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CORINNA PROJECT

EXPLORATION LICENCE NO. 26/95 SPECIMEN CREEK, WESTERN TASMANIA

ANNUAL REPORT TO 6/3/97

Volume 1 of 2

See folio 41.

Prepared by: N.J. Turner Geological Services Pty Ltd
65 Lochner Street, West Hobart Tasmania 7000

23rd October, 1997

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CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

LIST OF PLANS

1.0 Summary

- A comprehensive review has been carried out of previous mining and mineral exploration at Specimen Reef in EL 26/95.
- The review is not encouraging in respect of gold potential but points out that previous drilling has not effectively tested the reef.
- A soundly based interpretation of the subsurface disposition of Specimen Reef was produced during the review.
- Two diamond drill holes will be put down to test the interpreted reef in a position close to a previously reported narrow, high grade intersection.
- Detailed helimag has been acquired and will be processed and interpreted as an aid to mapping the reef and/or associated structures.

2.0 Introduction

This report outlines the nature and results of work carried out by the Goldstream – Titan Joint Venture in Mineral Exploration Licence No. 26/95 during 1996-1997. The work was part of Stage 1 of the Joint Venture's Corinna Project which encompasses seven exploration licences covering virtually all of the Arthur Metamorphic Complex in north western Tasmania.

The exploration licences comprising the area of the Corinna Project are shown in Figure 1. Consolidated Mineral Lease 7M97 is included in the project area through a joint venture with H.D. Nolan. Exploration Licence No. 44/96 is held by R. Holland for alluvial deposits to a depth of 15m whilst the Goldstream – Titan Joint Venture has the right to explore for deeper deposits.

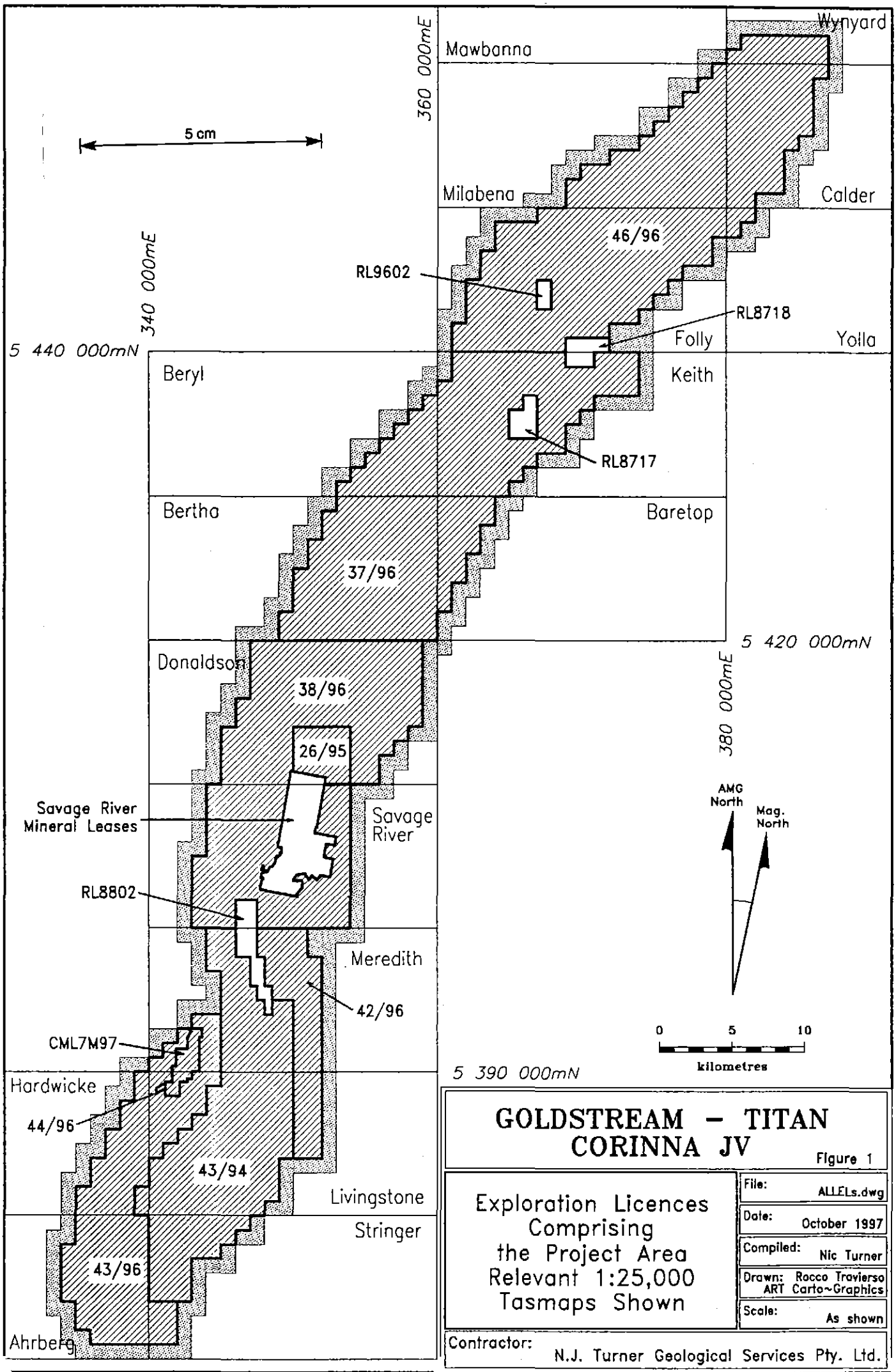
EL 43/94 and EL 26/95 were respectively the first and second tenements taken up by the Goldstream – Titan Joint Venture in the Corinna district. Acquisition followed a targeting exercise that focussed on Homestake style, Proterozoic, iron formation hosted, lode gold in north western Tasmania (Morritt, 1995). Work comprising Stage 1 of the Joint Venture's programme in EL 43/94 has been reported previously (Turner, 1997).

Figure 2 shows the general geological settings of EL 43/94 and EL 26/95.

3.0 Tenement information

Exploration Licence No. 26/95 (Plan 1, Figure 1) has an area of approximately 15skm and lies immediately north of the Savage River Mine leases which are held by Goldamere and operated by Australian Bulk Minerals.

The tenement falls within the Savage River Recommended Area for Protection, a land classification which reflects the importance attached to native forest in the region. The tenement is also part of a large tract of mainly forested land that has been registered under the National Estate.



GOLDSTREAM – TITAN CORINNA JV

Figure 1

Exploration Licences Comprising the Project Area Relevant 1:25,000 Tasmaps Shown

File: ALLELs.dwg

Date: October 1997

Compiled: Nic Turner

Drawn: Rocco Traverso ART Carto~Graphics

Scale: As shown

Contractor: N.J. Turner Geological Services Pty. Ltd.

An all weather gravel road traverses EL 26/95 (Plan 1). It provides access for maintenance to the adjacent Savage River iron-ore-slurry pipeline. Goldamere holds the ground for 22.9m on either side of the pipeline as part of its leases.

EL 26/95 was granted from 5/4/96. It will remain current to 5/4/06 providing that the licensee's performance is deemed satisfactory by the Tasmanian Minister for Mines.

4.0 Work carried out by Goldstream and Titan

4.1 REVIEW OF PREVIOUS DATA

The Joint Venture commissioned L.A. Newnham to carry out a review of the Specimen Reef area in EL 26/95 in terms of land classification matters, geology, mining and previous exploration. The review is presented as Appendix 1 which is a separate volume of this report.

4.2 AEROMAGNETIC SURVEY

A detailed helimag survey of EL 26/95 was carried out by UTS geophysics as an aid to geological and structural interpretation. The flight line separation was 50m, the mean terrain clearance 40m and the sample interval 3-4m.

Specifications of the survey, the equipment used, and processing methods are summarised in Plan 2 which also presents contours of total magnetic intensity. The digital survey data have already been submitted to Mineral Resources Tasmania.

5.0 Results

5.1 REVIEW OF PREVIOUS DATA

The conclusions drawn from the review of previous mining and exploration at Specimen Reef are pessimistic in regard to both Specimen Reef itself and to the potential for gold enrichment in the surrounding rocks (Appendix 1, page 2). However, the review also concludes that previous drilling has been ineffective in testing the reef, also that the drilling suggests the possibility of a narrow (?<50mm) veinlet of high grade mineralisation parallel to Specimen Reef.

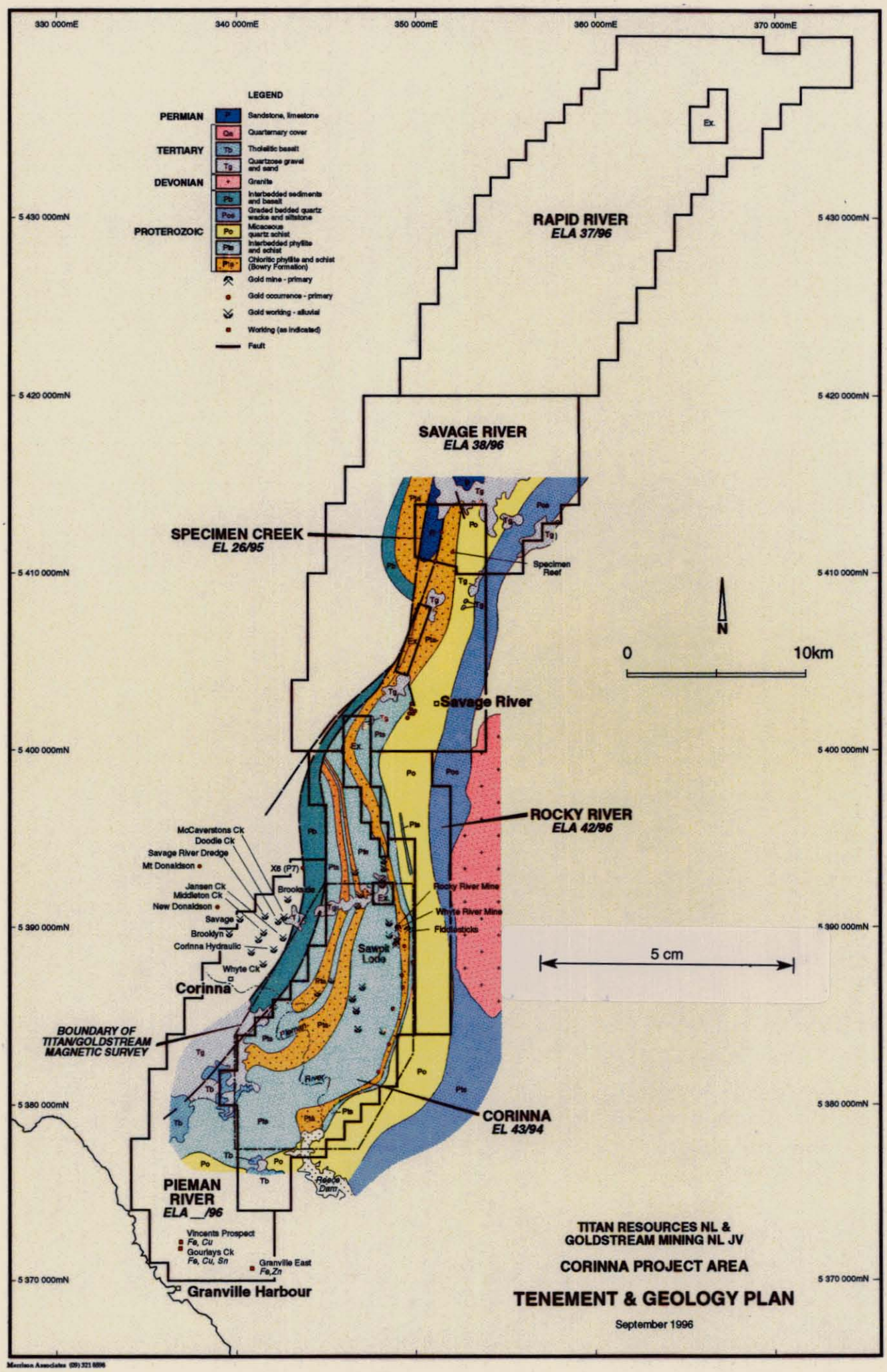
The reviewer recommended that exploration in EL 26/95 be focussed on iron formation hosted gold deposits if the Joint Venture should acquire other available ground north east of the Savage River Mine leases. This ground has now been acquired and is contained in ELs 37/96, 38/96 and 46/96 (Figure 1)

5.2 AEROMAGNETIC DATA

A belt of magnetically responsive rocks about 1.5km wide extends NNE from the Savage River Mine leases through EL 26/95 though the main magnetite-rich lens of the mine sequence terminates within the leases. Specimen Reef lies

Figure 2

275007



Mertons Associates (09) 321 8896

within the belt of magnetically responsive rocks, near AMG 352000E, 5411000N.

In the near vicinity of Specimen Reef the magnetics indicate a more local, NNE trending structure which may be related to the Reef.

6.0 Conclusions

Specimen Reef has not been effectively tested by previous drilling. However, the drilling has not been encouraging in terms of bulk mineralisation in rocks adjacent to the reef.

A very complete synthesis of the available data relating to Specimen Reef has been produced, also a soundly based interpretation has been made of the subsurface location of the reef (Figure 7, Appendix 2).

It is likely that the detailed aeromagnetics will be a useful tool in mapping the reef and/or associated structures.

7.0 Further work

The Joint Venture has decided to diamond drill two holes to test the interpreted subsurface disposition of Specimen Reef (Plan 1). The holes will be oriented so as to intersect the reef at 90° to strike, close to the position of the previously intersected, narrow, high grade veinlet.

Processing and interpretation of the aeromagnetics will be carried out as an aid to mapping the reef and/or associated structures.

8.0 Environmental matters

The area around Specimen Reef is already substantially disturbed due to historical mining activity, construction of the pipline road and to tracks put in by the previous explorers.

Nonetheless, any tracks put in by the Joint Venture will need to be carefully positioned and constructed. Rehabilitation will be required.

9.0 References

Morritt, R.F.C., 1995, *Corinna EL 43/94. Annual Report 3/2/1995-3/2/1996*, Goldstream Mining NL.

Turner, N.J., 1997, *EL 43/94 Corinna, western Tasmania. Annual Report to 4/1/97*, Goldstream Mining NL, Titan Resources NL.

SCDDH2
Azimuth: 312°AMG
Dip: 65°
Depth: 175m

SCDDH1
Azimuth: 312°AMG
Dip: 55°
Depth: 225m

Fig7, Appendix 1

SL 12

0 100 200 300 400 metres

Scale 1 : 5000

EL 26/95 SPECIMEN CREEK	PLAN: 1
GOLDSTREAM MINING NL	
Access, Drainage and Contours Proposed diamond drill holes	File: 2695PL02.dwg Date: October 1997 Compiled: Nic Turner Drawn: Rocco Traviersо ART Carto~Graphics Scale: 1:5,000
Contractor: N.J. Turner Geological Services Pty. Ltd.	

97-4075

ANNUAL REPORT - SPECIMEN CREEK
EL 26/95 - GOLDSTREAM MINING/TITAN
RESOURCES - N J TURNER **VOL 1 OF 2**

AMG North / Mag. North 11.8°

600472

AIRBORNE SURVEY SPECIFICATIONS

Flight Line Direction:	090 - 270 degrees
Flight Line Separation:	50 metres
Tie Line Direction:	000 - 180 degrees
Tie Line Separation:	500 metres
Mean Terrain Clearance:	40 metres
Sample Interval:	3-4 metres
Navigation:	Differential GPS
Survey Flown:	May 1996

AIRBORNE SURVEY EQUIPMENT

Acquisition:	UTS Geophysics
Aircraft:	AS350B Helicopter
Magnetometer:	Scintrex Casium Vapour CS-2
Resolution:	0.001 nT
Sensitivity:	0.001 nT
Recording Interval:	0.1 sec
Compensation:	RMS AADC II Compensator

PROCESSING DETAILS

Diurnal variations have been removed from the data.
Tie line levelling processes have been applied.
Enhanced microlevelling processes have been applied.
The magnetic regional gradient has been removed by subtraction of the IGRF 1995 model computed at the date of the survey.

Grid cell size:	10mE x 10mN
1st contour interval:	1nT
2nd contour interval:	5nT
3rd contour interval:	10nT
4th contour interval:	50nT
5th contour interval:	100nT
6th contour interval:	250nT
7th contour interval:	500nT

PRELIMINARY
UTS GEOPHYSICS

Grid North

Universal Transverse Mercator Projection
Central Meridian 147
AMG zone 55

0 100 200 300 400 500 600 700 800 metres

Scale 1: 10000

5 cm

UTS Geophysics

97-4075

REVIEW OF PREVIOS DATA - SPECIMEN CREEK
EL 26/95 - GOLDSTREAM MINING/TITAN
RESOURCES [illegible] VOL 1 OF 2

275010 Plan 2

GOLDSTREAM MINING NL

SPECIMEN CREEK (TAS)
DETAILED HELI-MAG SURVEY
CONTOUR MAP OF
TOTAL MAGNETIC INTENSITY

DRAWN: UTS GEOPHYSICS	SCALE: 1: 10000
DATE: 10 JUNE 1996	JOB: A101 - AREA 03

Appendix 1 of Turner, N.J. 1997. Exploration Licence No 26/95, Specimen Reef, Tasmania. Annual Report 6/3/97. Goldstream Mining NL and Titan Resources NL. Volume 2 of 2 of the annual report.

97-4075A

E.L. 26/95

SPECIMEN REEF AREA

WESTERN TASMANIA

REVIEW OF PREVIOUS DATA

Prepared for:

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August 15, 1996

97-4075A
REVIEW OF PREVIOS DATA - SPECIMEN CREEK
EL 26/95 - GOLDSTREAM MINING/TITAN
RESOURCES -L A NEWNHAM VOL 2 OF 2

97-4075A
REVIEW OF PREVIOS DATA - SPECIMEN CREEK
EL 26/95 - GOLDSTREAM MINING/TITAN
RESOURCES -L A NEWNHAM VOL 2 OF 2

CONTENTS

1. SUMMARY

E.L. 26/95 covers a 15 square kilometre area north of Savage River. It lies entirely within the Savage River Recommended Area for Protection.

The principal reason for acquiring the tenement was to further evaluate the gold potential of the Specimen Reef deposit.

This review of former mining and drilling data on the reef suggests the following

(a) The reef is very narrow and probably has a productive capacity of less than 100 oz Au per vertical metre, which is a very low figure in commercial development terms.

(b) Drilling programs completed by previous workers have been eminently ineffective in testing the reef.

(c) This drilling does suggest there may be a second narrow (?< 50mm) veinlet of high grade mineralisation parallel to Specimen Reef.

(d) Existing assay data has not shown any potential for broader lower-grade Au zones in the vicinity of Specimen Reef.

(e) The only way to enhance Specimen Reef as a commercial proposition would be to demonstrate either a substantial development of the reef along strike and at depth or to locate several more adjacent reefs which could be mined collectively.

In view of the above points, it is recommended that no further work be undertaken on Specimen Reef.

If Titan-Goldstream are successful in their application for the contiguous ETAs 422, 423, then it is recommended that the exploration strategy on E.L. 26/95 be redirected from the Specimen Reef vein style of mineralisation to iron-formation-hosted gold deposits, of the type underlying both the philosophy for acquiring the ETAs and continuing work on the Corinna tenements.

This strategy would require collation and integration (preferably in a digitised format) of airborne and ground data on E.L. 26/95 with similar data sets from North and South of Specimen Creek. To achieve this, it is recommended that a set of standard 1:5,000 and

1:10,000 base maps be created across all the Titan-Goldstream tenements in the Arthur Metamorphic Belt.

The creation of such a data set would facilitate, firstly, a comprehensive regional understanding of existing data and, secondly, the systematic presentation of current and proposed work programs.

2. LOCATION AND ACCESS (Map 1, 2)

E.L. 26/95 of 15 sq kilometres lies 8 kilometres North of Savage River in NW Tasmania. Savage River is approximately 100 kilometres by sealed road SW of Burnie.

The Licence area is rugged and generally covered by dense cool temperate rain forest and patches of regrowth.

The only vehicular access into the region is via an all-weather dirt road which runs N-S through the middle of the Licence area. This is a private road which parallels the Savage River Mine-Port Latta iron-slurry pipe line for maintenance purposes.

Several short 4-wheel-drive tracks branch off the Pipeline Road into the Specimen Creek Mine area. These were constructed primarily for drill access.

A partially overgrown walking track departs the Pipeline Road and cuts through the NW corner of the Licence area.

The previous tenement holder established several grids of cut survey lines from the Pipeline Road. The two principal grids are Davis Creek and Specimen Creek. Their current condition is not known to this writer.

In general, access away from established roads and tracks is very difficult, especially in the winter months.

NEWNHAM EXPLORATION AND MINING SERVICES

SPECIMEN REEF PROJECT

E.L. 26/95

REGIONAL LOCATION PLAN

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

Drawn: L.A. Newnham. | Date: Aug. 96 | Figure: 1.

275016

275017

EL 26/95

SRM SL 12

NEWNHAM EXPLORATION AND MINING SERVICES

SPECIMEN REEF PROJECT

E.L. 26/95

LOCATION MAP

Scale: 1:25 000

Drawn L.A. Newnham | Date 08 Aug 96 | Figure 2

Geology from MRT
Central Arthur Project Map 2

5 cm

3. CURRENT LAND MANAGEMENT AND TENURE: (Maps 3, 4)

E.L. 26/95 of 15 sq kilometres is held jointly by Titan Resources N.L. and Goldstream Mining N.L.

The area is exclusive of 1.5 sq kilometres of Exempt Area in the SW portion and an easement along the Savage River pipeline. The exempt area was formerly part of the Savage River Mine Consolidated Mining Lease. Upon closure of the mine, government exempted the area from the Mining Act whilst it was subject to feasibility studies by potential new operators.

E.L. 26/95 falls entirely within the Savage River Recommended Area for Protection and the Savage River Australian Heritage Commission registered entry.

These land classification systems are essentially quasi-land management systems. They do not prevent exploration or mining but any such work requires approval of the intragovernmental body known as the Mineral Exploration Working Group (MEWG), and work programs must be designed and implemented with great environmental care.

The RAP classification requires further comment. RAPs were a product of the Forests and Forest Industries Strategy (FFIS) developed during the Tasmanian Labor-Green Accord Government of the early 1990s.

They cover areas considered to have special and significant ecological values. The FFIS provided for a prohibition of commercial logging in the RAPs, and for a continuation of exploration and mining under special conditions. It is instructive to note that the new Henty Mine was developed in a RAP.

The FFIS also provided for an on-going process to determine the ultimate classification and management prescriptions of RAPs, through the Public Land Use Commission (PLUC).

This process has now been caught up in the Federal-driven Regional Forest Agreement (RFA) process. The principal outcome of the RFA process will be a national system of forest reserves designed to protect specified levels of pre-European forests in Australia. The process is currently in full swing in Tasmania and the outcomes should be reasonably clear about mid 1997.

It is anticipated by most that the Savage River RAP will be part of the national forest reserve system. . What is not yet clear is what it will be classified as and what its management prescription will be.

This writer considers the area will be classified as a "Protected or Conservation Area" in which mineral exploration and mining are permitted but closely-controlled activities.

3443

3442

ETA 423

ETA 422

167
Savage River

3441

EL 26/95

3440

Heazlewood Hill

June 1996

Unresolved Raps

Wet Sclerophyll

Dry Sclerophyll

Rain Forest

NE Registered

Resolved Raps

NE Interim

NE Nominated

5 cm

NEWNHAM EXPLORATION AND MINING SERVICES

SPECIMEN REEF PROJECT
E.L. 26/95

LAND MANAGEMENT STATUS

0 km. 4 | Scale 1:100,000

Drawn L.A Newnham | Date Aug 96 | Figure: 3

Base Map and Classification from Forestry Tasmania

27502

ETA 423

ETA 422

EL 26/95

SRM

5 cm

Multiple Use Forest (available for forest production and mineral exploration)

Deferred Forest (available for exploration but currently not for forest production)

Recommended Areas for Protection (strict control of mineral exploration, no forest production)

NEWNHAM EXPLORATION AND MINING SERVICES

SPECIMEN REEF PROJECT

E.L. 26/95

FOREST CLASSIFICATION

Scale 1:100,000

Drawn L A Newnham | Date Aug 96 | Figure 4

4. GEOLOGY (Map 6)

E.L. 26/95 lies within the Arthur Metamorphic Complex (Arthur Lineament). This is a major NE-SW structural trend which cuts through the complete NW section of Tasmania.

The AMC is well known for its iron (magnetite) and magnesite resources, and has also been viewed for many years as highly prospective for gold and base-metal deposits.

The attached Map 6 is a 1:50,000 GIS map produced by Mineral Resources Tasmania with a few mineral occurrences and other features added by this writer. Also added are the outlines of E.L. 26/95, ETA 423, ETA 422, the Savage River Mine Exempt Area and several other tenements.

The geology on this map is self-explanatory, although the geology is complex and correlations change regularly as new information is acquired.

The principal elements of the AMC underlying E.L. 26/95 are the upper Precambrian Keith River Schists (or correlates) to the East and the Bowry Formation to the West.

The Keith River Schists (or correlates) are dominantly quartz mica schists with minor phyllite and dolomite units, grading up into quartz-wacke turbidites of the Oonah formation. The distinction and boundary between the Keith River and Oonah Formations are not always clear and some maps appear to interchange them. In its simplest form, it is possibly best to simply regard the eastern section of the Licence area as underlain by sheared upper Precambrian silicious sediments.

Underlying the western half of the Licence is a sequence of chloritic schists, with occasional dolomite and magnesite units. Further South, this formation contains amphibolite units which host the Savage River iron deposits.

A major fault structure which lies on the western side of the Savage Open Cuts extends North through E.L. 26/95.

Permian sediments overlie a section of the schists in the western half of the Licence. They dip shallowly to the East and their thickness is unknown. They appear to infill a downfaulted zone which suggests either substantial post-Permian movement on these faults or the existence of a pre-Permian rift-like valley in the region.

Tertiary basalt flows extend into the northern section of the Licence area. Their thickness is unknown.

Of principal interest in E.L. 26/95 is the former gold mining operations on Specimen Reef. The reef appears to strike 20-30° East of the local schistosity (metamorphic foliation) and dips shallowly to the SE, whilst the schistosity probably dips steeply to the West.

Specimen Reef is a narrow auriferous structure and there may in fact be more than one such structure in that vicinity. The geology and resource potential of Specimen Reef is presented in greater detail in Section 5.1 below.

No other significant mineralisation is reported elsewhere on the Licence area.

275024

13

413,000 N

12.9 12.8 12.7 12.6 12.5 12.4 12.3 12.2 12.1 12.0 11.9 11.8 11.7 11.6 11.5 11.3 11.2 11.1

418,000 N

411,000 N

Pipeline Road

Specimen Reef outcrop

Main Specimen Reef workings.

On MRT Maps, this area is shown as Keith River Schists, not Oonah which lies further E.

Oonah Formation

100S 200S 300S 400S 500S 600S 800S 1000S 1200S 1400S

DAVIS CREEK GRID

352,000E

Upper Bowry Sequence 352,000 E

Gridline 11

Gridline 5

SAM Boundary.

SPECIMEN CREEK GRIDS

Middle Bowry (Includes Eastern Schists of SRM Pits)

Carbonate horizon

Lower Bowry = SRM Sequence above western schists.

Davis Creek

Fault

Wynyard Tillite

Tims Formation.

351,000E

Au anomalies

As anomalies (>50 ppm)

Cu > 400 ppm.

5 cm

The data on this summary map is taken from the 1:2,500 plans contained in Savage Resources Rept. 87/2683 (MRT Cat. No.)

NEWNHAM EXPLORATION AND MINING SERVICES

SPECIMEN REEF PROJECT
EL 26/95
LOCATION OF MAIN GRIDS AND PRINCIPAL ANOMALIES

Scale: 1:10,000

Drawn: L.A Newnham | Date: Aug 96 | Figure: 5

5. PREVIOUS EXPLORATION

Prospecting in the Savage River area around the turn of the century resulted in the discovery of the auriferous Specimen Reef. Development work and other subsequent exploration on Specimen Reef is described below in Section 5.1.

Virtually no other work was undertaken until the early 1960s when the area was acquired by Savage Resources Limited as part of E.L. 4/61.

Their early work concentrated on iron ore exploration principally South of Savage River. In the 1980s they extended their work North of Savage River, looking mainly for Au.

Within the area now covered by E.L. 26/95, they established two gridded traverse line systems known as Davis Creek and Specimen Creek Grids. They undertook a variety of geological, geochemical and geophysical surveys on these grids and completed drilling programs on the Specimen Creek Gridded area.

The only other work of note completed on E.L. 26/95 is a number of airborne geophysical (principally magnetic) surveys.

5.1 Specimen Reef: (Maps 5, 6, 7)

5.1.1 Mine Development:

Specimen Reef was one of the very first mineral deposits discovered in Tasmania. It must have been discovered in the 1870s by stream panning, because when Montgomery (1) reported on it in 1880, there were already tunnels developed on two levels.

Access into this area in those early days would have been extremely difficult and active mining appears to have ceased about 1900.

The following description of the mine workings is a personal interpretation of the mine development based on old mine plans - no official description of the workings was found.

The workings were surveyed in detail, by the developers, at 1" - 20' scale. These drawings have been reproduced on 1:1,000 scale on Map 7.

The reef was located in outcrops in Specimen Creek and traced along surface by shallow pitting. It appears

to strike NE (50° AMG) and dip SE at approximately 55°, beneath the topographic slope.

Because of the rugged topography and the narrow nature of the reef, the early workers developed three access tunnels. The **upper No.1 Tunnel** was driven 10 m. below the outcrop position in soft yellow sandstones and slates. It is 90 m. long and intersected two shoots of high grade auriferous quartz, 48 m. and 3.6 m. long. They noted these reefs as plunging SE at < 45°, and containing abundant black sulfates derived from weathered sulfides.

The **middle No.2 Tunnel** was 300 m. long, including 90 m. crosscutting from portal to the reef. The reef consisted of white quartz, siderite and pyrite with some visible Au and minor chalcopyrite. The reef was described as having a hard sandstone HW and metamorphic slate FW, and being disrupted by a number of small crosscutting faults.

A winze was developed on the reef between the No.1 and No.2 Tunnels and some adjacent stoping took place.

The **lower No.3 Tunnel** was driven 29 m. below the No.2 Tunnel. The lode was cut 150 m. from the portal cross-cut and was driven on to the North where it was connected to the No.2 by a winze (rise). Development work on the northern end of No.3 suggests the reef was becoming discontinuous and difficult to follow.

An eastern cross-cut from the No.2 Tunnel suggests the early miners were searching for parallel structures but no records of success exist. Similarly, No.5 Tunnel to the East of the main reef indicates they were searching for further lodes.

Information on the nature of the reef is sparse. It appears to have been a narrow reef < 1 m. wide (possibly < 0.5 m. in main) composed mainly of quartz, siderite and pyrite. Au occured in short shoots along the reef structure, and the suggestion is that their plunge was controlled by the intersection of the reef structure with particular units or features in the enclosing rocks - possibly schistosity.

Some reports talk of the "strata' dipping East; ie, parallel to the reef.

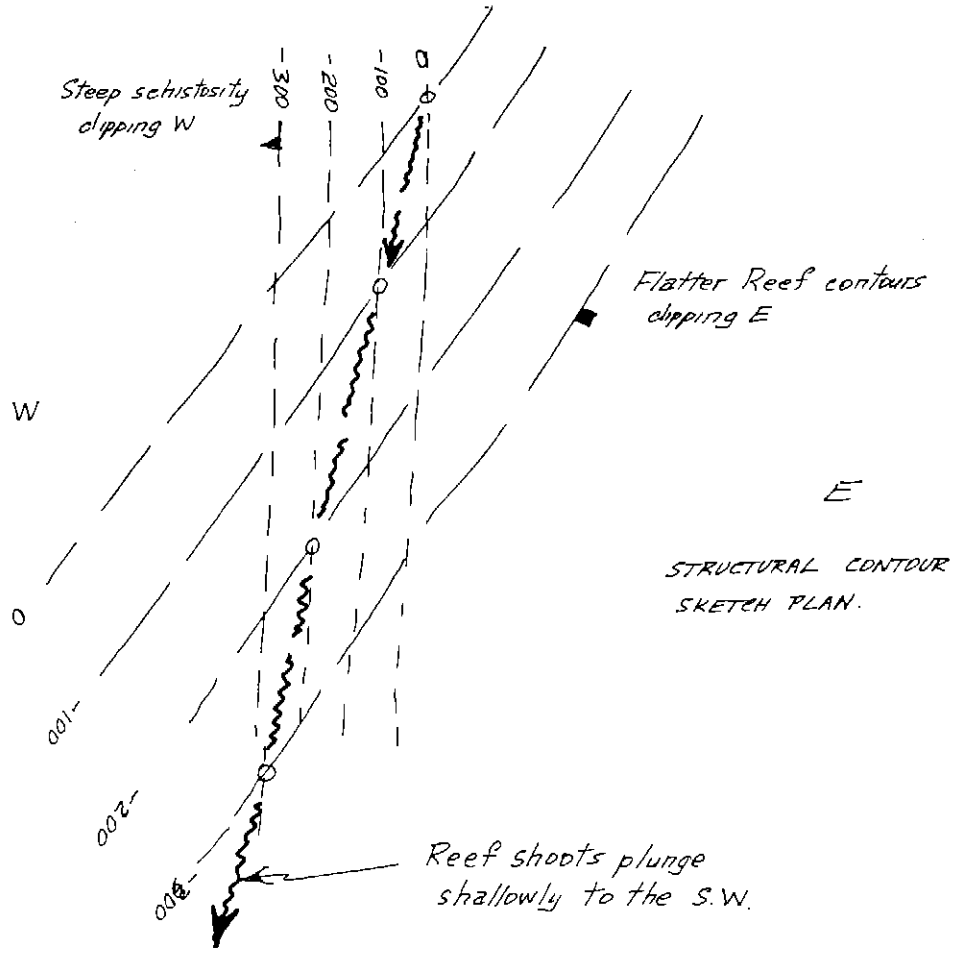
An inspection of Savage Resources core shows schistosity to core axis angles of 70° in East-dipping holes, approximately 40° in vertical holes and 20-30° in West-dipping holes. These approximations can only mean

schistosity is dipping steeply **West.** If the historically documented shoot plunge is SE and if this direction is controlled by the intersection of the reef structure and some feature of the enclosing rocks, then only two options are possible:

(i) The shoots are controlled by the intersection of the reef structure and schistosity and the reef strikes more easterly than the schistosity. This will result in a very shallow SE plunge on the shoots.

(ii) The shoots are controlled by the intersection of the reef structure and original bedding. If this original bedding dips East, then the shoots will plunge SE.

The former option is preferred:



No grade data or production records are available.

5.1.2 Savage Resources Programs:

Savage Resources commenced work in the Specimen Reef area in the early 1980s.

Their work included the following:

- establishment (and periodic extension) of the Specimen Creek grid
- completion of various mapping, soil sampling and geophysical surveys on the grid
- stream sediment surveys around Specimen Creek.
- completion of fifteen (15) drill holes

It is very difficult to see what they were hoping to achieve with much of the geophysical and geochemical work.

The stream sediment surveys successfully "located" Specimen Reef and minor anomalies away from the influence of the known reef could generally not be repeated.

The soil sampling failed to define any cohesive anomalies, apart from one zone to the East of Specimen Reef, known as the Specimen Reef East Zone.

Geophysical surveys (I.P. and magnetic) failed to define any significant anomalies, which is not surprising as there are no petrophysical features associated with the Specimen Reef or its host rocks which would produce I.P. or magnetic anomalies. Several weak responses were recorded in the Specimen Reef East area.

Specimen Reef Drilling:

Savage Resources completed fifteen (15) drill holes between 1982-89 to test Specimen Reef.

Early encouragement was obtained with DDH SPC 1 in 1982 which intersected a narrow but very high grade zone of Au mineralisation. In the interval between 139 - 142 m., the following assays were obtained:

SPC 1	139-140 m.:	1.0 m.	0.87 g/t Au
	140-140.85 m.:	0.85 m.	0.008 g/t Au
	140.85-141.05 m.	0.20 m.	910 g/t Au
	141.05-142.0 m.	0.95 m.	0.75 g/t Au

Either side of this interval, assays were < 0.1 g/t Au. (The high grade sample observed by Robin Morritt came from approximately 140.85 m.)

In the belief that this hole was, in fact, Specimen Reef, Savage completed a further fourteen (14) holes with disappointing results. Of the fifteen (15) holes, five (5) (SPC 7-11 inc) were percussion holes and unfortunately several of the remaining ten (10) holes were percussion pre-collared.

Logs do not indicate how the holes were surveyed at collar or down-hole, if they were in fact suveyed at all. This is unfortunate in schistose rocks because the holes may have deviated substantially.

Unfortunately, it was not until the last year of tenure that Savage in fact located the plans of the mine workings. When they plotted these up relative to their drill holes, they realised that most of the holes did not test the reef. They attempted to deepen several holes with limited success.

The former workings suggest the reef is dipping 53° to the East. Schistosity to core axis angles suggest the schistosity dips steeply to the West. Surface mapping suggests the difference in strike between the reef and the schistosity is approximately 30°. (Reef greater than schistosity.)

Savage holes SPC 1, 2, 5, 7, 8, 9, 10, 11, 13 drilled West to East; ie, with the dip of the reef, but at a reasonably high angle to schistosity. If surveyed, it would probably show these holes shallowed and drifted North.

Holes SPC 3, 4, 6, 15 drilled East to West; ie, at a high angle to the reef but with the dip of the schistosity. These holes probably drifted in various ways.

Holes SPC 12, 14 were drilled vertically at a reasonable angle to both reef dip and schistosity.

A brief discussion of each hole follows:

SPC 1:

This hole intersected 0.2 m. 900 g/t Au at 140.85 m. The intersection was assumed to be Specimen Reef and provided justification for further work.

SPC 1 collared 10 m. in the FW of the Specimen Reef outcrop position (Savage plans). Some sections show it collaring in the HW of the reef which surely can not be correct as the hole dip is less than the reef dip.

The collar dip was -46° and the end of hole dip was -42°. Because there were no bearings given, these were probably acid tube surveys.

The reef dip in this area is 53°. Therefore, mathematically, the drill hole should have intersected the reef around 20-30 m. depth. However, it is recorded as having hit the reef at 140 m. at a calculated RL of 321 m.

This can not be correct.

For the reef to have flattened between No.3 drive to that point at 321 RL, it would have to dip at approximately 38°; ie, shallower than the drill hole which collared in its FW. **This is impossible.**

A more likely explanation is that SPC 1 intersected a second reef at 140 m. (Specimen Reef East) and that the main Specimen Reef was intersected much higher in the hole. An inspection of the core showed abundant quartz veining at approximately 20 m., within a zone of substantial core loss. None of this interval was assayed.

Because the drill hole is dipping with the probable reef direction, the high grade Specimen Reef East intersection is probably only a very narrow vein several centimetres wide.

In Summary, SPC 1 probably intersected the Specimen Reef at 20 m. depth in a zone of no assays and high core loss. The deeper high grade intersection is probably Specimen Reef East and is represented by a narrow high grade vein 40-50 mm wide.

SPC 2:

Designed to test the SW extension of the reef. It collared in the reef HW and was drilled at the same dip angle as the reef. Therefore, it probably never reached the reef.

SPC 3:

Designed to test the reef SW along strike of SPC 2. The structural contour plan (Fig 7) clearly illustrates this hole would not have reached either Specimen Reef or Specimen Reef East.

SPC 4:

This was a well designed hole but unfortunately it hit No.3 Tunnel (where the reef was prior to mining). Hence, there was no reef recovered.
SPC 4 should have intersected the Specimen Reef East (as postulated from SPC 1) near the collar. Some large quartz veins in this zone were not assayed.

SPC 5:

Drilled parallel to reef well into HW. It would not intersect either Specimen Reef or Specimen Reef East.

SPC 6:

Drilled sub-parallel to schistosity. No down hole surveys. If hole steepened slightly (probably) it would not intersect Specimen Reef. However, it should have intersected Specimen Reef East. There is a zone of quartz and carbonate veining at 352 RL which may be the eastern reef. Gold values, however, are < 0.1 g/t.

SPC 7-11:

These 5 short percussion holes were drilled to test a weak soil geochemical anomaly to the NE of the main workings. Results were very disappointing. However, they collared too far East of Specimen Reef and probably also Specimen Reef East. They were drilled sub-parallel to any likely reef orientation and were drilled with open hole percussion equipment in very wet conditions.
Not particulary useful holes.

SPC 12:

Designed to test Specimen Reef beneath No.3 Tunnel, this hole was originally drilled to 90 m. (top 68 m. percussion drilled) and later deepened to 120 m.

If the reef was slightly steeper than anticipated in this area or if the hole shallowed to East slightly, the hole would still not have reached Specimen Reef (see section on Plan 7).

It should have intersected the Specimen Reef East, but it would have been in the percussion section. Assays were very low in this section but the drilling technique is unreliable.

SPC 13:

Drilled with dip of Specimen Reef and would not have intersected reef. Should have intersected Specimen Reef East, and a zone of veining with low Au values around 120 m. depth may have been that reef. Some additional assaying required.

Savage reported considerable drilling difficulties in getting the core barrel to bottom after 120 m. and attributed this to magnetised rods. This is unlikely. Sounds more probable that this hole suffered severe deviation.

SPC 14:

Originally drilled to 105 m., including 64 m. of open hole percussion drilling to 64 m., then extended to 154 m. in 1990.

Should have hit Specimen Reef at approximately 130 m. There was a major zone of alteration with carbonate-magnetite veining from 119.0-135 m. Five intervals, each one metre long, were split and assayed with the best result being 0.01 g/t Au.

If the plunge of the gold bearing shoots was slightly flatter than shown, this hole may have passed through the reef structure beneath the main shoots. Hole may have intersected Specimen Reef East in the percussion open-hole interval.

SPC 15:

Designed to test SW strike extension. Should have intersected Specimen Reef betweeen 110-115 m. This is a weakly veined and altered zone with all assays < 0.008 g/t Au.

If there is only one main shoot on Specimen Reef as shown on the longitudinal projection, then this hole passed well over the top of that shoot.

Should have intersected Specimen Reef East, but in the open hole percussion top section.

Discussion of Drilling Results:

Below is a table which summarises the results of the Specimen Reef drilling.

In Summary:

(i) Eight (8) of the fifteen (15) holes would not have intersected either reef

(ii) Only three (3) holes probably intersected the Specimen Reef. Two of these probably missed the main shoot and, in the third, the reef interval was not assayed.

(iii) Seven (7) holes may have intersected the postulated Specimen Reef East. In three (3) of these it would be in open hole percussion section. In two (2) further assaying is required.

(iv) Only one hole intersected significant Au and this was an extremely high value (900 g/t) in a very narrow vein (40-50 mm?) - probably Specimen Reef East.

In general, the standard of the drilling campaigns was very low and predictably the results are inconclusive. **At best, the following conclusions can be drawn:**

(a) In the Specimen Creek area, there is one, possibly two, narrow gold bearing structures striking NE and dipping 50-55° to the SE.

(b) On one of these structures known as Specimen Reef, prospectors at the turn of the century developed three tunnels into a high grade Au bearing quartz-carbonate shoot which plunges at a shallow angle to the South.

This shoot may be up to 100 m. long and between 0.5-1.0 m. wide and was developed over a vertical depth of approximately 60 m.

(c) Drilling to date has failed to test this shoot down plunge of the lowest (No.3) tunnel level.

(d) One (1) drill hole intersected a very narrow (50 mm), high grade (900 g/t Au) vein approximately 30 m. in the HW of Specimen Reef. This possibly represents another reef structure, termed Specimen Reef East.

(e) **If** the main shoot on Specimen Reef is 100 m. long and, say, 1.0 m. wide, then for every vertical metre there is approximately 250 tonnes (optomistic).

It is reasonable to assume the average grade of this shoot is < 15 g/t Au, otherwise the mine workings would have continued at depth.

Thus, 250 t. x 15 g = 3.75 kg Au pvm ($60,000 pvm). This is about one tenth of the generally accepted desirable level for underground mining.

To improve this statistic by an order of magnitude would require either the grade and size of the shoot to improve with depth, or the location of additional shoots on Specimen Reef or adjacent reef structures.

(f) Assaying to date does not suggest there are any broader lower grade zones adjacent to the main reef structures.

5.2 Other Surveys by Savage Resources: (Fig 5)

In addition to their work in the Specimen Creek Area, Savage Resources established the Davis Creek Grid to the North of Specimen Creek.

On this grid, they completed geochemical soil sampling, geological mapping and ground magnetic surveys (7).

The magnetic data is noisy and complex and may benefit from re-processing.

The geochemical results are generally low order with some minor gold responses.

The data from this grid appears to be of reasonable quality and may be of some value in regionally directed programs to the North and South by Titan-Goldstream.

The amount of data is large and is not presented in this report.

5.3 Airborne Surveys:

The Arthur Metamorphic Complex has been subjected to several aeromagnetic surveys. These include:

- 1981 Government Aeromagnetic survey
- 1993 Arthur Lineament survey
- 1996 A new government survey (not yet released) possibly covered the Specimen Creek area.
- Several private surveys

It is probable that collation and re-processing of data from these various surveys may be of value in guiding the direction of future exploration on E.L. 26/95

SPC 1	Probably hit SR near collar; not assayed; poor recoveries Narrow high grade zone at 140 m., may be SRE
2	Would not hit either reef
3	Would not hit either reef
4	Hit SR in old tunnel: no core SRE possible near collar but not assayed
5	Would not hit either reef
6	Probably did not reach SR; SRE may have been intersected: low values
7 -11	Percussion holes; would not hit either SR or SRE
12	Probably did not reach SR; SRE may have been present in percussion section
13	Would not hit SR; may have hit SRE: further assaying required
14	Should have intersected SR; low values in reef structure; may have passed below main shoot; SRE may be present in percussion pre-collar
15	Should have hit SR; low values; probably passed over main shoot; should have hit SRE - in percussion section

SR = Specimen Reef

SRE = Specimen Reef East

TABLE 1: Drilling Summary

6. RECOMMENDATIONS

The following recommendations are made as a guide to further work on E.L. 26/95:

(a) It is difficult to justify further work on Specimen Reef. If a desire to undertake further drill testing emerged, holes should be drilled East to West, dipping at -50°, designed to test, firstly, the possibility of a Specimen Reef East and, secondly, the Specimen Reef Shoot 50-100 m. down plunge beneath No.3 Tunnel.

(b) If Titan-Goldstream is successful in its tender for ETA 422 and 423, the Davis Creek Grid data should be comprehensively collated with other regional data onto a set of standard 1:5,000 sheets covering the complete area. This is a fairly big job but would provide a worthwhile basis for dealing with the substantial amount of data in the region.

The data ideally should be digitised.

(c) Similarly, the existing aeromagnetic data over E.L. 26/95 should be re-assessed as part of a more regional study incorporating the adjacent areas.

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APPENDIX 1

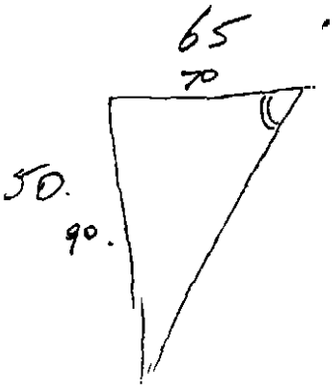
DRILL LOGS

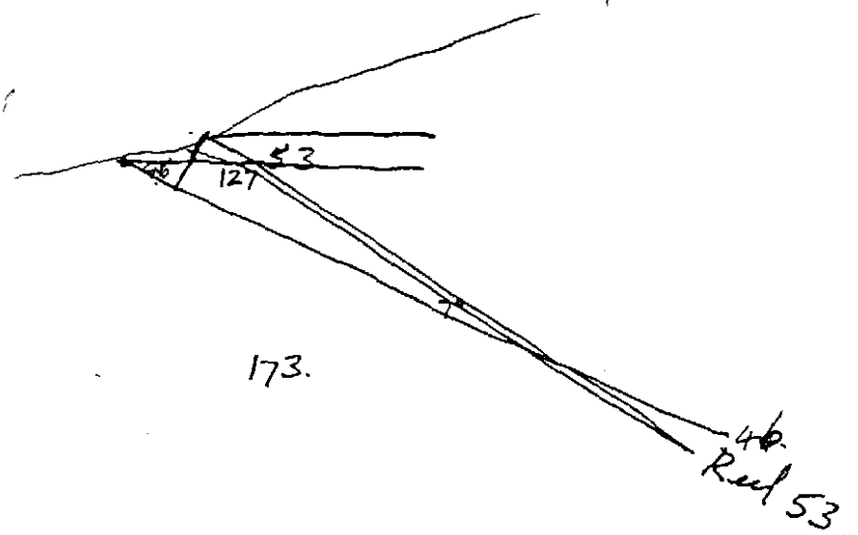
275041

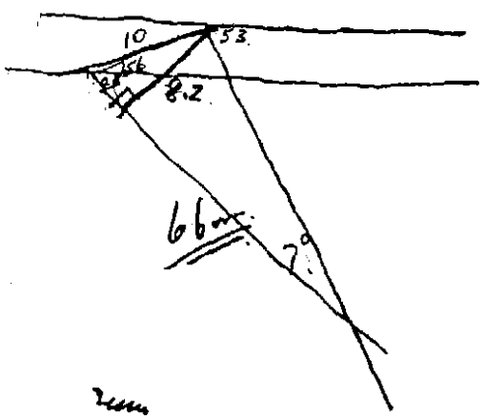
Qtz zone + sheared conglom (50-75% Qtz) at 17-25m.
probably ≡ S.R.
S.C.A. in hole 1 = 70° (ie) schistosity to W.

SPC 1

Hole dip 46°.
Reef dip. 53°.







$\sin 56 = \frac{x}{10}$

$\tan 7 = \frac{8.2}{x}$ 66m.

$x = \frac{8.2}{\tan 7}$

TABLE 1

Specimen Reef - Analysis of Drill Core

Core has been cut for all drillholes of the 1981-82 programme below the leached zone. (Some portions of leached zone material have also been sectioned.) Assay results in hand are shown below.

DDH.SPC 1

Depth (m)	Element													
	Cu	Pb	Zn	Co	As	Ag	Au	Hg	Se	Sb	Te	Fe%	Mn	S
00-38	no assays													
38-42	105	x	50	25	19	x	.017	x	x	x	x	3.20	220	.413%
42-44	200	x	80	25	10	x	.017	x	x	x	x	5.8	330	
44-46	145	x	50	30	19	x	.032	x	x	x	x	5.4	305	
46-48	345	x	55	25	9	x	.100	x	x	x	x	4.95	330	
48-63.15	no assays													
63.15-63.4	5	5	48	35	5	.3	.017	x	x	x	x	3.05	390	.413%
63.4-100	no assays													
100-102	85	5	195	25	15	x	.032	.015	x	x	x	4.50	615	
102-104.2	625	5	190	40	34	x	.032	x	x	x	x	4.60	425	
104.2-106	100	x	180	20	9	x	.017	x	x	x	x	4.25	520	
106-108	45	x	100	30	21	x	.017	x	x	x	x	2.80	450	
108-108.9	80	x	150	30	5	x	.017	x	x	x	x	3.25	420	
108.9-110	85	5	50	45	15	x	.032	x	x	4	x	4.20	430	
110-111	85	5	75	55	7	x	.032	.025	x	x	x	4.40	560	
111-112	65	5	325	25	2	x	.032	.030	x	x	x	3.85	500	
112-114	25	x	50	15	1	x	.017	x	x	x	x	3.10	405	
114-116	90	5	115	25	10	x	.017	x	x	x	x	4.20	465	
116-118	70	5	695	35	2	x	.017	.040	x	x	x	4.30	525	
118-120	75	x	320	25	1	x	.017	.015	x	x	x	4.00	520	
120-122	105	5	45	20	1	x	.017	x	x	x	x	3.95	410	
122-124	40	x	45	35	5	x	.017	x	x	x	x	4.75	510	
124-125.9	80	x	45	30	6	x	.017	x	x	x	x	4.70	540	

DDH SPC 1 (cont'd)

Depth (m)	Element													
	Cu	Pb	Zn	Co	As	Ag	Au	Hg	Se	Sb	Te	Fe%	Mn	S
125.9-127	50	x	30	25	17	x	.017	x	x	x	x	2.90	580	
127-128	45	5	75	20	9	x	.017	x	x	x	x	3.05	430	
128-130	75	5	40	35	5	x	.017	x	x	x	x	4.00	430	
130-132	140	x	65	25	28	x	.017	x	x	x	x	4.05	455	
132-134	100	5	135	25	4	x	.017	x	x	x	x	4.55	500	
134-136	50	x	85	20	7	x	.017	x	x	x	x	4.15	435	
136-137	190	5	320	30	12	x	.017	x	x	x	x	5.05	620	
137-138	90	15	435	40	17	x	.017	.025	x	x	x	3.95	600	
138-139	110	55	400	35	20	x	.017	.025	x	x	x	4.45	450	
139-140	80	x	70	25	14	0.4	.875	x	x	x	x	2.85	735	.507%
140-140.85	10	x	70	25	1	0.3	.008	x	x	x	x	3.85	575	.294%
140.85-141.05	20	195	30	65	2	1.7	922	.085	4	x	x	5.60	1150	1.192%
			Repeat assay for gold				901							
141.05-142	75	x	25	45	2	0.3	.758	.010	x	x	x	4.65	1050	1.137%
142-144	80	x	128	35	10	x	.025	.015	4	x	x	5.10	530	
144-145.2	155	x	30	30	7	x	.032	.010	x	x	x	4.65	690	
145.2-147	50	x	45	25	2	x	.025	x	x	x	x	4.30	410	
147-149	20	x	35	25	1	x	.025	x	x	x	x	4.05	330	
149-150	10	x	30	30	1	x	.017	.010	x	x	x	6.75	1450	
End of Hole														
Detection	5	5	5	5	1	0.5	.008	.005	3	3	3	50	5	

Method Code 101 101 101 101 114 101 309 122 402 402 402 402 101 101 402
All results in p.p.m. unless indicated. Prepared by Analabs, Burnie Laboratory.

Report No's 236.1 08 2598, Date 24.8.84: Cu, Pb, Zn, Co, Ag, Au, Hg, Se, Sb, Te

236.1 08 2713, Date 8.10.84: As, Fe (in %), Mn

236.1 08 2734, Date 23.10.84: Cu, Pb, Zn, Co, Mn, Fe (in %), Ag*, As

236.1 08 2734B, Date 30.10.84: S (in %), Se, Sb, Te, Au

*Ag by method 102, detection limit 0.1 p.p.m.

Comments on Table 1

The aim of these analyses was firstly to check if there was potential for open cuttable disseminated gold mineralisation. Indications are unfavourable in this respect and values would need to be of the order of 100 times richer for this to be possible. The gold values are nonetheless well above average and if compared with data from the Lamaque Mine, Quebec (in Perrault, Trudel and Bedard 1984) in which a greenstone hosted gold area is described which appears comparable with Savage River, all gold values would be classified as ore zone halo range. They are substantially above average for a shale or mafic volcanic terrain given in Rose, Hawkes and Webb 1979 (0.004 and 0.0032 p.p.m. respectively). About one third of the values are 10 times average.

For the other analyses, copper values above 300 and cobalt above 40 generally correlate with elevated gold; mercury registrations correspond with elevated zinc and/or gold; lead, zinc, mercury, and to a degree cobalt and gold, appear to participate in a halo about the 139-142 gold intersection.

The intersection itself is in the 140.65-141.05 interval. Here there is elevated lead, silver and cobalt and to a lesser degree iron and manganese. Copper, zinc and (surprisingly) arsenic are depleted. The bleached alteration zone around the vein is also depleted in arsenic, iron, copper, lead and zinc.

Silver, selenium, antimony and tellurium results are practically featureless at the detection limits used. Selenium would appear to have some potential as an indicator element if a more sensitive technique were used.

The peak copper value occurs in the one interval where visible chalcopyrite was detected in a carbonate vein at 103.66 during logging (Woodman, Shannon and Edyvean 1982). The high gold/copper value 42-44m may relate to a chlorite rich zone with core loss possibly representing a leached out carbonate vein. There does not seem to be a direct correlation of gold with pyrite but there does appear to be a relation to talcose alteration zones associated with carbonate veins. Zinc values are usually up in the more pyritic rocks.

As a gold prospect the area probably depends on the high grade vein potential alone, despite the presence of gold in values approaching 1 g/t in the wall rock. The value of gold in a thin vein has to be very rich to be of much interest because nugget effects can be very deceptive. Still the intersection averages down to, say 60 g/t over a width of 3m. This is still definitely rich enough to maintain life in the prospect.

Other factors to be considered in the assessment are that the intersection is oblique, which downgrades the vein on a true width basis. Insofar as selection of the sample was done it was the less rich-looking half that was selected for petrological and analysis work, so that if further assays were done higher values would be expected. But the evidence of alteration adjacent to the mined out area intersected in SPC 4, which did

intersect what is interpreted as the same vein in a near perpendicular intersection, is that the gold bearing vein can be substantially wider. The best grades would normally be expected in the zone of maximum vein development. The favoured interpretation of the gold bearing vein in SPC 1 is that it is an exceptionally thin section of a normally wider vein.

275046

DRILLING LOG SPECIMEN REEF N° 1.

LOCATION: SPECIMEN CREEK, SAVAGE RIVER AREA, EL4/61

MAP N°: 7915 - 111, HORTON 1:50,000

CO-ORDINATES: 352250 mE, 5411116 mN (AMG) — SPECIMEN REEF GRID: 200S/50W

R.L OF SITE: 416 METRES

INCLINATION: AT COLLAR 45° BEARING: E ALONG TRAVERSE (180° Mag.)

CORE SIZE: HQ - 0 to 15 metres, NQ - 15 to 150 metres CORE RECOVERY: 81%

DRILL : DIAMOND DRILL - MINDRILL 10L (TYPE 250)

DRILLER : ASSOCIATED DIAMOND DRILLERS

DATE COMMENCED: 14th JANUARY 1982

DATE COMPLETED: 12th FEBRUARY 1982.

FINAL DEPTH: 150 METRES

275047

SPECIMEN REEF DDH 1. GEOLOGICAL LOG

ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
00	5	60	1	20	21	extensive core losses. recovered material broken; 0.30m. yellowish green leached foliated siltstone, low density, mainly quartz silt preserved; ~~qtz~~ - feldspar chlorite rock. 0.90m. orange foliated siltstone c.f. above.	5.60	
50	6.90		0.50		38	yellowish orange silt with chips of vein quartz and foliated siltstone c.f. above.	1.30	
	8.60		0.95		50	yellowish green leached foliated siltstone CSA 30° some yellowish orange silt c.f. above. In lower portion 3 leached quartz sandstone beds? to 1.5 cm.	1.90	
	15.00		1.90		30	0.7m. yellowish green leached foliated siltstone. 0.35m greenish grey leached foliated siltstone with bands to 1 cm light grey fine sandstone. CSA 45°. 0.85m leached grey graphitic micaceous foliated siltstone. ~~1~~ cm bands black graphite rich siltstone.	6.40	
00	17.80		1.15		41	~~1.10~~ m grey and ~~grey~~ yellow micaceous ~~sandstone~~ feldspar schist broken with limonite stained jointed and spots often pyrite blebs. Including 0.5 m. graphitic phyllite and chlorite phyllite.	2.80	
20	22.35		0.70		15	0.6m grey micaceous ~~sandstone~~ feldspar schist with limonite spots. 0.1m. grey silty clay, and limonite stained ~~sandstone~~ feldspar schist with select grey vuggs of pyritic ~~sandstone~~ feldspar schist, pyrite to 20%, minor yellow ~~sandstone~~ feldspar schist	4.55	
35	24.55		1.15		52	0.20m. fine feldspar and chlorite - feldspar schist, micro-pyrite 0.25m. quartz body with chlorite - feldspar schist. 0.70m pale grey to greenish grey mica-chlorite feldspar schist. CSA 40°. limonite spots and minor pyrite	2.20	

Continued over

ASSAY DATA

LE	FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

GEOLOGICAL LOG

FROM ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
55	28·50	0·70	19	greenish grey feldspar-chlorite schist with limonite spots and minor pyrite, 1 cm. quartz body at base	3·95	
0	31·30	2·00	71	0·3 m. greyish yellow leached feldspar schist. 0·12 m. orange-brown limonite stained leached feldspar schist. 1·38 m. green schist: alternating bands mainly 1-2 cm but upto 1 cm chlorite rich and albite rich material with some bands of feldspar schist. limonite stained joints. CSA 55°	2·80	
	35·29	1·85	46	1·80 m. grey-green feldspar schist and interlaminated chlorite and feldspar-chlorite schist limonite stained joints limonite spots + minor pyrite. minor quartz at base 0·05 m. weathered basalt. (probably representative of most core loss CSA 60°, locally 15°	3·99	
	36·70	1·20	85	yellowish grey and orange limonite stained albite schist grading to foliated meta-andesite. with pyrite rich segregations. In lower half some fresh cores of greenish grey foliated meta-andesite. with pyrite rich albite 'vein' segregations To 1 cm.	1·41	
	38·35	0·85	55	0·80 m. yellowish grey to orange limonite stained. foliated meta-andesite grading to albite-chlorite schist. with some fresh grey cores with pyrite. some limonitic feldspar veins with some relict pyrite 0·05 m pinkish grey weathered albite-chlorite schist.	1·55	
	42·24	1·25	31	Iron grey, fresh and yellow and orange limonite stained albite-chlorite schist with some veins of albite-pyrite 0·25 m. laminated albite / chlorite rich schist with minor quartz bodies	3·99	

Continued over

ASSAY DATA

FROM ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
24	44	44	2	00	91	tonal interlaminated feldspar rich and chlorite rich greenschist with minor pyrite laminae approx 2mm quartz bodies at 43.20 and 43.50, limonite stained with more pyrite 44.00 - 44.15 Below 44.30 chlorite rich greenschist, broken CSA 60°	2.20	
44	48	40	3	05	77	interlaminated feldspar rich and chlorite rich greenschist. quartz bodies at 45.30, 45.50, 45.60 46.65, 45.70, 45.85, limonite stained joints, minor pyrite from 46.22 broken chlorite rich greenschist (zone of core loss) then to end, dominated greenschist as above.	3.95	
40	50	40	1	10	55	0.20m. laminated greenschist, as above. quartz body near base. (core loss zone). 0.05 m quartz (core loss zone) 0.15 m. laminated greenschist, as above, with quartz - chlorite vein. 0.35 chlorite dominant laminated greenschist with ptygmatic quartz veins 50.05 - 50.40 laminated to chlorite dominant greenschist.	2.00	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

FROM (feet / metres)	TO (feet / metres)	RECOVERY (feet / metres)	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
50.40	53.70	3.6	79	CSA 70° Greenschist, laminated with alternating albite and chlorite rich layers (approx 5 : 1 ratio, albite rich layers predominant) at 50.60 core traversed by pink carbonate vein (? magnesite, will not fizz in cold HCl) CVA 30°, subparallel bleached alteration zone 3cm wide with carbonate replacing chlorite, schistosity fades relative to normal rock. at 51.50 minor euhedral pyrite 51.60 - 53.35 as above but with ptygmatic quartz veins and boudins to 3cm, and contorted schistosity 53.35 - 53.7 albite - carbonate schist	3.30	
53.7	55.00	0.6	46	CSA 63° 'albite - talc' schist extensive core loss 53.9 - 54.6 54.7 - 54.8 quartz vein with minor pyrite	1.3	
55.00	58.10	3.10	100	55.00 - 55.40 albite - talc schist. trace pyrite 55.30 - 55.40 55.40 - 55.80 albite rich albite/chlorite schist. 55.80 - 56.05 as above, with pink carbonate veins and boudins. 56.05 - 56.20 chlorite/albite schist with 5cm ptygmatic quartz vein, minor pyrite near top 56.20 - 58.10 albite/chlorite schist, laminae spindly and contorted, trace minor pyrite 57.0', boudins of quartz to 1cm from 57.40 - 58.10.	3.10	
58.10	61.20	3.10	100	laminated grey-green greenschist and slightly foliated metavolcanic quartz bodies in laminated material 'metavolcanic rock' at 58.30 - 58.35, 58.45 - 59.25 59.40 - 59.60 sporadic minor pyrite blebs at 60.70 - 60.80 albite - talc schist with 5% pyrite	3.10	

Continued over

ASSAY DATA

SAMPLE No.	FROM (feet / metres)	TO (feet / metres)	RECOVERY (feet / metres)	RECOVERY %	ASSAY RESULTS

Ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
1.20	63	20	~~2.00~~ 1.97		98	61.20 - 61.50 intercalcareous transitional to laminated chlorite/albite schist, albite rich with 1% pyrite 61.30 - 61.35	LPT 2.00	
						61.50 - 61.65 laminated albite/chlorite rock with some chlorite schist beds to 2cm		
						61.65 - 63.17 foliated greenish grey metavolcanic tuff pyritic chlorite/albite rock, at 62.15 chloriteschist with quartz boudin. at 62.75 - 62.80 and 63.00 - 63.17 banded albite/talc rock with minor pyrite		
						CSA 66°		
3.30	66	50	3.30		100	63.20 - 63.45 greyish grey foliated metavolcanic. (at base underite?) quartz replacement at top 2cm. traversed by haematite vein with dolomite and some calcite, also white CVA 10° indicating near vertical attitude paralleling BDH. no gold. The metavolcanic contains generally 1% pyrite with segregations (10% of rock) containing 10% pyrite and some talc	3.30	
						63.45 - 66.50 greyish grey foliated metavolcanic with minor pyrite (1%) some low CVA carbonate veins with talc-replacing-chlorite wall alteration. Also minor quartz veins themselves minor pyrite, nil, haematite.		
3.10	69	60	3.10		100	w/foliated metavolcanic (greenish grey) alternating with (1) interlaminated albite rich and chlorite rich laminated green schist with radial bending of metavolcanic and segregated, ptygmatic quartz bodies; green schist at 66.60 - 66.70; 66.85 - 67.00 (includes large quartz masses) 67.00 - 67.07, 67.11 - 67.12, 67.78 - 69.18.) low CVA carbonate veins with wall rock alteration, minor pyrite disseminated and in segregated blebs.	3.10	
60	72	74	3.14		100	as above, greenschist intervals with quartz bodies 70.60 - 70.45; 71.30 - 71.50, 71.80 - 72.00	3.14	

Continued over

ASSAY DATA

LE	FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
2.72	75.90	3.16	100	as above chlorite schist with quartz bodies 72.99 - 73.10	3.16	
				73.65 73.70 a poorly laminated 74.15 - 75.40.		
				75.90 - 76.02		
5.90	79.07	3.17	100	quartz feldspar / chlorite schist. feldspar layers to 0.5 cm.	3.17	
				chlorite layers to 0.5 cm.		
				76.02 - 76.13 dolomite vein.		
				76.13 - 76.20 feldspar/chlorite schist. as above.		
27				76.20 - 76.90 feldspar schist with partings of chlorite		
				0.5 mm between "metamorphic layers" 2 cm - 3 cm.		
				of quartz - feldspathic bands. quartz bodies at		
				76.50 - 76.60 76.65 - 76.70 76.95 - 78.02		
				band without chlorite partings 77.87 - 77.95.		
07	79.55	3.18	100	feldspathic schist with chlorite dominated partings	3.18	
				between layers pyrite common at 79.5 cm		
55	80.90			query metavolcanic. 'pepper and salt' texture		
				probably 'acidic' andesite. quartz segregations in		
		3.13		chlorite - muscovite phyllite at 80.25 - 80.40		
				pyrite in blebs (1% of rock) 80.64 - 80.69		
90	81.95			feldspar schist and muscovite / chlorite phyllite with		
				ptygmatic quartz segregations and relicts of foliated		
				"acidic andesite"		
5	82.25			acidic andesite.		
5	85.95	3.13	100	" acidic andesite.	3.13	
5	83.94			contorted feldspar schist and chlorite muscovite		
				phyllite with relict bodies of "acidic andesite" altering		
				to quartzite? 80 - 83.94		
4	84.40			micaceous quartzite, talc - muscovite schist and		
				quartz segregations, pale yellowish green		
	85.38			pale grey micaceous quartzite (sericolite)		

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

FROM ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
38	85·50	3·13	100	ISA 60" "quartzite" (variably altered andesitic andesite with chlorite → biotite interbanded chlorite schist, talc mica schist, talc phyllite, quartz "quartzite" / talc altered and silicified andesite) and some relict acidic andesite (pale grey)	3·13	
50	85·70					
70	86·83					
83	~~88·51~~			pale grey "acidic" andesite with brown foliation and carbonate (mainly dolomite) veins		
83	88·51			schistose intervals with quartz segregations 86·20–86·50, with some relict feldspar phenocrysts talc alteration gives yellow grey colour adjacent to carbonate veins notably 8775–8790		
51	89·00	3·13	100	acidic andesite, grey some bands schistose yellow brown with talc alteration and some quartz bodies	3·13	
00	89·20					
00	89·20			yellow grey talc altered and ? with chlorite schist some pyrite		
20	91·64			schistose andesite, altered yellow grey andesite, quartz schist and quartz, acidic andesite with relict phenocrysts quartz schist at 89·30–89·35 89·47–89·60 89·88–89·83, 91·60–91·64		
~~94·80~~	~~3·16~~					
94·80	3·16	100		pale grey to medium grey andesite with feldspar phenocrysts, grading to pale grey schistose intermediate with quartz schist – quartz intervals at 91·64–91·70 91·95–91·98, 92·20–92·25 (qtz), 92·80–92·98 93·20–93·28, 93·56–93·70, 93·83–93·91	3·16	
20	98·45	3·65	100	pale grey to grey foliated meta-andesite and andesite with relict phenocrysts with quartz schist / quartz intervals 95·43–95·56 96·45–96·52, 96·77–96·82 and some smaller intervals	3·65	

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

FROM ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
8.45	100.36	1.91	100	pale to medium grey andesite with some greenschist with quartz bodies 98.82 – 98.93. carbonate veins with low CVA. CSA 65°.	1.91	
8.36	103.47	3.11	100	pale to medium grey andesite and schistose metavolcanics with some quartz and greenschist. pyrite common in blebs 102.8 – 103.47 (some 100.77 – 101.12), quartz body 102.03 – 102.11, greenschist with pyrite 102.33 – 102.75 at 103.40, carbonate veins with chalcopyrite and pyrite.	3.11	
3.47	104.95	3.47	100	foliated metaandesite, greenschist, banded 'albite' schist with albite pantings. pyrite blebs common minor chalcopyrite at 103.66 in carbonate veins.	3.18	
.95	105.80			grey foliated meta andesite		
5.80	105.42			grey foliated meta andesite, with purplish and green bands		
.42	106.65			foliated meta andesite, pale grey to med grey andesite, some carbonate veins quartz body at end.		
6.65	108.75	3.15	100	foliated meta andesite and andesite pyrite abundant 106.82 – 106.88 in blebs	3.15	
.75	108.90			banded schist/phyllite with bands 0.5 – 2cm of green chlorite dominant and brown? muscovite dominant phyllite with bands of 'albite' pyrite rock.		
.90	109.05			foliated meta andesite		
.05	109.80			banded grey/tan brown and green phyllite with minor albite/pyrite rock and quartz bodies		
9.80	111.80	3.11	100	banded brown and green phyllite with quartz bodies and 'albite' pyrite. CBA 73°	3.11	
1.80	112.91			foliated and massive meta-andesite.		

Continued over

ASSAY DATA

E	FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

275055

GEOLOGICAL LOG

FROM ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
91	115 86	3·09	100	foliated meta andesite and andesite, minor quartz bodies and carbonate veins	3·09	
5·85	115·96			2 uniform green-brown dolerite/meta phyllite		
5·96	116·00			banded green and brown " " "		
				with quartz bodies at 115·85, 115·60, 115·78		
2·00						
6·00	118·65	2·65	100	banded and contorted brown and green phyllite sporadic quartz bodies, carbonate veins pyrite ~~bands~~ with bands	2·65	
15	119·55	3·12	100	banded brown and green phyllite, minor pyrite at base.	3·12	
55	119·85			andesite (fine grained)		
85	120·65			brown and green phyllite some pyritic altered layers		
65	121·15			andesite		
15	121·46			brown to green phyllite		
46	121·77	52		banded ~~brown~~ green and brown-green phyllite ~~partings~~ and ~~altered~~ ~~bands~~ to 5cm		
2	123·80	3·18	100	banded to uniform green + brown phyllite.	3·18	
80	124·95			pale grey to grey brown banded meta-andesite quartz at 124·73		
85	125·85	3·10	100	grey to grey brown foliated meta andesite with phyllite at 124·95 - 125·03 and 125·72-125·75	3·10	
	126·55			pale grey altered (talcose) metaandesite		
	~~126·55~~ ~~126·58~~			carbonate vein - calcite, dolomite, quartz.		
	127·35			pale grey altered (talcose) meta-andesite		
	127·72			grey green andesite		
	128·05			foliated meta-andesite grading to phyllite green to brown		

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
.05	128	45	3	15	100	green and brown banded phyllite	3.15	
28.45	131	20				grey foliated meta-andesite with green-brown phyllite at 128.85, with pyrite, pyrite/albite at 130.45 quartz at 130.55 - 130.60		
.20	134	30	3	10	100	green and brown phyllite with ptygmatic quartz-carbonate veins, contorted in plane some relicts of andesite with phenocrysts. quartz 131.98 - 132.08, 132.35 - 132.47 132.58; 132.70 - 132.75; 133.10; 133.40 - 133.70, 134.17 - 134.37.	3.10	
.30	136	20	3	15	100	green and brown phyllite with ptygmatic quartz veins and some minor carbonate veins CSA 40° minor pyrite quartz 134.66 - 135.08, 136.45 - 136.61, 136.85 - 136.91, 136.16 - 136.20	3.15	
.20	136	90				grey foliated meta-andesite, minor pyrite		
.40	137	00				green and brown phyllite with minor carbonate veins		
.00	137	30				grey pyritic meta-andesite and some phyllite. 137.08 - 137.12. pyrite blebby 5%.		
.30	137	44				green phyllite with quartz segregations.		
.44	137	45				grey meta-andesite.		
.45	138	90	3	15	100	green and brown phyllite with quartz and minor pyrite, some relicts of porphyritic meta-andesite. pyrite 3% 138.37 - 138.47 incipient talc alteration	3.15	
.90	139	20				pale yellowish grey andesite (mineralized alteration		
.20	139	40				green and brown phyllite with areas of talc alteration trace pyrite		
.0	139	97				pale grey silicified metavolcanic/ex phyllite. contorted in quartz body 139.90 - 139.97 minor pyrite (1%) stylolites		
.7	140	60				pale greyish yellow schistose metavolcanic with talc alteration and minor pyrite		

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
060	141	20	1	0	100	greenish yellowish grey phyllite with talc alteration, minor pyrite throughout muscovite prominent 141.07 - 141.20; pyrite 5% 141.07 - 141.02. CSA 55°. From 140.85 - ~~141.02~~ 141.03 Dolomite - calcite - haematite GOLD vein true width 1.5cm. CVA 15° ∠ schistosity/vein 30° GOLD associated with haematite 140.88 - 140.91 and 140.93 - 140.97. remainder of vein is carbonates only. GOLD approx 5% of gold bearing interval.	1.0	
20	141	60				pale yellow slightly foliated and silicified. talc-altered metavolcanic with minor pyrite blebs To 5% at 141.45. quartz body at 141.60.		
60	147	02	3	11	100	pale grey to greyish yellow slightly foliated and silicified talc altered metavolcanic with minor pyrite blebs ~~from 141.62 - 141.63 quartz~~, from 141.66 - 141.95 core traversed by carbonate vein (dolomite - calcite) (pyrite concentrated on stylolite at 147.00) CSA 60° CVA 10° ∠ schistosity/vein 50°	3.11	
02	147	80				talc-altered phyllite ~~yellowish~~ greyish yellow. minor pyrite ~~pyrite 5% at 147.63, 148.70, 148.75~~ pyrite to 5% at 147.63, 148.70, 148.75		
80	144	35				dark green chlorite phyllite with minor carbonate veins. minor pyrite throughout. pyrite to 5% at 143.44, 143.58 - 143.59, 143.66, 143.77. 144.05 - 144.09.		
35	144	71				pale greyish yellow talc altered phyllite, silicified from 144.64. From 144.69 carbonate vein.		

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

ns.	TO ft. ins.	RECOVERY ft. ins.	%	DESCRIPTION	SECTION Core	Sample
44·71	144·42	2·90	(100.	~~Th~~ silicified · ex greyish yellow talc altered phyllite. 70% carbonate vein. Including clasts of silicified rock. (above).	3·09	
4·42	145·15			~~G~~greyish yellow talc-altered phyllite		
5·15	147·80			green and brown phyllite with minor pyrite bands to 15% pyrite at 145·40, 145·44 145·88 ~~146·55 [illegible] pyrite~~ 146·89 146·35, 146·53, 147·14 quartz at 145·62 – 145·64. ~~contorted albite~~ folded "albite" vein 146·80 – 147·10		
8·80	148·0	3·38	100	~~green phyllite with pink~~ foliated metaandesite ~~dike~~ // D	3·38	
2·00	149·16			green ~~phyllite~~ with siliceous bands with 15% pyrite green phyllite with pyritic bands and areas of talc alteration (adjoining carbonate vein, See below)		
1·16	149·92			foliated meta andesite (green) and talc-altered foliated meta-andesite (pale greyish yellow) adjoining dolomite-calcite vein ~~of~~ 1m true thickness C.U.A 10° CSA 50° / vein-schistosity 60°.		
9·2	150·18	.98	100	green foliated meta-andesite.	.98	

Continued over

ASSAY DATA

.E	FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	%	ASSAY RESULTS

SPECIMEN CREEK DDH - SPC1
DIAMOND DRILL HOLE LOG

SAMPLE NUMBER	INTERVAL (m)	DESCRIPTION
SP1001	48-50	Slightly foliated mica greenschist; mod hematite; trace of disseminated pyrite and pyritic casts; minor quartz carbonate veins // to foliation.
SP1002	50-52	Slightly foliated mica greenschist; hematite rich zones, trace of disseminated pyrite; numerous ptygmatic quartz veins.
SP1003	52-54	As above but with silicified zones.
SP1004	54-56	Slightly silicified meta-andesite; minor quartz veins with traces of carbonate; mod hematite, trace of pyrite.
SP1005	56-58	Meta-andesite grading into greenschist, minor quartz veins, traces of pyrite.
SP1006	58-60	Foliated greenschist with meta-andesite bands; thick quartz veins with traces of carbonate; mod disseminated pyrite.
SP1007	60-62	Meta-andesite with silicic zones and quartz carbonate veins; minor greenschist with ptygmatic vein quartz; disseminated pyrite and chalcopyrite.
SP1008	62-64	Meta-andesite with narrow silicified carbonate zones; disseminated pyrite; thin quartz pyrite stringers, minor greenschist.
SP1009	64-66	Meta-andesite with thin cross cutting of quartz carbonate veins; moderate disseminated pyrite and chalcopyrite.
SP1010	66-68	Meta-andesite with silicic and greenschist zones, minor thin ptygmatic quartz veins; minor thin foliated and cross cutting quartz carbonate veins; disseminated pyrite and a trace of pyritic stringers.
SP1011	68-70	Foliated greenschist with minor as above and moderate hematite.
SP1012	70-72	Zonated greenschist and meta-andesite. Narrow ptygmatic quartz veins occur in the greenschist. Thick (approx 2cm) quartz carbonate veins with associated pyrite occur in the andesite. Minor disseminated pyrite.
SP1013	72-74	Greenschist grading into a meta-andesite. A quartz vein with carbonate blebs and pyritic selvages forms a contact between the andesite and schist. Pyrite accumulates in fractures and in a narrow zone // to foliation.

SAMPLE NUMBER	INTERVAL (m)	DESCRIPTION
SP1014	74-76	Meta-andesite with minor quartz stingers and a thick (1/2cm) quartz-carbonate vein; traces of disseminated pyrite.
SP1015	76-78	Meta-andesite with minor greenschist, containing silicic zones and a 5cm quartz band; ptygmatic quartz veins with associated carbonate blebs; minor disseminated pyrite.
SP1016	78-80	Meta-andesite; numerous quartz carbonate hematite veins // to foliation and along gractures; pyrite also forms accumulated blebs within fractures. Minor disseminated pyrite; minor ptygmatic quartz within greenschist zones.
SP1017	80-82	Meta-andesite, with quartz carbonate zones, ptygmatic vein quartz and a zone of 2-5cm thick containing two bands of massive pyrite and chalcopyrite.
SP1018	82-84	Meta-andesite grading into greenschist; numerous small ptygmatic quartz veins containing carbonate blebs and hematite; minor 2-3cm thick quartz carbonate veins; trace of disseminated pyrite.
SP1019	84-86	Meta-andesite; slightly silicic; mod hematite; minor quartz veins; moderate disseminated pyrite.
SP1020	86-88	As above but with quartz carbonate veins which lack specific orientations and a zone of disseminated pyrite.
SP1021	88-90	As above.
SP1022	90-92	Meta-andesite with minor greenschist and a silicic zone; minor thin quartz carbonate veins and one 2-5cm thick quartz vein.
SP1023	92-94	Meta-andesite with minor greeschist; contains a 2-5cm quartz vein and several quartz carbonate hematite fracture filling veinlets. Several fractures contain pyrite and large pyritic blebs are common.
SP1024	94-96	Meta-andesite, minor quartz veinlets, moderate pyritic blebs and some fracture filling pyrite.
SP1025	96-98	Meta-andesite, containing a zone of greenschist rich in ptygmatic quartz veinlets, and a 5cm zone with vein quartz, fuchsite?, pyrite and carbonate.
SP1026	98-100	Meta-andesite with disseminated pyrite; containing 1-2cm thick quartz carbonate veins and fracture filled quartz veinlets; some veins contain large pyritic accumulates.

105

A.3.3.1

SPECIMEN CREEK - DDH SPC 1

INTERVAL (M)	SAMPLE NUMBER	ELEMENTS (ppm)										
		Cu	Pb	Zn	Ni	Mn	Ag	As	Sn	Ba	Au	Se
48-50	SP1001	215	x	75	50	380	x	x	x	170	0.002	x
50-52	SP1002	40	x	65	60	510	0.1	2	x	40	x	x
52-54	SP1003	355	x	35	50	755	0.1	3	x	20	0.006	0.04
54-56	SP1004	65	x	20	70	330	x	6	x	25	x	0.08
56-58	SP1005	50	x	30	65	380	0.1	13	x	90	0.002	x
58-60	SP1006	5	x	35	50	355	0.1	7	x	20	x	x
60-62	SP1007	5	x	20	85	295	0.1	7	x	x	0.002	0.04
62-64	SP1008	25	x	20	125	280	0.1	8	x	x	x	0.08
64-66	SP1009	50	x	15	50	305	0.1	7	x	x	0.003	x
66-68	SP1010	95	x	20	105	400	0.1	6	x	x	0.003	x
68-70	SP1011	35	x	30	50	310	0.2	7	x	x	x	x
70-72	SP1012	80	x	30	85	380	x	8	x	x	x	0.16
72-74	SP1013	80	x	25	90	390	0.1	12	x	x	0.017	x
74-76	SP1014	75	x	90	45	345	0.1	12	x	x	0.003	x
76-78	SP1015	20	x	115	75	620	0.1	7	3	35	0.004	x
78-80	SP1016	40	x	105	45	505	0.1	8	4	40	x	0.12
80-82	SP1017	25	x	70	105	490	x	11	x	140	x	x
82-84	SP1018	25	x	65	55	575	0.1	5	x	95	x	0.04
84-86	SP1019	20	x	20	140	560	0.1	4	x	70	0.003	x
86-88	SP1020	25	x	10	215	520	0.2	6	x	40	0.002	x
88-90	SP1021	25	x	50	50	495	0.2	7	x	60	0.004	x
90-92	SP1022	55	x	60	130	375	0.1	3	x	35	0.007	x
92-94	SP1023	140	5	220	55	415	0.1	7	x	x	0.002	x
94-96	SP1024	45	5	245	115	390	0.1	4	3	x	0.002	x
96-98	SP1025	35	x	170	60	410	x	5	x	x	0.002	x
98-100	SP1026	75	x	425	50	515	0.1	5	x	25	0.003	x
Method		101	101	101	101	101	102	114	401	120	325	115

x Below the limit of detection

SPC 2

275063

Drilling Log Specimen Reef No. 2

Location : Specimen Creek, Savage River Area EL 4/61
Map No. : 7915-111, Horton 1:50,000
ordinates : 352125mE, 5411116mN (AMG) - Specimen Reef Grid: 4000, 0
L. of site : 421 metres
clination : At Collar 55°, Bearing: 100° magnetic
-e Size : HQ - 0 to 6 metres, NQ - 6 to 120 meters, Core Recovery: 73%
Drill : Diamond Drill - Mindrill 10L (Type 250)
Driller : Associated Diamond Drillers
Commenced : 13th February 1982
Completed : 21st February 1982
nal Depth : 120 metres

Timmen Reef DDH2 — GEOLOGICAL LOG — 275064 — Page: 1 of 12

TO ft. ins.	RECOVERY ft. ins.	%	DESCRIPTION	SECTION Core	SECTION Sample
3.00	1.74	58	mica greenschist moderately foliated CSA=45 0.00-1.40m greenschist is strongly weathered to hematite and limonite between foliation bands 1.40m-3.00m greenschist is moderately weathered with strongly weathered zones along fractures. Also small blebs of phyllite in schist	3.00	
6.00	1.95	65	mica greenschist strong foliation CSA=50° interval predominately weathered to hematite with minor limonite staining in small banded areas. Small blebs of phyllite throughout interval	3.00	
9.25	1.90	58	mica greenschist strong foliation CSA=50° 6.00-7.15 core is red & white in color, numerous small quartz phenocrysts within bands. Also pitted texture with numerous vugs lined with hematite - possibly ~~after~~ weathered out feldspars. 7.15-9.25 greenschist contains bands of phylite approximately 1cm-3cm thick parallel to foliation. Moderate limonite staining on fractured surfaces Weak limonite staining locally	3.25	
13.50	.90	21	mica greenschist with phylite bands CSA=50° considerable core loss Moderate limonite staining on fractured surfaces Limonite & hematite staining in foliated bands of greenschist. 13.00-13.50 core consists of phyllite chips.	4.25	

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	%	ASSAY RESULTS

Nen Reef DDH 2 — GEOLOGICAL LOG — 275065

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
15	95	1	35	55	greenschist with phyllide bands CSA = 50 same as interval 9.25 – 13.50 m except with two small quartz veins parallel to foliation.	2.45	
17	20	1	05	84	micaceous greenschist strong foliation CSA = 50° Moderate to strong limonite staining on fractures and adjacent to quartz veins. Weak hematite staining locally. Weak limonite staining in foliated bands Ptygmatic quartz parallel and cross-cut foliation throughout the entire interval	1.25	
21	70		77	17	micaceous greenschist same as interval 15.95 – 17.20 with slightly more ptygmatic quartz veins. Also extensive core loss	4.50	
25	00		86	26	Phyllite and greenschist extensive core loss again. Strong foliation CSA = 45° Weak limonite and hematite staining locally. 2 minor ptygmatic qtz veins	3.30	
25	55		25	45	Phyllite and greenschist same as interval 21.70 – 25.00m without quartz veins	.55	
28	80	2	90	89	Phyllite and greenschist. Numerous ptygmatic qtz veins parallel or nearly parallel to foliation CSA = 40° Qtz veins contain leached large leached out vugs lined with hematite	3.25	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Linen Reef DDH 2 — GEOLOGICAL LOG — 275066 — Page [illegible]

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
					staining. Limonite and hematite staining is strong adjacent to fractured surfaces. Otso weak limonite found locally within foliated bands 26.80m small zone of pyrite crystals, first appearance of fresh sulfides		
30	65	1	45	78	Phyllite and greenschist same as 25.55-28.80. With pyrite inclusions locally	1.85	
33	37	1	36	50	greenschist with small bands of phyllite locally. Core is filled with small vugs lined with limonite, they appear to be weathered out feldspar phenocrysts Minor quartz veins with leached out zones. Limonite and hematite are found along fracture surfaces and quartz veins. greenschist is moderate to strongly foliated CSA = 50°	2.72	
36	60	1	01	31	greenschist with small bands of phyllite locally. Same as interval 30.65 - 33.37m 33.37 - 33.80 quartz vein area with carbonate leached zones and strong limonite staining	3.23	
38	95	1	60	68	greenschist with small bands of phylite locally. Moderate to strong foliation CSA = 60°. Several small ptygmatic quartz veins containing cavities with limonite staining. Limonite and hematite are found along fractures. 36.60 - 37.00 greenschist with small	2.35	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Lymen Rect DDH2 275067

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
					small vugs lined with limonite they appear to be weathered out feldspar phenocrysts.		
40.60	1.45			88	Greenschist Moderately foliated CSA = 60 Limonite staining ~~&~~ strong on fractured surfaces, and weak limonite throughout interval 38.95 – 39.60 4 ptygmatic quartz veins in this zone containing cavities with limonite and hematite staining. Possibly weathered out carbonate cavities	1.65	
43.00	1.75			73	Greenschist Moderately foliated CSA = 50° Rock consists of large bands of albite – carbonate. Bands are separated by small laminations of micas. Containing small Liesgang bands. Weak limonite throughout interval. Strong limonite staining on fractured surfaces. Small weathered out cavities locally – appear to be weather out feldspars Very little quartz vein material	2.40	
45.55	.79			31	Greenschist same as ~~35.00~~ 40.60 – 43.00m	2.55	
49.65	.87			21	Micaceous greenschist with bands of phyllite locally. Numerous ptygmatic qtz vein and adjacent cavities with strong limonite staining. Strong limonite staining of fractured surfaces. Weak limonite staining within foliated bands. Extensive core loss.	4.10	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Simen Reef DDH 2 — GEOLOGICAL LOG — 275068 — Page:

TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
51.27	1.50	93	graphitic phyllite & schist containing alternating bands of albite, ranging from 1mm to 5mm in thickness, low density, moderately foliated CSA 60° 51.75m - 51.80m, 52.95m - 52.98, 53.45 - 53.48m ptygmatic quartz veins with no prefered orentation. Minor pyrite in and adjacent to quartz veins	1.62	
52.55	1.28	95	graphite phyllite & schist with lammerated bands of albite, ranging from 1mm to 5mm thick, moderately foliated but weakly foliated locally CSA 45° 51.54 - 5157, 51.74 - 51.78, 52.05 - 52.31 ptygmatic quartz veins generally ~~fatti~~ parelled folliation - CVA 45° linear inclusions of pyrite in quartz veins, up to 3mm thick, ~~also~~ extending through the core approx. parellel to foliation, also disseminated pyrite adjacent to quartz veins in schist	1.28	
55.00	2.26	92	52.55 - 53.26m graphite phyllite schist same as above, except numerious band of chlorite - albite greenschist, ~~a wide~~ displaying a wide variety of sizes, commonly located adjacent to ptygmatic quartz veins 52.78 - 52.82, 52.97 - 53.02 ptygmatic quartz veins parallelling foliation - CVA 45° 53.26 - 55.00 chlorite - albite - talc greenschist with smaller twisted ptygmatic quartz veins (5mm to 20mm) throughout. Minor disseminated pyrite found locally CSA - 45°	2.45	

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

Timen Reef DDH 2 — GEOLOGICAL LOG — 275069 — Page: 6 of 12

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
58.10		2.93		95	chlorite-albite greenschist, numerous twisted ptygmatic quartz veins (3mm to 30mm) throughout CVA 60°-80°. Foliation is moderate to strong CSA 60°. 56.05-58.10m rock displays what appears to be secondary foliation nearly perpendicular to primary foliation. 55.04 albite vein leached of carbonates 1cm thick. Only minor disseminated pyrite throughout greenschist	3.10	
61.15		3.05		100	chlorite-albite greenschist CSA 60° 58.33-58.35, 58.54-58.56, 59.10-59.13 59.88-60.01 ptygmatic quartz veins CVA 30°-60°. Rock is moderately foliated. Trace of pyrite locally.	3.05	
64.15		2.70		90	chlorite-albite greenschist CSA 40°-60° Only 2 small ptygmatic quartz veins less than 1cm thick CVA-70° Disseminated pyrite in greenschist, stronger pyrite and chalcopyrite in the numerous small leached albite-carbonate veins in area 63.06-64.15	3.00	
66.32		1.57		72	64.15-66.05 chlorite-albite greenschist CSA 40°-70° 64.38-64.40, 64.75-64.78m ptygmatic quartz veins with no preferred orientation 64.27m small ~1-2mm inclusions of chalcopyrite; 64.87 and 65.17m numerous large pyrite inclusion up to 1cm in dia. 66.05-66.32 silicified andesite light grey in color with disseminated pyrite.	2.17	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Hemlo Area Drill Hole — 275070

TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
66.97	.57	88	chlorite - albite greenschist, CSA 70° 66.47 - 66.48, 66.55 - 66.59, 66.82 - 66.97 ptygmatic quartz veins, generally parallel to foliation, CVA 50° - 70°. Rock exhibits weak to moderate foliation. Trace of pyrite locally. 66.82 - 66.97 sericite adjacent to quartz vein	.65	
69.19	1.97	89	meta - andesite, weakly foliated CSA 60° 68.84 - 68.95m zone of ~~quartz~~ ptygmatic quartz with adjacent sericite - chlorite - albite greenschist containing small limonite after pyrite pseudomorphs No sulfide mineralization was found in ~~greenschist~~ meta - andesite	2.22	
70.57	1.27	92	meta - andesite, weakly foliated CSA 60° ~~No~~ No sulfide mineralization. 69.37 - 69.47m, 70.11 - 70.15m zones of ptygmatic quartz with adjacent sericite - chlorite - albite greenschist with moderate foliation.	1.38	
73.00	2.33	96	chlorite - albite greenschist with bands ~~intercalated~~ of meta - andesite CSA 50° - 70° Weak to moderate alteration. A trace of disseminated pyrite found locally. 71.27 - 71.31, 71.86 - 71.91, 72.21 - 72.34, 72.48 - 72.55 m zones of ptygmatic quartz veins with adjacent phyllite bands. Qtz veins exhibit 1mm to 5mm inclusions of pyrite and also contain small leached carbonate zones locally.	2.43	

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

TO ft. ins.	RECOVERY ft. ins.	%	DESCRIPTION 275071	SECTION Core	Sample
76.05	3.05	100	meta-andesite, weak foliation CSA = 70°	3.05	
			74.70 - 7472 ptygmatic quartz vein containing pyrite inclusions.		
			73.54 - 73.55m, 73.80 - 73.92m zones of small (less than 2mm) carbonate veins		
			74.72 - 74.90 zone of leached carbonate - albite veins, up to 15mm thick		
			Pyrite inclusion are found throughout this interal, but slightly more numerious near carbonate & quartz veins		
78.38	1.70	73	meta-andesite, weak foliation CSA = 60°	2.33	
			77.54 - 78.34 meta-andesite is inter-mixed with chlorite-albite greenschist containing sericite locally.		
			76.99 - 77.10 quartz vein with carbonate-albite blebs, numerious small inclusions of pyrite in vein, vein exhibits no consistant attitude.		
81.55	3.05	96	chlorite-albite greenschist, CSA = 60°	3.17	
			Pyrite in foliation bands		
			78.38 - 79.30m zone containing nrmerious contorted quartz veins with small leached albite-carbonate blebs.		
			80.03 - 80.04, 80.82 - 80.83, 81.28 - 81.55 ptygmatic quartz veins commonly paralleling foliation CVA = 45°-60°, with several small albite-carbonate blebs		
84.60	2.95	97	~~chlorite~~ meta-andesite, weak foliation CSA = 60°	3.05	
			81.55 - 81.87, 81.55 - 82.37, 84.18 - 84.60 zones of quartz veins and strongly silicified		

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	%	ASSAY RESULTS

Men Keet DDH 2 — 275022

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
					greenschist, also containing albite-carbonate veins and leached veins, elongate inclusion of pyrite parallel foliation in qtz vein areas. The adjacent meta-andesite has been metamorphosed to a moderate to strongly foliated greenschist		
87.73	2.97			95	meta-andesite, weak foliation with moderate to strong foliation nearly quartz veins. Numerious small quartz veins containing small blebs of albite-carbonate, veins have no prefered orientation. Elongate inclusion of pyrite found locally in qtz veins	3.13	
90.85	3.00			96	meta-andesite CSA = 60°-70° weak foliation, with equal granular texture 87.73-88.69 area of numerious quartz veins. 40% of veins are ptygmatic with strongly foliated greenschist adjacent to veins. 60% of veins are planar with consistant thicknesses, containing small elongate inclusions of pyrite. All veins have small carbonate-albite blebs	3.12	
93.95	3.00			97	meta-andesite CSA = 60 weak foliation numerious qtz veins containing minor pyrite. Smaller veins exhibit albite-carbonate zones. Disseminated pyrite throughout rock.	3.10	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

275073

...ins.	RECOVERY ft.	ins.	%	DESCRIPTION	SECTION Core	Sample
96.40	2.35		96	meta-andesite CSA 60°, weak foliation with disseminated pyrite. Numerious qtz veins containing minor pyrite. 94.44–95.18, 93.41–93.95 zones of quartz veins and highly silicified meta-andesite containing 2 zones of strong pyrite, and numerious albite-carbonate zones. Disseminated pyrite throughout rock.	2.45	
99.60	3.05		95	Meta-andesite CSA = 50° weak foliation 96.40–97.97 zones of qtz veins and strongly silicified meta-andesite containing disseminated pyrite and calcite blebs. Veins show no prefered orientation 97.97–98.7 band of chlorite-albite greenschist with foliated bands of pyrite inclusions, also small quartz veins with albite-carbonate	3.20	
102.60	3.00		100	meta-andesite CSA = 60° weak foliation 99.78–100.76 zone of qtz veins and strongly silicified meta-andesite containing ~~xx~~ numerious small inclusion of chalcopyrite locally with minor disseminated chalcopyrite & pyrite ~~100.3–100~~ 102.05–102.17 area of greenschist surrounding 2 qtz veins, which contain disseminated chalcopyrite and pyrite. area shows moderately well foliated bands Small qtz veins with carbonate-plagioclase inclusions are throughout entire interval.	3.00	

Continued over

ASSAY DATA

FROM ft.	ins.	TO ft.	ins.	RECOVERY ft.	ins.	%	ASSAY RESULTS

[redacted] Reef DDH 2 275074

TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
105.70	3	10	100	meta-andesite, CSA = 50°, weak foliation numerous quartz veins containing carbonate and plagioclase blebs and small elongate pyrite inclusions Disseminated pyrite throughout interval	3.10	
108.90	3	20	100	meta-andesite with several small zones of moderately foliated greenschist CSA = 60°. 105.85 - 106.50 zone containing disseminated chalcopyrite and pyrite. Numerous quartz veins containing carbonate and plagioclase blebs exhibit no preferred orientation with respect to foliation	3.20	
112.05	3	15	100	meta-andesite with small zones of moderately foliated greenschist. Commonly located near qtz veins CSA = 60° 109.55 - 109.69 white in color, area is composed entirely of calcite and quartz*. Disseminated pyrite throughout, and numerous qtz veins with carbonate - ~~calcite~~ blebs.	3.15	
115.20	2	31	73	meta-andesite with small zones of moderately foliated greenschist locally. Several small qtz veins cross-cutting foliation at various angles. 112.52 - 112.55, 112.79 - 112.83 dolomitic calcite zones which parallel foliation CSA = 60°. Also other small plagioclase-carbonate veins are numerous throughout the entire interval 113.14 - 113.19 linear inclusions of pyrite * interval 109.55 - 109.69 small piece of core sent to CSRO for analysis.	3.15	

Continued over

ASSAY DATA

SAMPLE	FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
					with strong disseminated pyrite in surrounding rock		
118.25	3.05			100	meta-andesite weakly foliated CSA = 50° Numerious small and large qtz veins throughout interval, several contain small carbonate blebs. Weak disseminated pyrite locally.	3.05	
120.00	1.75			100	meta-andesite weakly foliated CSA = 60° Numerious small quartz veins with random orientation throughout interval 119.72 - 119.75 Small planar zone of large pyrite inclusions. Disseminated pyrite locally strong near quartz veins.	1.75	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

SPECIMEN CREEK DDH - SPC 2
DIAMOND DRILL HOLE LOG

SAMPLE NUMBER	INTERVAL (m)	DESCRIPTION
SP2001	33-37	Leached material, includes sericite schist, quartz clots, quartz mica carbonate? schist.
SP2002	37-39	Leached material, includes sericite schist with ptygmatic quartz veinlets.
SP2003	39-41	As above.
SP2004	41-43	Leached material, includes sericiet schist with carbonate bands.
SP2005	43-45	As Above.
SP2006	45-49	Leached material, includes micaceous greenschist with ptygmatic vein quartz.
SP2007	49-51	Graphitic phyllite with alternating bands of albite and minor pyrite in adjacent quartz veins.
SP2008	51-53	As Above.
SP2009	53-55	As above but chloritic; minor chlorite albite talc greenschist; minor pyrite.
SP2010	55-57	Chlorite-albite greenschist; numerous ptygmatic quartz veins; yellow FeO staining from pyrite.
SP2011	57-59	As above.
SP2012	59-61	As above.
SP2013	61-63	As above.
SP2014	63-65	Chlorite albite greenschist, small ptygmatic quartz veinlets; pyrite and chalcopyrite occurs in numerous leached albite carbonate veins.
SP2015	65-67	As above with large cpy and py inclusions, minor silicic andesite, minor disseminated pyrite.
SP2016	67-69	Meta-andesite and chlorite-albite greenschist containing ptygmatic quartz and pyritic pseudomorphs.
SP2017	69-71	Meta-andesite with patches of ptygmatic vein quartzed sericiet chlorite albit greenschist.

SAMPLE NUMBER	INTERVAL (m)	DESCRIPTION
SP2018	71-73	Chlorite albite greenschist with bands of meta-andesite; ptygmatic quartz veins; minor pyrite; moderate carbonate alteration within quartz veins.
SP2019	73-75	Meta-andesite containing ptygmatic quartz veins, pyritic inclusions and minor carbonate veins.
SP2020	75-77	As above.
SP2021	77-79	Chlorite-albite greenschist with disseminated pyrite; contorted vein quartz and minor carbonate veins.
SP2022	79-81	Chlorite albite greenschist, with ptygmatic vein quartz, silicic zones, disseminated pyrite, leached carbonate blebs and pyrite in foliation bands.
SP2023	81-82.2	Chlorite albite greenschist with FeO staining, ptygmatic vein quartz, containing zones of silicic and carbonate alteration; disseminated pyrite and pyritic blebs.
SP2024	82.2-84	Meta-andesite, silicified with zones rich in vein quartz and minor disseminated pyrite.
SP2025	84-85	Meta-andesite with large pyritic blebs; numerous quartz veins and silicic carbonate alteration.
SP2026	85-87	Meta-andesite, strongly foliated near quartz veins, with numerous small quartz veins containing carbonate blebs.
SP2027	87-89	Meta-andesite with numerous quartz veins (40% ptygmatic); minor carbonate and elongated pyrite.
SP2028	89-91	As above.
SP2029	91-93	Meta-andesite with disseminated pyrite, numerous quartz veins and minor pyrite carbonate zones.
SP2030	93-94.45	Meta-andesite with disseminated pyrite, silicic with zones of vein quartz containing pyrite and carboantes.
SP2031	94.45-95.45	Meta-andesite, silicic, with pyritic and pink tinted carbonate zones.
SP2032	95.45-97	As above.
SP2033	97-98	As above with minor chlorite albite schist.
SP2034	98-100	Silicic meta-andesite, containing disseminated pyrite, ptygmatic vein quartz and minor carbonates.

SAMPLE NUMBER	INTERVAL (m)	DESCRIPTION
SP2035	100-102	Silicic meta-andesite, with zones of vein quartz, minor carbonates; cpy and py disseminations and inclusions.
SR2036	102-104	Meta-andesite containing numerous quartz veins with carbonate and pyrite, minor greenschist, moderate disseminated pyrite.
SP2037	104-106	Meta-andesite, with numerous quartz veins, minor carbonates and disseminated pyrite.
SP2038	106-108	Meta-andesite, with small greenschist zones; numerous quartz veins containing carbonate and plagioclase. Minor zones with disseminated cpy 6 py.
SP2039	108-109.525	Meta-andesite with disseminated pyrite, vein quartz, carbonate and minor greenschist.
SP2040	109.525 - 109.675	White carbonate vein.
SP2041	109.675-112	Meta-andesite; disseminated pyrite; vein quartz, carbonate and minor greenschist.
SP2042	112-114	As above.
SP2043	114-116	Meta-andesite, with disseminated pyrite, numerous small quartz veins and carbonate blebs.
SP2044	116-118	Meta-andesite; numerous quartz veins which contain carbonate blebs; minor zones of silicification, minor disseminated pyrite.
SP2045	118-120	Meta-andesite; numerous small quartz veins; pyritic zones with large pyrite crystals close to quartz veins; moderate disseminated pyrite.

SPECIMEN CREEK - DDH SPC 2

INTERVAL (M)	SAMPLE NUMBER	ELEMENTS (ppm)										
		Cu	Pb	Zn	Ni	Mn	Ag	As	Sn	Ba	Au	Se
33-37	SP2001	30	5	95	35	245	0.1	4	7	280	0.003	x
37-39	SP2002	35	15	175	45	250	0.1	5	5	280	0.003	0.06
39-41	SP2003	35	30	155	60	275	0.1	3	x	420	0.017	x
41-43	SP2004	20	5	165	40	245	0.1	3	x	240	0.004	x
43-45	SP2005	35	5	170	55	305	0.1	2	3	440	x	x
45-47	SP2006	100	5	300	45	425	0.1	2	3	450	x	x
47-49	SP2007	70	x	195	85	350	0.2	5	x	580	x	0.24
49-51	SP2008	95	x	85	75	380	0.2	1	x	520	0.002	x
51-53	SP2009	75	x	140	50	420	0.1	4	x	300	x	x
53-55	SP2010	205	350	740	85	465	0.2	x	x	30	x	0.08
55-57	SP2011	65	5	50	55	435	0.2	x	x	55	0.003	x
57-59	SP2012	30	x	35	60	355	0.2	x	x	35	0.003	x
59-61	SP2013	40	x	60	50	470	0.2	x	4	45	0.002	x
61-63	SP2014	765	x	140	90	325	0.5	9	x	50	0.003	x
63-67	SP2015	245	5	145	90	300	0.53	15	x	360	0.002	0.04
67-69	SP2016	15	x	25	100	330	0.1	x	x	200	0.002	x
69-71	SP2017	20	x	40	50	375	0.1	x	x	180	0.002	0.04
71-73	SP2018	30	5	30	50	465	0.3	1	x	290	0.004	x
73-75	SP2019	40	5	45	95	425	0.1	x	x	560	x	x
75-77	SP2020	25	x	85	85	410	0.2	1	3	490	x	x
77-79	SP2021	80	15	45	55	380	0.2	x	x	460	x	0.08
79-81	SP2022	85	15	25	95	365	0.1	2	x	500	0.002	x
81-82.2	SP2023	15	10	35	55	765	0.3	4	3	280	0.002	0.04
82.2-84	SP2024	5	10	10	120	365	0.3	x	x	x	0.004	x
84-85	SP2025	5	5	15	55	540	0.3	1	x	20	0.003	x
85-87	SP2026	15	10	20	85	435	0.3	x	x	45	0.008	x
87-89	SP2027	35	15	20	60	290	0.2	1	x	50	0.002	x
89-91	SP2028	15	5	15	95	250	0.1	x	x	x	0.003	x
91-93	SP2029	110	10	20	65	525	0.2	3	x	x	0.002	0.04
93-94.5	SP2030	45	5	15	105	365	0.2	x	x	x	0.002	x
94.5-95.45	SP2031	5	10	15	50	400	0.2	x	x	x	x	0.12
95.45-97	SP2032	5	x	15	100	460	0.2	x	x	x	x	x
97-98	SP2033	5	5	20	60	415	0.2	x	5	55	0.002	0.04
98-100	SP2034	25	5	55	95	290	0.2	x	x	470	0.004	x
100-102	SP2035	150	10	50	55	415	0.1	6	x	340	0.002	x
102-104	SP2036	35	10	340	110	350	0.2	4	x	540	0.003	0.08
104-106	SP2037	40	10	70	55	420	0.2	3	x	500	x	x
106-108	SP2038	105	10	105	95	475	0.1	10	x	340	x	x
108-109.525	SP2039	240	10	45	50	525	0.2	4	x	210	x	x

INTER-VAL (M)	SAMPLE NUMBER	ELEMENTS (ppm) Cu	Pb	Zn	Ni	Mn	Ag	As	Sn	Ba	Au	Se
109.525 - 109.675	SP2040	330	20	15	50	3850	0.2	3	3	x	0.002	x
109.675 -112	SP2041	40	x	45	85	400	x	1	4	450	x	x
112-114	SP2042	65	x	50	60	635	0.2	22	x	80	x	0.04
114-116	SP2043	50	x	50	90	360	0.1	8	x	330	x	x
116-118	SP2044	175	x	45	50	370	x	4	x	400	x	x
118-120	SP2045	40	x	30	110	310	0.1	6	x	140	x	x
Method		101	101	101	101	101	102	114	401	120	325	115

x Below the limit of detection

275081

SPC. 3

Didn't reach reef.

275082

Drilling Log Specimen Reef No 3

Location : Specimen Creek, Savage River Area, EL 4/61
Map No : 7913-111, Norton 1:50,000
Co-ordinates : 352184m E, 5410739m N, (AMG) - Specimen Reef Grid: 500S, 225E
R.L of site : 452 metres
Inclination : At collar 50°, Bearing: W along traverse (310° Magnetic)
Core Size : HQ - 0 to 15 metres, NQ - 15 to 70 metres, Core Recovery 55%
Drill : Diamond Drill - Mindrill 10L (Type 250)
Driller : Associated Diamond Drillers
Commenced : 24th February 1982
Completed : 25th February 1982 (???)
Total Depth : 70 metres

Hammer Keet WDH-5 275083

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
3.00		.57		19	Clay and silt Yellow in colour. Silt appears to be composed of quartz grains. Interval is homogeneous throughout	3.00	
~~10.50~~ 15.00		5.10		43	Strongly weathered foliated rock. Strong hematite bands between laminations containing numerous small aggregate crystals, which appear to be quartz but could possibly be feldspar crystals, they compose up to 30% of rock locally. Strong hematite and strong limonite staining on fractured surfaces	12.00	
19.00		1.00		25	Strongly weathered foliated rock. CSA = 50° Same as interval 3.00m - 15.00m with ptygmatic quartz veins which appear to parallel to foliation (core is extremely shattered). Rock adjacent to qtz veins is strongly foliated and inclusions of mica are visible 18.5 - 19.0m aggregate quartz (?) crystals are larger, up to 3mm in lenght and rock is limonite stained rather than hematite	4.00	
25.30		2.35		37	Weathered greenschist. Weak to moderate hematite and limonite staining. Numerous kink bands in foliated greenschist suggest secondary foliation. 19.00 - 19.30m ptygmatic quartz veins, appear to be parallel to foliation, and adjacent rock ~~are~~ exhibit stronger foliation	6.30	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
28.00		10		4	Extensive core loss. This interval is composed of a handful of quartz and weathered greenschist. Greenschist is weakly foliated with moderate hematite staining	2.70	
31.30		1.40		42	Weathered greenschist Strong hematite stained bands, between laminations containing numerous small aggregate phenocrysts, which appear to be qtz but could possibly be feldspar phenos, they compose up to 20% of the rock locally. Two areas of ptygmatic quartz veins, which appear to be parallel to foliation	3.30	
37.30		3.55		59	Weathered greenschist. All foliated bands are twisted in krinkled suggesting secondary foliation. Strong limonite and hematite staining near and on fractured surfaces 32.15 - 32.57, 33.30 - 33.82 areas of only slight weathering, which exhibit trace amounts of hematite and limonite 31.47 - 31.75, 32.65 - 32.87, 33.12 - 33.25 zones of ptygmatic qtz veins	6.00	
40.30		1.08		36	Weathered greenschist. Pervasive strong hematite throughout interval. Weakly foliated CSA = 50°. Strong hematite and limonite staining on fractured surfaces. No qtz veins	3.00	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Specimen Rect DDH 3 GEOLOGICAL LOG 275085

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
42	55	1	20	53	Weathered greenschist Moderately foliated CA = 50° Ptygmatic quartz veins throughout this interval. Strong foliation near qtz veins. Moderate pervasive hematite and limonite staining, with strong Fe staining on fractured surfaces	2.25	
46	30	3	15	84	Weathered greenschist Moderately foliated Foliation bands are twisted and kinked possibly due to secondary foliation. Moderate to strong banded hematite and limonite throughout. Strong limonite staining on fractured surfaces	3.75	
55	30	5	40	60	Weathered greenschist Same as 42.55 – 46.30 except: 46.30 – 48.85 numerous ptygmatic quartz veins generally parallel to foliation. Adjacent rocks exhibit strong foliation, higher percentage of mica, and less weathering. Only a trace of hematite and/or limonite.	9.00	
58	30	2	65	88	Greenschist Moderately foliated CA = 50° Numerious ptygmatic quartz veins throughout interval, veins are commonly elongate, parallel to foliation. A trace of limonite and hematite staining on greenschist. Strong Fe staining on fractured surfaces and quartz veins. Large cavities in quartz veins, possibly leached carbonate blebs.	3.00	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Specimen Reef (VMS)

27:086

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
30	61.30	3.00		100	Weathered greenschist. Moderately foliated CSA = 45°. Several ptygmatic qtz veins, with leached cavities, possibly leached carbonate blebs. 58.30 - 59.65 Trace of limonite & hematite staining on greenschist with strong limonite staining on fractured surfaces 59.65 - 61.30. Strong Fe staining throughout interval	3.00	
0	65.80	3.75		83	Weathered greenschist Moderate to strongly foliated near qtz veins CSA = 50° Ptygmatic qtz veins, with leached cavities throughout. Trace of limonite and hematite in 60% of sample. Strong Fe staining in 40% of sample	4.50	
0	70.00	3.85		92	Weathered greenschist. Weakly foliated Strong limonite and hematite staining Very few ptygmatic qtz veins.	4.20	

Continued over

ASSAY DATA

LE	FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

SPC 4

Hand written log looks better than later typed log.

Drilling Log Specimen Reef No 7

275088

Location : Specimen Creek, Sewage River Area, EL 4/81
Map No : 7915-111, Horton 1:50,000
Coordinates : 352296 m E, 5411059 m N (AMG) - Specimen Reef Grid: 200S, 75E.
Dip of site : 4/34 metres
Orientation : At collar 60°, Bearing : 280° magnetic
Core Size : HQ - 0 to 15 metres, NQ 15 to 94 metres. Core Recovery: 67%
Drill : Diamond Drill - Mindrill 10L (Type 250)
Driller : Associated Diamond Drillers
Commenced : 28th February 1982
Completed : 5th March. 1982
Final Depth : 94 metres

Collar 440?

E/H 81 = 359 RL.

W'Kgn. 72 = 368 R.L.

Union Reef DDH 4 GEOLOGICAL LOG 275089 Page: 1 of 6

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
2.00		.32		16	Soil, organic material & quartz pebbles. Quartz pebbles have been weathered out of greenschist.	2.00	
6.00		1.20		30	Limonite stained clay & silt. Silt appears to be composed of quartz grains. Pieces are easily broken. Interval is homogeneous throughout.	4.00	
17.00		3.25		30	Strongly weathered foliated rock. Relic foliation texture is preserved CSA = 20. Strong alternating bands of either limonite or hematite and laminations containing numerous small aggregate crystals which appear to be plagioclase. Strong hematite staining on fractured surfaces. At approximately 7.00m a large quartz vein was encountered. No other significant quartz veins in this interval.	11.00	
25.50		3.65		43	Weathered greenschist, brown in color. Moderately limonite and hematite stained. Numerous limonite after pyrite inclusion and completely weathered out pyrite cavities throughout interval. Several areas of ptygmatic quartz veins which appear to be parallel to foliation and adjacent area exhibits stronger foliation and large chlorite bands. Strong hematite & limonite staining on fracture surfaces.	8.50	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Hmen Keet 225090

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
33.	00	5.	60	75	Weathered greenschist light brown to green in color. Weak limonite & hematite staining. Limonite after pyrite pseudomorphs throughout interval. Only minor quartz veining, sponge like cross cutting foliation	7.50	
35.	40	2.	15	90	Weathered greenschist. Rock is green in color. Weak limonite staining is confined to small foliated bands in the greenschist. Limonite after pyrite locally and small weathered out cavities. Strong limonite & hematite staining on fracture surfaces	2.40	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Specimen Keet DDH 4 — 275091

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
43	50	7	40	91	Moderately foliated fresh greenschist CSA=30° Strong hematite & limonite staining on fractured surfaces and moderate to weak lie sagang bands of hematite adjacent to fractures. Limonite after pyrite was observed in weathered intervals. Fresh greenschist is composed of sericite, plagioclase & chlorite, with a trace of pyrite locally. Sponge like quartz veins both cross-cut and are parallel to foliation. Relatively small quantities of quartz veining	8.10	
48	80	4	90	92	Strongly to moderately foliated greenschist Again strong hematite & limonite staining on fractured surface with lie sagang Fe banding near fractures. Greater segregation of minerals into bands. Ptygmatic quartz veins are numerous locally. Some containing leached carbonate vugs. A trace of pyrite in fresh rock & limonite after pyrite pseudomorphs in oxidised zones.	5.30	
52	70	5	15	58	Strongly foliated bleached schist CSA = 20° Strong hematite & limonite staining on fractured surfaces with lie sagang Fe banding near fractures. Minerals are well segregated into bands; chalk white bands are composed of quartz, feldspar & sericite; dark bands are composed of chlorite. Very little quartz veining and only a trace of pyrite	8.90	
62	45	3	85	57	Moderated to Strongly foliated greenschist Strong hematite & limonite staining on	6.75	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Timmins Reef DDH 4 GEOLOGICAL LOG 275092 Page: 4 of 5

TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
			fractured surfaces		
			58.80 - 60.50 bleached interval similar to interval 48.80 - 52.20 but with sponge quartz veins. Veins contain traces of pyrite & magnetite		
65.85	2.80	82	Moderately foliated greenschist CSA = 20° Hematite & limonite staining on fracture surfaces. Sponge quartz locally containing trace amounts of pyrite	3.40	
71.35	5.05	92	Weak to Strongly silicified greenschist. Areas of strong silicification contain numerous quartz - carbonate veins Disseminated pyrite throughout interval Very little Fe staining	5.50	
74.00	1.95	74	Weakly to Moderately foliated greenschist Very little quartz veining & trace of hematite & a trace of pyrite locally	2.65	
76.00	2.00	100	Weakly foliated greenschist. Interval is marked with numerous ptygmatic quartz veins which compose 30% of rock. Hematite staining along fracture surfaces Large (up to 3mm) inclusions of pyrite scattered throughout interval	2.00	
79.60	1.80	75	Weakly foliated greenschist CSA = 15° Numerous thin quartz veins with hematite staining. Hematite staining along fracture surfaces. Disseminated pyrite throughout interval	2.40	

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

Specimen Reef DDH 4 — GEOLOGICAL LOG — 275093 — Page: 5 of 6

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
82.00		3.20		92	Moderately to Strongly foliated greenschist Numerous ptygmatic quartz veins parallel to foliation. Also several thin quartz veins with hematite staining cross-cut foliation. Disseminated pyrite 80.85 – 82.00 greenschist is strongly silicified and light brown in color, but still exhibits protolithic textures Pyrite is concentrated locally rather than disseminated.	2.40	
82.35		.35		100	Quartz vein material, silicified greenschist and epidote Numerous small carbonate veins. Pyrite inclusion are found locally No relic metamorphic textures.	.35	
83.85		0		0	A wooden mine-shaft support was penetrated followed by a 1.50 meter core loss as the drill past through the mining cavity	1.50	
88.15		4.15		97	Silicified & non silicified greenschist Numerous ptygmatic quartz vein and several larger quartz veins. Greenschist displays stronger foliation adjacent to ptygmatic quartz veins Numerous calcite veins less than 2mm thick with no prefered orientation Pyrite inclusion up to 2mm in diameter occur locally.	4.30	
94.00		5.45		93	Weakly to moderately foliated greenschist CSA 15°-20°. Relatively small quantities of quartz veining occur as ptygmatic	5.85	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Coleman Reef UUH 4

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
					quartz veins which generally parallel foliation and in planar cross-cutting quartz veins. Foliation is more prominent near qtz veins. Several calcite veins cross-cut core nearly perpendicular to core [redacted] axis, up to 10mm in thickness. Pyrite inclusions occur locally.		

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

SPECIMEN CREEK DDH - SPC 4
DIAMOND DRILL HOLE LOG

SAMPLE NUMBER	INTERVAL (m)	DESCRIPTION
SPC4000	25-27	Brown yellow FeO stained foliated greenschist containing narrow lensoid quartz and pyritic patches; grading into a grey green meta-andesite with pyritic casts in band like zones and in fractures.
SPC4001	27-29	Green grey meta-andesite, with aligned mafics and disseminated pyrite casts; mod FeO staining.
SPC4002	29-31	Meta-andesite, with mafic acidic banding; moderate FeO staining; disseminated pyrite and minor thin corss cutting quartz veins.
SPC4003	31-33	As Above.
SPC4004	33-35	Chloritic meta-andesite; with cross cutting quartz veins, some associated with specular hematite; disseminated pyrite; minor FeO staining.
SPC4005	35-37	Meta-andesite, with ptygmatic quartz veins, pyrite and hematite zones and minor cross cutting quartz veins.
SPC4006	37-39	Greenschist with ptygmatic quartz veins and disseminated pyrite. Grades into a meta-andesite with disseminated pyrite and cross cutting quartz veins.
SPC4007	39-41	Meta-andesite with foliated zones; disseminated pyrite and hematite; minor fractures and cast remnants.
SPC4008	41-43	Meta-andesite with disseminated pyrite, contains minor thin cross cutting quartz veins with pyrite casts and specular hematite.
SPC4009	43-45	Meta-andesite with disseminated pyrite and 1cm thick cross cutting quartz pyrite veinlets. Grades into foliated hematitic greenschist with minor pyrite and magnetite.
SPC4010	45-47	Greenschist with ptygmatic vein quartz, minor disseminated pyrite, minor quartz carbonate veins and minor hematitic bands.
SPC4011	47-49	Foliated greenschist, ptygmatic veins quartz; several large quartz carbonate pyrite veins with hematitic selvages; moderate hematite bands, minor pyrite and pyrite casts.
SPC4012	49-51.5	Foliated greenschist with ptygmatic vein quartz, minor pyrite and some large quartz lenses.

SAMPLE NUMBER	INTERVAL (m)	DESCRIPTION
SPC4013	51.5-62	Foliated greenschist with large pyritic blebs; 1-2cm thick quartz carbonate veins and pyrite casts.
SPC4014	62-64	Foliated greenschist grading into a meta-andesite; contains metasomatic pyritic vein quartz; some large quartz lenses and traces of disseminated py.
SPC4015	64-66	Greenschist containing a 10-15cm thick silicic zone with carbonate blebs and minor disseminated pyrite.
SPC4016	66-68	Greenschist, partly silicic with carbonate blebs, disseminated pyrite, minor quartz veinlets and a carbonate chlorite vein.
SPC4017	68-70	Greenschist with apparent original bedding, ptygmatic vein quartz, minor disseminated pyrite and minor cross cutting quartz carbonate veins.
SPC4018	70-72	Greenschist, containing lensoidal quartz veins with carbonate blebs; moderate disseminated pyrite and traces of fracture filled veinlets.
SPC4019	72-74	As above.
SPC4020	74-76	Greenschist with quartz carbonate alteration, disseminated pyrite and quartz rich zones with hematite pyrite selvages.
SPC4021	76-78	Greenschist with disseminated pyrite; quartz carbonate pyrite zones; hematite stained fractures and hematitic selvage alteration.
SPC4022	78-80	As above with highly fractured meta-andesite between 78.5 and 79m; the fractures contain carbonate and hematite.
SPC4023	80-82	As above grading into a pink grey white carbonate alteration zone 1-1.5m thick.
SPC4024	82-84*	Quartz carbonate altered greenschist with talc rich zones, highly fractured. Grades into a greenschist containing pink carbonate in fractures.
SPC4025	84-86	Greenschist with thick boudin quartz veins; carbonate filled fractures and traces of disseminated pyrite.
SPC4026	86-88	As above with a thick cross cutting carbonate vein, chlorite rich zones and minor talc

Mine timber

* 1.5m of core missing. ← Mine W'kgs.

SAMPLE NUMBER	INTERVAL (m)	DESCRIPTION
SPC4027	88-90	Greenschist containing a 20cm thick zone of vein quartz; lensoidal vein quartz and several cross cutting carbonate veins; fractures are carbonate and quartz rich.
SPC4028	90-92	Greenschist, containing minor lensoidal vein quartz and minor cross cutting carbonate veins.
SPC4029	92-94	Greenschist, containing a silicic carbonate altered zone; minor thin carbonate veins; minor ptygmatic vein quartz and minor disseminated pyrite.

SPECIMEN CREEK - DDH SPC 4

DEPTH (M)	SAMPLE NUMBER	ELEMENTS (ppm)								
		Cu	Pb	Zn	Ni	Fe%	Mn	Ag	As	Au
25-27	SPC4000	20	x	50	40	4.05	205	x	5	x
27-29	SPC4001	35	x	25	35	2.80	130	x	5	x
29-31	SPC4002	40	x	25	50	2.45	130	x	3	0.005
31-33	SPC4003	85	x	20	40	2.85	170	x	5	x
33-35	SPC4004	70	x	25	70	3.35	245	x	2	x
35-37	SPC4005	50	x	20	40	3.50	285	x	4	x
37-39	SPC4006	35	x	20	80	3.05	280	0.1	4	x
39-41	SPC4007	40	x	20	80	2.80	245	0.1	9	0.003
41-43	SPC4008	75	x	25	40	3.25	285	0.1	7	0.002
43-45	SPC4010A	170	x	30	45	3.60	295	x	8	x
45-47	SPC4010B	135	5	40	55	4.45	345	x	5	0.003
47-49	SPC4011	115	x	35	75	3.50	225	x	17	0.002
49-51.5	SPC4012	90	x	40	35	2.70	130	x	5	x
51.5-62	SPC4013	20	5	65	65	4.80	285	x	6	x
62-64	SPC4014	5	x	70	65	4.20	310	x	2	0.003
64-66	SPC4015	5	x	55	45	3.25	250	x	x	0.002
66-68	SPC4016	10	10	30	60	2.70	275	x	5	0.002
68-70	SPC4017	15	5	20	45	2.20	370	x	7	x
70-72	SPC4018	5	5	40	65	4.10	300	x	4	0.002
72-74	SPC4019	15	5	45	65	4.25	315	x	2	0.002
74-76	SPC4020	65	x	30	45	2.40	170	x	7	0.003
76-78	SPC4021	15	x	30	80	3.15	220	x	4	x
78-80	SPC4022	10	5	25	95	3.20	345	x	10	x
80-82	SPC4023	10	x	20	55	4.60	610	x	9	0.003
82-84	SPC4024	20	x	15	140	2.85	615	x	4	x
84-86	SPC4025	65	x	75	55	3.90	510	x	2	x
86-88	SPC4026	95	x	70	110	3.90	475	x	11	0.002
88-90	SPC4027	125	10	60	110	4.10	490	x	13	x
90-92	SPC4028	35	5	40	50	4.90	685	x	4	x
92-94	SPC4029	140	x	70	80	5.10	875	x	21	x
Method		101	101	101	101	101	101	102	114	325

x Below the limit of detection

275099

SPC 5

Drilled parallel to reef.

∴ did not intersect reef.

275100

Drilling Log Specimen Reef No. 5

Location : Specimen Creek, Savage River Area, EL 4/61
Map No : 7915-111, Horton 1:50,000
Co-ordinates : 352300mE, 5411056mN (AMG) - Specimen Reef Grid : 200S, 25E
R.L. of site : 434 metres
Inclination : At Collar 50°, Bearing: E along traverse (130° magnetic)
Core size : NQ - 0 to 6 metres, NQ - 6 to 70 metres, Core Recovery: 61%
Drill : Diamond Drill - Mindrill 10L (Type 250)
Driller : Associated Diamond Drillers
Date Commenced : 7th March 1982
Date Completed : 10th March 1982
Final Depth : 70 metres

Turnagain Reef DDH 5 — GEOLOGICAL LOG — Page: 27510

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
6.00		2.05		34	Strongly weathered foliated rock. Strong limonite staining throughout and minor localized hematite staining. Numerous small rounded aggregate crystals which appear to be feldspars	6.00	
18.60		1.35		8	Strongly weathered foliated rock. Strong to moderate limonite staining. Weak hematite staining locally on fracture surface. Rock is bleached	12.60	
22.50		.65		17	Weathered greenschist. Lesgang bands of hematite. Numerous quartz veins containing leached out cavities of possibly carbonate material are observed throughout interval. Areas adjacent to quartz veins exhibit strong bleaching	3.90	
29.25		2.90		43	Weathered greenschist, greenish brown to light brown in color. Moderately limonite stained. Several limonite after pyrite inclusion and weathered out pyrite cavities throughout interval. Strong Fe staining on fracture surfaces.	6.75	
37.30		6.45		80	Weathered greenschist, greyish brown in color. Weak to moderate limonite staining. Strong Fe staining on fracture surfaces. Rock in bleached locally. 31.75 & 33.20 cavities of plugmatic qtz veins containing leached out cavities	8.05	

Continued over

ASSAY DATA

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Specimen Reef DDH 5 — GEOLOGICAL LOG — Page: 2 of 4

TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
38.35		1.05		100	Moderately to Strongly foliated greenschist. This interval is marked with strong ptygmatic quartz veining which closely parallel foliation (SA = 45°. Greenschist exhibits stronger foliation adjacent to ptygmatic qtz veins, where chlorite, and plagioclase & dark oxidation products are segragated into distinct laminations. Disseminated pyrite throughout. Small inclusions of what appears to be chalcopyrite, but may be tarnished pyrite found in plagioclase bands	1.05	
39.60		1.25		100	Silicified meta-volcanic rock. Light grey in color. Strong hematite staining on fracture surfaces. Numerous inclusions of pyrite & limonite after pyrite throughout interval. Very little quartz veining. Core is quite homogenous.	1.25	
43.30		1.75		47	Meta-volcanic rock. Strong limonite & hematite staining on fracture surfaces. Shattered inclusion of pyrite throughout interval 40.10 – 40.45 silicified meta-volcanic rock. Light grey in colour 40.75 – 40.90 zone of ptygmatic qtz veins with stronger foliation on adjacent rocks.	3.70	
45.10		1.66		92	Minous Greenschist & Phyllite. Weakly foliated. No quartz veins. Disseminated pyrite throughout.	1.80	

Continued over

ASSAY DATA

LE	FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

Specimen Reef DDH 5 — GEOLOGICAL LOG —

FROM ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
10	46.20	~~1.60~~ 1.20	75	Bleached meta-volcanic rock. Weak pervasive limonite and hematite staining with lineage banding locally. Strong hematite staining on fracture surfaces. A trace of disseminated pyrite, large inclusions locally.	1.60	
20	48.10	1.85	93	Moderately foliated greenschist & micaceous greenschist. Several ptygmatic quartz veins with numerous pyrite inclusions locally. Strong hematite and limonite staining on fracture surfaces. A trace of disseminated pyrite. 47.36 – 47.60 zone of bleached greenschist with limonite staining.	2.00	
0	54.20	5.10	93	Weakly foliated greenschist. CSA = 50°. Moderate hematite and limonite staining on fracture surfaces. A trace of disseminated pyrite. Core is silicified in 2 localities.	5.50	
0	60.25	5.55	92	Weakly foliated intermediate volcanic rock fresh & silicified. Silicification and limonite staining is concentrated near quartz veins at several locations. Strong limonite and hematite staining on fracture surfaces. Disseminated pyrite locally. Areas of silicification exhibit weak bleaching of volcanic rock.	6.05	

Continued over

ASSAY DATA

FROM ft. ins.	TO ft. ins.	RECOVERY ft. ins.	RECOVERY %	ASSAY RESULTS

Specimen Reef DDH 5 GEOLOGICAL LOG

FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
25		62.50		2.95		49	~~Micaceous~~ Micaceous greenschist moderately foliated. Two large ptygmatic quartz veins both approximately 15 cm thick, adjacent greenschist is strongly foliated and large areas of chlorite can be observed. Disseminately pyrite throughout interval. Several small inclusions of chalcopyrite were found locally.	6.05	
50		64.35		1.65		89	Greenschist and micaceous greenschist locally. Several plagioclase – carbonate veins containing numerous inclusions of pyrite up to 10% of vein material locally, also minor chalcopyrite. Finely disseminately pyrite throughout interval.	1.85	
35		70.00		5.10		90	Greenschist and micaceous greenschist locally. Numerous ptygmatic quartz veins throughout some containing large pyrite inclusions. Adjacent greenschist is strongly foliated Ptygmatic veins parallel foliation. Other smaller qtz veins are found cross-cut foliation. 67.30 – 67.60 zone of plagioclase – carbonate veining with high percentage of pyrite.	5.65	

Continued over

ASSAY DATA

E	FROM ft.	FROM ins.	TO ft.	TO ins.	RECOVERY ft.	RECOVERY ins.	RECOVERY %	ASSAY RESULTS

SPC 6.

No down hole surveys.

If hole steepened, it would not have intersected reef.

DRILL CORE DESCRIPTION
SPECIMEN REEF DDH - SPC6

FROM M	TO M	INTERNAL M	RECOVERY M		GEOLOGICAL DESCRIPTION & REMARKS
42.5	44.2	1.7	1.7	100%	Cream/green/grey psammitic meta volcanic with 30% mafic (chlorite or actinolite) mineralogy. Contains cream/grey silicic alteration bands with numerous quartz-carbonate veins (1mm-30mm thick). These veins contain creamy pink carbonate and large pyritic crystal blebs. Several cross-cutting fracture filled quartz pyrite veinlets occur and a zone (43.2-43.6) of disseminated pyrite is also present.
44.2	47.4	3.2	3.05	95%	Cream/green/grey psammitic meta volcanic with silicic alteration bands and disseminated pyrite. A major alteration zone with a 25 cm cavity occurs at 45.3-46m. Numerous thin (1-2mm) carbonate and quartz veinlets and several vuggy quartz-carbonate veinlets are present.
47.4	50.4	3.0	2.9	97%	Psammitic meta volcanic containing numerous carbonate and quartz-carbonate veinlets. Some veinlets are vuggy others contain alteration haloes or pyritic accumulates. The meta volcanic becomes contorted and foliated between 48.8-50.4m. This zone contains numerous thick ptygmatic quartz vein and chloritic contorted blebs. At 48m a 10cm vein occurs.
50.4	52.1	1.7	1.6	95%	Foliated greenschist with traces of disseminated pyrite, minor carbonate and quartz-carbonate veinlets. Contain two veins 5-10cm thick at 50.4 and 51m. Some ptygmatic quartz is also present.
52.1	52.6	0.5	0.4	80%	Puggy green/black clay grades into a foliated greenschist which contains ptygmatic vein quartz.

FROM M	TO M	INTERNAL M	RECOVERY M		GEOLOGICAL DESCRIPTION & REMARKS
52.6	53.4	0.8	0.65	81%	Foliated black/grey/cream/orange carbonate talc rich greenschist very crumbly with traces of disseminated pyrite and minor vein quartz.
53.4	54.2	0.8	0.8	100%	A cream/grey alteration zone, highly silicic with numerous vUgs and cavities, contains traces of disseminated pyrite and minor carbonate veinlets.
54.2	55.8	1.6	1.6	100%	Meta-volcanic with quartz-carbonate veinlets and some alteration. Contains minor pyrite in some of the veinlets.
55.8	56.4	0.6	0.6	100%	As above but grades into a foliated greenschist zone.
56.4	58.3	1.9	1.9	100%	Foliated greenschist with minor thin quartz veinlets and disseminated pyrite. Grades into a meta-volcanic with minor carbonate and quartz carbonate veinlets, some containing large pyrite crystals.
58.3	60.1	1.8	1.7	95%	Cream/black/grey meta-volcanic which contains numerous veins and veinlets of carbonate and quartz carbonate. Some veins are vuggy and pyritic others are surronded by alteration zones of variable thickness. Disseminated pyrite is present and at 60-60.1m a cream/pink pyritic carbonate vein occurs. Talc is present along some fractures while some thin cross-cutting fractures are infilled by pyrite.
60.1	62.4	2.3	2.3	100%	As above but with highly fractured zones after 60.7. Partial to total alteration occurs in the alteration zones and talc predominantly infills the fractures. After 61.7m a zone of total alteration occurs which contains several thick carbonate veins.

FROM M	TO M	INTERNAL M	RECOVERY M		GEOLOGICAL DESCRIPTION & REMARKS
62.4	64.6	2.2	2.2	100%	A zone of total to partial alteration with numerous carbonate veinlets, vugs and some vuggy pyrite quartz veins. Contains talc infilled fractures and disseminated pyrite aligned to the foliation.
64.6	66.4	1.8	1.75	97%	Partial to totally altered meta volcanic grades into a foliated carbonate rich greenschist which contains numerous vuggy quartz lenses parallel to the foliation some of the quartz lenses contain disseminated pyrite. A very crumble zone occurs between 66 and 66.4m.
66.4	67.1	0.7	0.7	100%	A foliated carbonaceous greenschist with quartz lenses and traces of disseminated pyrite.
67.1	68.2	1.1	1.1	100%	As above but with less carbonate and fewer quartz veins and some talc.
68.2	69.7	1.5	1.5	100%	Foliated greenschist grades into a slightly foliated meta-volcanic. The meta volcanic contains several thin carbonate veinlets, and some thick quartz carbonate veins. Pyrite is in disseminated form but also occurs as blebs in fractures.
69.7	71.2	1.5	1.4	96%	Talc-carbonate schist with traces of disseminated pyrite. At 70.3 two quartz-carbonate veins cross-cut the cleavage. These 3-4cm thick veins contain blotchy pinkish-orange carbonate selvaged by some pyritic accumulates. After 70.5 a highly altered zone occurs which is fractured and contains quartz-carbonate veins and minor pyrite.
71.2	71.9	0.7	0.7	100%	Creamy/pink/grey/green talc-carbonate schist, containing disseminated pyrite

FROM M	TO M	INTERNAL M	RECOVERY M		GEOLOGICAL DESCRIPTION & REMARKS
					and pyritic stringers. Several thin quartz-carbonate veins occur between 71.2-71.5m.
71.9	73	1.1	1.1	100%	Talc carbonate schist containing very minor graphitic laminae, disseminated pyrite and a few thin (<5mm) quartz-carbonate veins. Grades into a psammitic zone with 1% disseminated pyrite.
73	74	1.0	0.75	75%	Psammitic-talc schist with minor disseminated pyrite. Grades into a zone which contains numerous quartz-carbonate veins. Some veins contain patches of fine pyrite.
74	74.4	0.4	0.35	88%	A puggy cream/green/grey talc-mica schist with traces of graphite.
74.4	75.5	1.1	0.8	74%	Light grey/green carbonaceous-talc schist with traces of disseminated pyrite. Contains several puggy zones and some quartz-carbonate veinlets.
75.5	76.5	1.0	1.0	100%	Carbonaceous-talc schist grades into a silicic carbonate zone with numerous cream/pink quartz carbonate veinlets. Between 76.3 and 76.5m graphitic patches occure. Disseminated pyrite occurs throughout the sample.
76.5	80.4	3.9	3.9	100%	Zone of total alteration, containing silica, white and creamy carbonates, talc and chlorite (actinolite?) rich mineral assemblage. The alteration minerals occur in a blotchy form within a highly fractured but cohesive sample. Several thick 1-2cm quartz-carbonate veins cross-cut the alteration. Pyrite occurs in massive form, as stringers and as accumulates in fractures, pyrite forms up to 5% of some zones of the sample. A minor

FROM M	TO M	INTERNAL M	RECOVERY M		GEOLOGICAL DESCRIPTION & REMARKS
					red-mineral possibly rhodochrosite occurs as a replacement mineral in some carbonates.
80.4	83.4	3.0	2.95	97%	80.4-82m highly altered meta-volcanic with patches of quartz-carbonate and a carbonate rich matrix. Contains silicic zones and minor cross-cutting quartz-carbonate veins. A red mineral replaces the carbonate in several veins. Pyrite occurs as small blebs, predominantly in the cross-cutting veins. Small blotches of chloritic relic volcanic material occurs in the altered zone. 82-83.4m slightly foliated green/grey chlorite talc? meta-volcanic. Highly silicic slightly carbonaceous with cross-cutting quartz-carbonate veins(<3cm thick). Disseminated pyrite occurs as small and large blebs throughout the sample. The cross-cutting veins contain a network of an unknown black bladed mineral (psilomelane?) and an unknown red mineral.
83.4	86.4	3.0	3.0	100%	Grey-violet silicic and slightly carbonaceous meta-volcanic with folded chloritic remnants. Between 83.55 and 83.95 similar quartz-carbonate veins and veinlets occur. They contain a network of an unknown black mineral which forms <20% of the veins; minor amounts of an unknown red mineral and 5 & 10% pyritic accumulates. The veins are linked by stingers containing pyrite and the black mineral. Between 84.4 and 85m quartz-carbonate patches and a 3cm vein occurs. This zone contains between 5-15% pyrite in large accumulates and very minor amounts of the unknown red and black minerals. At 85.3-85.7 a

Dip of vein set at
83.4m - 40°
84.4m - 45°
85.4m - 50°

* Thin Section at 83.85m

FROM M	TO M	INTERNAL RECOVERY M	M		GEOLOGICAL DESCRIPTION & REMARKS
					thick quartz-carbonate vein occurs. The vein contains minor pyritic blebs and traces of the black and red minerals along its selvages. Between 85.7 and 86.4 there are numerous quartz carbonate veins which contain the unknown red and black minerals. This zone contains some fracturing infilled by carbonate and randomly distributed pyritic accumulates.
86.4	89.4	3.0	3.0	100%	Alteration zone similar to the above intersection. Contains grey/violet siliceous and slightly carbonaceous meta-volcanic; with pyritic blebs, chloritic patches and networks of thin carbonate rich veinlets. The zone contains several thin quartz-carbonate veins and minor amounts of the blackish and red minerals in massive and disseminated for. Traces of a green mineral.
	Dip of vein set at 86.45 - 35° 89.2 - 40°				
89.4	92.4	3.0	3.0	100%	As above but containing patches with slightly altered green chloritic meta-volcanic. Also containing pyritic zones (5% pyrite) particularly in areas of silicification and in some of the quartz-carbonate veins. At 90.7m a 2.3cm pyritic (20% pyrite) quartz carbonate vein with the unknown red and black minerals occurred. Many of the carbonate veins >2cm thick contain a creamy-pink carbonate and traces of chalcopyrite occurs in thin veinlets. Minor talc.
	Dip of vein sets at 89.6 - 89.7m - 40° & 14° 90.2m - 65° & 43° 92.3m - 55°				
92.4	93.7	1.3	1.3	100%	This interval contains two silicified zones at 92.1-92.85, and 93.3-93.7m; which contain several 1-2cm thick quartz-carbonate veins with two carbonates, pyritic blebs and black mineralization. Between the silicic zone slightly altered
	Dip of vein sets at 92.9m - 16°				

FROM M	TO M	INTERNAL M	RECOVERY M		GEOLOGICAL DESCRIPTION & REMARKS
					green-chlorite meta-volcanic with disseminated pyrite and numerous quartz-carbonate veins occurs.
93.7	95.4	1.7	1.7	100%	The interval contains 50% silicic-carbonate alteration. Total alteration occurs at 94.4-94.7m and at 94.8-95.1m the alteration zones are linked by silicification which traces the foliation. The first alteration zone contains a 3-4cm thick quartz-carbonate vein (possible equivalent of auriferous vein in SPC1) which contains large pyritic accumulates and massive black mineralization. Both form between 10-15% of the vein. The second alteration zone contains numerous thin creamy-carbonate veins.
95.4	98.4	3.0	3.0	100%	The interval contains 50% silicic-carbonate alteration. Numerous <2cm thick carbonate veins are surrounded by silicic alteration haloes up to 15cm thick. Disseminated pyrite occurs throughout fault displaced carbonate vein occurs at 98m. This 6cm thick quartz-carbonate vein contains minor quantities of pyrite and black mineralization.
	Dip of vein sets at 98m - 40°				
98.4	100.7	2.3	2.3	100%	As above but containing numerous 2cm thick, white, quartz carbonate veins, some containing pyrite and the red-black mineralization.
	Dip of vein sets at 99.6m - 50° 99.8m - 32°				
100.7	102.4	1.7	1.7	100%	Foliated green-chloritic meta-volcanic with thick ptygmatic quartz veins, 10% silicic carbonate alteration and disseminated pyrite. Several carbonate veins occur with or without silicic haloes. Traces of cpy? (different pyrite phase).

FROM M	TO M	INTERNAL M	RECOVERY M		GEOLOGICAL DESCRIPTION & REMARKS
102.4	104.4	2.0	2.0	100%	As above.
104.4	107.3	2.9	2.9	100%	Foliated green chloritic meta-volcanic with numerous 1-2cm thick carbonate veins, some veins contain two carbonates and inclusions of country rock. Minor pytgmatic vein-quartz, minor disseminated pyrite.
	Dip of vein sets at 105.8m - 18° 106.9m - 20° 197.2m - 28°				
107.3	110.4	3.1	3.1	100%	Foliated meta-volcanic with zones containing 5% pyrite as large blebs. Very minor carbonate veins. At 108.5 a 1cm thick quartz-carbonate vein with two carbonates cross-cuts the foliation.
	Dip of vein sets at 108.6m - 8°				
110.4	113.4	3.0	3.0	100%	Foliated meta-volcanic containing disseminated pyrite. About 10 thin quartz carbonate veins cross-cut the foliation.
113.4	116.4	3.0	3.0	100%	Foliated meta-volcanic containing ptygmatic vein quartz and disseminated pyrite. At 15m a 1cm cr-or carbonate vein with a 15cm silicic aureole grading pyritic alteration zone occurs. There are also several thin quartz-carbonate veins some with narrow silicic alteration bands.
	Dip of vein sets at 115m - 16°				
116.4	119.4	3.0	3.0	100%	As above but with fewer ptygmatic veins and a silicic-carbonate alteration zone at 17.6m. The 10cm alteration zone contains several thin quartz-carbonate veins and a 1cm cr-or carbonate vein.
119.4	122.4	3.0	3.0	100%	Foliated meta-volcanic containing numerous quartz-carbonate veins and veinlets some with narrow silicic haloes. At 120.9 a silicic alteration zone occurs which contains disseminated pyrite and numerous thin quartz-carbonate veinlets.
122.4	125.4	3.0	3.0	100%	The silicic alteration zone ends

FROM M	TO M	INTERNAL M	RECOVERY M		GEOLOGICAL DESCRIPTION & REMARKS
					at 125.5m. Between 122.5 and 123m several narrow carbonate veins occur, at 123m a 10cm silicic zone occurs. After 123m the foliated meta-volcanic contains few carbonate veins.
125.4	128.4 Dip of vein sets at 125m - 45°	3.0	3.0	100%	Foliated meta-volcanic with ptygmatic vein quartz and disseminated pyrite. Some pyritic accumulations to foliation and very few thin carbonate veins.

GEOCHEMICAL ANALYSES

SPECIMEN REEF - D.D.H. 85 SPC 6

SAMPLE INTERVAL	ELEMENTS (ppm) Cu	Pb	Zn	Mn	As	Analabs Au	WMC Au
			SLUDGE				
0 - 1.9	105	10	85	320	39	X	
1.9 - 4.9	95	10	55	230	40	X	
4.9 - 7.9	85	5	60	290	41	X	
7.9 - 10.9	90	10	70	355	45	X	
10.9 - 13.9	50	10	75	290	40	X	
13.9 - 16.9	25	10	55	170	16	X	
19.9 - 22.9	10	5	30	115	3	X	
22.9 - 25.9	10	X	40	150	2	X	
25.9 - 28.9	20	X	35	160	4	X	
28.9 - 30.9	40	X	35	150	7	X	
30.9 - 34.9	80	X	30	95	6	X	
34.9 - 37.9	70	X	40	205	30	X	
37.9 - 40.9	55	5	45	300	29	X	
40.9 - 42.5	40	X	35	300	13	X	
			CORE				
42.5 - 44.2	20	X	30	285	6	X	X
44.2 - 47.4	50	X	25	360	3	X	X
47.4 - 50.4	5	X	35	415	9	X	X
50.5 - 53.4	60	5	100	1300	15	X	X
53.4 - 56.4	35	X	25	190	3	X	X
56.4 - 58.3	120	X	20	310	14	X	X
58.3 - 60.1	30	X	20	290	7	X	X
60.1 - 62.4	175	X	15	280	15	X	X
62.4 - 64.6	70	X	15	620	12	X	X
64.6 - 67.1	245	X	50	920	12	X	0.03
67.1 - 69.7	260	X	180	720	6	X	0.02
69.7 - 73.0	50	X	110	1450	15	X	<0.02
73.0 - 76.5	60	X	30	645	11	X	0.02
76.5 - 77.6	15	5	10	800	10	X	0.03
77.6 - 78.5	10	X	5	600	10	X	0.02
78.5 - 79.5	20	X	5	475	6	X	0.03
79.5 - 80.4	15	X	5	680	18	X	X
80.4 - 81.4	10	X	5	750	4	X	X
81.4 - 82.4	35	X	10	765	8	X	X
82.4 - 83.4	5	X	15	315	4	X	X
83.4 - 84.4	20	X	10	660	16	X	X
84.4 - 85.4	105	X	5	975	11	X	X
85.4 - 86.4	15	X	10	575	20	X	X
86.4 - 87.4	5	X	5	630	11	X	0.03
87.4 - 88.4	5	X	5	575	9	X	X

SAMPLE INTERVAL	ELEMENTS (ppm) Cu	Pb	Zn	Mn	As	Analabs Au	WMC Au
88.4 - 89.4	5	X	5	530	11	X	X
89.4 - 90.4	25	X	15	845	10	X	X
90.4 - 92.4	25	X	10	685	9	X	X
92.4 - 94.5	5	X	15	405	11	X	0.02
94.5 - 94.76	10	X	15	975	11	X	0.02
94.76 - 96.4	15	X	10	480	8	0.01	0.04
96.4 - 97.9	5	X	10	530	8	X	0.02
97.9 - 98.2	5	X	10	1500	5	X	0.02
98.2 - 99.8	5	X	15	435	7	X	X
99.8 - 102.4	85	X	15	490	10	X	X
102.4 - 104.4	420	X	20	540	4	X	X
104.4 - 106.4	15	X	25	390	4	X	X
106.4 - 109.4	95	X	30	520	7	0.02	X
109.4 - 112.4	185	X	45	620	6	X	X
112.4 - 115.4	5	X	35	530	8	0.01	X
115.4 - 117.4	5	X	30	455	8	0.01	X
117.5 - 119.4	10	X	20	385	8	X	X
119.4 - 120.4	5	X	20	390	3	X	X
120.4 - 121.4	5	X	10	685	10	0.02	X
121.4 - 128.4	5	X	65	625	4	0.01	X
122.4 - 125.4	30	X	35	915	7	X	X
125.4 - 128.4	5	X	40	644	2	X	X
METHOD	101	101	101	101	114	309	

NOTE

* Analabs Method 309 Fire Assay/AAS finish 20 ppb limit of detection.

* WMC Method 309 aqua region/AAS finish 20 ppb limit of detection.

X Below limit of detection (<0.02ppm)

275116

SPC 7-11

Percussion holes

Did not intersect Specimen Reef.

SPECIMEN REEF DRILLING OCT/NOV 1987

Specimen Reef 7, SPC 7.

Percussion : 6½ 0-3m, 4½" 3-44m.
Co-ordinates: 11.250N 52350E; AMG 5411256mN 352317mE.
Drilled : October 27, 1987.
Inclination : -62°.
Declination : 077° magnetic.
Depth of hole: 44m.
Water Table : approx. 20 - 22m.
Wet drilling: after 24m.

Sample Number	Interval	Au assay/checks	
SPC 7 / 1	0 - 3	x	.02
2	3 - 4	.01	
3	4 - 6	.01	
4	6 - 8	.04	
5	8 - 10	x	
6	10 - 12	x	
7	12 - 14	x	
8	14 - 16	x	
9	16 - 18	x	
SPC 7 /10	18 - 20	x	
11	20 - 22	x	
12	22 - 24	x	
13	24 - 26	x	<--- wet drilling
14	26 - 28	x	
15	28 - 30	x	
16	30 - 32	x	
17	32 - 34	x	
18	34 - 36	x	
19	36 - 38	x	
20	38 - 40	x	
21	40 - 42	x	
SPC 7 /22	42 - 44	x	x/x

4

275118

Specimen Reef 8, SPC 8.

Percussion : 6½" 0-3m, 4½" 3-42m.
Co-ordinates : 11.250N 52340E; AMG 5411256mN 352307mE.
Drilled : 27-28 October, 1987.
Inclination : -65°.
Declination : 077° magnetic.
Depth of hole : 42m.
Water table : 28 - 30m.
Wet drilling : after 30m.

Sample Number	Interval	Au assay/checks	
SPC 8 / 1	0 - 3	x	x
2	3 - 4	x	
3	4 - 6	x	
4	6 - 8	x	
5	8 - 10	x	
6	10 - 12	x	
7	12 - 14	x	
8	14 - 16	x	
9	16 - 18	x	
SPC 8 /10	18 - 20	.03	
11	20 - 22	x	
12	22 - 24	x	
13	24 - 26	x	
14	26 - 28	x	
15	28 - 30	.01	<---- wet drilling
16	30 - 32	.03	
17	32 - 34	.01	
18	34 - 36	.02	
19	36 - 38	x	
SPC 8 /20	38 - 40	.01	

275119

Specimen Reef 9, SPC 9.

Percussion : 6½" 0 - 3, 4½" 3 - 36m.
Co-ordinates : 11.225N 52342E: AMG 5411231mN 352309mE.
Drilled : 28 October, 1987.
Inclination : -60°.
Declination : 071° magnetic.
Depth of hole : 36m.
Water table : -
Wet drilling : -

Sample Number	Interval	Au assay / checks	
SPC 9 / 1	0 - 3	x	
2	3 - 4	x	
3	4 - 6	x	
4	6 - 8	x	x
5	8 - 10	x	.04
6	10 - 12	x	
7	12 - 14	.01	
8	14 - 16	x	
9	16 - 18	x	
SPC 9 /10	18 - 20	x	
11	20 - 22	x	
12	22 - 24	x	
13	24 - 26	x	
14	26 - 28	x	
15	28 - 30	x	x
16	30 - 32	x	
17	32 - 34	x	
SPC 9 /18	34 - 36	x	

275120

Specimen Reef 10, SPC 10.

Percussion : 6½" 0-3m, 4½" 3-34m,
Co-ordinates : 11.200N 52365E; AMG 5411205mN 352313mE.
Drilled : 28 October, 1987.
Inclination : -60°.
Declination : 080° magnetic.
Depth of hole : 34m.
Water table : 24 - 26m.
Wet drilling : 26m.

Sample Number	Interval	Au assay/checks	
SPC 10/ 1	0 - 3	.05	
2	3 - 4	.04	
3	4 - 6	x	
4	6 - 8	x	
5	8 - 10	x	
6	10 - 12	x	
7	12 - 14	x	
8	14 - 16	x	
9	16 - 18	x	
SPC 10/10	18 - 20	x	
11	20 - 22	x	
12	22 - 24	x	
13	24 - 26	.44	<---- wet drilling
14	26 - 28	x	
15	28 - 30	x	
16	30 - 32	.03	x
SPC 10/17	32 - 34	x	

Specimen Reef 11, SPC 11.

275121

Percussion : 6½" 0-3m, 4½" 3-39m.
Co-ordinates : 11.200N 52353E; AMG 5411205mN 352301mE.
Drilled : 29 October, 1987.
Inclination : -60°.
Declination : 068° magnetic.
Depth of hole : 39m.
Water table : 30m.
Wet drilling : after 32m.

Sample Number	Interval	Au assay/checks	
SPC 11/ 1	0 - 3	.20	
2	3 - 4	x	
3	4 - 6	x	
4	6 - 8	x	
5	8 - 10	x	
6	10 - 12	x	
7	12 - 14	.01	
8	14 - 16	.11	.11
9	16 - 18	.06	
SPC 11/10	18 - 20	x	
11	20 - 22	x	
12	22 - 24	x	
13	24 - 26	x	
14	26 - 28	x	
15	28 - 30	x	
16	30 - 32	.01	
		<---- wet drilling	
17	32 - 34	x	
18	34 - 36	x	
SPC 11/19	36 - 39	x	x

275122

SPC 12

Hole deepened in 1990.

Any down hole surveys?

Should have hit reef about 110m.

If reef steepened or hole flattened to SE, then would not have reached reef.

275123

CORE LOG - SPC 12 - H. SHANNON

0	- 68.8	percussion drilling.
68.8	- 69.5	banded chlorite / quartz feldspar schist with minor blobs of quartz C.S.A. 10^{o}.
69.5	- 71.9	light greenish grey massive, sandy greenschist speckled with carbonate porpyroblasts, alteration zones (yellowish pink) associated with hairline carbonate veins C.V.A. Set 1 35^{o}, Set 2 70^{o}.
71.9	- 74.7	greenish grey massive greenschist, few veins and minimal wall rock alteration.
74.7	- 76.5	mainly pale grey "wall rock alteration" phase with relics of unaltered greenish grey massive greenschist. Pink carbonate veins normally <1cm, C.V.A. 60^{o}. Carbonate porpyroblasts present.
76.5	- 76.65	cluster of 3 veins with approximately equal amount of altered greenschist. The vein material consists of white carbonate (dolomite?) 80% pink carbonate (magnesite, ankerite?) 15% quartz 5% plus a trace of pyrite. C.V.A. 45^{o}.
76.65	- 77.7	c.f. 74.7 - 76.5 "wall rock alteration" etc.
77.7	- 78.5	dark grey green massive greenschist hairline veins without wall rock alteration minor pyrite along joints.
78.5	- 79.9	pinkish grey "wall rock alteration" phase, massive greenschist associated with <3mm thickness pink carbonate veins, C.V.A. 45^{o}. Relict cores of grey-green massive greenschist.
79.9	- 83.7	dark greenish grey banded schist including a 0.1m bed of massive grey-green massive greenschist, C.B.A. 75^{o}.

275124

83.7 - 87.4	greenish grey massive greenschist speckled with carbonate porpyroblasts (probably dolomite) quartz blob at 84.6m.
87.4 - 90.2	massive to foliated grey green greenschist with chlorite dominant bands at 87.4, 88.2 and 88.5m (dark green). Remainder contains C 20% carbonate with quartz-feldspar. Quartz blobs at 87.5, 88.6, 88.8 minor pyrite. Pyrite + chalcopyrite to 5% 90.1 - 90.2.

DRILLING LOG FOR SPC 12 DDH. continuation from 90.2m.

Location: AMG 5216210045, RL 440, T.D. 120.2m.

Drilled by: Stacpoole's, Launceston. Drillers: W. Bald, T. Lodge, 20-23/11/1989, for Savage Resources Ltd.

90.2-90.8	0.8m	full rec.: dark greenish grey granular feldspar chlorite schist; minor carbonate and pyrite; CSA 25 . At 90.3, quartz with carbonate vein; 90.4 quartz vein CVA 30deg no alteration.
90.8-92.5	1.7m	full rec.: grey green pyritic feldspar chlorite schist and granular feldspar chlorite schist. At 91.0, grey brown, pyrite rich band; at 92.3 pyrite blobs and veins.
92.5-93.2	0.8m	full rec.: greenish grey granular feldspar chlorite schist. Pyrite bands 1cm at 92.7, 93.1. Silicified 92.9-93.2, minor carbonate veins with quartz and pyrite and alteration rims; CVA 45, VSA 80; other veins with no alteration CVA 30 plus irregular quartz.
93.2-96.5	3.3m	full rec.: granular to laminated feldspar chlorite schist with pyrite; pyrite rich 96.3, ptygmatic quartz blobs 95.7, 96.1.
96.5-97.0	0.5m	full rec.: light greenish grey quartz rich schist; at 96.8 band tan feldspar chlorite schist, also minor carbonate veins, CVA 40, CSA 30, VSA 80.
97.0-97.9	0.9m	full rec.: very dark greenish grey fissile chlorite schist, pyritic, with ptygmatic quartz blobs.
97.9-99.6	1.7m	full rec.: very dark brownish/greenish grey granular to weakly schistose feldspar chlorite schist; fissile chlorite schist and quartz blobs at 98.8; pyrite rich bed CBA 20 at 98.9.
99.6-100.1	0.5m	full rec.: very dark greenish grey chlorite schist with ptygmatic quartz blobs.
100.1-101.4	1.3m	full rec.: dark greenish grey, granular to laminated feldspar chlorite schist, some pyritic grading to brownish from 101.0; minor carbonate veins with light yellowish grey alteration.

101.4-103.6 2.2m full rec.: very dark greenish grey and some brownish chlorite schist; pyritic bands commenn ptygmatic quartz blobs. CSA 35; CVA of carbonate veins 40deg. at 102.2 with alteration rims. CVA carbonate vein at 102.6 45deg. no alteration.

103.6-104.0 0.4m full rec.: greenish grey and yellowish grey quartz rich granular feldspar chlorite schist.

104.0-108.0 4.0m full rec.: dark greenish grey chlorite schist with quartz blobs, CSA 30. Also laminated feldspar chlorite schist, 104.2-105.0; 106.0-106.2, quartz 105.2-105.4; 105.8-106.0, carbonate veins 105.1; 1cm; CVA 60, 106.5; 107.2 CVA 30.

108.0-111.1 3.1m full rec.: dark brownish grey and greenish grey laminated micaceous chlorite feldspar schist with carbonate and pyrite. Carbonate rich 108.0-108.3 (pyritic bands 108.2). Carbonate veins 108.4, 109.2, 109.4 with minor alteration; at 110.6 with no alteration. CVA 45, CSA 33, VSA 100. 2cm alteration zone at base, grades to granular from 110.4.

111.1-111.22 0.12m full rec.: pyritic "alteration quartzite" (feldspar) with carbonate veins on both boundaries, CVA 55, CSA 30, VSA 90 and gash veins CVA c80. This is interpreted as the SPECIMEN REEF vein unfortunatly clogged by a piece of detached country rock. The carbonate vein material contains two carbonates, pyrite and magnetite.

111.12-111.65 0.43m full rec.: yellowish grey alteration product of schist with hairline carbonate veins from 111.50.

111.65-113.25 1.55m full rec.: dark brownish grey and dark greenish grey micaceous feldspar chlorite schist with carbonate and pyrite; quartz blobs.

113.25-113.9 0.65 full rec.: greenish grey granular quartz rich feldspar chlorite schist.

113.9-120.2 6.3m full rec.:dark brownish grey and brownish grey micaceous chlorite schist with pyrite, quartz blobs and carbonate veins without alteration; 115.7, 116.5, 116.8, 119.0.

End Hole.

275127

Specimen Reef 12, SPC 12.

Percussion	:	6½" 0-3m, 4½" 3-68.8m.
Diamond NQ	:	68.8m - 90.2m.
Co-ordinates	:	5411050mN, 352164mE.
Drilled	:	29,30 October and 3, 4 November, 1987.
Inclination	:	-90°.
Declination	:	-
Depth of hole	:	68.8 percussion, 90.42 diamond NQ.
Water table	:	
Wet drilling	:	

Sample Number	Interval	Au assay
SPC 12/ 1	0 - 3	x
2	3 - 4	x
3	4 - 6	x
4	6 - 8	x
5	8 - 10	x
6	10 - 12	x
7	12 - 14	x
8	14 - 16	x
9	16 - 18	x
SPC 12/10	18 - 20	x
11	20 - 22	x
12	22 - 24	x
13	24 - 26	x
14	26 - 28	x
15	28 - 30	x
16	30 - 32	x
17	32 - 34	x
18	34 - 36	x
19	36 - 38	x
SPC 12/20	38 - 40	x
21	40 - 42	x
22	42 - 44	x
SPC 12/23	44 - 46	x

275128

Specimen Reef 12, SPC 12.

Sample Number	Interval	Au Assay	Au fire assay		Interval
SPC 12/24	46 - 48	x			
25	48 - 50	x			
26	50 - 52	x			
27	52 - 54	x			
28	54 - 56	x			
29	56 - 58	x			
SPC 12/30	58 - 60	x			
31	60 - 62	x			
32	62 - 64	x			
33	64 - 66	x			
34	66 - 68.8	x			
SPC 12/35	68.8 - 69.7	x	x	<--diamond core	0.90
36	69.7 - 70.1	x	x		0.40
37	70.1 - 71.8	x	x		1.70
38	71.8 - 74.4	x	x		2.60
39	74.4 - 77.7	x	x		3.30
SPC 12/40	77.7 - 79.2	x	x		1.50
41	79.2 - 80.7	x	x		1.50
42	80.7 - 83.8	x	x		3.10
43	83.8 - 84.6	x	x		0.80
SPC 12/44	84.6 - 90.2	x	x		5.60

Assays for SPC 12 hole cont.

Source: Analabs report 236.1.08.06748, 12-12-89.

Sample/depth	Au	Au check results in p.p.m.
SPC 12 88.0-89.0	0.011	0.012
SPC 12 90.8-91.8	<0.008	
SPC 12 111.1-112.0	0.021	

275130

SPC 13

Hole drilled ~ dip of reef & dip not intersect reef, unless hole steepened dramatically. (which is possible).

No down hole surveys!

But more splitting justified

Introduction

Two drillholes were put down on the Specimen Reef prospect which encountered the target vein systems, and others, but not the visible gold hoped for. Veins with magnetite were comparatively large, up to 8cm and and the magnetite masses may include wolframite

Commentary on drilling

The drilling was intended to test hypotheses as follows:

1. In the case of SPC 14 the ore shoot of the original workings is reported to trend south and would be expected to pass through the area of this hole. Previous drilling of bores SPC 12 and SPC 6 limit the potential ore shoot both east and west. The Specimen Reef vein system was encountered as 1m of silicification with only minor carbonate veins close to its expected position. The target has now been limited still more severely. The lower vein system was detected but only as a cluster of thin carbonate veins with associated alteration. The wall rock is a bluish grey sandy schist which can be matched with rock outcropping where the old workings have been stoped out to the surface. No magnetite was seen in the hole.

2. The hole SPC 13 was intended to test the response of the Specimen Reef vein in the vicinity and in particular in the same wall rock zone as the thin but spectacular gold intersection of the SPC 1 drillhole.

This zone lies substantially east of the bluish grey schist and is greenish grey and more reasonably related to original basic tuff. In this hole the vein intersections were substantially lower than predicted and this attributed to a 2 degree shallowing of the hole from its initial 75 degree declination. (The point could not be tested since hole survey equipment was not available.) The speciman Reef vein was detected as a carbonate vein with altered schist margins but not a major one, the lower vein, which is intersected rather further from the original gold target than originally intended is a comparatively thick zone of mainly siliceous and magnetite bearing alteration with a cluster of magnetite bearing carbonate veins, of promising aspect but with no visible gold. There are also several other magnetite bearing carbonate veins in the lower portion of the core all more substantial than seen in any previous bore but also without visible gold.

Although the dark mineral mass is strongly magnetic, many larger crystals are bladed and show good cleavage, and a dark brown streak. These features are more like wolframite than magnetite. The cleavage may be a well developed parting such as is permissible for magnetite but there seems a possibility that the dark mineral mass contains magnetite and wolframite.

In the case of the SPC 1 drillhole the carbonate vein which contained visible gold in association with magnetite the adjacent alteration was pale olive altered schist that was not itself gold bearing, though the metre length samples above and below that alteration

zone, which were alteration quartzite were gold bearing. It appears that the rather special combination of a 2-carbonate vein with magnetite and pale olive grey altered schist adjoining is neccessary for the vein material proper to contain gold. All the other magnetite bearing veins seen in the drilling have had the "alteration quartzite" as the main component of the alteration zone, and these veins seem earlier and hotter than the gold bearing vein, whereas the greyish orange pink veins normally lack the magnetite though having the pale olive grey altered schist margins.

Drilling oddities

In SPC 13 great difficulty was encountered in getting the core barrel down once the magnetic interval 120-122 was passed. Apparently the drill rods became magnetized. The solution was to pull back several rods then to pump the core barrel past the bit. This made for slow drilling.

Samples

89/001 SPC 13 120.4-120.5m; 1/3 magnetite carbonate pyrite vein; 1/3 alteration quartzite; 1/3 altered schist.

89/002 SPC 13 121.45-121.55; 1/3 (quartz rimmed) carbonate magnetite pyrite vein 2/3 alteration quartzite with 10% basic schist.

89/003 SPC 13 134.4-134.7 alteration quartzite with magnetite.

89/004 SPC 13 134.7-135.35 carbonate veins and alteration quartzite with magnetite.

89/005 SPC 13 135.35-135.7 alteration quartzite with magnetite.

89/006 SPC 13 140.85-141.0 1/3 magnetite quartz carbonate vein 1/6 alteration quartzite; 1/2 basic schist.

89/007 SPC 13 143.2-143.35 carbonate magnetite pyrite vein 90% marginal alteration of schist 10%.

Geology

Some rough mapping was done to account for areas of 060 degree strike and other local features which do not conform to the major 020 degree trend. The map shows a conceptual model which fits the local distribution of distinctive rocks but is not supported by minor fold styles, which are more acute. Dips are westerly and steep.

Conclusion

The Specimen Reef is petering out at depth, whereas the Lower Vein system may be strengthening. The drill site intended to test the vein systems on the next road southward can be sited further west and need only be 180m deep. Only assays can show if there is worthwhile mineralization e.g. non-visible gold.

275135

DRILLING LOG FOR SPC 13 DDH.

Location: collar AMG 5215411027, RL 440; end, AMG 5218110993, RL 299.

Direction: 141.2 degrees AMG = 130 magnetic, inclined at 75 degrees initially but inferred to shallow to average 73 degrees; T.D. 147.5m.

Drilled by: Australian diamond drilling P/L, Stawell, Vic. Drillers: A. Butler, J. Grellie, 17-21/2/1989, for Savage Resources Ltd.

Non core drilling

0-8	reddish brown 10YR 4/6
8-16	light brown 5YR 5/6
16-18	dark yellowish orange 10YR 6/6
18-26	pale yellowish orange 10YR 8/6
26-32	dusky yellow 5Y 6/6 (damp), 5Y 6/4 (dry)
32-36	yellowish grey 5YR 6/2
36-44	light bluish grey 5B 7/1; 5B 6/1 (damp), water struck
44-52	greenish grey 5B 6/1
52-62	light olive grey 5Y 6/1 washed chips and some quartzite cavings.
62-64	olive grey 5YR 4/2 chips and minor cavings.
64-66	dark yellowish orange sand, cavings of quartzite: light olive grey 5YR 4/2 (alteration). More water struck; leached vein.
66-72	light olive grey 5Y 6/2 washed sand and chips with quartzite cavings.
72-78	light olive grey 5Y 5/2 as above
78-80	olive grey 5YR 4/2 as above
80-84	yellowish grey 5YR 7/2 with quartzite cavings: leached vein.
84-90	greenish grey 5GY 5/1 chips, fresh.

Core Drilling

from-to	interval	recovery/remarks
90.0-91.7	1.7m	full recovery: basic schist (albite quartz calcite chlorite actinolite schist) with minor pyrite; greenish black 5GY 2/1 to dark greenish grey 5G 4/1; CSA (= core schistocity angle in degrees) 35. At 91.5 CBA 40; vein set (a) at CVA 40, bedding/vein angle 90, vein contains "pink" and white carbonates ("pink" = greyish orange pink, 5YR 7/2), minor pyrite, trace magnetite; associated with light olive 10Y 6/3 alteration zones (talcose?) margining the veins at 90.2, 90.5, 91.35, 91.5;also vein set (b) at CVA 25, white carbonate without marginal alteration zone. The white veins (dolomite) tend to feather out to "gash veins". The "pink" carbonate appears to be magnesite (or ankerite).
91.7-92.4	0.7m	full recovery: altered schist, light olive grey 5YR 6/1 grading to quartzite alteration light grey N 6; at 91.9, 92, 92.2 about thin veins. The "quartzite" may be largely feldspar.
92.4-92.6	0.4m	full recovery: basic schist, dark greenish grey 5G 4/1 and light olive grey 5Y 6/1 CBA 40
92.6-93.2	0.8m	full rec.: altered schist CSA 40 with alteration quartzite at 93.1, light grey; carbonate vein with pyrite clot; mainly greyish orange pink carbonate where thicker; white carbonate where thinner CVA 20; vein schistocity angle VSA 120.
93.2-94.2	1.0m	full rec.: basic schist, dark greenish grey; quartzite alteration at 93.6, 93.7 with thin white carbonate gash veins.
94.2-94.9	0.7m	full rec.: altered schist with relics of basic schist; and alteration quartzite at 94.2, 94.6, 94.65 to 94.9; quartz blob at 94.7. Alteration is marginal to greyish orange pink and white carbonate vein CVA 20 at 94.4.
94.9-96.1	1.2m	full rec.: basic schist, greenish grey 5G 5/1 with veins and associated altered schist, light olive grey 5Y 6/1 and at 95.6; alteration quartzite light grey N6 to brownish/pinkish grey 5YR 7/1.

96.1-101.0	4.9m	full rec.: 2-phase schist with chloritic laminae separating thicker laminae of feldspathic schist, dark greenish grey 5G 4/1 to dark olive grey 5Y 3/1; CSA 35 veins have little alteration associated, but at 100.6 an included block of altered schist is incorporated in a 3mm "pink" carbonate vein. At 98.5 a vein of another style appears, white carbonate margins; mica/pyrite core, wavy edges; approx CVA 90, no alteration zone.
101.0-101.15	0.15m	full rec. altered schist, light olive grey, marginal to "pink" and white carbonate vein 3mm.
101.15-105.3	4.15m	full rec. 2-phase schist, c.f. 96-101m, CSA 35; disseminated pyrite 30% at 102.9, alteration quartzite at 103.8, messy gash vein of white carbonate at 104.4; ptygmatic quartz vein at 103.3.
105.3-106.0	0.7m	full rec. altered schist and minor alteration quartzite; with relicts of 2-phase schist grading to spindle laminated quartzofeldspathic schist; "pink" and white carbonate veins to 3mm, set at CVA 15-30 at 105.4, 105.7, 105.8.0
106.0-108.9	2.9m	full rec. 2-phase schist as above, very dark greenish grey5G 3/1; 1mm "pink" and white carbonate vein CVA 15 at 106.4 in 1cm alteration zone.
108.9-109.2	0.3m	full rec.: altered schist, light olive grey 5Y 6/1 to 7/1 about "pink" carbonate vein, 6mm at 109.1. CSA 30; VSA 50.
109.2-112.2	3.0m	full rec.: 2-phase schist, very dark greenish grey, 5G 3/1, CBA 30; at 109.4 white carbonate vein with core of green mica and trace pyrite and magnetite, no wall rock alteration; c.f. vein at 98.5.
112.2-112.6	0.4m	90% recovery: altered schist, light olive grey and minor alteration quartzite, pale pinkish brown grey, about CARBONATE VEIN, (SPECIMEN REEF) 1.5cm, "pink" and white carbonate with quartz, trace green mica, pyrite, magnetite; CVA 40; VSA 45; CSA 40; quartz blob at 112.6.
112.6-117.0	4.4m	full rec.: basic schist and 2-phase schist, very dark greenish grey 5G 3/1, few veins or alteration e.g. 115.0; at 114.7 minor fold.

RL. 332.

117.0-119.1	2.1m	full rec.: altered schist, light olive grey 5Y 6/1, with relicts of basic schist 5G 3/1, associated with "pink" carbonate veins; 3mm at 117.5; 5mm at 118.9; main alteration pale olive 10Y 6/2 with quartz blobs and veins and pinkish grey cast light grey alteration quartzite.
119.1-120.5	1.4m	full rec.: basic schist, spindle laminated with 5cm alteration quartzite at 119.5.
120.5-120.55	0.05m	full rec.: CARBONATE MAGNETITE VEIN, 3cm, minor quartz, white to off white carbonate, brownish black magnetite with "prominent parting", minor alteration quartzite alteration margins 1-2cm. CVA 40, CSA 40, VSA 40? Sample 89/001.
120.55-121.4	0.85m	full rec.: basic schist, very dark greenish grey 5G 3/1; at 121.0, "pink" carbonate vein CVA 5 with pale olive alteration selvedge to 4cm; whole core in places.
121.4-121.45	0.05m	full rec.: CARBONATE MAGNETITE PYRITE VEIN, 4cm, minor quartz, white and off white carbonate, quartzite alteration margins 3cm; CVA 40, CSA 40, VSA 40; Sample 89/002.
121.45-124.2	2.75m	full rec.: basic schist, very dark greenish grey 5G 3/1, few thin white carbonate veins (dolomite); no alteration, quartz vein CVA 15 at 124.1.
124.2-124.4	0.2m	full rec.: alteration quartzite; (pinkish) light grey N7 to 5YR 7/1.
124.4-127.4	3.0m	full rec.: basic schist grading to 2-phase schist, v. dark greenish grey 5G 3/1; minor quartz veins, white carbonate veins.
127.4-127.7	0.3m	full rec.: interbedded basic tuff; 5G 3/1 and "green" phyllite; (greenish black 5G 2/1 when wet).
127.7-127.9	0.2m	80% recovery: interbedded 1-2cm units quartzite and phyllite as above, pyrite relatively commen, and abundant along boundaries.
127.9-129.1	1.2m	60% recovery: basic schist, very dark greenish grey 5G 3/1.

129.1-132.0	2.9m	full rec.: basic schist with minor dark phyllite and quartzite CBA60 at 130.2 minor quartz blobs and veins; white carbonate veins, no alteration.
132.0-132.5	0.5m	full rec.: contorted phyllite CSA 10 dark greenish grey 5G 6/1
132.5-133.6	1.1m	90% recovery: basic schist, massive to slightly foliated, speckled with carbonate (40%) and pyrite(<5%); greenish black 5G 2/1; brownish grey alteration at 134.4.
133.6-133.9	0.3m	85% recovery: alteration quartzite, light brownish grey 5YR 6/1 with central magnetite carbonate veins.
133.9-134.3	0.4m	full rec.: basic schist speckled with carbonate, greenish black 5G 2/1; at 134.3, alteration quartzite, brownish grey.
134.3-134.4	0.1m	full rec.: altered 2-phase schist, light olive grey; CSA 40.
134.4-134.7	0.3m	full rec.: alteration quartzite, with some veins and impregnations of MAGNETITE and pyrite, grey to light brownish grey; N5-N8, 5YR 6/1. START OF LOWER VEIN. Sample 89/003
134.7-134.85	0.15m	full rec.: CARBONATE MAGNETITE VEIN; white and off-white (pinkish yellowish grey, (5YR to 5Y) 8/1) carbonates, minor magnetite, pyrite; blocks of altered basic schist included; CVA 30, parallel to bedding, at top; irregular at bottom. Note: It seems that the following interval is a large included block. Sample 89/004 (part).
134.85-135.35	0.5m	full rec.: alteration quartzite with MAGNETITE; light grey to light brownish grey, with the magnetite impregnating along fractures and schistocity planes which appear discordant. Sample 89/004 (part).
135.35-135.4	0.05m	full rec.: CARBONATE MAGNETITE VEIN, white and off white carbonates as above. Base sharp and top irregular, see comment above. Sample 89/005 (part).
135.4-135.7	0.3m	full rec.: alteration quartzite, very light grey N7; END LOWER VEIN. Sample 89/005 (part).

135.7-137.3	1.9m	full rec.: basic schist with abundant carbonate porphyroblasts, and "green" phyllite with with quartz blobs grading to stumpy ptygmatic veins at 136.6, 136.8-136.9, 137.4, also blurry quartz carbonate minor pyrite, magnetite "veins".
137.3-140.65	3.35	full rec.: altered schist, (mostly light olive grey 5Y 6/1) with relicts of basic schist (very dark greenish grey, 5G 3/1) about low angle "pink" carbonate vein (greyish orange pink, 5YR 6/1) CVA 3, 1cm, with minor quartz and white carbonate. Unusual "green" alteration at 140.0 (light greenish grey, 5G 8/1) Also minor alteration quartzite, (light brownish grey to brownish grey, 5YR 6/1 to 5YR 4/1) at 137.6, 139.3, 140.6. Minor quartz carbonate MAGNETITE pyrite veins at 137.2, 137.3, 138.5, 139.25, 140.5. Quartz blobs at 137.4, 139.75, 139.9. A vein of quartz with white carbonate, minor MAGNETITE and pyrite may represent another "hotter" vein style but its alteration selvedge is comparable with the carbonate/magnetite veins with siliceous alteration.
0.65-140.9	0.25m	full rec.: bedded schist, foliated and granular, dark greenish grey 5G 4/1 and brownish grey 5YR 4/1; CSA/CBA 65.
0.9-141.15	0.25m	full rec.: MAGNETITE CARBONATE QUARTZ VEIN, very coarse brownish black bladed crystals with strong single cleavage or cleavage-like "octagonal parting". Possibly 2 dark minerals present (wolframite enclosing magnetite). Quartz relatively commen, only white carbonate. The alteration quartzite selvedge is minor, CVA 0 but vein is stepped. From 140.9-141.0, sample 89/006.
15-143.2	2.05m	95% recovery: basic schist, greenish black 5GY 2/1, some thin carbonate veins, also quartz veins at 142.0, 142.8, quartz blobs at 141.2 (with disseminated magnetite fringes) and at 141.8. At 142.9-143.0 fold axis which changes CBA's from c.70 above to c.25 below, also minor light olive grey alteration.

143.2-143.35 0.15m full rec.: CARBONATE MAGNETITE PYRITE VEIN, 8cm across, core of white and off-white carbonates, margins with clots of magnetite (intergrown with wolframite?) and pyrite; selvedges of alteration quarzite with disseminated pyrite and minor pale olive grey altered schist. Sample 89/007.

143.3-147.5 4.2m full rec.: basic schist, greenish black 5GY 2/1, CSA 30; with alteration quartzite, brownish grey, at 143.55-143.85, 144.0, 144.8-144.9, 146.25-146.45, 146.7-146.9, 147.1-147.2, 147.4-147.45; and altered schist, pale olive grey, at 144.5-144.75; also quartz blobs at 144.4, 144.5, 146.0, 146.1; minor MAGNETITE pyrite quartz carbonate veins at 146.3, 147.1; tremolite/MAGNETITE/quartz vein, 1cm, CVA 35 at 146.75.

End hole.c

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EL 4/84 ANALYTICAL DATA 1989.

275142

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	236.1.08.06096	28/04/89	18505	1 OF 6

BE No.	SAMPLE No.	Li	Be	Na	Mg	Al	P	K	Ca	Sc	
	89 001	<5	1	2.360	2.310	3.14	180	909	4.030		2
	89 002	<5	1	2.050	3.870	2.77	130	647	7.790		1
	89 003	<5	1	4.390	1.110	5.85	329	2477	1.260		2
	89 004	<5	1	4.700	2.600	5.66	281	<500	4.960		4
	89 005	<5	1	7.780	0.870	8.52	304	635	1.350		2
	89 006	<5	1	2.080	1.980	2.76	167	573	3.250		3
	89 007	<5	1	1.460	5.100	1.83	110	<500	9.[illegible]		3
	89/001	= SPC	13,	120.4 -	120.55	magnetite/pyrite/carbonate vein + alteration					
	89/002	= SPC	13	121.45 -	121.55	as above					
	89/003	= SPC	13,	134.4 -	134.7	alteration with magnetite					
	89/004	= SPC	13	134.7 -	135.35	carb vein, alteration with magnetite					
	89/005	= SPC	13	135.35 -	135.7	alteration with magnetite					
	89/006	= SPC	13	140.85 -	141.0	mag/py/carb vein, alteration, chert					
	89/007	= SPC	13	143.2 -	143.35	carb/pyrite/py vein; alteration					
	DETECTION	5	1	0.005	0.001	0.01	100	500	0.005		1
	UNITS	PPM	PPM	%	%	%	PPM	PPM	%		PPM
	METHOD	201	201	201	201	201	201	201	201		201

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

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275143

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	236.1.08.06096	28/04/89	18505	2 OF 6

BE	SAMPLE No.	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn
	89 001	985	165	65	889	13.05	41	36	65	1[illegible]
	89 002	1013	120	54	1244	12.19	46	34	22	[illegible]
	89 003	1491	84	61	502	5.63	100	34	52	[illegible]
	89 004	1084	104	69	1011	6.11	63	28	19	[illegible]
	89 005	2175	69	45	359	1.77	10	<10	9	[illegible]
	89 006	666	151	61	573	21.54	33	41	18	[illegible]
	89 007	576	136	46	1123	18.70	95	69	52	[illegible]
	DETECTION	10	2	10	15	0.01	5	10	5	5
	UNITS	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM
	METHOD	201	201	201	201	201	201	201	201	201

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

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	236.1.08.06096	28/04/89	18505	3 OF 6

TUBE No.	SAMPLE No.	Sr	Y	Zr	Nb	Mo	Ag	Ba	La	Ce
1	89 001	25	14	83	<10	<20	<5	31	14	2
2	89 002	42	26	65	<10	<20	<5	21	10	1
3	89 003	29	6	118	<10	<20	<5	26	13	
4	89 004	34	10	145	<10	<20	<5	23	9	<5
5	89 005	23	6	180	<10	<20	<5	14	6	<5
6	89 006	26	8	50	<10	<20	<5	14	36	<5
	89 007	73	20	33	<10	<20	<5	16	6	1
	DETECTION	1	1	5	10	20	5	5	5	5
	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
	METHOD	201	201	201	201	201	201	201	201	201

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

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	236.1.00.06096	28/04/89	18569	4 OF 6

TUBE No.	SAMPLE No.	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
1	MP 001	<15	<20	<20	<5	<1	<5	<5	<20	
2	MP 002	<15	<20	<20	<5	<1	<5	<5	<20	
3	MP 003	<15	<20	<20	<5	<1	<5	<5	<20	
4	MP 004	<15	<20	<20	<5	<1	<5	<5	<20	
5	MP 005	<15	<20	<20	<5	<1	<5	<5	<20	
6	MP 006	<15	31	<20	<5	<1	<5	<5	<20	
7	MP 007	<15	<20	<20	<5	<1	<5	<5	<20	
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
	DETECTION	15	20	20	5	1	5	5	20	
	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
	METHOD	201	201	201	201	201	201	201	201	201

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

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ANALYTICAL DATA

SAMPLE PREFIX | REPORT NUMBER | REPORT DATE | CLIENT ORDER No. | PAGE

		#238	08.06096		28/04/88	#1850			5 OF 8	

SAMPLE No.	Tm	Yb	Hf	Ta	W	Re	Au	Pb	Th
89.001	<2	<2	16	<10	1.5	<10	<0.005	<200	<10
89.002	<2	<2	20	<10	1.5	<10	<0.005	<200	<10
89.003	<2	<2	10	<10	1.0	<10	<0.005	<200	<10
89.004	<2	<2	18	<10	0.5	<10	<0.005	<200	<10
89.005	<2	<2	12	<10	1.0	<10	<0.005	<200	<10
89.006	<2	<2	12	<10	1.5	<10	<0.005	<200	<10
89.007	<2	<2	20	<10	3.0	<10	<0.005	<200	<10
DETECTION	2	2	10	10	0.5	10	0.005	200	10
UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
METHOD	201	201	201	201	124	201	309	201	201

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

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275146

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	236.1.08.06096	28/04/89	18505	6 OF 16

TUBE No.	SAMPLE No.	U
1	89 001	<200
2	89 002	<200
3	89 003	<200
4	89 004	<200
5	89 005	<200
6	89 006	<200
7	89 007	<200
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23	DETECTION	200
	UNITS	PPM
	METHOD	201

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

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SPC 14

Hole deepened in 1990.

No down hole surveys?

Not many assays.

Reef Zone interp 129-130m Σ' not assayed.

RILLING LOG FOR SPC 14 DDH.

ocation: AMG 5219011066, RL 443, vertical; T.D. 105m.

rilled by: Australian diamond drilling P/L, Stawell, Vic. Drillers: . Butler, J. Grellie, 21-23/2/1989, for Savage Resources Ltd.

on-core drilling

-20 not sampled

0-22 light brown 5YR 5/6

2-24 dark yellowish orange 10YR 6/6

4-46 light greenish/bluish grey 5G 7/1

6-48 water struck; gr/bluish grey sandy with greenish black chips.

-52 water struck; N7 (pinkish) grey sand with greenish black chips.

-56 green/blue grey 5GB 6/1 sand with greenish black chips.

-62 pinkish 5YR 8/1 grey sand with siliceous and some schist chips.

-64 green/blue grey 5GB 6/1 sand and greenish black chips, minor siliceous chips.

Core drilling

66.0-66.45	0.45m	full recovery: ,Sandy feldspar chlorite schist, light bluish grey 5B 7/1, mostly feldspar dominant, spindle laminated schist but grading to 2-phase schist with micaceous laminae; CBA = CSA 25; "talcose" altered schist zones (bleached to very light grey N8) at 66.25 marginal to greyish orange pink cabonate veins (CVA 40, VSA 110); and at 66.4 to 66.45 marginal to alteration quartzite. Also white carbonate veins without alteration.
66.45-66.65	0.20m	full recovery: alteration quartzite zone, light grey N6-N7 with "pink" carbonate veins to 3mm; CVA 30.
66.65-66.9	0.25m	60% recovery: core loss 0.1m then continuing in v. light grey altered schist with greyish orange pink carbonate vein at 66.8; CVA 25, CSA 20, VSA 135.
66.9-67.8	0.9m	full rec.: sandy feldspar chlorite schist, as above with minor white carbonate veins, CSA 25, CVA 50.
67.8-68.35	0.55m	full rec.: schist as above with carbonate veins and associated altered schist at 67.8, 67.95-68.05, 68.35. Also quartz vein at 68.15; CVA 80, VSA 80.
68.35-73.8	5.45m	full rec.: schist as above; CSA 15-20; with minor veins with minimal or no alteration. At 71.05 two veins intersect; the older 5mm, quartz and wuite carbonate,the younger 5mm, white and "pink" carbonate. At 71.8 3mm "pink" carbonate vein.
73.8-76.3	2.5m	full rec.: 2-phase schist, medium blue grey 5B 5/1, more micaceous than above with development of a separate chloritic phase, and also quartz blobs and ptygmatic veins.
76.3-76.9	0.6m	full rec.: altered schist, very light grey N8 to yellowish grey 5Y 8/1 associated with 1cm carbonate vein with minor pyrite, greyish orange pink, 5YR 7/2; CVA 15, VSA 10, CSA 10.
76.9-81.0	4.1m	full rec.: 2-phase schist with quartz blobs, as above.

1.0-82.0	1.0m	98% recovery: alteration quartzite with minor "pink" carbonate veins e.g. at 81.85 with possible core loss; SPECIMAN REEF.
2.0-84.0	2.0m	full rec.: schist with quartz blobs; "pink" carbonate veins with light yellowish grey altered schist margins at 82.8, 3mm; 82.9, 2mm.
4.0-93.2	9.2m	full rec.: 2-phase and spindle laminated schist as above; CSA = CBA 30.
3.2-96.9	3.7m	full rec.: schist as above with quartz blobs, also white carbonate veins without alteration margins.
6.9-98.55	1.65m	85% recovery, .25m core loss: 2-phase and spindle laminated sandy feldspar chlorite schist, as above, light bluish grey 5B 6/1; with thin carbonate veins, greyish orange pink 5YR 7/2; each associated with altered schist margins, very light grey N8 to yellowish grey 5Y 8/1; CVA 60, CSA 35, VSA 100; LOWER VEIN SYSTEM; Veins at 96.95, 98.35, 98.5 and several smaller ones.
8.55-105.0	6.45m	full recovery: 2-phase schist with minor granular schist e.g. at 103.5, CBA 30; quartz blob at 100.5; 5mm carbonate vein CVA 70, CBA 30, VSA 90.
		End hole.

DRILLING LOG FOR SPC 14 DDH: CONTINUATION FROM 105.0M.

Location: AMG 52190 11066, RL 443, hole is vertical; T.D. 153.7m.

Drilled by: Stacpoole's, Launceston. Drillers: W. Bald, T. Lodge, 24-27/11/1989, for Savage Resources Ltd.

From -to	int.	recovery/description
105.0-109.6	6.45m	full recovery: bluish grey to greenish grey (5G 4/1 to 5B 5/1) feldspar chlorite schist, some banding, pyritic. At 105.85 2-carbonate vein with alteration rim, other minor veins. Quartz blobs at 109.0, 109.5.
109.6-111.2	1.2m	full rec.: bluish grey spindle laminated feldspathic schist, few minor veins.
111.2-112.6	1.4m	full rec.: bluish to greenish grey feldspar chlorite schist with occasional chlorite schist beds; CBA 70. Quartz blobs e.g. at 113.5, 114.5.
112.6-115.8	3.2m	full rec.: spindle laminated to banded feldspar chlorite schist with occasional chlorite schist beds; CBA 70 at 113.5. Rare quartz blobs e.g. 114.5.
115.8-116.4	0.6m	full rec? but broken core: dark greenish grey 5G 4/1 chloritic carbonated? schist, speckled to spindle laminated with abundant quartz blobs.
116.4-117.9	1.5m	full rec? but broken core: light olive grey 5Y 6/1 altered schist. At 116.8, 2-carbonate vein; carbonate A greyish orange pink 5YR 7/1; carbonate B white N9. Some minor micaceous material.
117.9-119.0	1.1m	full rec.: spindle laminated and some banded feldspar chlorite schist, CBA 65-80. At 118.7 more chloritic feldspar chlorite schist with quartz blobs.
119.0-119.25	0.25m	full rec.: altered schist, light olive grey 5Y 6/1 with quartz blobs. At 119.17 1.2cm carbonate vein; greyish orange pink with minor-trace magnetite.

119.25-120.6	1.35m	full rec.: chlorite schist with quartz blobs and spindle laminated to banded feldspar chlorite schist. Some pinkish alteration material with magnetite adjacent to the quartz.
120.6-121.3	0.6m	full rec.: alteration feldspar quartz rock, some with pyrite and magnetite; pinkish brown 5YR 6/2 associated with carbonate and carbonate/quartz veins and relict unaltered schist, greenish grey 5G 5/1.
121.3-122.8	1.5m	full rec.: (two veins intersect the core at a very low angle); (a), CVA 0, width 5cm, white and greyish orange pink and white vein carbonates with bladed magnetite margins. (b), CVA 15, 1.5cm, 2-carbonate vein also with bladed magnetite margins. Also wall rock of pinkish brown alteration of schist with pyrite and magnetite.
122.8-124.0	1.2m	full rec.: feldspathic alteration of schist with relicts of greenish grey (more chloritic) schist. Minor greyish orange pink carbonate vein at 123m. Disseminated pyrite and some magnetite.
124.0-124.4	0.4m	full rec.: speckled feldspar chlorite schist and minor beds chlorite schist with minimal alteration; CBA 60.
124.4-124.7	0.3m	full rec.: pinkish grey feldspathic alteration of schist and associated carbonate veins; disseminated magnetite.
124.7-125.0	1.3m	full rec.: speckled feldspar chlorite schist and banded chlorite schist with quartz blobs and minimal alteration. Greyish orange pink carbonate vein with no alteration rim at 124.85.
125.0-125.5	0.5m	full rec.: alteration zone and carbonate veins. At top and bottom altered schist, light olive grey 5Y 6/1, the rest alteration feldspar quartz rock, pinkish/brownish grey 5YR 7/1, about carbonate veins, principally at 125.3m, 2cm with probably 3 carbonates plus quartz and minor equant magnetite. More magnetite occurs in the adjacent alteration rock.

125.5-128.3	2.8m	full rec.: greenish grey 5G 5/1 speckled schist, minor veins without alteration margins. From 126.8-128.1 mostly quartz blobs in chlorite schist.
128.3-129.0	0.7m	full rec.: alteration zone; 128.3-128.6 light olive grey, remainder pinkish grey 5YR 8/1 with trace disseminated magnetite about shear/vein with carbonates at 128.8.
129.0-129.25	0.25m	full rec.: greenish grey spindle laminated schist with minor veins and alteration.
129.25-130.6	0.35m	full rec.: alteration zone, pinkish grey feldspathized schist and marginal light olive grey sericitized schist about carbonate vein, mostly white carbonate (dolomite?) but including siderite? pale yellowish brown 10YR 6/2 in 2cm vein CVA 50 at 129.9. Other substantial veins of the same set at 129.4; 1.5cm and 129.55; 3cm. SPECIMEN REEF.
130.6-130.7	0.1m	full rec.: relict of greenish grey 5Y 5/1 spindle laminated schist.
130.7-133.5	2.8m	full rec.: alteration zone as above. At 131.1 5cm carbonate vein, other alteration associated with stylolites (ex veins?). 3cm carbonates at 132.4, 2cm at 132.55, minor relict schist at132.65, 132.7.
133.5-135.2	1.7m	full rec.: alteration zone with relict schist; pinkish grey alteration with disseminated magnetite extends along schistocity, smaller veins with magnetite. Carbonate veins CVA 60. 2-carbonate veis occur at 134.5 and 134.95; quartz blob also at 134.5.
135.2-138.5	3.2m	full rec.: spindle laminated to speckled massive schist, and minor chlorite schist with quartz blobs. Some carbonate in the quartz at 163.4; big quartz blobs at 136.6, 137.5, 137.9. 5cm alteration at 138.0.
138.5-140.2	1.7m	full rec.: greenish grey 5Y 5/1 schist altering to light olive grey 5Y 6/1 adjacent to carbonate veins particularly 138.5-138.7 and 139.3-139.7. At 140.2 carbonate-magnetite-pyrite vein with white feldspathic alteration margin. CSA 70, CVA 60.

140.2-146.9	6.7m	full rec.: bluish grey 5B 5/1 spindle laminated and banded feldspar chlorite (mica?) schist. At 145.9 10cm light olive grey alteration associated with minor carbonate veins; quartz blob. Minor veins without alteration at quartz blobs.
146.9-148.2	1.3m	full rec.:dark bluish grey chloritic schist with quartz blobs 147.0-147.2. Minor pyrite magnetite pink feldspathic alteration veins at 147.5, 147.8, 148.0.
148.2-150.5	2.3m	full rec.:speckled to spindle laminated bluish grey 5B 5/1 feldspar chlorite mica? schist. Minor greyish orange pink carbonate veins.
150.5-150.9	0.4m	full rec.:alteration zone, yellowish grey 5Y 8/1 marginal to 1cm carbonate quartz magnetite vein at 150.7; CVA 75.
150.9-153.7	2.8m	full rec.:spindle laminated bluish grey feldspar chlorite mica schist.
		End hole.

Assays for SPC 14 hole cont.

Source: Analabs report 236.1.08.06748, 12-12-89; Method 309: fire assay fusion; AAS finish, results in ppm.

Sample/depth		Au
SPC 14	115.0-116.0	<0.008
SPC 14	119.0-119.5	0.010
SPC 14	120.0-121.0	0.010
SPC 14	121.0-122.0	<0.008
SPC 14	122.0-123.0	<0.008
SPC 14	136.0-137.0	<0.008

Note: the probable Specimen Reef intercept 129.4-129.9 was not assayed.

024

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275156

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	236.1.08.06121	17/04/89	18506	1 OF 1

SE	SAMPLE No.	Au		Spc							
	89 008	<0.008		SPC	14	81.1 - 81.9					
	89 009	<0.008		SPC	14	82.05 - 82.2					
	89 010	<0.008		SPC	14	83.7 - 83.85					
	89 011	<0.008		SPC	14	97.2 - 97.5					
	89 012	<0.008		SPC	14	98.3 - 98.5					
	89 013	<0.008		SPC	14	66.45 - 67.0					
	89 014	<0.008		SPC	14	73.4 - 73.85					
	89 015	<0.008		SPC	13	108.95 - 109.25					
	89 016	<0.008		SPC	13	112.4 - 112.6					
	89 017	<0.008		SPC	13	143.6 - 143.9					
	89 018	<0.008		SPC	13	146.6 - 146.85					
	DETECTION	0.008									
	UNITS	PPM									
	METHOD	309									

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

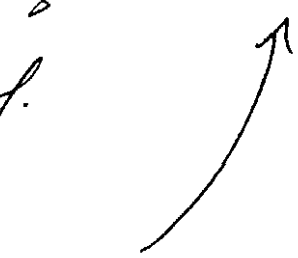
AUTHORISED OFFICER

275157

SPC 15

No down hole surveys.

Faulted, veined, altered zone 110-115 m.
possibly Specimen Reef.



Ore loading zone.

S.C.A. : 10-20°.

Drilling log for SPC 15 DDH:

Location: AMG 52055 10860, RL 434, 68 deg. declination to 310 deg. magnetic = 321 degrees grid; T.D. 134.8m, RL end 310m.

Drilled by: Stacpoole's, Launceston. Drillers: W. Bald, T. Lodge, assisted by J. Walker; 1-5/12/1989, for Savage Resources Ltd.

Precollar drilling:

0-2	light orange brown 5YR 5/6 pulp.
2-8	moderate brown 5YR 4/4 pulp.
8-20	light brown 5YR 6/4 pulp.
20-26	light brown 6YR 6/6 pulp.
26-34	light brown 6YR 5/6 pulp.
34-36	moderate yellowish brown 10YR 5/4 pulp.
36-38	dark yellowish orange 10YR 6/4 pulp.
38-40	yellowish orange 10YR 7/6 pulp.
40-42	greyish orange 10YR 6/4 pulp.
42-44	water struck, light brown 5YR 6/4 mud.
44-46	greyish orange 10YR 7/4 mud.
46-50	more water struck, greyish orange 10YR 6/4 mud.
50-64	greyish orange 10YR 6/4 mud.
64-68	pale yellowish brown 10YR 6/2 mud with chips.
68-80	more water struck, pale yellowish brown mud with chips including schist, medium bluish grey 5B 5/1 and quartz with minor chips of "alteration", light bluish grey 5B 5/1.

Core drilling from 80.9m.

From -to	int.	recovery/description
80.9-81.85	0.95m	full recovery: dark greenish grey 5G 4/1 2-phase banded feldspar chlorite carbonate schist, CSA -5 to +30 with ptygmatic quartz blobs containing up to 10% carbonate at 81.2, 81.4, 81.8 with minor alteration light olive grey 5Y 6/1 about blobs and thin carbonate veins CVA 70 at 81.5, 81.54, 81.69.
81.85-83.0	1.2m	full rec.: speckled massive to spindle laminated feldspar chlorite carbonate actinolite? schist. pyritic quartz blob at 82.9. Quartz carbonate veins with minor magnetite, CVA 60. (a) 3cm at 82.13; central to 15cm alteration, (b) 6cm at 82.57; central to 25cm alteration. The alteration is pinkish brown tough feldspathic rock speckled with carbonate. From 82.91-83.00 alteration about 2 minor carbonate vein CVA 80 at 82.46, quartz veins with minor carbonate; trace magnetite and no alteration margin at 83.0, 83.45, 83.4.
83.0-83.8	0.8m	full rec.: 2-phase feldspar chlorite carbonate actinolite schist, contorted, relatively rich in carbonate. Ptygmatic quartz/carbonate blobs at 83.02, 83.3, 83.45, 83.7. a few hairline veins only.
83.8-84.15	0.35m	full rec.: yellowish grey 5Y 7/2 alteration zone about minor greyish orange pink carbonate veins CVA 75 where adjacent alteration shades to light grey N7. Stylolite at 83.91; CStA 70.
84.15-84.95	0.8m	full rec.: greenish grey 5G 6/1 speckled and minor 2-phase schist (feldspar chlorite actinolite carbonate) some contorted; CSA 0-60 . Quartz carbonate segregation with pyrite at 84.7, carbonate veins with alteration at 84.55, 84.85.
84.95-86.0	1.05m	full rec.: alteration zone, feldspathic speckled with carbonate and minor relicts of schist about veins and stylolites. Veins include quartz carbonate trace magnetite, with marginal stylolites in places. At 85.4 1.5cm, CVA 70 and 85.9, 3.0cm, CVA 70, CSA 80.

86.0-89.45	3.45m	full rec.: dark greenish grey 5GY 3/1 micaceous feldspar chlorite schist with quartz carbonate trace magnetite veins and associated alteration at 86.4, 86.6, 87.4, 88.3, 88.4, 89.45, some with marginal stylolites, also minor quartz, white carbonate and pink carbonate veins without alteration.
89.45-91.55	2.1m	full rec.: light olive grey 5Y 6/1 and light grey N7 altered schist adjacent to vein complexes; veins include quartz and carbonate, 89.45 to 89.82 and at 89.95; 3cm, 90.7; 4cm, 90.9; 1cm, 91.7. Large stylolite at 90.95, clusters of minor pink carbonate gash veins with light grey N7 alteration 90.6-90.7, 91.05-91.25.
91.55-92.45	0.9m	full rec.: greenish grey 5G 5/1 schist with minor pink gash veins.
92.45-92.75	0.3m	full rec.: light olive grey 5Y 6/1 altered? schist grading to sandstone/schist about compound quartz carbonate veins at 92.6 followed by fine grained unaltered schist 92.65-92.75.
92.75-95.9	3.15m	full rec.: sandstone, medium to dark grey N4-N5 with phyllite, greenish black 5GY 2/1 at 93.1, 94.0-94.1. Minor veins with light grey N3 alteration rims.
95.9-96.65	1.75m	full rec.: greenish black phyllite with few white carbonate veins, ptygmatic quartz vein at base.
96.65-96.9	0.25m	full rec.: medium grey N5 to light olive grey 5Y 6/1 altered micaceous chlorite schist, contorted about 2-carbonate and minor quartz vein 1-2cm at 96.8.
96.9-100.35	3.45m	full rec.: schist, medium grey N5; greenish grey 5G 5/1; greenish black 5GY 2/1; olive black 5Y 2/1 with minor veins and quartz blobs. Cherty or feldspathic alteration beds at 97.6; 3cm and (with carbonate margins) at 98.55; 1cm quartz blobs at 98.8, 99.3-100.2.
100.35-101.7	1.35m	full rec.: light grey to greenish grey 5GY 6/1 sandstone to sandy schist alteration? about 2-carbonate vein: white centre zone with greyish orange pink margins 1-2.5cm at 101.0, also minor vein at 101.4.

101.7-103.9	2.2m	full rec.: dark greenish grey 5G 5/1 chlorite mica schist CSA approx 65, contorted; with carbonate veins lacking alteration margins, messy pink at 101.7, CVA 40 at 102.0, CVA 80 at 102.7; 0.5cm, other minor veins.
103.9-104.3	0.4m	full rec.: light grey N7 altered (chlorite) mica schist about 2-carbonate veins; greyish orange pink with some white clustered at 103.95, 104.0, 104.18, 104.22, 104.24
104.3-106.9	2.6m	full rec.: greenish grey 5G 5/1 chlorite mica schist with minor quartz veins, carbonate gash veins and ptygmatic quartz blobs.
106.9-107.4	0.5m	full rec.: grey N6 fine grained sandstone/schist with alteration zones N7, pink carbonate veins 106.9-107.0, 107.18-107.26 and other minor carbonate veins.
107.4-109.2	1.8m	full rec.: chlorite mica schist; dark greenish grey 5GY 4/1, greenish grey 5GY 6/1, brownish grey 5 YR 5/1. Minor alteration to light olive grey 5YR 6/1. Minor veins and quartz blobs, carbonate chlorite veins at 107.5, 108.3. Alteration zone with carbonate, light grey N7 at 107.55-107.7. At 109.1 magnetite quartz carbonate vein without alteration margin. The magnetite is altering to haematite (red) also fine disseminated pyrite.
109.2-109.72	0.52m	full rec.: altered schist; light olive grey 5Y 6/1, and relict fine grained sandstone/schist, greenish grey 5G 6/1. Minor carbonate veins. Base sharp with vein along minor fault.
109.72-110.05	0.33m	full rec.: dark greenish grey 5G 4/1 chlorite mica schist, minor carbonate veins.
110.05-110.6	0.55m	full rec.: alteration zone with large carbonate veins. Predominantly light olive grey fine grained sandstone/schist. From 110.24-110.25 and from 110.3-110.35, SPECIMEN REEF; 2-carbonate veins with quartz and pyrite; the carbonates being siderite? greyish orange 10YR 7/2 and dolomite white N9. The quartz and siderite are banded in a texture observed in "barren vein material" on the old mine dump. From 110.25-110.24 and from 110.25-110.30, medium light grey N6 hard siliceous and/or feldspathic

alteration.

110.6-113.1	2.5m	full rec.: chlorite mica schist and sandy schist, mainly greenish grey 5G 4/1, with patches of light olive grey alteration and minor quartz and carbonate veins and a magnetite bearing carbonate vein at 111.95. From 111.4-111.9, sedimentary banding including light grey N7 sandstone and olive grey 5Y 4/3 schist also greenish grey 5G 5/1 schist. CBA=CSA 80.
113.1-115.6	2.5m	full rec.: fine granular and some banded schist, mainly <u>altered</u> to light olive grey 5Y 6/1 with relicts unaltered schist greenish grey 5G 5/1, some sedimentary bedded intervals with sandstone medium grey N6. CBA 0-30, contorted at base. Carbonate veins at 113.9, 114.05, 115.1, 115.4 each with light grey siliceous and/or feldspathic alteration margin.
115.6-115.75	0.15m	full recovery: fault breccia, clasts of schist and sandstone to 1cm, light grey to greenish grey. Start of FAULT zone.
115.75-116.0	0.25m	0.1m recovery, 40%:gouge clay, schist chips, quartz chips. FAULT.
116.0-117.0	1.0m	0.85m recovery, 85%: FAULT breccia, large clasts of light grey banded schist CBA 0; 116.0-116.4. granular schist CBA 80; 116.4-116.7, alteration with carbonates CBA 45; 116.75-117.9. Gouge clay preserved 116.7-116.75 but lost at the other margins of the larger blocks total core loss 0.15m.
117.0-119.2	2.2m	full rec.: light grey N7 <u>altered schist</u> CSA 0-10 laced with minor carbonate veins; some fuchsite (apple green) along stylolites. Large quartz blob at 118.0.
119.2-119.8	0.6m	full rec.: light grey N7 <u>altered schist</u>, feldspathic and/or quartz alteration with fuchsite in stylolites, disseminated pyrite and magnetite and isolated larger magnetite crystals, more intensly laced with minor carbonate veins.
119.8-120.4	0.6m	full rec.: light grey N7 altered schist and greenish grey 5G 5/1 granular schist CSA 30. Sparse network of minor carbonate veins, followed by light grey N7 and some fractured,

		light olive grey 5Y 6/1 granular to stylolite laced 2-phase schist. Minor carbonate veins occur as a lacework in the more altered schist.
120.4-121.1	0.6m	full rec.: light olive grey 5Y 6/1 schist, core broken, with stylolite network and harder altered schist with networks of minor carbonate veins; light grey N7, 120.4-120.5; 120.85-120.95.
121.1-121.5	0.4m	full rec.: light grey N7 altered schist (2-phase quartz rich schist) CSA 0, minor carbonate veins; greyish orange pink 5YR 7/2.
121.5-121.8	0.3m	full rec.: light grey N7 altered schist (feldspar and/or quartz) laced with 2-carbonate veins up to 1cm thickness with light olive grey fractured 2-phase schist.
121.8-124.3	2.5m	full rec.: light grey N7 and light olive grey 5Y 6/1 altered 2-phase and granular schist with some relict greenish grey 5G 5/1 schist; 121.8-122.0, 123.6-123.75, 124.2-124.3. Minor carbonate vein networks principally 123.9-124.2.
124.3-125.5	1.2m	full rec.: hard altered schist, light olive grey 5Y 6/1 to light grey N7 with carbonate quartz magnetite pyrite veins at 124.5 (2cm quartz mainly), 124.56, 124.85, 125.35; 1cm. The carbonates are light brownish grey 5YR 7/1 and white N9. The veins include bodies with brownish grey 5YR 4/1 mass colour in which magnetite altering to haematite dominates the colour. Minute metallic specks might be gold but more likely to be copper from the drillers grease. Some disseminated magnetite occurs in the altered schist. There is a network of minor greyish orange pink carbonate veins. CSA 70, CVA 70, VSA 90.
125.5-126.85	1.35m	full rec.: greenish grey 5G 5/1 speckled to 2-phase feldspar chlorite schist with feldspar quartz alteration zones, light grey N7 about networks of minor greyish orange pink carbonate veins. The outer margins of the alteration are light olive grey 5Y 6/1 altered schist. The are also other minor veins.
126.85-128.2	1.35m	full rec.: alteration feldspar and/or quartz rock speckled with carbonate, pale brownish grey

		5YR 7/1 with relicts of 2-phase schist bluish to greenish grey 5B 6/1 to 5G 6/1, altering to light olive grey 5Y 6/1. Veins with quartz carbonate magnetite pyrite at 127.05, 127.1, 127.85.
128.2-130.9	2.7m	full rec.: chloritic 2-phase schist, dark greenish grey 5G 4/1 grading to bluish grey 5B 5/1 in feldspathic phase CSA 0-20 contorted at base. Ptygmatic quartz blobs.
130.9-132.8	1.9m	full rec.: altered schist (feldspar quartz rock) light grey N7 to brownish grey and speckled with carbonate, minor relict schist greenish grey 5G 5/1. At 131.25 quartz carbonate magnetite pyrite vein, 30% magnetite some altering to haematite; 0.5-1.5cm. Minor white carbonate veins.
132.8-134.8	2.0m	full rec.: 2-phase schist, greenish grey 5G 5/1, with quartz blobs and minor veins, without alteration.
		End hole.

Assay notes: source Analabs report 236.1.08.06748; method 309; fire assay fusion; AAS finish, results in ppm.

Sample/depth		Au	Au check
SPC 15	80.5-81.0	<0.008	
SPC 15	81.0-82.0	<0.008	
SPC 15	82.0-83.0	<0.008	
SPC 15	83.0-84.0	<0.008	
SPC 15	84.0-85.0	<0.008	
SPC 15	85.0-86.0	<0.008	
SPC 15	86.0-86.9	<0.008	<0.008
SPC 15	87.3-87.6	<0.008	
SPC 15	88.8-89.5	<0.008	
SPC 15	89.5-90.5	0.010	
SPC 15	90.5-91.5	<0.008	

SPC 15	92.4-92.6	<0.008	
SPC 15	100.9-101.3	<0.008	
SPC 15	103.7-104.2	<0.008	
SPC 15	110.1-111.1	<0.008	
SPC 15	113.0-114.0	<0.008	
SPC 15	114.0-115.0	<0.008	
SPC 15	115.0-116.0	<0.008	
SPC 15	116.0-117.0	<0.008	
SPC 15	117.0-118.0	<0.008	
SPC 15	118.0-119.0	<0.008	
SPC 15	119.0-120.0	<0.008	
SPC 15	120.0-121.0	<0.008	<0.008
SPC 15	121.0-122.0	<0.008	
SPC 15	122.0-123.0	<0.008	
SPC 15	123.0-124.0	<0.008	
SPC 15	124.0-125.0	<0.008	
SPC 15	125.0-126.0	<0.008	
SPC 15	126.0-127.0	<0.008	
SPC 15	127.0-128.0	<0.008	
SPC 15	131.0-132.0	<0.008	
SPC 15	132.0-133.0	<0.008	

CENTRAL ARTHUR PROJECT - MAP 2

TASMANIA DEVELOPMENT AND RESOURCES
TASMANIAN GEOLOGICAL SURVEY

SCALE 1:50000

0 1 2 3 4 5
Kilometres
Grid: Australian Map Grid, Zone 55.

340000mE 350 360 370 380000mE
5430000mN 5420 5410 5400000mN

HORTON RIVER · PYRAMID HILL · DONALDSON RIVER · BADGER PLAINS · SAVAGE RIVER MINE · SAVAGE RIVER · MT BERTHA · PIPELINE ROAD · BARETOP RIDGE · MAYFIELD · SHEFFIELD PLAINS · BELMONT HILL · MAGNET RANGE · GRANITE HILL · BASALT HILL · BURGESS HILL · MT CLEVELAND · BRASSEY HILL · CONNIMA · MEAZLEWOOD · LUINA · MT BISCHOFF · WARATAH · WARATAH ROAD · WARATAH RESERVOIR · ARTHUR DAM · WOMBAT FLAT · MT STEWART · HAMPE

CAINOZOIC

- HOLOCENE — Qh — Sand, gravel, and mud of alluvial, lacustrine and littoral origin (Qh).
- HOLOCENE — Ql — Talus (Ql).
- PLEISTOCENE — Qp — Glacial, periglacial and fluvioglacial sediments including till and interglacial deposits (Qp).
- Erosional surface
- TERTIARY — Ts / Tb — Dominantly non-marine sequences of sand, gravel, silt and clay (Ts); basalt and related igneous and pyroclastic rocks (Tb).
- Erosional surface.

PALAEOZOIC

- PERMIAN-LATE CARBONIFEROUS — Pl / Pt — Freshwater and paralic sandstone and mudstone with some coal measures (Plc). Lower glaciomarine sequences of mudstone, pebbly mudstone, pebbly sandstone, minor limestone and Tasmanite oil shale (Pl). Basal tillite (Pt).
- Angular unconformity.
- SILURIAN — SDc — Siltstone, shale and minor quartz sandstone (SDa).
- SILURIAN — SD — Shallow marine quartz sandstone (SDc) (Crotty Quartzite and correlates). (SD- Eldon Group and correlates).
- ORDOVICIAN — Dominantly shallow marine limestone with minor siltstone and sandstone. (Ol- Gordon Group).
- LATE CAMBRIAN — CDh — Marine sandstone–siltstone–conglomerate sequences including, tubidite fan deposits, commonly with Late Cambrian fossils. Includes upper Dundas Group and correlates, Newton Creek Sandstone and correlates (CDh).
- Angular unconformity.
- MIDDLE CAMBRIAN — Cds — Undifferentiated sedimentary sequences (Cds).
- ? — Cs — Layered peridotite, serpentinite and associated rocks (Cs); tonalite and associated rocks (Ct); low-Ti tholeiitic and boninitic lavas (Cb). Structurally emplaced.
- EARLY CAMBRIAN — Cw — Sequences of turbiditic mafic volcaniclastics, red mudstone and chert. Some basalts (Cwb) and chert (Cwc) indicated. (Cw: 'Cleveland-Waratah association' and correlates).

PROTEROZOIC

LOWER PARMENEER SUPERGROUP

- NEOPROTEROZOIC — Psv / Ps / Psc / Psq — Turbiditic volcaniclastic – mafic volcanic rocks and minor diamictite (Psv).
- Shallow marine dolomite, chert, shale and diamictite (Pss); basal siliceous conglomerate and sandstone (Psc). (Ps: Togari Group, Ahrberg Group and correlates).
- Angular unconformity.
- Prp — Successions of mudstone, siltstone and minor carbonate (Prp) and orthoquartzite (Prs). (Nacky Cape Group).

ARTHUR METAMORPHIC COMPLEX

(in part metamorphic equivalents of Prp, Po and Ps).

- Pmc — Chloritic schist, with minor phyllite, dolomite and magnesite (Pmc); amphibolite (Pma).
- Pot — Quartz mica schist, quartzite, phyllite and rare dolomite (Pot) (Keith Schist and correlates).
- Pap — Phyllite with minor pelitic schist, foliated quartzite and dolomite, and rare conglomerate (Pap).
- Po — Psc / Psq — Quartzwacke turbidite successions (Po), with some basalt (Pob); quartzwacke of high-grade metamorphic provenance (Poq) (Burnie and Oonah formations and correlates).

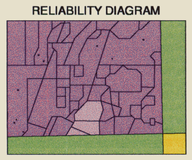
IGNEOUS ROCKS

- TERTIARY — Tb — Basalt and related igneous and pyroclastic rocks (Tb).
- LOWER CARBONIFEROUS DEVONIAN — Dgsf — Dominantly alkali-feldspar granite (Dgsf).
- Dgso — Dominantly adamellite/granite and associated dykes (Dgso).
- CAMBRIAN — Cg — Gabbroic rocks (Cg).
- Cbo — Boninitic lavas (Cbo).
- Cb — Low-Ti tholeiitic lavas (Cb).
- Ct — Tonalite and associated rocks (Ct).
- Csp / Cs / Csp — Layered peridotite, serpentinite and associated rocks (Cs); dominantly serpentinised, layered dunite and harzburgite (Csp); dominantly layered pyroxenite and dunite (Csp).
- ? Pd — Felsic and mafic dykes (Pd).
- Pma — Amphibolite (Pma).

Strike and dip of bedding: right way up; overturned; facing unknown; vertical with facing unknown.
Strike and dip of cleavage: dipping; vertical.
Strike and dip of crenulation cleavage; dipping.
Direction and plunge of minor fold hinge line, unspecified age.
Strike and dip of igneous mineral foliation: dipping, trend of foliation trace on horizontal surface.
Strike and dip of schistosity or metamorphic foliation: dipping, vertical.
Geological boundary.
Fault.

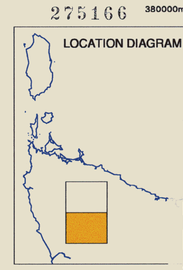
5 cm

RELIABILITY DIAGRAM



- Published systematic Geological Survey mapping (1:25000 scale).
- Published systematic Geological Survey mapping (1:50000 scale).
- Unpublished compilation Geological Survey mapping (1:10000 - 1:50000 scale).
- Published systematic Geological Survey mapping (1:63360 scale) after 1985.
- Published systematic Geological Survey mapping (1:63360 scale) before 1985.
- Mapping (1:63360 or more detailed scale) from various non-Geological Survey sources.
- Reconnaissance scale mapping, and/or interpretation based on air photo and/or geophysical data, from various sources.

LOCATION DIAGRAM



Digital data compiled from published and unpublished geological mapping and interpretation of helicopter borne magnetics and radiometric data by J.L. Everard and R.G. Richardson.
Data is based on 1:250,000 Geological and Topographical data.

Digital base information from Land Information Bureau, Department of Environment and Land Management.

Map produced April 1995 by Data Management Group using G.I.S. software.
Data correct as at 27th April 1995.

WARNING
INKS ARE WATER SOLUBLE AND LIGHT SENSITIVE

Plotted 07/OCT/1997 Tuesday 12:52 PM

275166

97-4075A

REVIEW OF PREVIOS DATA - SPECIMEN CREEK
EL 26/95 - GOLDSTREAM MINING/TITAN RESOURCES -L.A NEWNHAM **VOL 2 OF 2**

MAP 5

Dam
Goldfinder ck.
Tramway
No.3 Tunnel 370m.
B Rise
No.2 Tunnel 399m.
A
B
No.4 Tunnel 415m.
Specimen Creek
No.1 Tunnel 423m.
Underlay shaft on reef
Stoped
Rise (on reef)
Winze
Winze
Shaft
SPECIMEN REEF OUTCROP
Collar R.L. 421m.
Collar R.L. 416.
Vent
Rise
Winze
Whytes Winze
(McCullochs Tom)
X-cut
X-cut
X-cut
SPC A
369
Intersected 1.5m gap in old workings = Specimen Reef
SPECIMEN REEF STRUCTURE CONTOURS
Airport Creek
SPC 19
Alt'n 330R.L.
Altered, veined, faulted schists
330
332
May not have reached reef. Some carb. veining Au = 0.1g/t.
SPC 2
325 R.L. Alt'n
? Specimen Reef? Au 0.01g/t.
Collar 434 RL
SPC 12
R.L. 320m.
Alt'n 320m. Length 120m.
Collar 440
Collar 440
SPC 14
Collar 443
Length 154m
Alt'n 289m
Reef interp. 313 RL
SPC 6
Alt'n 319
Carbonate vein 352
varying Alteration
Collar 445
Probable that this hole didn't reach reef Au 0.01g/t.
No. 5 Tunnel
Possible reef 332 (at 2nd Reef)
Gold intersection 321
SPC 2
E.H. 312 R.L.
SPC 13
SPC 5
R.L. of Alt'n 297 RL
This hole would not intersect reef.
Alt'n 256
Depth 167.5m
This hole probably did not reach Specimen Reef.
SPC 7
R.L. Collar -17m.
SPC 8
R.L. Collar -20m
SPC 9
R.L. Collar -16m
SPC 11
R.L. Collar -18m.
SPC 10
R.L. Collar -17m.
These five percussion holes were drilled to test a geochemical anomalous zone known as Specimen Reef East. They were not deep enough to test the N.E. extension of Specimen Reef.
SPC 3
R.L. 398 R.L.
This hole did not reach Specimen Reef. No assay data available?
Collar R.L. 452
A'
B'
352,000E
352,400E
5,410,800N
5,411,200N
EL 26/95 S.R.M. Lease
Pipeline Road
Kayser's Creek

SPECIMEN REEF LONGITUDINAL PROJECTION

Looking N.W.

Reef Outcrop
Underlay shaft on reef
No.1 Tunnel (423m) RL
Inclined rise on reef
No.2 (399m) RL
Vent
Whytes Winze (on reef)
No stoping?
End X-Cut
End No.3 Tunnel (370m R.L)
Intersected 1.5m mine workings Thus no reef intersection.
SPC 4
SPC 2 :- drilled sub parallel to reef; may not have reached reef. Some carbonate-py veins near bottom of hole; Au assays: 0.1g/t.
Altered, veined, faulted zone probably Specimen Reef structure ? Au = 0.01g/t.
SPC 15
High gold intersection Possibly not Specimen Reef.
SPC 1
SPC 12
SPC 6
Some veining and alteration but hole probably did not reach reef. Au = 0.1g/t.
Should have intersected reef structure in this interval
If hole flattened so as if reef stepped, hole would not have reached reef.
The intersections in SPC 1 and SPC 13 are probably not the main Specimen Reef.
SPC 13
Drilled with dip of reef and did not reach reef.
SPC 14
Interp. Reef position (not assayed)

CROSS-SECTIONS

Looking NE

A
A'
B
B'
400 R.L.
350
300
300 R.L.
Pt. veining in SPC 4
No. 2 Tunnel
Specimen Reef
No. 3 Tunnel
Hole Intersected Tunnel
SPC 4
Percussion To here
SPC 5
Possible reef?
SPC 12
High grade intersection Possible eastern reef
SPC 1
SPC 13
No. 2 Tunnel
Whytes winze - McCullochs rise
No. 3 Tunnel
SPECIMEN REEF
Carbonate vein possible reef
SPC 6 (Projected 20m S.W.)
Interpreted Reef position not assayed.
SPC 14 (Projected 15m NE)
5 cm

275167

97-4075 A

REVIEW OF PREVIOS DATA - SPECIMEN CREEK
EL 26/95 - GOLDSTREAM MINING/TITAN RESOURCES -L A NEWNHAM **VOL 2 OF 2**

NEWNHAM EXPLORATION AND MINING SERVICES	
MAP 7 E.L. 26/95	DRAWN: L A Newnham.
SPECIMEN REEF PROJECT	DRAFTSPERSON:
MINE WORKINGS and DRILL HOLE	DATE: July 96
LOCATION and INTERPRETATION MAPS.	