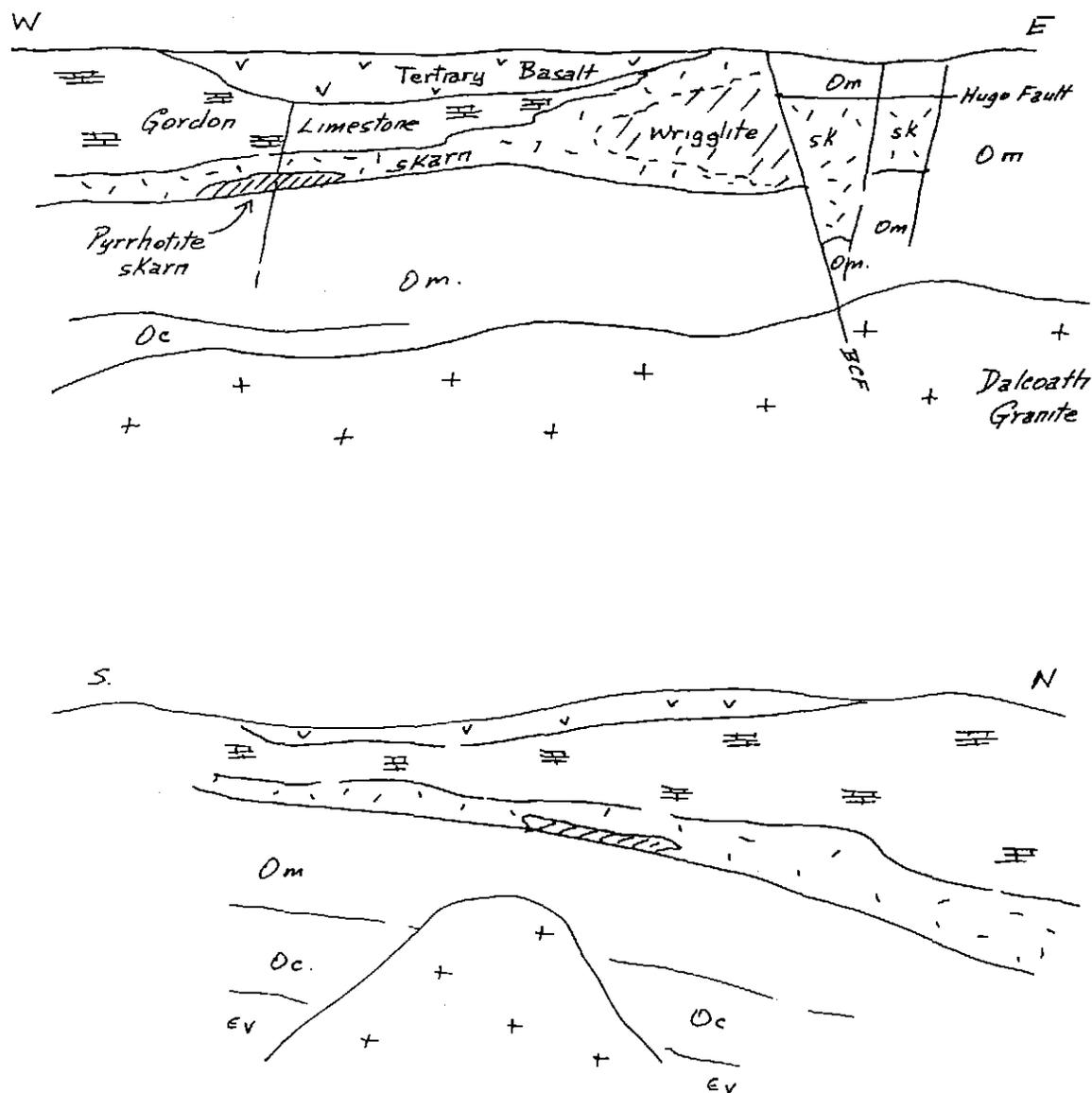
This section deals with an assessment of the base-precious metal potential of the skarn west of the Bismuth Creek Fault.

Drilling has demonstrated that the complete western section of RL 8810 is underlain by a thick (up to 300 m) sequence of Gordon Limestone which in

turn overlies Moina Sandstone. The limestone is widely concealed beneath Tertiary basalt up to 50 m thick in the east and thinning to zero metres to the west.

The limestone dips gently north and is very broadly folded along N-S (?) axes.

Only the basal 10 - 50 m of the limestone has been altered to skarn in the western and southern areas, increasing to 50 - 100 m in the east near the Bismuth Creek Fault.



Generally, the skarn is a wigglyite-magnetite-fluorite-garnet-amphibole-pyroxene type. However, sections of the skarn in SMD 9 and to a lesser extent in MD 35 contained significant pyrrhotite.

Not all skarn intersections were assayed for gold and base metals, especially the earlier ones. Those that were generally gave disappointing results. Only three holes contained Au > 0.1 g/t:

SMD 9: 96 - 104 m 8 m 1.5 g/t Au in pyrrhotite skarn

MD 35: 100.6 - 101.4 m 0.8 m 0.4 g/t Au in pyrrhotite rich skarn

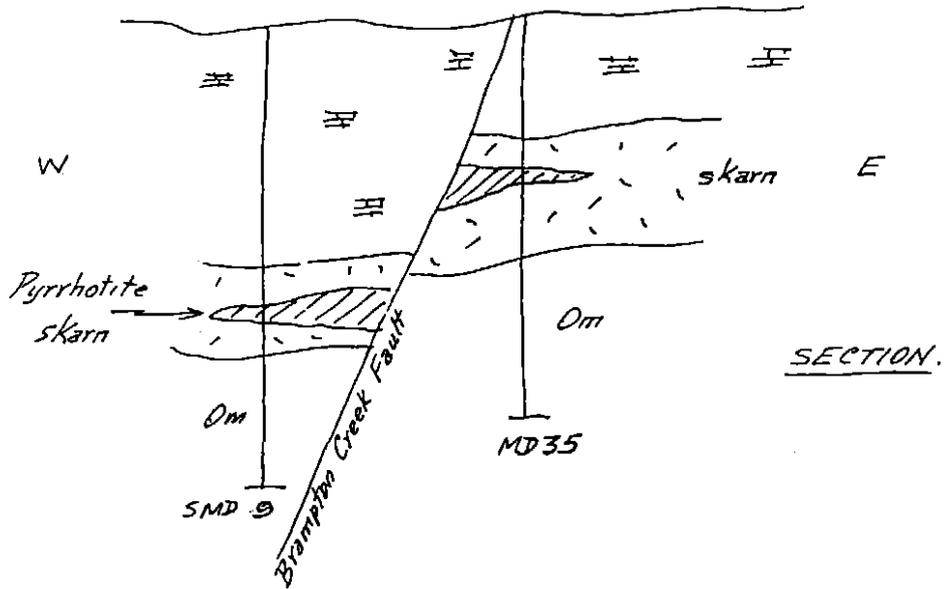
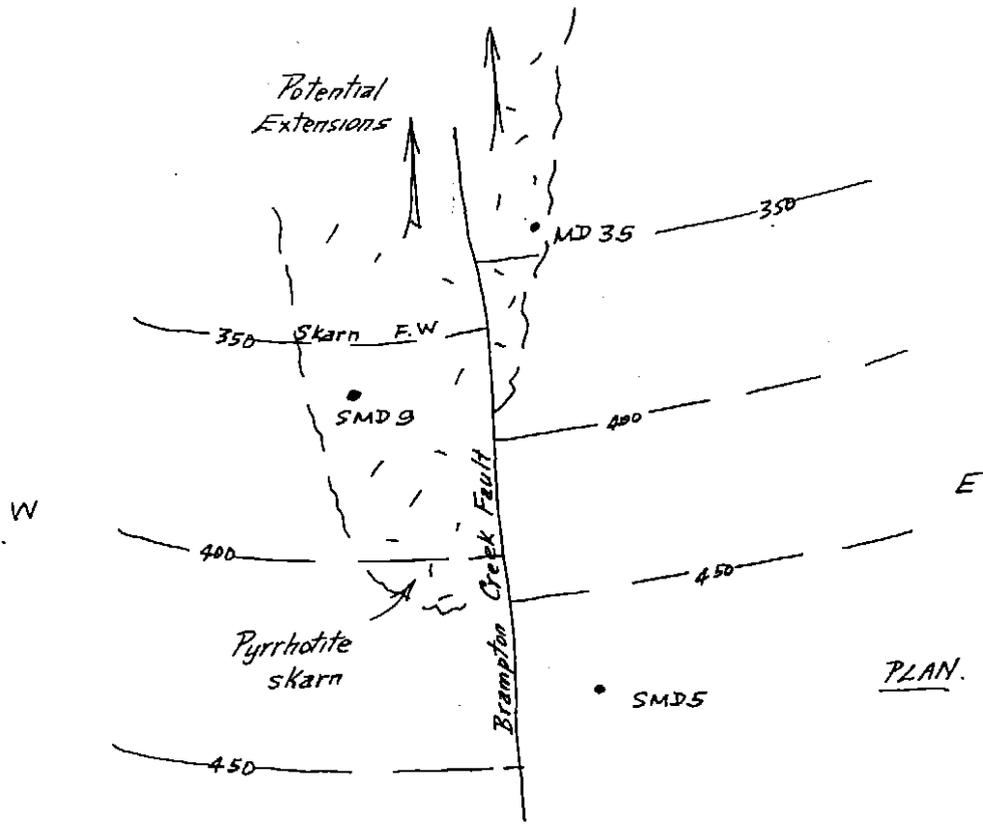
MD 40: 94.5 - 98.3 m 3.8 m 1.15 g/t Au in garnet skarn

MD 40 also contained 39.4 - 41.4 m, 2 m 2% Zn.

The thick skarn intersection in MD 40 which contains patchy anomalous Au and Zn is interpreted as a faulted section of the similarly mineralised Hugo Skarn.

Most encouragement on the western end of RL 8810 thus appears to lie in the pyrrhotite rich intersections in holes SMD 9 and MD 35.

A convergence of skarn FW contours between these two holes suggests there may be a fault between them, possibly represented on surface by Brampton Creek, with the pyrrhotite skarns developed either side of the fault.



SMD 5 to the south intersected only 15 m of skarn with no pyrrhotite.

On the basis of this model, some potential may exist for the auriferous pyrrhotite to extend north along either side of the postulated Brampton Creek Fault. Such a zone could be at least 400 m long, within RL 8810.

There appears to be little encouragement elsewhere on RL 8810.

Of geological interest is MD 38 which Comalco-CRA interpreted as lying west of Bismuth Creek Fault. However, because of limestone RL differences between MD 38 and adjacent holes, this is either unlikely or another significant fault exists in this area. If it plots east of Bismuth Creek Fault, it is most likely the northern extension of the Gordon Limestone **above** the Hugo Fault.

In summary:

Potential exists for an auriferous pyrrhotite skarn to extend at least 400 m north of SMD 9 and MD 35 adjacent to a postulated fault, at depth of 100 - 200 m. This area is readily accessible to drill testing.

265027

APPENDIX A

COMPANY: Goldstream-Titan
PROJECT: Hugo RL 8810
HOLE NUMBER: HS 8

Commenced:	09 Sept 96
Completed:	20 Sept 96
Logged By:	L A Newnham
Drilled By:	Dia. Drill Tas

Purpose of Hole
To confirm the high grade Zn-Au skarn intersection obtained in drill hole SMD 13 on the same site during a previous drilling program completed by Shell-CRA

Comments on Completion
.the Hugo Skarn was intersected directly beneath the Hugo Fault between 82.8- 116.3 m. The top section of the skarn may have been faulted off; a 17 m. thick Au-Zn anomalous zone was present in the top half of the skarn and the upper 9 m. of this assayed 2.34 g/t Au, 8.9 %Zn, 0.16 %Bi; the Shell-CRA hole on this same site was higher in Zn and lower in Au;

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5,406,251	423703	638	-90	-

Length (m)
144.3

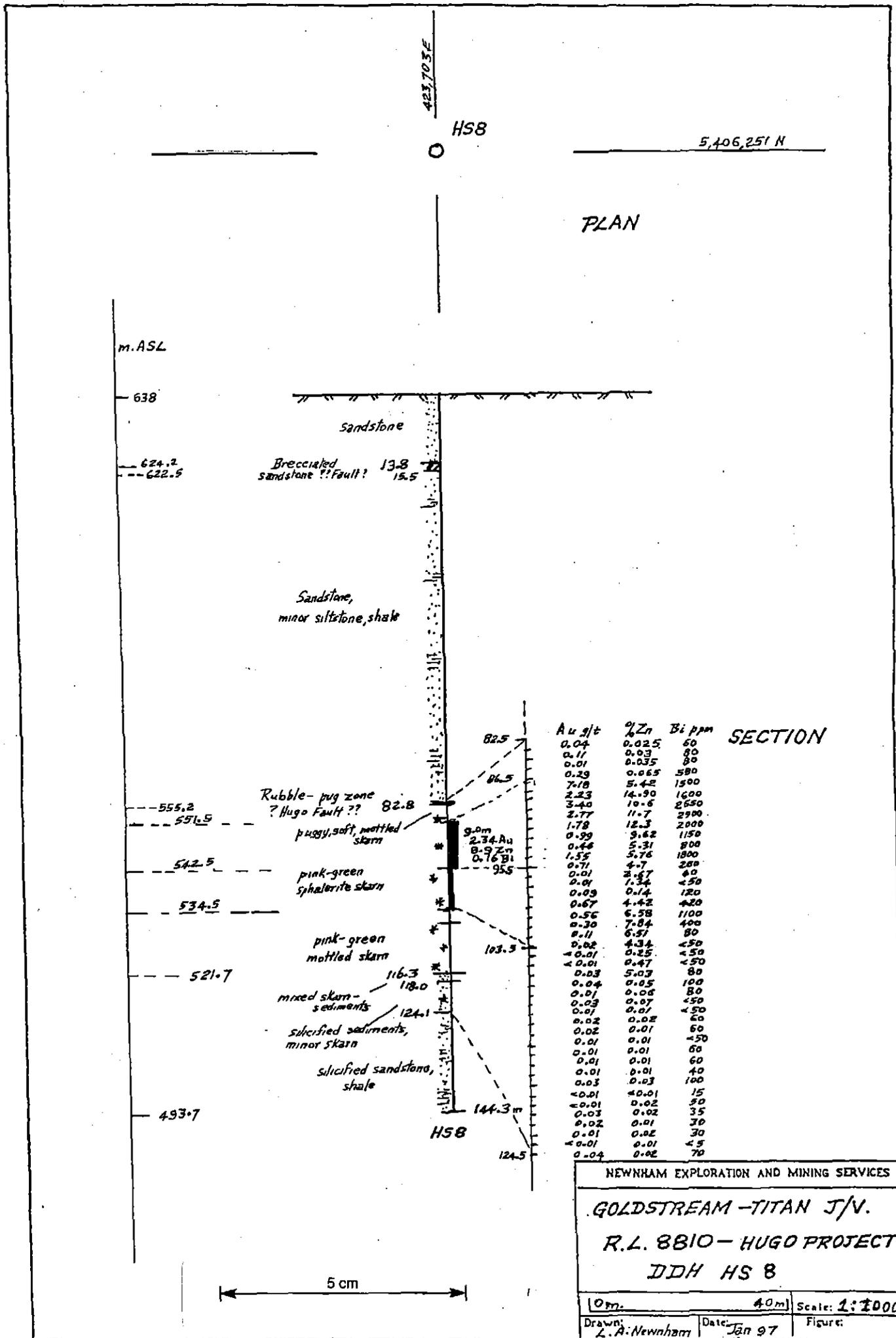
Hole Size	
To (m)	Size
60	HQ
144.3	NQ

Significant Core Loss Zones		
From	To	%Rec.
31.7	33.0	25
33.0	35.2	10
35.2	36.0	0
36.0	38.0	10

Hole Condition on Completion
.All steel casing removed from hole

Summary of Results:

Depth		Recovery	Description	Assays						
From	To			%	Length	Au	Zn	Ag	As	Mo
86.5	95.5	100	Mottled light green-pink sphalerite rich skarn	9.0	2.34	8.9				0.16
86.5	103.5	100	Skarn	17.0	1.34	6.7				0.10



PLAN

SECTION

Au g/t	%Zn	Bi ppm
0.04	0.025	60
0.11	0.03	80
0.01	0.035	80
0.29	0.065	590
7.18	5.42	1500
2.23	14.90	1600
3.40	10.6	2650
2.77	11.7	2900
1.78	12.3	2000
0.99	9.82	1150
0.46	5.31	800
1.35	5.76	1800
0.71	4.7	280
0.01	3.67	60
0.01	1.34	<50
0.03	0.4	120
0.67	4.42	420
0.56	6.58	1100
0.30	7.84	400
0.11	6.51	80
0.02	4.34	<50
<0.01	0.25	<50
<0.01	0.47	<50
0.03	5.07	80
0.04	0.05	100
0.01	0.06	80
0.03	0.07	<50
0.01	0.07	<50
0.02	0.02	60
0.02	0.01	60
0.01	0.01	<50
0.01	0.01	60
0.01	0.01	60
0.01	0.01	40
0.03	0.03	100
<0.01	<0.01	15
<0.01	0.02	50
0.03	0.02	35
0.02	0.01	30
0.01	0.02	30
<0.01	0.01	<5
0.04	0.02	70

NEWNHAM EXPLORATION AND MINING SERVICES

GOLDSTREAM-TITAN J/V.

R.L. 8810-HUGO PROJECT

DDH HS 8

Opp. 40m Scale: 1:1000

Drawn: L.A. Newham Date: Jan 97 Figure:

DOWN HOLE SURVEY DATA

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 8

Depth (m)	Dip	Bearing (AMG)	Interval		Length (D)	Vertical Distance		Horizontal Distance		Co-ordinates			
			From	To		O. 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					638.00		0.00		5,406,251.0		423,703.0
0	-90	0	0	25	25	25.00	613.00	0.00	0.00	0.00	5,406,251.0	0.00	423,703.0
50	-89	247	25	75	50	49.99	563.01	0.87	0.87	-0.34	5,406,250.7	-0.80	423,702.2
100	-89	34	75	122.15	47.15	47.14	515.86	0.82	1.70	0.68	5,406,251.3	0.46	423,702.7
144.3	-88	154	122.15	144.3	22.15	22.14	493.73	0.77	2.47	-0.69	5,406,250.6	0.34	423,703.0
144.3													

265030

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 8

Description		Core Recovery			RQD			Assays							
From	To	From	To	%	From	To	%	From	To						
0.0	13.8	SANDSTONE:													
		light gray, medium-coarse grained pyritic sandstone, with occasional narrow dark brown altered siltstone beds;	0	2.2	82										
		core has pervasive dendritic appearance due to fine anastomosing fractures filled with pyrite and fine mica;	2.2	5.2	100										
		pyrite also common as disseminations and aggregates in sandstone, and smeared along joint planes;	5.2	8.2	87										
		minor broken quartz veins below 12 m., core loss at 8m., in brown puggy clay zone; sandstone massive with no positive bedding; extensively broken and fractured, especially below 11.5m.	8.2	13.8	100										
		several prominent joint sets 30, 70 CA; limonite common on joints;													
13.8	15.5	BRECCIATED SANDSTONE-FAULT ZONE?													
		broken, brecciated, quartz veined pyritic sandstone;	13.8	15.5	100										
		prominent sericitic pug-quartz breccia zone parallel CA for most of interval;													
		coarse pyrite abundant throughout; core very broken and limonitic;													
15.5	82.8	SANDSTONE, minor SILTSTONE and SHALE:													
		similar to unit above fault but more broken and becoming less pyritic with depth;	15.5	17.2	100										
		joint set parallel to core axis results in very broken core;	17.2	18.0	50										
		limonite common on joints;	18.0	31.7	100										
		27-29m: sandstone finer grained, dark gray, more silicified; possible bedding 80 CA;													
		31.7-38m: zone of major core loss; difficult to speculate what was lost; recovered core is very broken sandstone and some massive white quartz veins;	31.7	33.0	25										
			33.0	35.2	10										
			35.2	36.0	0										
			36.0	38.0	10										

265031

COMPANY: Goldstream-Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 8

Description		Core Recovery			RQD			Assays							
From	To	From	To	%	From	To	%	From	To						
.15.5 continued.....	82.8	.some redrilled core suggests probably a drilling problem rather than a ground problem													
		38.0-40.5m: softer finer grained brown sandstone-siltstone-altered shale unit with small augens of quartz and sandstone; pyritic; BCA 40;													
		38	41	80											
		clayey and pug in places; unit very broken;													
		40.5-62m: light gray sandstone interbedded with soft, cream siltstone-shale; wispy green sericite common in sandstone; thin white quartz veins increasing down hole at random angles but commonly at high angle to CA; pyrite as occasional disseminated coarse grains and blebs in quartz veins-decreasing down hole to 1-2%;													
		41	62	100											
		metasandstone becoming very siliceous below 50m. with numerous thin (<10mm) quartz veins with coarse euhedral pyrite; limonite abundant on joints;													
		below 55m. increase in number of soft buff brown altered shale-siltstone units, containing narrow 10-20mm. light gray sandstone beds;													
		REDUCED TO NQ AT 60M.													
		62.0-66.0m: metasiltstone-shale bed, BCA 60-70; pyrite common in fractures and thin quartz veins;													
		62.0	66.0	100											
		below 66m: light gray sandstone, intensely silicified with occasional soft light brown siltstone-shale beds;													
		66.0	69.3	100											
		69.3	72.2	69											
		72.2	78.3	100											
		BCA 70; core intensely fractured and broken with pyrite common on all fracture surfaces and in thin veins;													
		below 76m: mainly siltstone, light gray and very broken, cut by quartz veins and brecciated in places; minor disseminated pyrite;													
		78.3	81.3	67											
		81.3	82.8	100											
		78.0-82.8m: dark gray siltstone, extremely broken with soft soapy bright green sericite on most fracture surfaces; thin quartz veins and narrow breccia zones; 82.0-82.8m: core pug and rubble (HUGO FAULT ZONE?)													

265032

COMPANY: Goldstream-Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 8

Description		Core Recovery			RQD			Assays											
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi			
82.8	116.3	.SKARN: sharp but very broken contact with unit above 82.8-85.0: very soft, puggy, broken, mottled light green-pink skarn; no significant veining or sulfide mineralisation; 85.0-106.8m: light pink-green mottled sphalerite skarn; (garnet-epidote? skarn); sphalerite is dark brown-black with dark streak (le) marmatite; occurs in large interconnected patches; abundant from 86.5- 93.0m. and 99.0-103.0m.; decreasing below 103m; coarse euhedral pyrite associated with sphalerite in places; 86.5-87.0m: some magnetite patches associated with sphalerite; minor amounts magnetite elsewhere in unit; soft red amorphous mineral near top of unit possibly hematite after either magnetite or leached sphalerite; core soft and moderately broken; several joint sets- one 20 CA associated with thin veinlets of dark gray-black material (dark quartz-mica greisen?); other persistent joint sets at 40 and 60 CA; below 102m: 5-10mm. dark greisen veins with significant magnetite, semi parallel to core axis; 106.8-116.3m: mottled pink-green skarn with substantially less sphalerite and pyrite; increasing component of dark green-gray moderately hard mineral and increasing dark gray-black 5-10mm greisen veining sub parallel to core axis; core generally competent but fracturing along greisen veins sub parallel to CA;																	
			82.8	105.3	100						82.5	83.5	0.04	0.025	4	<0.005	<20	60	
													0.02(dup)						
												83.5	84.5	0.11	0.03	2	<0.005	<20	80
												84.5	85.5	0.01	0.035	4	<0.005	<20	80
						105.3	108.3	95				85.5	86.5	0.29	0.065	10	<0.005	<20	580
												86.5	87.5	7.18	5.42	11	<0.005	40	1500
												87.5	88.5	2.23	14.9	8	<0.005	30	1600
												88.5	89.5	3.4	10.6	10	0.005	<20	2650
												89.5	90.5	2.77	11.7	10	<0.005	20	2900
												90.5	91.5	1.78	12.3	11	<0.005	<20	2000
												91.5	92.5	0.99	9.62	8	<0.005	20	1150
												92.5	93.5	0.46	5.31	9	<0.005	<20	800
												93.5	94.5	1.55	5.76	8	<0.005	<20	1800
												94.5	95.5	0.71	4.7	7	<0.005	<20	260
												95.5	96.5	0.01	2.67	8	<0.005	<20	60
												96.5	97.5	0.01	1.34	5	<0.005	<20	<50
												97.5	98.5	0.09	0.145	7	0.005	<20	120
												98.5	99.5	0.67	4.42	7	<0.005	<20	420
												99.5	100.5	0.56	6.58	8	<0.005	<20	1100
												100.5	101.5	0.3	7.84	8	<0.005	<20	400
												101.5	102.5	0.11	6.51	9	<0.005	<20	80
												102.5	103.5	0.02	4.34	7	<0.005	<20	<50
											0.03(dup)								
									103.5	104.5	<0.01	0.255	7	<0.005	<20	<50			
									104.5	105.5	<0.01	0.475	19	<0.005	<20	<50			
									105.5	106.5	0.03	5.03	9	<0.005	<20	80			
			108.3	116.3	100						0.02(dup)								
									106.5	107.5	0.04	0.05	6	<0.005	<20	100			
									107.5	108.5	0.01	0.06	<2	<0.005	<20	80			
									108.5	109.5	0.03	0.07	6	<0.005	<20	<50			
									109.5	110.5	0.01	0.015	4	<0.005	30	<50			
									110.5	111.5	0.02	0.02	<2	<0.005	30	60			
									111.5	112.5	0.02	0.015	8	<0.005	<20	60			
											0.01(dup)								
									112.5	113.5	0.01	0.015	6	<0.005	<20	<50			
									113.5	114.5	0.01	0.015	5	<0.005	<20	60			
									114.5	115.5	0.01	0.015	5	<0.005	<20	60			
									115.5	116.5	0.01	0.015	<0.5	<0.005	6	40			
											0.03(dup)								
116.3	118.0	MIXED SKARN-SEDIMENT ZONE: zone of mixed pink skarn and other fine grained calc. silicates, possibly including minor hornfelsed shale-siltstone beds;	116.3	118.0	100														

265033

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 8

Page No: 4

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
.116.3 cont.....	118.0	numerous 1-10 mm. dark gray-black greisen veins; no mineralisation observed;							116.5	117.5	0.03	0.03	<0.5	<0.005	27	100
118.0	124.1	INTERBEDDED SILICEOUS SEDIMENTS and MINOR SKARN UNITS:	118	124.1	100				117.5	118.5	<0.01	<0.01	<0.5	<0.005	2	15
		light gray and greenish intensely altered fine grained siliceous sediments, interbedded with pink (garnet)-green (epidote?) skarn; minor blebs silvery mineral in skarn, possibly bismuthinite or fine mica; interval cut by several generations of greisen veins - abundant 1-5 mm. dark gray veins often sub parallel to core axds, comprised mainly of magnetite and dark mica; other wider zoned veins with quartz-topaz-fluorite centres and mica-magnetite selvages, occasionally containing fine grained acicular mineral (?? arsenopyrite); mica very weathered/altered to soft sericite resulting in very broken core, especially in silicified units;							118.5	119.5	<0.01	0.02	<0.5	<0.005	26	50
									119.5	120.5	0.03	0.02	<0.5	<0.005	40	35
									120.5	121.5	0.02	0.01	<0.5	<0.005	230	30
									121.5	122.5	0.01	0.02	<0.5	<0.005	80	30
									122.5	123.5	<0.01	0.01	<0.5	<0.005	59	5
									123.5	124.5	0.04	0.02	<0.5	<0.005	32	70
											Sn	W				
									115.5	116.5	250	105				
									116.5	117.5	150	2350				
									117.5	118.5	130	25				
									118.5	119.5	115	50				
									119.5	120.5	230	280				
									120.5	121.5	175	15				
									121.5	122.5	76	130				
									122.5	123.5	150	<10				
124.1	144.3	SILICIFIED SHALE and SANDSTONE:	124.1	144.3	100				123.5	124.5	165	650				
		light gray silicified siltstone with minor brown sandstone beds, grading down hole into micaceous greisenised sandstones; BCA becomes regular 80 CA; below 130 m., dark gray sandstone, pyritic, micaceous; occasional 5-20 mm. quartz-mica-pyrite greisen veins parallel to bedding; unit extensively broken along joints and greisen veins but becoming more competent below 135 m.														
		END OF HOLE														

265034

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 9

Commenced:	21 Sept 96
Completed:	04 October 96
Logged By:	L A Newnham
Drilled By:	Dia. Drill Tas

Purpose of Hole
.to test the eastern margin of the main Au - Zn Hugo Skarn deposit

Comments on Completion
.only a 1 m. wide skarn zone was intersected in the middle of a thick sandstone sequence; this probably does not equate with the Hugo Skarn; the hole was probably drilled just on the east side of the main fault which truncates the eastern side of the Hugo Skarn;

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5406298	423731	643	-90	-

Length (m)
.150.0

Hole Size	
To (m)	Size
66.0	HQ
150.0	NQ

Significant Core Loss Zones		
From	To	%Rec.
89.4	90.4	50

Hole Condition on Completion
.all steel casing removed from hole

Summary of Results:

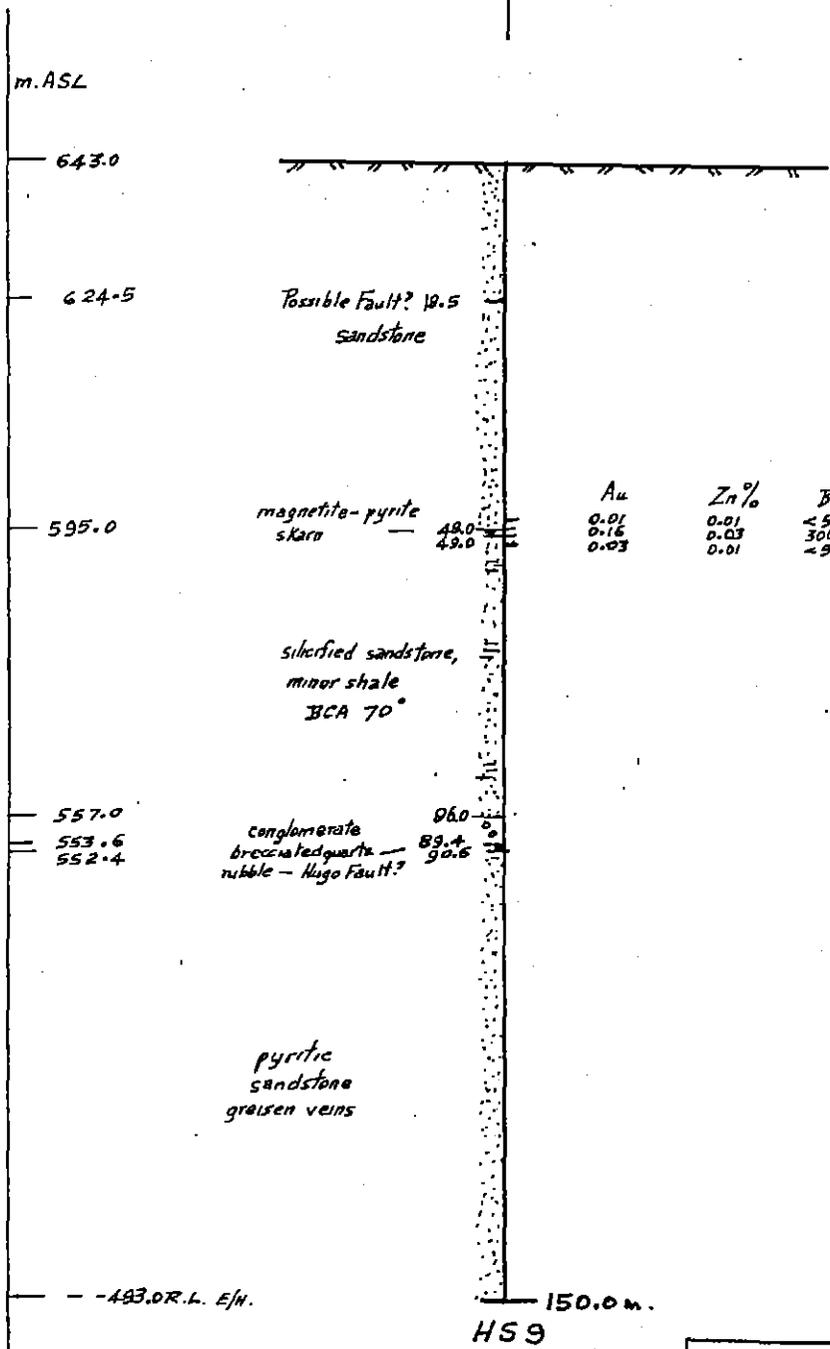
Depth		Recovery	Description	Assays							
From	To	%		Length	Au	Ag	Cu	Pb	Zn	As	S
			no significant assays								

123.731E

HS 9
643R.L.

5,406,298N

PLAN



SECTION

-- 483.0R.L. E/H.

150.0 m.
HS 9

NEWNHAM EXPLORATION AND MINING SERVICES

GOLDSTREAM-TITAN J/V.

R.L. 8810-HUGO PROJECT

DDH HS 9

0m.	40m	Scale: 1:2000
Drawn: L.A. Newnham	Date: Jan 97	Figure:

5 cm

DOWN HOLE SURVEY DATA

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 9

Depth (m)	Dip	Bearing (AMG)	Interval		Length (D)	Vertical Distance		Horizontal Distance		Co-ordinates				
			From	To		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					643.00		0.00			5,406,298.0		423,731.0
0	-90		0	25	25	25.00	618.00	0.00	0.00	0.00	5,406,298.0	0.00	423,731.0	
50	-88.5	206	25	75	50	49.98	568.02	1.31	1.31	-1.18	5,406,296.8	-0.57	423,730.4	
100	-88.3	267	75	125	50	49.98	518.04	1.48	2.79	-0.08	5,406,296.7	-1.48	423,728.9	
150	-88	228	125	150	25	24.98	493.05	0.87	3.66	-0.58	5,406,296.2	-0.65	423,728.3	
150														

265037

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 9

Page No: 1

Description		Core Recovery			RQD			Assays								
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
0.0	48.0	SANDSTONE: light gray, medium grained sandstone; pyritic where fresh, limonitic where weathered; BCA 75-80; generally very broken, several joint sets, usually coated with limonite and sericite; 0.4 m. core lost at 11 m. in rubbly quartzites; below 15.8 m: light gray sandstone with network fine anastomosing pyritic veinlets resulting in dendritic appearance; also 3-5% pyrite as disseminations and aggregates in sandstone; 18.5-18.8 m: puggy zone with embedded angular fragments of quartzite; below 20 m: quartzite strongly pyritic, as disseminations and blebs, along joints and in fine dendritic fractures; soft puggy 200 mm. zones at 23.8, 24.6, 28.7m tubicolor texture well developed at 30.5 m; below 40 m: increasing proportion of altered siltstone-shale with well pronounced bedding, BCA 75-80; mottled greenish texture probably due to alteration of fine mica; pyrite 2-5% pervasive as clots, disseminated and concentrated along margins of thin greisen veins, sub parallel to core axis; core generally very broken, along sericitic joint surfaces; strong joint direction 10-20 CA; 47-48.0 m: sandstone dark green, mottled texture, soft in places with light brown clay filled anastomosing veinlets; possibly gradational with narrow skarn zone below; BCA 80; core competent but greasy, dark green joint surfaces common;														
			0	2	30											
			2	11	100											
			11	13.8	86											
			13.8	48	100											
48.0	49.0	SKARN: dark gray-black magnetite - pyrite skarn, with patches white sacchroidal material - possibly topaz rich sandstone ??; bands of up to 75% magnetite	48.0	49.0	100				47	48	0.01	0.01	<0.5	<0.005	1	<5
									48	49	0.16	0.03	2	<0.005	<1	300
									49	50	0.03	0.01	<0.5	0.005	1	<5

265038

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 9

Description		Core Recovery			RQD			Assays							
From	To	From	To	%	From	To	%	From	To	Sn	W				
49.0	86.0	49	86	100				47	48	44	20				
								48	49	300	20				
								49	50	65	30				
86.0	89.4	86.0	87.2	100											
		87.2	89.4	90											
89.4	90.6	89.4	90.4	50											

265039

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 9

Description		Core Recovery			RQD			Assays							
From	To	From	To	%	From	To	%	From	To						
.90.6	150.0														
		90.4	147.4	100											
		147.4	150	58											
		<p>.PYRITIC SANDSTONE: light gray monotonous pyritic sandstone, very broken in places; pyrite 2-5% but up to 10% over short intervals disseminated and clots in sandstone but also common in thin wispy veinlets; core broken to 95 m. then more competent; 2-5 mm. quartz-pyrite greisen veins 30 CA, and generally widely spaced; narrow brown units below 111m., possibly represent mica rich zones; 113-115.5: very broken and mottled greenish sandstone, possible result of altered feldspathic groundmass; 118-124.5: similar mottled greenish-rusty coloration; 129.4-132 : several major fractured quartz veins, with 3-5% pyrite mainly in fractures but also disseminated; below 135.5: 2-5 mm. greisen veins 20-30 CA becoming more common, with disseminated dark metallic mineral ? hematite; below 140: sandstone has mottled rusty orange-green appearance, possibly altered feldspathic sandstone; 141.7-143.0: massive white quartz vein, very broken; 147.6-148.0: rubbly white quartz vein;</p> <p>overall decrease in pyrite down hole below 140m.</p> <p style="text-align: center;">END OF HOLE</p>													

265040

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 10

Commenced:	07 Oct 97
Completed:	16 Oct 97
Logged By:	L A Newnham
Drilled By:	Dia. Drill Tas

Purpose of Hole
.to test the northern end of the Hugo skarn immediately beneath the Hugo Fault.

Comments on Completion
.a thin skarn intersection was obtained directly beneath a rubbly core loss zone which probably equates with the Hugo Fault; thus the hanging wall section of the skarn which is generally the mineralised section was faulted off; the footwall section intersected was very poorly mineralised; this means the Hugo Au-Zn skarn is probably terminated against the Hugo Fault just south of HS 10

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5406334	423695	627	-90	-

Length (m)
147.3

Hole Size	
To (m)	Size
54.0	HQ
147.3	NQ

Significant Core Loss Zones		
From	To	%Rec.
115.5	116.5	0

Hole Condition on Completion
.all steel casing removed from hole on completion

Summary of Results:

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

265041

423695E

HS 10
Collar 627

5,406,334 N

PLAN

m. ASL

627

Sandstone, minor shale
BCA 70°

593.0

Altered sandstone - shale
40.5

Au g/t	Zn	ppm Cu
0.02	0.02	10
0.03	0.03	50
0.08	0.13	45
0.02	0.04	15
0.14	0.02	15
0.02	0.02	15

Interbedded sandstone - shale
BCA 70-80°

564.8

68.2

Conglomerate, minor gnts

532.4
530.7

Rubble quartz, possible fault
94.6
96.3

altered siltstone-sandstone

517.3

quartz-carbonate
pyrite vein
109.7
110.5

<0.01 0.02 <5

510.5

altered fine grained sandstone
core loss
115.5
116.5

<0.01 0.04 <5
<0.01 0.05 <5
<0.01 0.05 <5
0.01 0.04 <5

501.4 (F.W.)

shaly, magnetic
(in part; gn-pink mottled)
125.6

0.01 0.03 <5
0.02 0.02 <5
0.01 0.01 <5
0.04 0.02 <5
0.05 0.03 <5
0.03 0.02 <5

altered sandstone, greisen veins

479.7 R.L. E/H

147.3

HS 10

SECTION

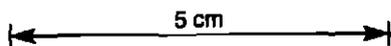
NEWMHAM EXPLORATION AND MINING SERVICES

GOLDSTREAM-TITAN J/V.

R.L. 8B10-HUGO PROJECT

DDH HS 10

10m	40m	Scale: 1:1000
Drawn: Z.A. Newnham	Date: Jan 97	Figure:



DOWN HOLE SURVEY DATA

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 10

Depth (m)	Dip	Bearing (AMG)	Interval		Length (D)	Vertical Distance		Horizontal Distance		Co-ordinates			
			From	To		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					627.00		0.00		5,406,334.0		423,695.0
0	-90	0	0	25	25	25.00	602.00	0.00	0.00	0.00	5,406,334.0	0.00	423,695.0
50	-88.2	317	25	75	50	49.98	552.02	1.57	1.57	1.15	5,406,335.1	-1.07	423,693.9
100	-88.2	23	75	123.65	48.65	48.63	503.40	1.53	3.10	1.41	5,406,336.6	0.60	423,694.5
147.3	-88.5	319	123.65	147.3	23.65	23.64	479.76	0.62	3.72	0.47	5,406,337.0	-0.41	423,694.1
147.3													

265043

COMPANY: Goldstream - Titan
 PROJECT: RL 8810
 HOLE NUMBER: HS 10

Description		Core Recovery			RQD			Assays								
From	To		From	To	%	From	To	%	From	To						
.40.5 cont.....	68.2	.below 61: shale dominant, soft creamy altered; BCA 70-80; core generally competent but brittle fracturing in sandstone and several soft crumbly sections in altered shale; 66.5-68.2: light gray medium grained sandstone with gritty texture in part;														
68.2	93.7	CONGLOMERATE: quartz pebble conglomerate with white pebbles up to 50 mm. in light gray fine grained sandy matrix; pyrite <1% as disseminated grains in sandy matrix; sharp contact with unit above 80 CA; brittle fracturing and failure on joint sets 45 and 10-20 CA; some sections have very dark matrix eg. 82.5-84.2 m;	68.2	93.7	100											
93.7	94.6	GRIT: fractured and broken gritty zone, with narrow quartz veins; possibly milled conglomerate;	93.7	94.6	100											
94.6	96.3	RUBBLY QUARTZ ZONE- probable fault: very broken (rubble) zone of quartz veined brecciated sediments; pyrite 5% as veinlets and clots;	94.6	96.3	100											
96.3	109.7	ALTERED SILTSTONE-SANDSTONE: light gray fine grained siltstone? with minor sandstone units (possible volcaniclastic ??); sericitised ground mass; cream anastomosing veinlets in some intervals; Pyrite <1%, disseminated; unit altered (sericitised) but not silicified; some bluish-gray greisenised patches;	96.3	109.7	100											

265045

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 10

Page No: 3

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
.96.3 cont.....	109.7	.below 102m: more definite fine grained sandstone, sericitic alteration, steep dipping <1mm. greisen veinlets, with possible trace blismuthinite;														
109.7	110.5	QUARTZ-CARBONATE-PYRITE VEIN: massive white quartz vein with large patches cream carbonate (siderite) enclosing large aggregates pyrite; narrow remnant sandstone beds; minor <1mm. greisen veins of quartz-topaz?-mica; minor dark fine grained mineral; vein appears orientated 50 CA;	109.7	110.5	100				109.5	110.5	<0.01	0.02	<0.5	<0.005	3	5
110.5	115.5	ALTERED FINE GRAINED SANDSTONE: light gray-fawn fine grained sandstone, extensively altered with abundant bright yellow-green sericitic zones; pyrite <1%;	110.5	115.5	100											
115.5	116.5	CORE LOSS only rubble recovered; ? fault zone?														
116.5	125.6	SKARN: to 119m: light brown-pink sacchroidal texture, very soft, extremely altered and degraded; streaks and patches of dark fine grained mineral, weathered to blood red color in places (? hematite, sphalerite?) 119-121 m: large dark green-black patches of massive soft mica, resulting in mottled texture; below 121m: pink-gray sacchroidal skarn with abundant dark gray-black patches resulting in streaky texture; dark mineral again weathering to blood red soft material (hematite?); below 124.5m: skarn becomes very dark green	116.5	122.8	100				116.5	117.5	<0.01	0.04	1	<0.005	190	5
			122.8	124.9	86				117.5	118.5	<0.01	0.05	2	<0.005	86	5
			124.9	125.6	100				118.5	119.5	<0.01	0.05	1.5	<0.005	71	5
									119.5	120.5	0.01	0.04	<0.5	0.01	5	5
									120	121.5	0.01	0.03	1	<0.005	11	5
									121.5	122.5	0.02	0.02	0.5	<0.005	2	5
									122.5	123.5	0.01	0.01	0.5	<0.005	<1	5
									123.5	124.5	0.06	0.02	<0.5	<0.005	<1	5
									124.5	125.5	0.05	0.03	0.5	<0.005	<1	5
									125.5	126.5	0.03	0.02	<0.5	<0.005	<1	5

COMPANY: Goldstream- Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 10

Description		Core Recovery			RQD			Assays								
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
.116.5 cont.....	125.6	.mottled black color, with patches magnetite and dark mlca;														
125.6	147.3	ALTERED GREISENISED SANDSTONE, minor SKARN:	125.6	147.3	100				128.5	129.5	0.03	0.005	<0.5	<0.005	2	<5
		light gray- light green altered sandstone metasiltstone, with some pink-gray calc - silicate/skarn zones;							131.5	132.5	0.03	0.01	<0.5	<0.005	3	<5
		relatively sharp contact with unit above;							136.5	137.5	0.02	0.01	<0.5	<0.005	2	<5
		to 131.5 m: light gray - light green meta-siltstone with abundant fine spots of hematite, blood red in color;							140.5	141.5	0.01	0.02	<0.5	<0.005	8	<5
		numerous <1mm. very fine, dark gray - black greisen veins, some high angle CA (70-80) others at low angles (20-30);							144.5	145.5	0.01	0.01	<0.5	<0.005	1	<5
		below 131.5: siltstones becoming more saccharoidal;									Sn	W				
		Increase in dark green-black greisen veining, which becomes an abundant component of the interval (20-30%);							34	35	4	15				
		greisen veins are anastomosing with no preferred orientation; consist of quartz-mica and quartz-mica-magnetite veins generally <10 mm. thick;							35	36	5	20				
		interval is moderately magnetic due to magnetite selvages on greisen veins;							36	37	4	20				
		occasional patches of pink felspar eg. 139.6;							37	38	4	<10				
		several fine grains of a silvery mineral associated with the greisen veins;							38	39	45	25				
		patchy pink coloration may be result of presence of calc-silicate or feldspathisation of metasiltstone;							39	40	4	15				
									109.5	110.5	14	55				
									116.5	117.5	250	35				
									117.5	118.5	34	15				
									118.5	119.5	49	35				
									119.5	120.5	4	<10				
									120.5	121.5	130	15				
									121.5	122.5	320	25				
									122.5	123.5	330	30				
									123.5	124.5	270	70				
									124.5	125.5	390	20				
									125.5	126.5	110	20				
									128.5	129.5	76	15				
									131.5	132.5	65	70				
									136.5	137.5	87	50				
									140.5	141.5	120	75				
									144.5	145.5	320	15				
		END OF HOLE														

265047

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 11

Commenced:	18 October 96
Completed:	26 October 96
Logged By:	L A Newnham
Drilled By:	Dia. Drill Tas

Purpose of Hole
.to test the Hugo Skarn between

Comments on Completion

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5406217	423 693	625	- 90	-

Length (m)
135.0

Hole Size	
To (m)	Size
59.6	HQ
135.0	NQ

Significant Core Loss Zones		
From	To	%Rec.
0.0	2.0	50
2.0	5.0	60

Hole Condition on Completion
.HQ rods stuck in hole: backed them off at 36 m; thus HQ remains in hole from 36 - 59.6 m;

Summary of Results:

Depth		Recovery	Description	Assays							
From	To	%		Length	Au	Zn	As	Mo	Bi	Sn	W
77.0	89.0	100	skarn with abundant greisen veins	12.0m	0.84	3.38	88	11	778	866	311
83.0	89.0	100		6.0 m	1.15	3.93	9	14	923	515	347
57.0	81.0	100	wrigglite with limestone (closer to 0.2 Sn if limestone beds omitted)	24.0 m						1098	205

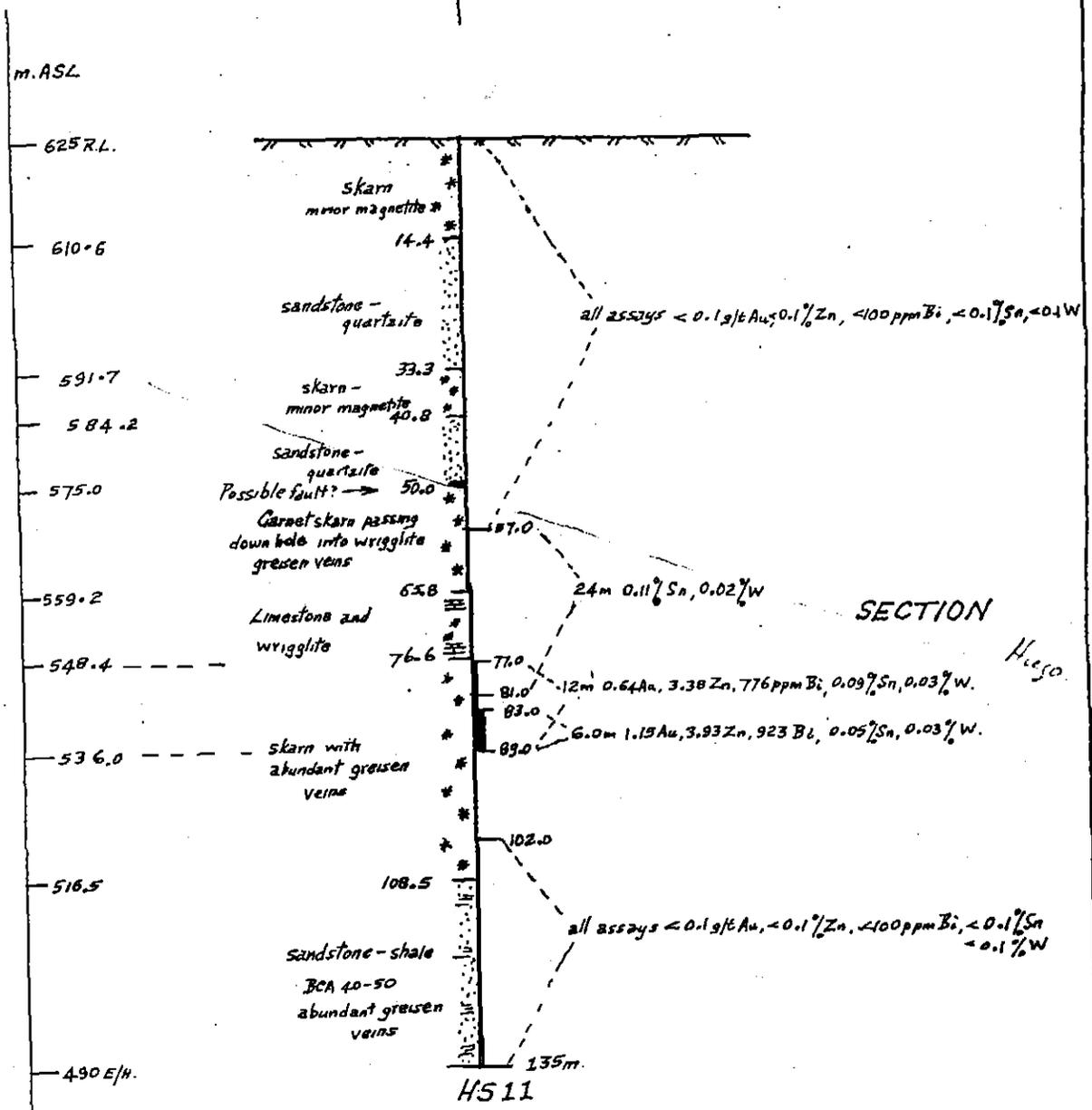
423, 693E

HS 11

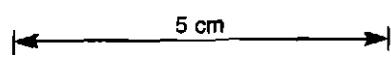
625 R.L.

5406217N

PLAN



NEWNHAM EXPLORATION AND MINING SERVICES		
GOLDSTREAM-TITAN J/V.		
R.L. 8810 - HUGO PROJECT		
DDH HS11		
10m	40m	Scale: 1:200
Drawn: L.A. Newham	Date: Jan 97	Figure:



DOWN HOLE SURVEY DATA

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 11

Depth (m)	Dip	Bearing (AMG)	Interval		Length (D)	Vertical Distance		Horizontal Distance		Co-ordinates			
			From	To		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					625.00		0.00		5,406,217.0		423,693.0
0	-90	0	0	25	25	25.00	600.00	0.00	0.00	0.00	5,406,217.0	0.00	423,693.0
50	-88.5	309	25	75	50	49.98	550.02	1.31	1.31	0.82	5,406,217.8	-1.02	423,692.0
100	-88.5	299	75	117.5	42.5	42.49	507.53	1.11	2.42	0.54	5,406,218.4	-0.97	423,691.0
135	-88.8	120	117.5	135	17.5	17.50	490.04	0.37	2.79	-0.18	5,406,218.2	0.32	423,691.3
135													

265050

Description		Core Recovery			RQD			Assays								
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
.0.0	14.4	SKARN:														
		mottled pink-dark gray/green granular garnet skarn with garnets up to 2 mm. forming large degraded/ weathered aggregates, separated by dark gray mineral;	0	2	50				0.0	2.0	0.02	0.03	1.5	5	195	<5
		translucent interstitial fluorite common;	2	5	60				2.0	3.0	0.03	0.03	<0.5	4	750	<5
		thin dark gray-black greisen veins 70-80 CA common, often with narrow magnetite selvages either side of fluorite-quartz cores;	5	8	90				3.0	4.0	0.04	0.02	<0.5	<1	59	30
		minor light brown-pink skarn zones eg. 7-8 m;	8	11	100				4.0	5.0	0.03	0.02	<0.5	<1	410	<5
		below 11.0 m: becomes more siliceous, light green-gray calc-silicates, interbedded with altered sandstone?;	11	14	80						0.01 (dup)					
		minor disseminated soft silvery mineral, possibly molybdenite, pervasive from collar down, as grains up to 1 mm.;							5.0	6.0	0.03	0.01	<0.5	9	290	<5
		fluorite patches occasionally associated with massive pyrite, but overall only minor amounts;							6.0	7.0	0.02	0.02	<0.5	1	900	<5
		core generally solid and competent, but becoming very broken below 12.5 m;							7.0	8.0	0.02	0.03	1	<1	440	<5
											<0.01 (dup)					
									8.0	9.0	0.02	0.02	<0.5	<1	380	<5
									9.0	10.0	<0.01	0.02	<0.5	2	390	<5
									10.0	11.0	0.03	0.01	<0.5	10	22	<5
									11.0	12.0	0.02	0.01	<0.5	5	58	<5
									12.0	13.0	0.03	0.01	<0.5	22	95	<5
									13.0	14.0	0.01	0.04	1.5	<1	310	<5
									14.0	15.0	0.04	0.02	<0.5	2	11	<5
									15.0	16.0	0.03	0.01	<0.5	8	7	<5
14.4	33.3	SANDSTONE-QUARTZITE:							16.0	17.0	0.02	0.01	<0.5	8	43	5
		intensely silicified sandstone and minor siltstone: massive white-light gray quartzite for most part, with all original texture obliterated; gritty sandy sections pyritic with sericitisation of feldspathic groundmass;	14	31.7	100				20.0	21.0	0.01	0.08	0.5	16	6	10
		gradational contact with unit above but very sharp contact with unit below;	31.7	33.7	80											
		minor greisen veins with magnetite selvages and trace molybdenite near top of interval;							26.0	27.0	0.02	<0.01	<0.5	7	6	10
		interval very broken with abundant brittle fracturing and failure along several joint directions; most joint surfaces limonitic;							31.0	32.0	<0.01	<0.01	<0.5	6	7	<5
									33.0	34.0	0.05	0.04	<0.5	<1	<1	<5
33.3	40.8	SKARN:														
		33.3-35.0 m: dark green-dark gray mottled skarn with magnetite patches and trace amounts fine silvery mineral ? hematite;	33.7	35.0	95				34.0	35.0	0.04	0.04	<0.5	<1	<1	<5
			35.0	38.0	70				35.0	36.0	0.03	0.01	<0.5	3	9	<5
			38.0	41.0	70				36.0	37.0	0.01	0.02	6	380	110	10

Description		Core Recovery			RQD			Assays									
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi	
.33.3 cont.....	40.8	.35.0-40.8m: pink-light brown saccharoidal skarn, intensely weathered, leached and disaggregated; generally extremely broken; sandy 36-37m; yellow-buff brown pug 38.8-40.8m; sharp contact with unit below;							37.0	38.0	0.02	<0.01	<0.5	11	24	6	
									38.0	39.0	0.02	<0.01	<0.5	4	24	6	
									39.0	41.0	0.02	0.01	0.5	44	260	6	
40.8	50.0	SANDSTONE-QUARTZITE: light gray intensely silicified sandstone-siltstone-quartzite unit similar to 14.4-33.3m: pyritic; trace fine grains metallic mineral; interval fractured along limonitic and sericitic coated joint surfaces, 30 and 70 CA; very broken rubbly contact with unit below- POSSIBLE FAULT;	41.0	44.0	90				41.0	42.0	0.01	0.02	1	29	9	5	
				44.0	49.9	100				49.0	50.0	0.01 (dup)	<0.01	<0.5	8	5	6
50.0	65.8	SKARN: 50.0-57.4: light gray-light brown-pink garnet skarn; 50-52.4 m., very weathered / leached clayey and broken rubble, bright red coloring in places due to weathering of Fe amphibole/pyroxene; competent below 52.4 m. with blotchy texture due to small patches of dark green amphibole or pyroxene; below 53.5 m., abundant greisen veins, consisting of dark gray-black magnetite commonly with pink feldspar - quartz centres; veins 1-20 mm. width and generally 70-80 CA; veins make up over 50% of rock; REDUCED TO NQ AT 59.6 m; 57.4-65.8 m: wrigglyte; magnetite fluorite skarn with classic wrigglyte texture; highly magnetic and competent core; cut by occasional pink feldspar veins 60-70 CA, 2-10 mm. thick;	49.9	52.9	85				50.0	51.0	0.01	0.02	<0.5	25	18	20	
				52.9	65.8	100				51.0	52.0	0.01	0.02	<0.5	11	100	6
										52.0	53.0	<0.01	0.02	0.5	3	2	6
										53.0	54.0	0.07	0.02	0.5	10	5	70
										54.0	55.0	0.02	0.01	0.5	7	7	15
										55.0	56.0	<0.01	0.01	0.5	3	2	5
										56.0	57.0	<0.01	0.01	<0.5	4	2	10
										57.0	58.0	0.04	0.54	2	51	2	650
												0.03(dup)					
										58.0	59.0	0.02	0.06	1.5	87	2	500
									59.0	60.0	0.1	0.07	1.5	340	3	900	
									60.0	61.0	0.25	0.63	2.5	200	2	1200	
									61.0	62.0	0.08	0.09	2	140	1	700	
									62.0	63.0	0.1	0.43	2	320	3	900	
									63.0	64.0	0.1	0.04	1.5	165	2	700	
									64.0	65.0	0.1	0.03	1.5	280	2	700	
									65.0	66.0	0.08	0.16	1.5	230	2	550	
65.8	76.6	LIMESTONE WITH WRIGGLITE BEDS: 65.8-71.0 m: medium gray massive limestone with mottled texture in places;	65.8	76.6	100				66.0	67.0	0.01	0.03	<0.5	50	2	15	
												<0.01(dup)					
									67.0	68.0	<0.01	0.01	<0.5	29	<1	15	

265052

Description		Core Recovery			RQD			Assays								
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
.65.8 cont.....	76.6	.minor fine grained magnetite veinlets < 1mm. increasing in abundance towards base of Interval; 71.0-73.2 m: zone of intermixed limestone and wriggllite; limestone cream-white-light gray; 73.2-76.6 m: intermixed limestone, pale green-pink skarn, and minor wriggllite patches;							68.0	69.0	<0.01	<0.01	<0.5	33	2	10
												0.03(dup)				
									69.0	70.0	0.01	0.01	<0.5	38	1	10
									70.0	71.0	<0.01	0.04	<0.5	150	1	40
									71.0	72.0	<0.01	0.08	1	650	3	380
									72.0	73.0	0.04	0.09	1.5	450	1	600
									73.0	74.0	0.02	0.08	<0.5	160	2	250
									74.0	75.0	0.02	0.47	1.5	550	1	700
76.6	108.5	SKARN WITH ABUNDANT GREISEN VEINS:							75.0	76.0	0.01	0.12	0.5	270	2	390
		light green-honey colored skarn with patches magnetite and sphalerite - close to wriggllite texture in places; cut by abundant thin 1-2 mm greisen veins of magnetite, dark biotite, generally 50 CA; greisen veins and skarn cut by 5-15 mm. bright pink felspar veins 30 CA; these in turn are fractured with fractures infilled with a soft red-pink mineral; up to 87 m: dominated by magnetite- sphalerite skarn, either as intervals of classic wriggllite or light brown-cream skarn with patches of massive magnetite-pyrite-pyrrhotite and abundant magnetite greisen veins; pink felspar veins common, generally 70-80 CA; below 87 m: skarn grades into light pink garnet skarn with decreasing magnetite; 87-96.2 m: pink saccharoidal textured skarn with numerous magnetite-sphalerite patches and widely spaced greisen veins with quartz- fluorite cores and pink felspar - magnetite rims; 96.2-98.5 m: fine grained pink skarn with magnetite restricted to network fine quartz- topaz?-fluorite-magnetite veinlets; 98.5-108.5 m: light green-pink fine grained garnet skarn with abundant magnetite- sphalerite in skarn and in numerous quartz- topaz?-pink fluorite-magnetite greisen veins; minor specs metallic mineral in greisen veinlets;	76.6	108.5	100				76.0	77.0	<0.01	0.16	<0.5	145	2	300
									77.0	78.0	<0.1	1.14	1	350	2	290
									78.0	79.0	0.04	3.38	2	290	2	490
									79.0	80.0	0.02	10.4	2.5	99	10	950
									80.0	81.0	0.19	0.2	2.5	84	4	1400
									81.0	82.0	0.40	0.32	1.5	120	19	470
									82.0	83.0	0.16	1.56	1.5	35	11	180
									83.0	84.0	0.96	4.03	1.5	14	22	450
											1.02(dup)					
									84.0	85.0	2.00	5.77	1.5	14	8	1550
											1.99(dup)					
									85.0	86.0	0.31	0.33	1	6	10	140
									86.0	87.0	0.86	5.7	2	8	23	1450
											0.92(dup)					
									87.0	88.0	1.40	6.15	1.5	8	7	1300
											1.33(dup)					
									88.0	89.0	1.39	1.65	1.5	4	16	650
											1.12(dup)					
									89.0	90.0	0.08	0.06	1	1	4	40
									90.0	91.0	0.05	0.02	0.5	2	3	25
									91.0	92.0	0.96	0.03	1	3	4	180
											1.10(dup)					
									92.0	93.0	0.70	0.33	1	7	3	175
											0.72(dup)					
									93.0	94.0	0.12	3.43	1	14	5	30
									94.0	95.0	0.05	0.03	1	8	14	5
									95.0	96.0	0.02	0.02	1	17	5	30
									96.0	97.0	0.02	0.08	1	3	4	10
									97.0	98.0	<0.01	0.01	0.5	13	4	20
									98.0	99.0	0.01	0.01	0.5	9	8	10

265053

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 11

Description		Core Recovery			RQD			Assays								
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
			A	B	C	D	E	F	G	H	I	J	K	L	M	N
.76.6	108.5	.base of interval gradational; fine light-brown siltstone-shale beds first appear 107.8 m.							99.0	100.0	<0.01	0.08	<0.5	39	5	40
cont.....									100.0	101.0	3.16	0.93	1	88	15	600
108.5	135.0	SANDSTONE-SHALE with greisen veining: fine-medium grained dark gray sandstone with minor beds of light brown wispy siltstone- shale; unit intensely altered and hornfelsed; abundant 1-10 mm. greisen veins 60-70 CA, variable composition: quartz-topaz?-mica (green and white) centres with dark mica- magnetite margins; pervasive greenish coloration in places and minor disseminated magnetite in sandstone; BCA 40-50; pervasive 1-3% pyrite as clots in sandstone and in most of greisen veins; trace Bi, Mo and Wolframite? in greisen veins, especially in thicker veins below 123 m; core moderately competent but several very broken zones associated with fracturing along greisen veins;	108.5	135	100				101.0	102.0	2.63(dup) 0.53	0.02	1	23	18	85
									102.0	103.0	0.09	0.01	<0.5	34	11	55
									103.0	104.0	0.01	0.02	<0.5	5	6	5
									104.0	105.0	<0.01	0.01	<0.5	7	5	5
									105.0	106.0	<0.01	0.01	<0.5	5	5	15
									106.0	107.0	<0.01	0.01	<0.5	5	4	5
									107.0	108.0	<0.01	0.01	<0.5	8	4	15
									108.0	109.0	<0.01	0.01	<0.5	7	10	10
											0.04(dup)					
											Sn	W				
									0.0	2.0	110	20				
									2.0	3.0	130	<10				
									3.0	4.0	165	20				
									4.0	5.0	165	<10				
									5.0	6.0	220	15				
									6.0	7.0	220	30				
									7.0	8.0	270	<10				
									8.0	9.0	180	10				
									9.0	10.0	220	45				
									10.0	11.0	370	120				
									11.0	12.0	48	<10				
									12.0	13.0	74	15				
									13.0	14.0	200	25				
									14.0	15.0	145	25				
									15.0	16.0	13	<10				
									16.0	17.0	45	30				
									20.0	21.0	4	<10				
									26.0	27.0	17	20				
									31.0	32.0	5	<10				
									33.0	34.0	220	25				
									34.0	35.0	220	15				
									35.0	36.0	400	155				
									36.0	37.0	310	90				
									37.0	38.0	360	30				

END OF HOLE

265054

COMPANY: Goldstream - Titan
 PROJECT: Hugo RL 8810
 HOLE NUMBER: HS 11

Description		Core Recovery			RQD			Assays							
From	To	From	To	%	From	To	%	From	To	Sn	W				
								38.0	39.0	400	20				
								39.0	41.0	360	60	From	To	Sn	W
								41.0	42.0	10	10	85.0	86.0	600	490
								49.0	50.0	11	25	86.0	87.0	450	500
								50.0	51.0	130	115	87.0	88.0	470	170
								51.0	52.0	600	80	88.0	89.0	600	390
								52.0	53.0	650	100	89.0	90.0	550	140
								53.0	54.0	750	230	90.0	91.0	550	70
								54.0	55.0	370	95	91.0	92.0	600	165
								55.0	56.0	450	70	92.0	93.0	550	55
								56.0	57.0	650	270	93.0	94.0	550	55
								57.0	58.0	2250	320	94.0	95.0	600	220
								58.0	59.0	1700	420	95.0	96.0	550	165
								59.0	60.0	1450	490	96.0	97.0	550	115
								60.0	61.0	2400	380	97.0	98.0	650	140
								61.0	62.0	1550	430	98.0	99.0	650	480
								62.0	63.0	1250	600	99.0	100.0	450	115
								63.0	64.0	1100	500	100.0	101.0	500	165
								64.0	65.0	1050	500	101.0	102.0	500	280
								65.0	66.0	700	550	102.0	103.0	550	145
								66.0	67.0	33	<10	103.0	104.0	430	290
								67.0	68.0	23	<10	104.0	105.0	390	290
								68.0	69.0	20	10	105.0	106.0	440	240
								69.0	70.0	43	<10	106.0	107.0	400	125
								70.0	71.0	200	40	107.0	108.0	150	105
								71.0	72.0	850	310	108.0	109.0	72	95
								72.0	73.0	1150	185				
								73.0	74.0	240	45				
								74.0	75.0	1900	20				
								75.0	76.0	600	80				
								76.0	77.0	1500	<10				
								77.0	78.0	1750	85				
								78.0	79.0	1150	200				
								79.0	80.0	2450	500				
								80.0	81.0	1000	310				
								81.0	82.0	500	340				
								82.0	83.0	460	220				
								83.0	84.0	500	350				
								84.0	85.0	470	185				

APPENDIX B

265057

MINERAL CHEMISTRY

Amdel Laboratories Ltd
PO Box 338
Torrensville Plaza SA 5031
ACN 009 076 555

Telephone (08) 8416 5300
Facsimile (08) 8234 0321

Mr Lindsay Newnham
Newnham Exploration & Mining Services
PO Box 132
RIVERSIDE TAS 7250

FINAL ANALYSIS REPORT

Your Order No:

Our Job Number : 6AD3294

Sample rec'd : 26/09/96

Results reported : 02/10/96

No. of samples : 33

Report comprises a cover sheet and pages 1 to 1

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

This final analysis report replaces the preliminary reports sent on 2/10/96.

Approved Signature:



for
Alan Ciplis
Manager - Mineral Chemistry

Report Codes:

N.A. - Not Available.

L.N.R. - Listed But Not Received.

I.S. - Insufficient Sample.

Distribution Codes:

CC - Carbon Copy

EM - Electronic Media

MM - Magnetic Media



Final

ANALYTICAL REPORT

SAMPLE	Au	Au Dp1	Zn	Ag	As	Mo	Bi
HS8 82.5- 83.5	0.04	0.02	0.025	4	<0.005	<20	60
HS8 83.5- 84.5	0.11	--	0.030	2	<0.005	<20	80
HS8 84.5- 85.5	0.01	--	0.035	4	<0.005	<20	80
HS8 85.5- 86.5	0.29	--	0.065	10	<0.005	<20	580
HS8 86.5- 87.5	7.18	--	5.42	11	<0.005	40	1500
HS8 87.5- 88.5	2.23	--	14.9	8	<0.005	30	1600
HS8 88.5- 89.5	3.40	--	10.6	10	0.005	<20	2650
HS8 89.5- 90.5	2.77	--	11.7	10	<0.005	20	2900
HS8 90.5- 91.5	1.78	--	12.3	11	<0.005	<20	2000
HS8 91.5- 92.5	0.99	--	9.62	8	<0.005	20	1150
HS8 92.5- 93.5	0.46	--	5.31	9	<0.005	<20	800
HS8 93.5- 94.5	1.55	--	5.76	8	<0.005	<20	1800
HS8 94.5- 95.5	0.71	--	4.70	7	<0.005	<20	260
HS8 95.5- 96.5	0.01	--	2.67	8	<0.005	<20	60
HS8 96.5- 97.5	0.01	--	1.34	5	<0.005	<20	<50
HS8 97.5- 98.5	0.09	--	0.145	7	0.005	<20	120
HS8 98.5- 99.5	0.67	--	4.42	7	<0.005	<20	420
HS8 99.5-100.5	0.56	--	6.58	8	<0.005	<20	1100
HS8 100.5-101.5	0.30	--	7.84	8	<0.005	<20	400
HS8 101.5-102.5	0.11	--	6.51	9	<0.005	<20	80
HS8 102.5-103.5	0.02	0.03	4.34	7	<0.005	<20	<50
HS8 103.5-104.5	<0.01	--	0.255	7	<0.005	<20	<50
HS8 104.5-105.5	<0.01	--	0.475	19	<0.005	<20	<50
HS8 105.5-106.5	0.03	0.02	5.03	9	<0.005	<20	80
HS8 106.5-107.5	0.04	--	0.050	6	<0.005	<20	100
HS8 107.5-108.5	0.01	--	0.060	<2	<0.005	<20	80
HS8 108.5-109.5	0.03	--	0.070	6	<0.005	<20	<50
HS8 109.5-110.5	0.01	--	0.015	4	<0.005	30	<50
HS8 110.5-111.5	0.02	--	0.020	<2	<0.005	30	60
HS8 111.5-112.5	0.02	0.01	0.015	8	<0.005	<20	60
HS8 112.5-113.5	0.01	--	0.015	6	<0.005	<20	<50
HS8 113.5-114.5	0.01	--	0.015	5	<0.005	<20	60
HS8 114.5-115.5	0.01	--	0.015	5	<0.005	<20	60

UNITS	ppm	ppm	%	ppm	%	ppm	ppm
DET.LIM	0.01	0.01	0.005	2	0.005	20	50
SCHEME	FA1	FA1	MET1	MET1	MET1	MET1	MET1

MINERAL CHEMISTRY

**Amdel Laboratories Ltd
PO Box 338
Torrensville Plaza SA 5031
ACN 009 076 555**

**Telephone (08) 8416 5300
Facsimile (08) 8234 0321**

**Mr Lindsay Newnham
Newnham Exploration & Mining Services
PO Box 132
RIVERSIDE TAS 7250**

FINAL ANALYSIS REPORT

Your Order No: per: Goldstream

Our Job Number : 6AD3873

**Sample rec'd : 19/11/96
No. of samples : 121
Report comprises a cover sheet and pages 1 to 6**

Results reported : 17/12/96

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

This final analysis report replaces the preliminary reports sent on 10/12/96.

Approved Signature:

Chris Alkemy

**for
Alan Ciplys
Manager - Mineral Chemistry**

**Report Codes:
N.A. - Not Available.
L.N.R. - Listed But Not Received.
I.S. - Insufficient Sample.**

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


 Job: 6AD3873
 O/N: per: Goldstream

Final

ANALYTICAL REPORT

SAMPLE	Au	Au Dpl	Zn	Ag	As	Mo	Bi
HS8 115.5-116.5	0.01	0.03	145	<0.5	24	6	40
HS8 116.5-117.5	0.03	--	290	<0.5	11	27	100
HS8 117.5-118.5	<0.01	--	82	<0.5	10	2	15
HS8 118.5-119.5	<0.01	--	190	<0.5	7	26	50
HS8 119.5-120.5	0.03	--	155	<0.5	6	40	35
HS8 120.5-121.5	0.02	--	135	<0.5	4	230	30
HS8 121.5-122.5	0.01	--	210	<0.5	6	80	30
HS8 122.5-123.5	<0.01	--	150	<0.5	4	59	<5
HS8 123.5-124.5	0.04	--	200	<0.5	6	32	70
HS9 47.0-48.0	0.01	--	105	<0.5	25	1	<5
HS9 48.0-49.0	0.16	--	260	2.0	9	<1	300
HS9 49.0-50.0	0.03	--	130	<0.5	49	1	<5
HS10 34.0-35.0	0.02	0.01	155	<0.5	120	1	10
HS10 35.0-36.0	0.03	--	500	18.0	600	2	50
HS10 36.0-37.0	0.08	--	1300	14.5	7900	2	45
HS10 37.0-38.0	0.02	--	440	1.0	200	<1	15
HS10 38.0-39.0	0.14	--	220	1.0	54	<1	155
HS10 39.0-40.0	0.02	--	200	<0.5	500	<1	15
HS10 109.5-110.5	<0.01	--	155	<0.5	34	3	<5
HS10 116.5-117.5	<0.01	--	360	1.0	<1	190	<5
HS10 117.5-118.5	<0.01	--	500	2.0	<1	86	<5
HS10 118.5-119.5	<0.01	--	550	1.5	8	71	<5
HS10 119.5-120.5	0.01	--	420	<0.5	150	5	<5
HS10 120.5-121.5	0.01	--	320	1.0	8	11	<5
HS10 121.5-122.5	0.02	--	195	0.5	<1	2	<5
HS10 122.5-123.5	0.01	--	150	0.5	<1	<1	<5
HS10 123.5-124.5	0.06	--	190	<0.5	<1	<1	<5
HS10 124.5-125.5	0.05	--	290	0.5	3	<1	5
HS10 125.5-126.5	0.03	--	195	<0.5	3	<1	<5
HS10 128.5-129.5	0.03	--	50	<0.5	6	2	<5
HS10 131.5-132.5	0.03	--	125	<0.5	11	3	<5
HS10 136.5-137.5	0.02	--	78	<0.5	6	2	<5
HS10 140.5-141.5	0.01	--	160	<0.5	14	8	<5
HS10 144.5-145.5	0.01	--	67	<0.5	<1	1	<5
HS11 0.0-2.0	0.02	--	320	1.5	5	195	<5
HS11 2.0-3.0	0.03	--	250	<0.5	4	750	<5
HS11 3.0-4.0	0.04	--	175	<0.5	<1	59	30
HS11 4.0-5.0	0.03	0.01	230	<0.5	<1	410	<5
HS11 5.0-6.0	0.03	--	91	<0.5	9	290	<5
HS11 6.0-7.0	0.02	--	160	<0.5	1	900	<5
HS11 7.0-8.0	0.02	<0.01	250	1.0	<1	440	<5
HS11 8.0-9.0	0.02	--	185	<0.5	<1	380	<5
HS11 9.0-10.0	<0.01	--	220	<0.5	2	390	<5
HS11 10.0-11.0	0.03	--	105	<0.5	10	22	<5
HS11 11.0-12.0	0.02	--	89	<0.5	5	58	<5
HS11 12.0-13.0	0.03	--	130	<0.5	22	95	<5
HS11 13.0-14.0	0.01	--	360	1.5	<1	310	<5
HS11 14.0-15.0	0.04	--	230	<0.5	2	11	<5
HS11 15.0-16.0	0.03	--	80	<0.5	8	7	<5
HS11 16.0-17.0	0.02	--	130	<0.5	8	43	5

UNITS	ppm						
DET.LIM	0.01	0.01	1	0.5	1	1	5
SCHEME	FA1	FA1	IC2E	IC2E	IC2E	IC2E	IC2E
UPPER SCHEME					MET1		


 Job: 6AD3873
 O/N: per: Goldstream

Final

ANALYTICAL REPORT

SAMPLE	Au	Au Dpl	Zn	Ag	As	Mo	Bi
HS11 88.0-89.0	<u>1.39</u>	1.12	1.65%	1.5	4	16	650
HS11 89.0-90.0	0.08	--	650	1.0	1	4	40
HS11 90.0-91.0	0.05	--	160	0.5	2	3	25
HS11 91.0-92.0	0.96	1.10	250	1.0	3	4	180
HS11 92.0-93.0	0.70	0.72	3250	1.0	7	3	175
HS11 93.0-94.0	0.12	--	<u>3.43%</u>	1.0	14	5	30
HS11 94.0-95.0	0.05	--	310	1.0	8	14	5
HS11 95.0-96.0	0.02	--	230	1.0	17	5	30
HS11 96.0-97.0	0.02	--	750	1.0	3	4	10
HS11 97.0-98.0	<0.01	--	90	0.5	13	4	20
HS11 98.0-99.0	0.01	--	115	0.5	9	8	10
HS11 99.0-100.0	<0.01	--	750	<0.5	39	5	40
HS11 100.0-101.0	<u>3.16</u>	2.63	9300	1.0	88	15	600
HS11 101.0-102.0	0.53	0.69	210	1.0	23	18	85
HS11 102.0-103.0	0.09	--	115	<0.5	34	11	55
HS11 103.0-104.0	0.01	--	180	<0.5	5	6	5
HS11 104.0-105.0	<0.01	--	135	<0.5	7	5	<5
HS11 105.0-106.0	<0.01	--	135	<0.5	5	5	15
HS11 106.0-107.0	<0.01	--	120	<0.5	5	4	5
HS11 107.0-108.0	<0.01	--	120	<0.5	8	4	15
HS11 108.0-109.0	<0.01	0.04	70	<0.5	7	10	10

UNITS	ppm						
DET.LIM	0.01	0.01	1	0.5	1	1	5
SCHEME	FA1	FA1	IC2E	IC2E	IC2E	IC2E	IC2E
UPPER SCHEME			MET1				

Final

ANALYTICAL REPORT

SAMPLE	Sn	W
HS8 115.5-116.5	250	105
HS8 116.5-117.5	150	2350
HS8 117.5-118.5	130	25
HS8 118.5-119.5	115	50
HS8 119.5-120.5	230	280
HS8 120.5-121.5	175	15
HS8 121.5-122.5	76	130
HS8 122.5-123.5	150	<10
HS8 123.5-124.5	165	650
HS9 47.0-48.0	44	20
HS9 48.0-49.0	300	20
HS9 49.0-50.0	65	30
HS10 34.0-35.0	<4	15
HS10 35.0-36.0	5	20
HS10 36.0-37.0	<4	20
HS10 37.0-38.0	4	<10
HS10 38.0-39.0	45	25
HS10 39.0-40.0	<4	15
HS10 109.5-110.5	14	55
HS10 116.5-117.5	250	35
HS10 117.5-118.5	34	15
HS10 118.5-119.5	49	35
HS10 119.5-120.5	<4	<10
HS10 120.5-121.5	130	15
HS10 121.5-122.5	320	25
HS10 122.5-123.5	330	30
HS10 123.5-124.5	270	70
HS10 124.5-125.5	390	20
HS10 125.5-126.5	110	20
HS10 128.5-129.5	76	15
HS10 131.5-132.5	65	70
HS10 136.5-137.5	87	50
HS10 140.5-141.5	120	75
HS10 144.5-145.5	320	15
<hr/>		
HS11 0.0-2.0	110	20
HS11 2.0-3.0	130	<10
HS11 3.0-4.0	165	20
HS11 4.0-5.0	165	<10
HS11 5.0-6.0	220	15
HS11 6.0-7.0	220	30
HS11 7.0-8.0	270	<10
HS11 8.0-9.0	180	10
HS11 9.0-10.0	220	45
HS11 10.0-11.0	370	120
HS11 11.0-12.0	48	<10
HS11 12.0-13.0	74	15
HS11 13.0-14.0	200	25
HS11 14.0-15.0	145	25
HS11 15.0-16.0	13	<10
HS11 16.0-17.0	45	30

UNITS ppm ppm
DET. LIM 4 10
SCHEME XRF1 XRF1

Final

ANALYTICAL REPORT

SAMPLE	Sn	W
HS11 20.0-21.0	<4	<10
HS11 26.0-27.0	17	20
HS11 31.0-32.0	5	<10
HS11 33.0-34.0	220	25
HS11 34.0-35.0	200	15
HS11 35.0-36.0	400	155
HS11 36.0-37.0	310	90
HS11 37.0-38.0	360	30
HS11 38.0-39.0	400	20
HS11 39.0-41.0	360	60
HS11 41.0-42.0	10	10
HS11 49.0-50.0	11	25
HS11 50.0-51.0	130	115
HS11 51.0-52.0	600	80
HS11 52.0-53.0	650	100
HS11 53.0-54.0	750	230
HS11 54.0-55.0	370	95
HS11 55.0-56.0	450	70
HS11 56.0-57.0	650	270
HS11 57.0-58.0	2250	320
HS11 58.0-59.0	1700	420
HS11 59.0-60.0	1450	490
HS11 60.0-61.0	2400	380
HS11 61.0-62.0	1550	430
HS11 62.0-63.0	1250	600
HS11 63.0-64.0	1100	500
HS11 64.0-65.0	1050	500
HS11 65.0-66.0	700	550
HS11 66.0-67.0	33	<10
HS11 67.0-68.0	23	<10
HS11 68.0-69.0	20	10
HS11 69.0-70.0	43	<10
HS11 70.0-71.0	200	40
HS11 71.0-72.0	850	310
HS11 72.0-73.0	1150	185
HS11 73.0-74.0	240	45
HS11 74.0-75.0	1900	20
HS11 75.0-76.0	600	80
HS11 76.0-77.0	1500	<10
HS11 77.0-78.0	1750	85
HS11 78.0-79.0	1150	200
HS11 79.0-80.0	2450	500
HS11 80.0-81.0	1000	310
HS11 81.0-82.0	500	340
HS11 82.0-83.0	460	220
HS11 83.0-84.0	500	350
HS11 84.0-85.0	470	185
HS11 85.0-86.0	600	490
HS11 86.0-87.0	450	500
HS11 87.0-88.0	470	170

57-81: 24m 1098 g.
205 W.

77-89m: 866 g. 311 W.
83-89m: 515 g. 347 W.

UNITS ppm ppm
DET.LIM 4 10
SCHEME XRF1 XRF1

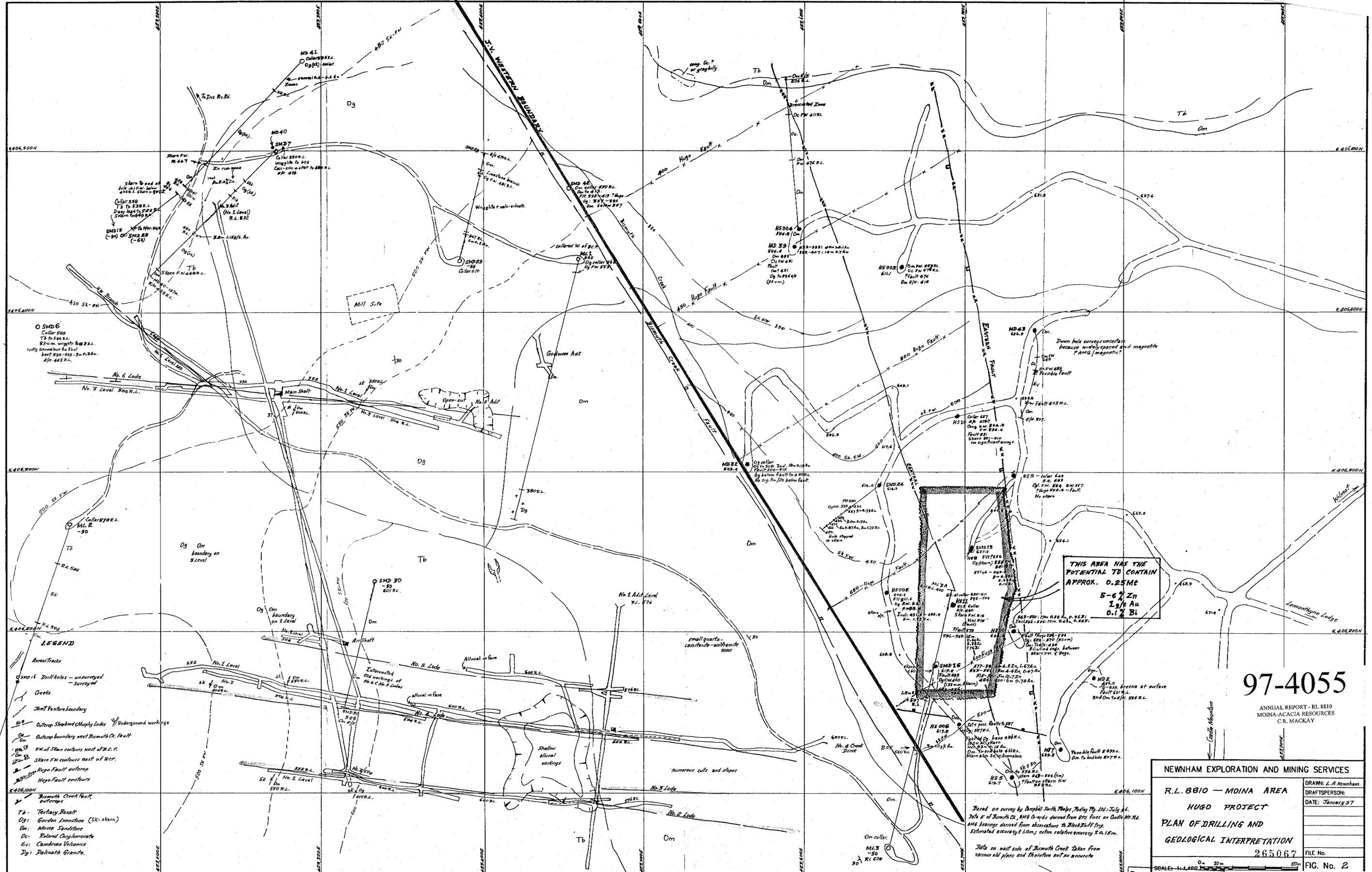
Final

ANALYTICAL REPORT

SAMPLE	Sn	W
HS11 88.0-89.0	600	390
HS11 89.0-90.0	550	140
HS11 90.0-91.0	550	70
HS11 91.0-92.0	600	165
HS11 92.0-93.0	550	55
HS11 93.0-94.0	550	55
HS11 94.0-95.0	600	220
HS11 95.0-96.0	550	165
HS11 96.0-97.0	550	115
HS11 97.0-98.0	650	140
HS11 98.0-99.0	650	480
HS11 99.0-100.0	450	115
HS11 100.0-101.0	500	165
HS11 101.0-102.0	500	280
HS11 102.0-103.0	550	145
HS11 103.0-104.0	430	290
HS11 104.0-105.0	390	290
HS11 105.0-106.0	440	240
HS11 106.0-107.0	400	125
HS11 107.0-108.0	150	105
HS11 108.0-109.0	72	95



UNITS	ppm	ppm
DET.LIM	4	10
SCHEME	XRF1	XRF1



THIS AREA HAS THE
POTENTIAL TO CONTAIN
APPROX. 0.25% Zn
1g/t Au
0.1% Bi

97-4055

ANNUAL REPORT - RL 8810
MOINA-ACACIA RESOURCES
C.R. MACKAY

NEWHAM EXPLORATION AND MINING SERVICES

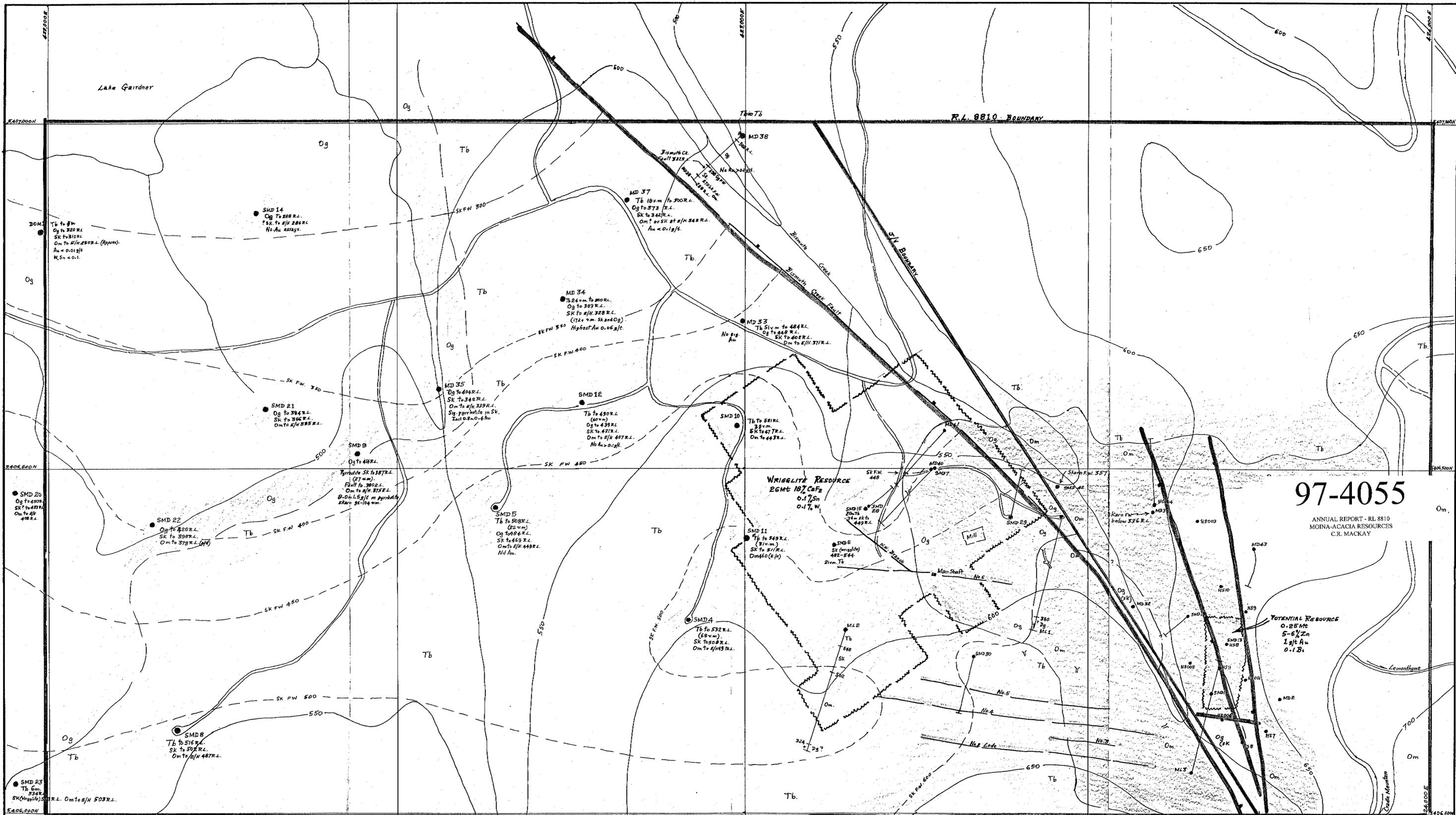
R.L. 8810 - MOINA AREA
HUGO PROJECT
PLAN OF DRILLING AND
GEOLOGICAL INTERPRETATION
265067

DRAWN: L.A. Newham
DRAFTSPERSON:
DATE: January 97
FILE No.
FIG. No. 2

Based on survey by Campbell Smith, Phelps Dodge Pty. Ltd., July 56.
Tb's E of Bismuth Crk. AMG Co-ords derived from GPS fixes on Gadsden Mt. Rd.
AMG bearings derived from observations to Black Bluff Top.
Estimated accuracy ± 1.0m; extra relative accuracy ± 0.15m.

Data on west side of Bismuth Creek taken from
various old plans and therefore not so accurate

SCALE: 1:1,000
Property of Information Unit
Acacia Resources Limited
8 8900
5 cm



97-4055

ANNUAL REPORT - RL 8810
MOINA-ACACIA RESOURCES
C.R. MACKAY

WRIGGLITE RESOURCE
26Mt 18% CaF₂
0.17% Sn
0.1% W

POTENTIAL RESOURCE
0.25 Mt
5-6% Zn
1 g/t Au
0.1% Bi

KEY

- Tb Tertiary Basalt and Tertiary sediments
- Og Gordon Limestone
- SK Skarned limestone
- Om Moine Sandstone
- Dg Dalroch granite
- - - Surface contours
- - - Skarn Fw. Outcrops
- - - Geological boundary
- - - Roads

NEWHAM EXPLORATION AND MINING SERVICES

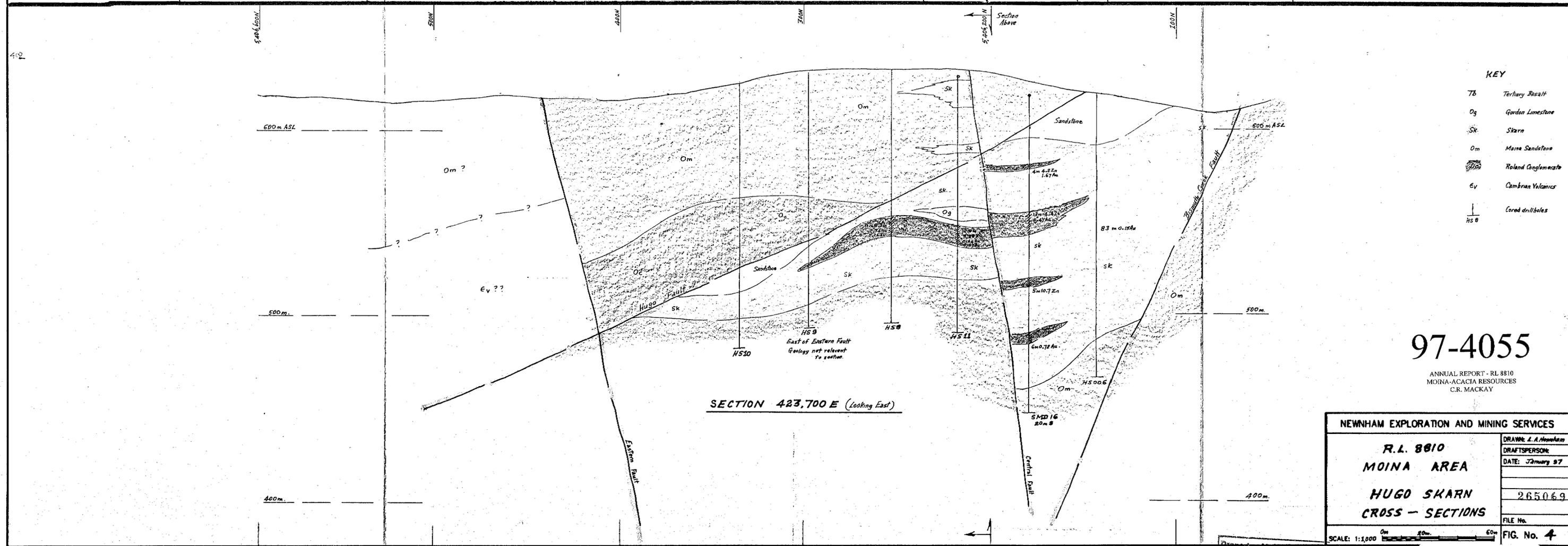
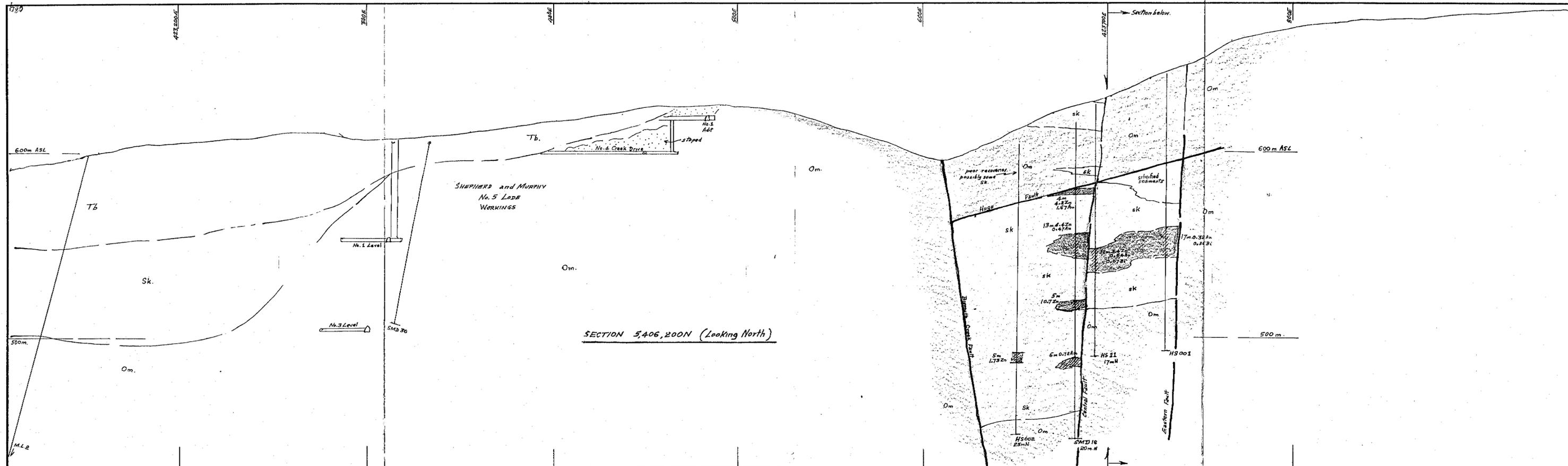
R.L. 8810 - MOINA AREA

PLAN OF GEOLOGY,
DRILL HOLES AND POTENTIAL
RESOURCES

DRAWN: L.A. Newham
DRAFTSPERSON:
DATE: Feb. 97
FILE No.
FIG. No. 3

SCALE: 1:2,500
8.8900

Property of Information Unit
Acacia Resources Limited



KEY

Tb	Tertiary Basalt
Og	Gordon Limestone
Sk	Skarn
Om	Main Sandstone
	Roland Conglomerate
Ev	Cambrian Volcanics
	Cored drillholes
HS #	

97-4055

ANNUAL REPORT - RL 8810
MOINA-ACACIA RESOURCES
C.R. MACKAY

NEWHAM EXPLORATION AND MINING SERVICES	
R.L. 8810 MOINA AREA HUGO SKARN CROSS - SECTIONS	
DRAWN: L.A. Newman	DRAFTSPERSON:
DATE: January 97	
	265069
FILE No.	
SCALE: 1:1,000	FIG. No. 4

Property of Information Unit
Acacia Resources Limited 8-8900