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ASARCO Exploration Company, Inc

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**Annual Report for
EL15/99 - LYNCHFORD
for the Period Ended October 15, 2000.**

EL15/99 PH1

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August 28 2000

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Contents

<i>Contents</i>	1
<i>Figures</i>	1
<i>Appendixes</i>	1
<i>Summary</i>	2
<i>1 Introduction</i>	3
<i>2 Location and Access</i>	3
<i>3 Tenure</i>	3
<i>4 Geology and Mineralization</i>	3
4.1 <i>Geology</i>	3
4.2 <i>Known Mineralization</i>	4
<i>5 Previous Exploration</i>	5
5.1 <i>Prior to 1981</i>	5
5.2 <i>1981 to 1984</i>	5
5.3 <i>1984 to 1987</i>	5
5.4 <i>1988 to 1990</i>	6
5.5 <i>1991 to 1992</i>	6
5.6 <i>1993 to 1995</i>	7
5.7 <i>1996 to present</i>	8
<i>6 Anomaly Evaluation Program</i>	8
6.1 <i>Coupon Prospect</i>	8
6.2 <i>Davie and 24-28N Prospects</i>	9
<i>7 Conclusions and Recommendations</i>	9
<i>8 Expenditure</i>	9
<i>9 References</i>	10

Figures

Figure 1 Location and regional geology

Appendixes

Appendix 1 Initial Investigations of Davies and 24-28 Anomalies

Summary

EL15/99 (Lynchford) is located 7 kilometres southwest of the Mount Lyell copper-gold mines near Queenstown in western Tasmania. Refer to Figure 1.

Asarco applied for the tenement to secure a number of gold occurrences that the literature indicated had some features in common with the disseminated sediment-hosted gold deposits of Nevada in the United States.

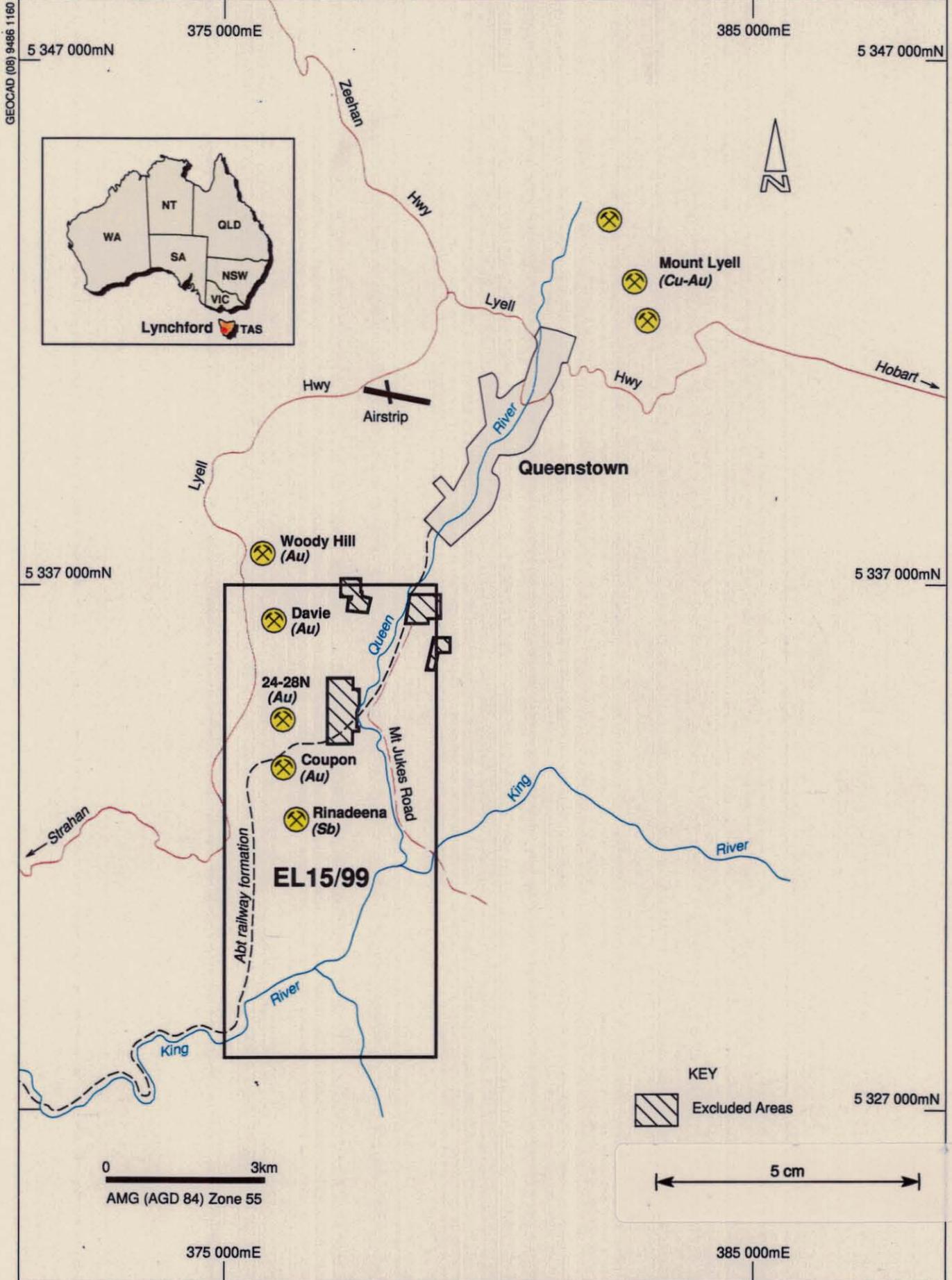
The most recent exploration in the tenement area has been at the Coupon prospect, which has been explored almost continuously since the mid-1980's. The best gold intercept was 24 metres at 1.1 gpt Au and 0.26% As. Subsequent diamond drilling failed to reproduce any commercial intercepts. Asarco after a review of the prospect, exploration data and drill core considers Coupon to be effectively tested.

The data review also highlighted two untested soil anomalies (24-28 and Davie) located one kilometre and 3 kilometres north of Coupon respectively. The geochemical signatures are of similar strength to Coupon. The prospects were relocated and a modest mapping and rock chip sampling program undertaken.

At 24-28 one partially collapsed adit and a possible second adit were located. Rock chip samples of sediments taken from near the portals of these adits were Au-As-Sb anomalous containing up to 0.5gpt Au.

At Davie a very prominent 200 metre long limonitic and gossanous sandstone outcrop was located and sampled. Gold values were weakly anomalous (up to 80ppb Au) and arsenic values were strongly anomalous (up to 0.38% As). Gold workings previously reported as being present at Davie were not located.

It is recommended that the Davie prospect be evaluated in more detail. The next phase of work will involve improving access to the prospect and carrying out a more thorough mapping and sampling program.



EL15/99 - LYNCHFORD
Location Plan



Figure 1

1 Introduction

EL15/99 was secured to cover Paleozoic sediments considered to have potential for disseminated sediment-hosted gold deposits. This conclusion was drawn on the basis of descriptions of the Coupon gold occurrence within Ordovician sediments in the centre of the EL. Gold anomalism extends north from Coupon over an 8 kilometre long zone adjacent to the Harvey's Creek – Garfield River fault zone. Initial work has focussed on compiling and assessing previous exploration data and determining the prospectivity of the defined prospects.

2 Location and Access

The tenement is centred 7 kilometres southwest of Queenstown in western Tasmania. The EL is traversed by the Lyell Highway between Queenstown and Strahan, the Mount Jukes road and the formation for the ABT railway that is presently being rehabilitated as a working tourist facility. The topography is rugged with thick forest and abundant regrowth making access off the cleared tracks very difficult.

3 Tenure

EL15/99 (Lynchford) was granted on October 15, 1999 for a period of 5 years. The license covers an area of 35 square kilometres. Exclusions include 6M/97, 14M/96, 25M/95 and 5M/95 and a crown reserve over the botanical gardens.

4 Geology and Mineralization

4.1 Geology

The geology of the Lynchford area is complex, and poorly understood. Past explorers have produced conflicting interpretations, exacerbated by poor outcrop and lack of distinct marker lithologies (Parkinson, 1999).

The eastern part of the tenement area comprises volcanics and sediments of the Western Volcano-sedimentary Sequence, part of the Cambrian Mount Read Volcanics. A small area of Tyndall Group volcanics are mapped immediately northeast of Lynchford.

The Mount Read Volcanics underlie Ordovician to Devonian siliciclastic and carbonaceous shallow water sediments to the west. Lowermost of this sedimentary package is Owen Conglomerate, dominantly pebble to cobble conglomerate, with sandstone beds in the upper parts of the unit (Pioneer Beds and Moina Sandstone).

Above the Owen Conglomerate is Ordovician carbonate and mudstone belonging to the Gordon Group. Throughout Tasmania the Gordon Limestone, an extensively developed platform carbonate, dominates the Gordon Group.

In the Lynchford area the Rinadeena Mudstone, is prevalent. Above the Ordovician sediments are Siluro-Devonian sediments of the Eldon Group comprising alternating sandstone and shales up to several kilometres thick.

Several major faults are mapped or implied from geological trends in the Lynchford area, the most significant being the Harvey's Creek - Garfield River Fault and the Harris Fault. The Ordovician to Devonian sediments appear drag folded along the Harvey's Creek - Garfield River Fault Zone to produce an antiform with a shallow north plunge. The presence of Devonian sediments juxtaposed against Ordovician units suggests substantial west-side-up movement along this portion of the structure.

4.2 Known Mineralization

The Mount Lyell copper-gold deposits are located 7km to the northeast of Lynchford within the Mount Read Volcanics.

Several historic gold mines and prospects are recorded in the Lynchford area including the Princess, Lynchford and King River mines, most discovered during a period of intense exploration following the discovery of Mount Lyell in the late 19th century. Exploration around Lynchford was aided by construction of the Abt railway linking Queenstown to Regatta Point at Strahan, and by widespread clearing of timber for mining and domestic purposes. Descriptions indicate most of the workings were minor, developed on narrow quartz veins in sediments.

Alluvial gold was detected in many streams in the Lynchford area, leading to identification of several hard-rock sources. These were prospected via shallow shafts and adits, however reported gold production is small.

The more significant discoveries within or adjacent to EL15/99, as summarized by Newnham (1995) include:

Woody Hill Gold Mine: Woody Hill is located 4 kilometres north of Coupon just outside the northern boundary of the tenement. Intermittent extraction during the period 1887 to 1907 resulted in recorded production of 4.6kg gold from 265t ore at recovered grade of 17.6g/t. Gold was obtained from two adits developed on narrow quartz veins within Siluro-Devonian quartzite adjacent to the Harvey's Creek Fault.

Davie Workings: Davie is believed to be located approximately 1.25km south of Woody Hill, also along the Harvey's Creek Fault. Although records are brief, the workings appear to have been substantial, consisting of several shafts and adits developed on quartz reefs. Surface samples are reported to have contained up to 14g/t gold.

Coupon Workings: Coupon is situated approximately 4.25km south of Woody Hill, immediately south of the Abt Railway, on a prominent ridge between Harvey's and Goring's Creeks. At least six tunnels, plus shafts and winzes were developed into gold-bearing limonitic zones. Production records are incomplete, however in 1913, 32t ore were extracted at recovered grade of 12g/t gold.

Rinadeena Reward Claim: The exact location of this claim is not known, but descriptions place it near Halls Creek at the saddle of the Abt Railway. The reward claim was for antimony, of significance here due to association of antimony with Carlin-style mineralization. Workings consisted of a 120m long adit driven into black pug (a common weathering product of Ordovician Gordon Limestone).

5 Previous Exploration

Parkinson (1999) completed a review of previous exploration for Asarco. Newnham (1995) had completed a comprehensive summary of the more significant exploration programs over the current tenement area. Activities relevant to Asarco's program are discussed below. Exploration over the Cambrian sequences in the eastern part of the tenement area was not reviewed.

5.1 Prior to 1981

Modern exploration of the area commenced with Pickands Mather International in the mid-1960's, who conducted a major stream sediment sampling program throughout western Tasmania. Streams crossed by the Abt railway were sampled and assayed for base metals, but not for gold. No anomalies were defined on the tenement.

5.2 1981 to 1984

Trikon International Limited acquired tenure over the area in March 1981 (SPL806) and subsequently joint ventured the tenement to Electrolytic Zinc Company of Australasia Limited (EZ). EZ completed a stream sediment and rockchip-sampling program with a Carlin-style model in mind. A number of tungsten anomalies were detected by the stream sediment survey, possibly significant in light of the tungsten association in the Carlin district.

5.3 1984 to 1987

SPL806 lapsed in 1984, but was re-issued to Trikon as EL9/84. Some statistical re-interpretation of EZ's rock and stream data was undertaken. A stream sediment-sampling program generated a number of gold anomalies in tributaries of Halls Creek.

A magnetic anomaly in the southeastern part of the tenement was investigated with grid-based mapping, soil geochemistry and ground magnetic surveys, locating a wedge of Cambrian volcanoclastics. Geophysical modeling and geological interpretation resulted in recognition of the major Harvey's Creek Fault.

The Harvey's Creek grid was extended 5km north covering a portion of the Harvey's Creek Fault Zone, with 9.2km of grid lines established initially at 200m to 1000m spacing. Hand-augured B-C horizon soil samples were collected at 20m spacing, for a total of 155 samples. The sampling detected several substantial gold-arsenic anomalies adjacent to the Harvey's Creek Fault over a 3km strike length. The principal anomalies were designated Coupon, 24-28, and Davie.

Rock sampling returned a number of significant values including 16gpt Au, 0.44% As from limonitic quartz float at anomaly 24-28, up to 4gpt Au from rockchips at Coupon, and 3.48gpt Au, 0.62% As from siltstone at 1415N.

The original Coupon workings were discovered during line cutting, and accessible adits were channel sampled. Better results included 6m @ 1.4gpt Au from adit #2.

5.4 1988 to 1990

In October 1987, Montroyal Mining NL acquired EL9/84 from Trikon, subsequently farming the tenement out to Cyprus Gold Australia Corporation in May 1988. Cyprus regarded the area as prospective for Carlin-style gold mineralization, as well as high-grade vein style and Henty-style structurally controlled gold.

Cyprus infilled the Harvey's Creek grid with a further 16.5km of line cutting at 50m to 300m spacing and collection of 600 hand-augered soil samples at 25m spacing. The sampling confirmed and delineated the three main gold-arsenic anomalies defined previously by Trikon. The Coupon anomaly was shown to extend over 400m x 150m, with soil samples generally in excess of 0.1g/t gold and 100ppm arsenic. Rock chip samples returned up to 21gpt Au.

Gold-arsenic anomalism at anomaly 24-28 extended over a 400m x 75m area, with float samples returning up to 16gpt Au and 0.44% As. The Davie anomaly was defined over 400m x 100m, with arsenic soil values to 0.56%. Gold to 14gpt was recovered from grab samples from old workings.

Due to ease of access, the Coupon anomaly was targeted for drilling. Excavated access tracks over the anomaly were mapped and channel sampled, highlighting widespread anomalous gold-arsenic in intensely veined and fractured sediments. Anomalism was commonly associated with limonitic weathering, probably after pyrite-arsenopyrite.

Cyprus drilled a total of 13 RC holes at Coupon, for a total of 737m. Due to drilling difficulties, most holes were abandoned prior to reaching target depths, the deepest hole being to only 82m. Best results were from hole CRC3 which returned 24m at 1.1gpt Au and 0.25% As from 16m.

Strong levels of arsenic anomalism were encountered in several holes although there were no other significant gold intercepts.

Cyprus withdrew from the joint venture in 1990.

5.5 1991 to 1992

Following Cyprus' withdrawal, a Perilya Mines NL - Noranda Pty Limited consortium farmed into the tenement in early 1991.

Perilya-Noranda completed infill of the Harveys Creek grid to 200m line spacing or closer over a 4km length. Soil sampling south of the Coupon anomaly demonstrated gold-anomalism up to 0.17gpt extending up to 300m from the main workings. Additional sampling north and south of anomaly 24-28 failed to define any substantial new targets.

Detailed remapping of the Coupon area resulted in substantial revision of the geological structure and mineralization controls. Perilya-Noranda recognized the Coupon area as comprising steeply east-dipping quartzite and siltstone occurring on the eastern limb of a northwest-trending anticline. A number of northwest trending shears and faults, with dips of 30 to 80° northeast, disrupt the sedimentary package. These structural zones are characterized by intense shearing, quartz veining and limonite development (after pyrite-arsenopyrite). Perilya-Noranda regarded most of the mineralization as confined to these shear zones, with lesser and patchy mineralization pervading sediments adjacent to these structures.

Comprehensive channel sampling of access tracks at Coupon returned several significant gold zones including 5m at 5.76gpt, 8m at 2.32gpt, 25m at 2.00gpt and 10m at 1.45gpt.

Relogging of drill chips, and careful analysis of gold-bearing intervals in CRC3 indicated disseminated pyrite-arsenopyrite in quartz veins within a siltstone-shale sequence.

A diamond hole LT91-1 was drilled in an attempt to test one of the postulated mineralized shear zones. Drilling difficulties resulted in abandonment of the hole at 61m before reaching target depth. Perilya-Noranda then withdrew from the project.

5.6 1993 to 1995

In January 1993, Montroyal's parent company, Goldstream Mining NL entered into a farm-in agreement with Titan Resources NL. A three-hole diamond-drilling program (total 536m) was conducted to further test the anomalous gold-arsenic zone at Coupon for fine-grained sediment-hosted gold. Drilling encountered elevated gold-arsenic within strongly leached limonitic sandstone, although core recoveries were poor. In general however, results were disappointing, with only one sample assaying over 1gpt gold.

From this program it was concluded that the significant gold-arsenic mineralization previously obtained in surface sampling and in hole CRC3 was controlled by an east-trending shear zone. Newnham (1995) reports that surface channel sampling in the vicinity of this fault returned >1.0g/t gold over 100m strike length. Sediments immediately north and south of this fault are variably gold-arsenic anomalous, particularly the leached limonitic sandstone unit intersected south of the fault.

A further three holes were drilled to test the hypothesis that mineralization potential was highest in the fault zone and limonitic sandstone unit. Hole LYN4 intersected a 70m zone of intensely leached limonitic sandstone anomalous in gold-arsenic. Best result within this zone was 8m at 1.24gpt gold.

To test the limonitic sandstone unit at depth, four additional diamond holes were drilled for a total of 1021m. Results of this program were disappointing, and it was concluded that mineralization of economic interest is confined to the east-west fault.

Newnham (1995) estimated that "potential may exist in this area of 200,000 to 300,000 tonnes of mineralization per 50 vertical metres, possibly grading in the 1 to 3gpt gold range." As this did not meet corporate objectives, the license was relinquished.

5.7 1996 to present

Since surrender by Goldstream in 1995, the gold-anomalous areas of Coupon, 24-28 and Davie have not been held under license. Additional exploration to the south and east was undertaken by RGC on EL2/94, that was relinquished in late 1998. RGC's program followed work at Lynchford by Aberfoyle - CRAE over an eleven-year period on EL47/83. These programs were not assessed as part of this review.

6 Anomaly Evaluation Program

6.1 Coupon Prospect

A field visit was made to the Coupon prospect and drill core inspected at the core library in Hobart.

The Coupon prospect straddles a ridge adjacent to the Abt railway formation. Quartz-carbonate-veined shale exposed in several access tracks and in the cutting of the railway. The veining is stockwork in nature, generally 2 to 10 mm in thickness. Patches of strongly limonitic clays are also exposed. Where observed to be in place, the veins dip shallowly to the west. It is not possible from outcrops to be certain of the dominant foliation/layering directions of the shales. It is possible that the relative ease of access to Coupon resulted in follow up work focussing there rather than the prospects to the north that are more difficult to access.

Drill core from the property is retained at Mineral Resources Tasmania's core library in Hobart where it was inspected. Points to note include:

- The highly variable depth of weathering from 5 metres to over 100 metres.
- The gold grades in the oxide zone correlate with rich, mustard-colored limonitic sandstone unit.
- Carbonate(-quartz) veining is ubiquitous throughout the core but assays indicate that it is mostly barren. The veining contains trace amounts of sulphide and alteration peripheral to the veins is minimal.
- A number of shear zones were intercepted by the core holes as indicated by zones of strongly foliated shale and fracturing and brecciation of the more competent limestone and sandstone units.
- Mineralized zones in fresh rock are restricted to narrow (1 to 2 metres thick) weakly mineralized shear zones in shale, and stockwork veining in the sandstone units.

Because of the uncertainty of the orientation of the mineralized zones the drilling may not have provided an optimal test of the Coupon mineralization. It was of sufficient density however to intercept any significant body of mineralization within 100 metres of surface. The narrow and weak mineralization intercepted in fresh rock suggests the enhanced values at surface and in the shallow oxide drilling may be due in part to supergene enrichment. The weak alteration, the barren stockwork veining and the lack of other indicators for a significant sediment-hosted deposit do not provide any encouragement for economic mineralization at Coupon.

6.2 Davie and 24-28N Prospects

Newnham Exploration and Mining Services was contracted by Asarco to undertake initial investigations of the Davie and 24-28 anomalies north of Coupon. A full report detailing the results of this investigation is included as Appendix 1.

Of most interest is the prominent gossanous (?) sandstone outcrop at Davie from which limited sampling, produced anomalous arsenic and gold values.

7 Conclusions and Recommendations

Previous exploration has downgraded the potential of the Coupon prospect for a significant gold deposit.

Initial investigation of the Davie and 24-28N prospects indicates further work is warranted to determine their potential.

8 Expenditure

Expenditure for the period from inception to August 30 2000 on EL 15/99 is as follows:

Geology	AUD 11,668.20
Geochemistry	AUD 2,924.00
Administration	AUD 2,434.05
Other (travel, accom, tenements)	AUD 6,241.80
Total	AUD 23,268.05

9 References

Newnham, L.A. EL 9/84 and EL 8/91 Lynchford Area, Data Review and Mineral Resource Potential Assessment for Goldstream Mining NL, 30th November 1991.

Parkinson, R. EL15/99 Lynchford Tasmania, Review of Previous Exploration and Mineralization Potential along the Coupon Trend, 22nd August 1999.

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Lynchford Project - Initial Investigations of Davie and
24-28 Anomalies - EL15/1999
Asarco Exploration Company Incorporated*; Newnham
Newnham, L.A. EL15/1999

APPENDIX 1

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NEWNHAM EXPLORATION & MINING SERVICES

ASARCO

LYNCHFORD PROJECT

**INITIAL INVESTIGATIONS OF
DAVIE AND 24-28 ANOMALIES**

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20 June 2000

CONTENTS

- 1. SUMMARY**
- 2. GEOLOGY**
- 3. MINING & EXPLORATION HISTORY**
- 4. ANOMALY INVESTIGATION PROGRAM**
 - 4.1 Davie Anomaly**
 - 4.1.1 Access**
 - 4.1.2 Geology**
 - 4.1.3 Sampling**
 - 4.1.4 Results**
 - 4.1.5 Comments**
 - 4.2 24-28 Anomaly**
 - 4.2.1 Access**
 - 4.2.2 Geology**
 - 4.2.3 Sampling**
 - 4.2.4 Results**
 - 4.2.5 Comments**
- 5. RECOMMENDATIONS**

MAPS & APPENDICES**Maps:**

Fig 1:	Prospect Locations	(1:25,000)
Fig 2:	Anomaly Locations and Access	(1:10,000)
Fig 3:	Regional Geology	(1:250,000)
Fig 4:	Local Geology	(1:25,000)
Fig 5:	Davie Anomaly Geology and Sample Locations	(1:2,500)
Fig 6:	Davie Anomaly Sample Results	(1:2,500)
Fig 7:	24-28 Anomaly Geology and Sample Locations	(1:2,500)
Fig 8:	24-28 Anomaly Sample Results	(1:2,500)

Appendix 1:**Sample Details****Appendix 2:****Assay Results**

1. SUMMARY

The Davie and 24-28 Anomalies are two small prospect areas several kilometres west of Lynchford, identified by previous explorers as being Au-As anomalous.

Asarco engaged NEMS to re-locate these prospects and validate their anomalism.

The area lies on the eastern margin of the large Palaeozoic sedimentary Henty Basin close to its contact with the Cambrian Mt Read Volcanic belt. It is underlain by a sequence of Ordovician limestones, and Silurian-Devonian quartzites, shales and siltstones. Existing data suggests the area has been strongly influenced by several N-S trending faults and accompanying splay faults.

Widespread minor Au mineralisation has been recorded locally and in the district and this may be linked to the waning phases of Mt Read Volcanism in the Ordovician and later remobilisation due to basin margin tectonism.

Grid controlled soil sampling and rock-chip sampling (late 1980s) exploration by Cyprus along the Harvey Creek Fault defined the Davie and 24-28 Anomalies north of the Coupon Workings.

Current access to both anomalies is difficult and, apart from the initial Cyprus work, no follow-up work was undertaken.

The aims of the current program were three-fold:

- (a) re-locate the anomalies
- (b) initial geological assessment
- (c) take rock samples to validate anomalism

One day was spent on each anomaly.

The anomalous areas were re-located with difficulty. Only traces of the Cyprus grid were found. At Davie, the area had been partially burnt and fallen timber and dense regrowth made access very difficult.

At **24-28 Anomaly** in-situ outcrop was very sparse. One adit (partially collapsed) and a possible second adit (totally collapsed) were located.

Chip samples of sediments taken from near the portals of these adits were Au-As-Sb anomalous (up to 0.5 g/t Au).

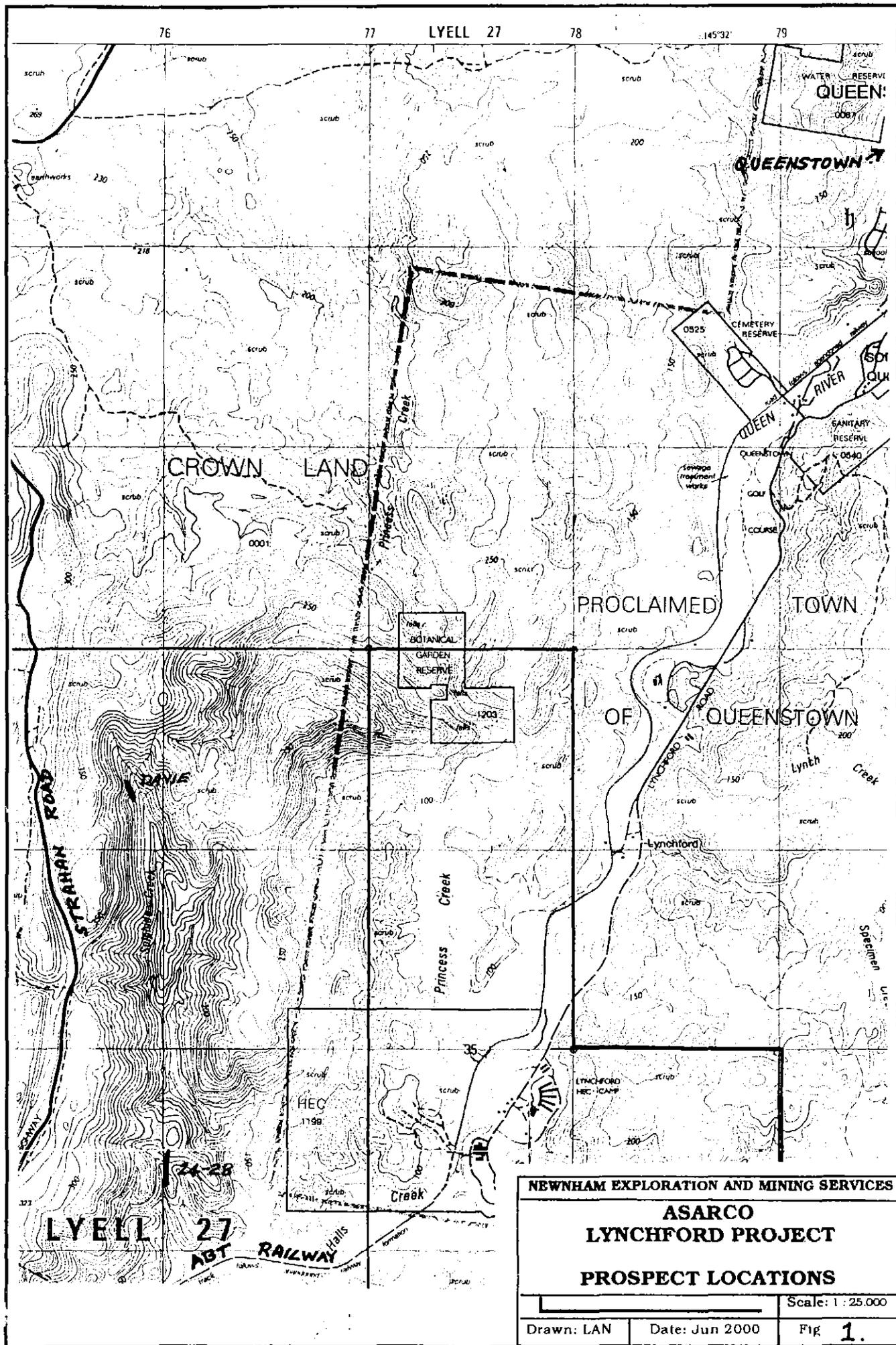
At **Davie Anomaly** a very prominent 200 m-long limonitic and gossanous (?) sandstone outcrop was located and sampled. As values were very high (up to 0.38% As) but Au was subdued (maximum 80 ppb). No workings were located but this probably just reflects the current difficult access. A more thorough search will (I'm sure) locate tunnels into this prominent feature.

This very brief initial investigation confirmed the anomalous nature of both prospects. More detailed investigations are recommended on the Davie prospect. However, to do this well, access by way of walking tracks needs to be improved so that exploration crews can operate more efficiently.

The Davie gossanous sandstone should be more thoroughly mapped and sampled. Depending on the results of that work, it may be possible to progress straight to drilling this prospect from the ridge line immediately to the west.

The 24-28 Anomaly should only be more thoroughly sampled and mapped if results from Davie are encouraging.

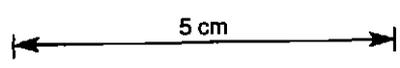
A budget of \$13,000 would be required to improve access and complete the mapping and sampling at Davie. However, it is recommended that this work should not commence before October in order to be completed efficiently.

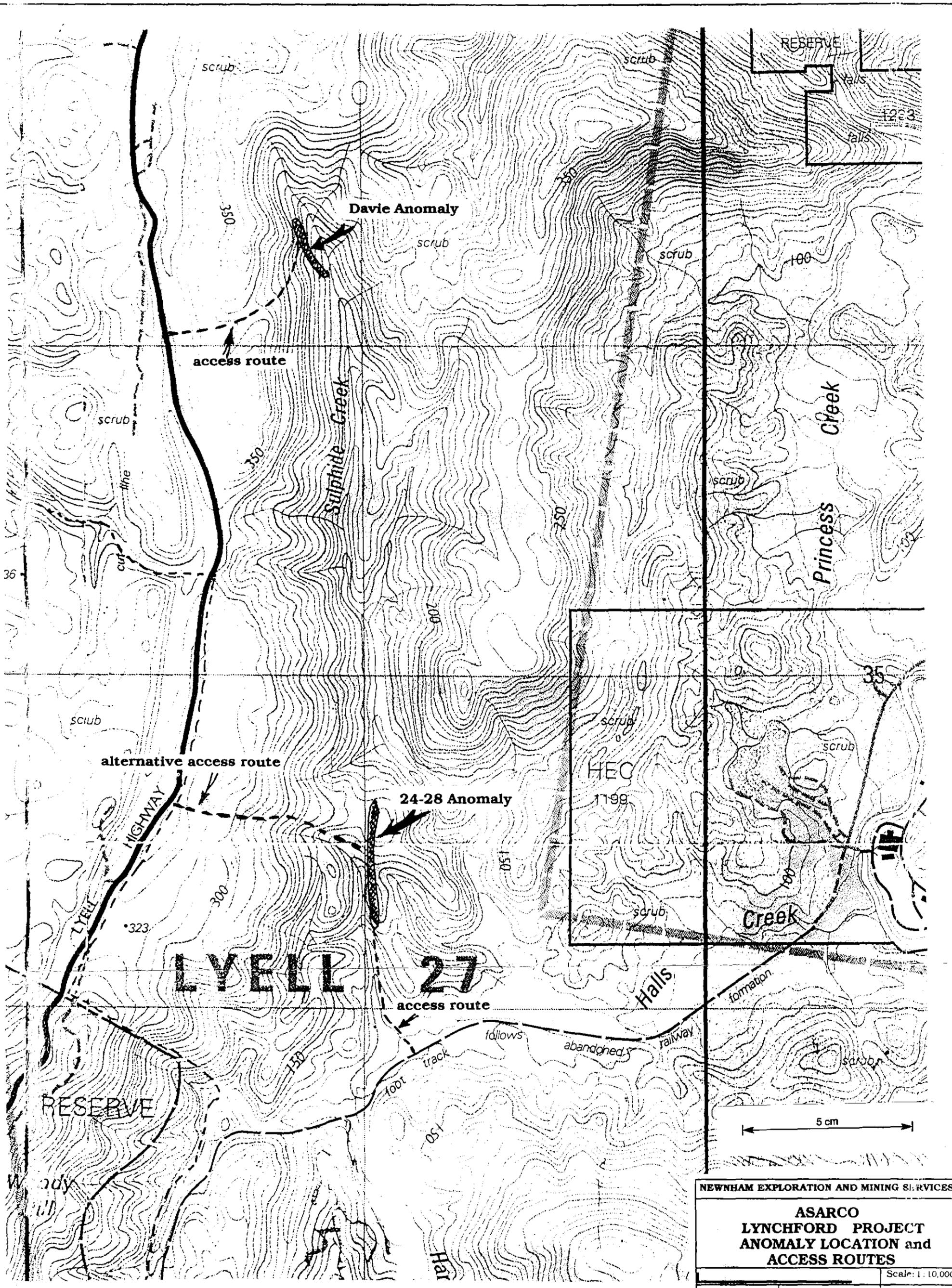


NEWHAM EXPLORATION AND MINING SERVICES

**ASARCO
LYNCHFORD PROJECT
PROSPECT LOCATIONS**

Scale: 1 : 25,000	
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Fig 1.	





NEWHAM EXPLORATION AND MINING SERVICES

**ASARCO
LYNCHFORD PROJECT
ANOMALY LOCATION and
ACCESS ROUTES**

Scale: 1:10,000

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2. GEOLOGY

The regional and local geology of the prospect areas is shown on Figs 3 and 4. These drawings are direct reproductions from maps prepared by NEMS on this area for the previous tenement holder (Goldstream).

These maps were essentially collated from various government maps and exploration company reports.

They show the prospect areas as lying close to the eastern margin of the Henty Basin. The Henty Basin is a large and thick accumulation of Ordovician-Devonian shallow water marine sediments. The basin is underlain by members of the Cambrian Mt Read Volcanics and the basin margins were tectonically active right through the Palaeozoic, possibly reflecting fundamental crustal weaknesses, especially along the northern and eastern flanks of the basin.

Significant faults are shown affecting this eastern margin, including the Harveys Creek and Harris Faults.

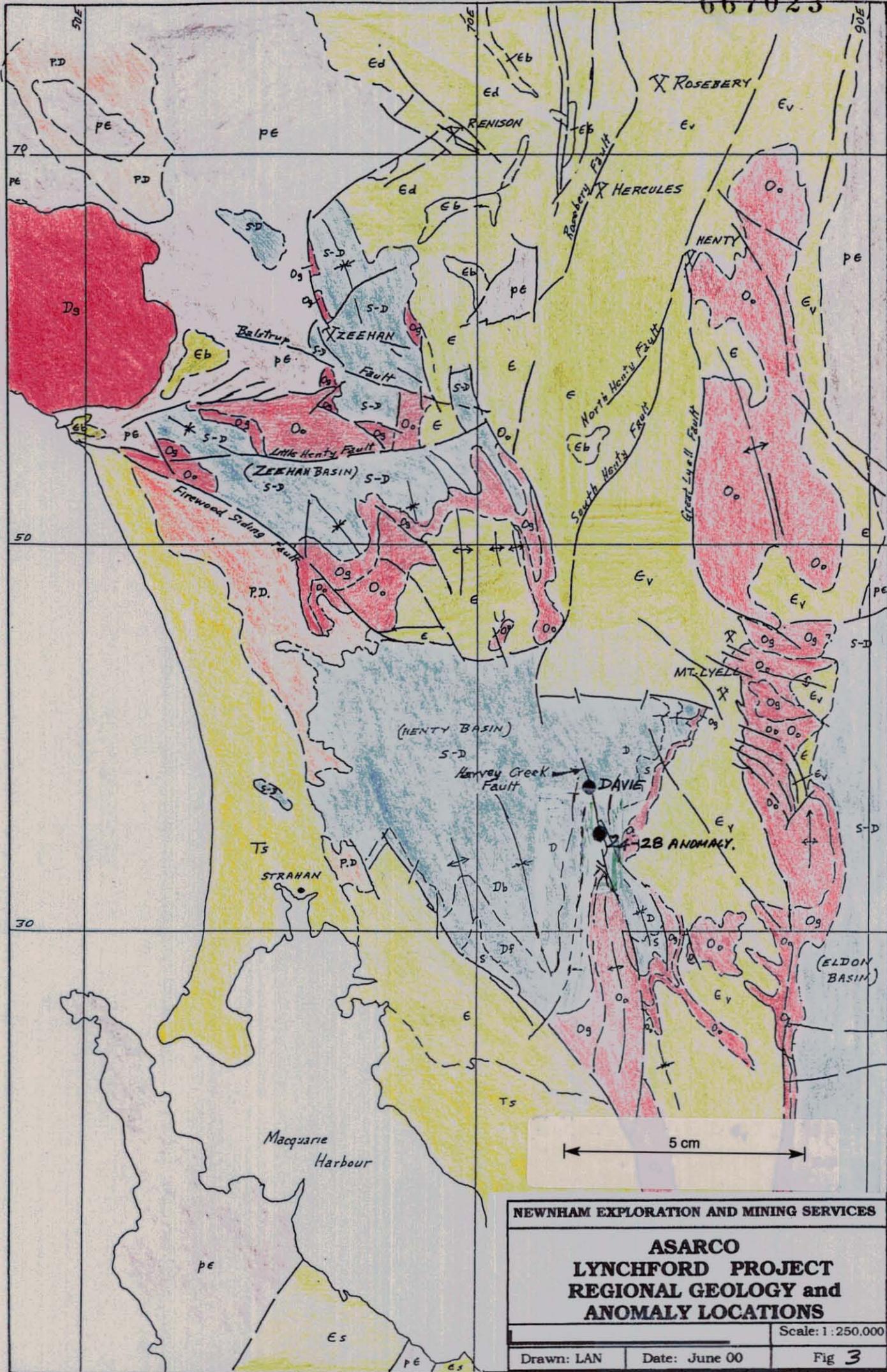
Major faults such as these may be long-lived structures, developed prior to basin formation and active during basin development. As such, they may have represented conduits for mineralisation emanating from the waning phases of Mt Read volcanism in the Ordovician and subsequently as conduits for mineralisation remobilised during basin margin subsidence and tectonism.

Minor gold and base metal mineralisation is widespread in the Palaeozoic sediments on this eastern margin of the Henty Basin (see Fig 3). Primary gold mineralisation was mined at the Princess, May and Woody Hill Mines, and prospected for at the Coupon, Davie and 24-28 Anomaly areas. Alluvial gold was widespread in the Hall Creek drainage system.

GEOLOGICAL KEY

See the General drawings in this Report

TERTIARY	Ts	Sediments	
	Pd	Undifferentiated Post-Devonian sediments	
DEVONIAN	D	Undifferentiated sediments	
	Dg	Granite	
	Db	Bell Shales	
	Df	Florence Quartzite	
SILURIAN	S	Silurian sediments undifferentiated	Eldon Group
	Sc	Crotty Quartzite	
ORDOVICIAN	Or	Rinadeena Formation	Junee Group
	Ors	sandstone	
	Orm	Shale	
	Og	Gordon Limestone	Demison Group
CAMBRO-ORDOVICIAN	Om-Dc	Moira Sandstone-Dwen Conglomerate and equivalents	
CAMBRIAN	E	Undifferentiated	
	Ed	Dundas Group	Mt. Read Volcanics
	Ev	Undifferentiated Mt. Read Volcanics	
	Et	Tyndall Group	
	Ec	Central Volcanic Complex	
	Ew	Western Sequence	
	Ep	Porphyritic Intrusives	
	Eb	Gabbroic and ultramafic complexes	
PRECAMBRIAN	Pg	Undifferentiated	



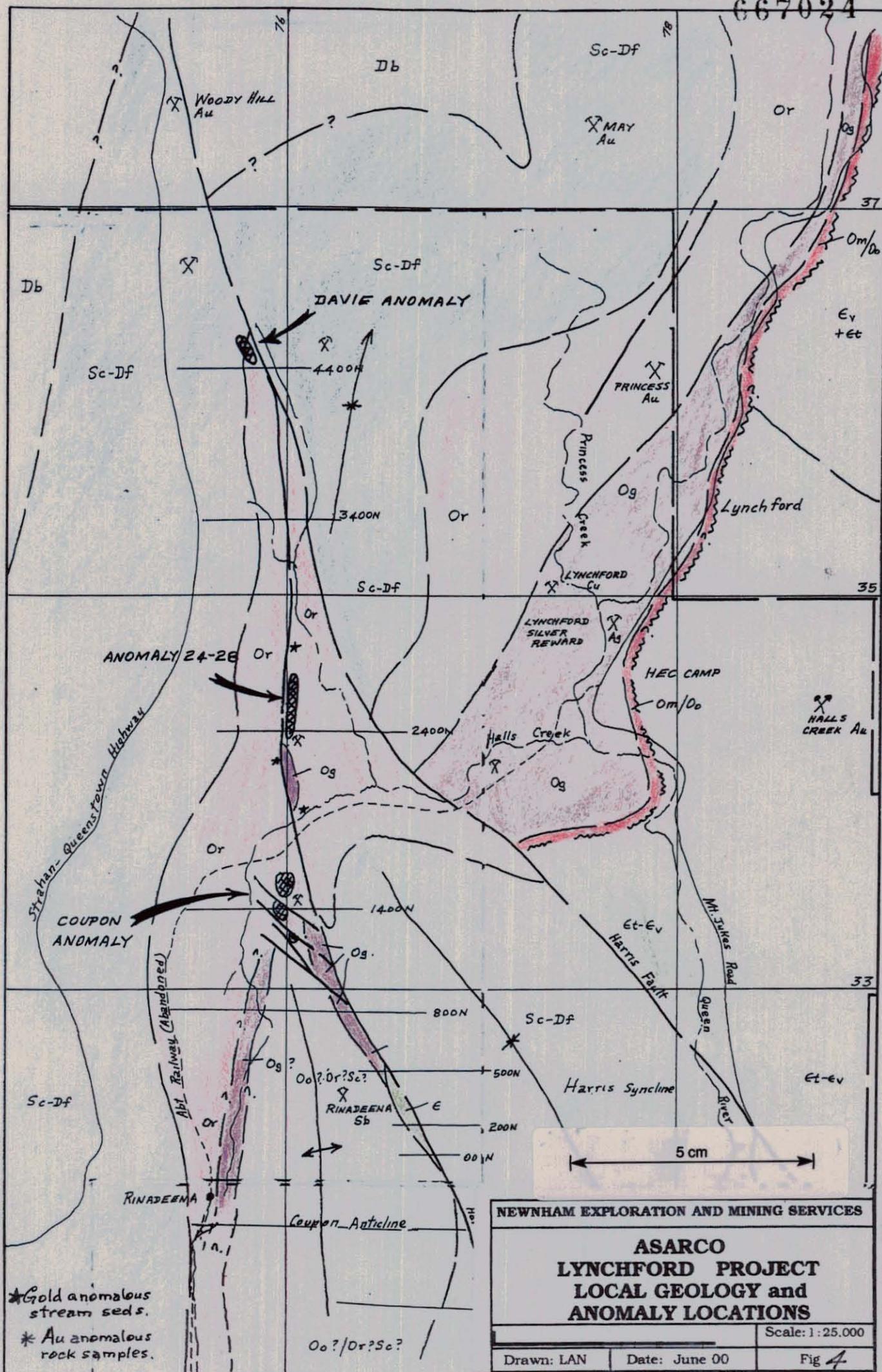
NEWMHAM EXPLORATION AND MINING SERVICES

**ASARCO
LYNCHFORD PROJECT
REGIONAL GEOLOGY and
ANOMALY LOCATIONS**

Scale: 1:250,000

Drawn: LAN	Date: June 00	Fig 3
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Data Sources: E.L. Mapping: Queenstown 1:250 000 Map Sheet: MRFV Map 6, 1:100,000



* Gold anomalous stream sed.
 * Au anomalous rock samples.

NEWNHAM EXPLORATION AND MINING SERVICES

**ASARCO
 LYNCHFORD PROJECT
 LOCAL GEOLOGY and
 ANOMALY LOCATIONS**

Scale: 1:25,000

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Date: June 00

Fig 4

3. MINING and EXPLORATION HISTORY

The **Davie Workings** have previously been described as consisting of "several shafts and adits developed on quartz reefs which produced encouraging assay results up to 14 g/t gold at surface" - (EL 9/84 Annual Report 1993-1994, NEMS). No such workings were located during this brief investigation but it is quite possible that they were concealed by the almost impenetrable mass of fallen timber and regrowth.

At **24-28 Anomaly** no records of previous mining exist but one, and possibly two, adits were located by this investigation.

In the early 1980s the **EZ Company** completed some regional mapping, rock-chip and stream sediment sampling through this area. Some of their sampling points at Davie were re-located, but it was difficult to read the tags. Records of their work are sparse.

In 1986-1987 **Trikon** established a widespaced grid over the Harveys Creek Fault zone. They mapped, rock-chip sampled and soil sampled these lines at 20 m spacings. Anomalous zones were defined at Coupon, 24-28 and Davie. One sample of limonitic quartz veined float from line 2,400 N/000 E (near the 24-28 adit) reportedly assayed 16 g/t Au and 0.44% As.

In 1987 **Cyprus** infilled the Trikon grid with closer spaced lines and undertook more detailed mapping, rock and soil sampling programs. Only vague traces of this grid could now be located. The Cyprus work confirmed the Au-As anomalous nature of the 24-28 and Davie areas.

At **24-28** they outlined a soil Au anomaly 50 m wide x 250 m long, with values to 0.24 g/t Au, and an As anomaly 75 m wide x 400 m long with values to 460 ppm As. Note: these values were derived from samples on cut grid lines and need not necessarily reflect continuity of anomalism between lines.

At **Davie** the soil Au anomaly was 75 m wide x 250 m long with values to 70 ppb, and the As anomaly was 100 m wide x 400 m long, with values to 5,600 ppm. Outcrop samples assayed to 0.76 g/t Au and 6,500 ppm As.

In 1991 **Perilya** cut additional lines over the 24-28 Anomaly, but the line spacing was still 200 m apart. They described the 24-28 adit as being developed in a major ferruginous shear zone. Sampling of the adit returned values up to 0.4 g/t Au and 500 ppm As. Float samples on lines 2,400 N and 2,600 N returned values to 1.65 g/t Au, and 0.14 g/t Au respectively. Perilya did not undertake any work at Davie.

4. ANOMALY INVESTIGATION PROGRAM

4.1 Davie Anomaly

4.1.1 Access:

The Davie Anomaly was accessed from the Strahan road. The first 300 m is across a boggy button-grass gully, then up a steep ridge which has been burnt. The second 300 m is down a very steep valley, which has been partially burnt, to Sulflde Creek. Landslips have occurred in places on the north end of the anomaly. Fallen timber and regrowth combined with the steep hillside make access difficult.

4.1.2 Geology:

The Davie anomaly refers to a prominent outcropping ridge of limonitic (gossanous?) sandstone, traced in a north-west direction for approximately 250 m. Cyprus mapped this unit on lines 45 N and 46 N and do appear to have followed it between lines. It is most prominent on its northern end where it forms high (quite dangerous) cliffs of massive ironstone. Access makes estimation of width difficult, but it may be approximately 20-30 m wide, dipping to the south-west.

Apart from this body, outcrop was sparse except for isolated outcrops of quartz veined quartzites along Sulflde Creek. With the benefit of cut line access, Cyprus appear to have mapped some outcrops along lines 45 N and 46 N, and these are reproduced herein on Fig 5. The sediments either side of the ironstone outcrop are probably interbedded siltstone-mudstones and coarser-grained quartzites.

4.1.3 Sampling:

Ten (10) rock-chip samples were taken during the current investigation. Sample locations and descriptions are attached as Appendix 1 and complete assay results as Appendix 2. Locations and some results are shown on Figs 5 and 6.

4.1.4 Results:

Our results tend to support the Cyprus results and the following comments are relevant:

- (a) Samples from sediments east of the ironstone outcrop were not geochemically anomalous.

- (b) The five outcrop samples from the ironstone were As anomalous (930-3,850 ppm).
- (c) Only the two samples from the northern section of the ironstone (31459 and 31460) were gold anomalous (51 and 80 ppb respectively).

These results are less than Cyprus results from the same area, but that may reflect the small number of samples from a very large outcrop.

- (d) The ironstone samples are also variably, but weakly, anomalous in Pb, Zn and Sb.
- (e) Our samples tend to compliment as well as support the Cyprus assays as their sampling was restricted to the cut lines 45 N and 46 N, whilst several of our samples were taken between these lines.

4.1.5 Comments:

The Cyprus and Asarco results combined confirm the presence of a substantial Au-As anomalous ironstone outcrop at Davie.

The body is at least 250 m long, possibly 20-30 m wide and appears to be stratabound, dipping steeply to the west.

The literature describes significant workings in this area but none were located either by Cyprus or NEMS. However, this area was intensely prospected in the late 19th century, and I would be very surprised if these prospectors did not sink shafts and drive adits into this outcrop. The fact that we did not find them probably reflects the difficult nature of the country and the limited search. A more intensive search aided by improved access is warranted.

Cyprus maps show some old workings on a ridge 250 m east of Davie, but these were not located during this program.

4.2 24-28 Anomaly

4.2.1 Access:

For the purposes of this exercise, the 24-28 Anomaly was accessed from the Abt Railway formation, north along a tributary of Halls Creek.

This route was heavily overgrown with blackberries, vines and swordgrass, but the gradient was low.

However, this does not represent a suitable route for future more serious access because, firstly, with the development of the Abt Railway, no vehicle access will be permitted south of Halls Creek Quarry and, secondly, the tributary valley is very steep-sided and any roading within the riparian zone would be unacceptable on environmental grounds.

An alternative, but very steep, access route is shown on Fig 2. This would be suitable during any further early stage evaluation.

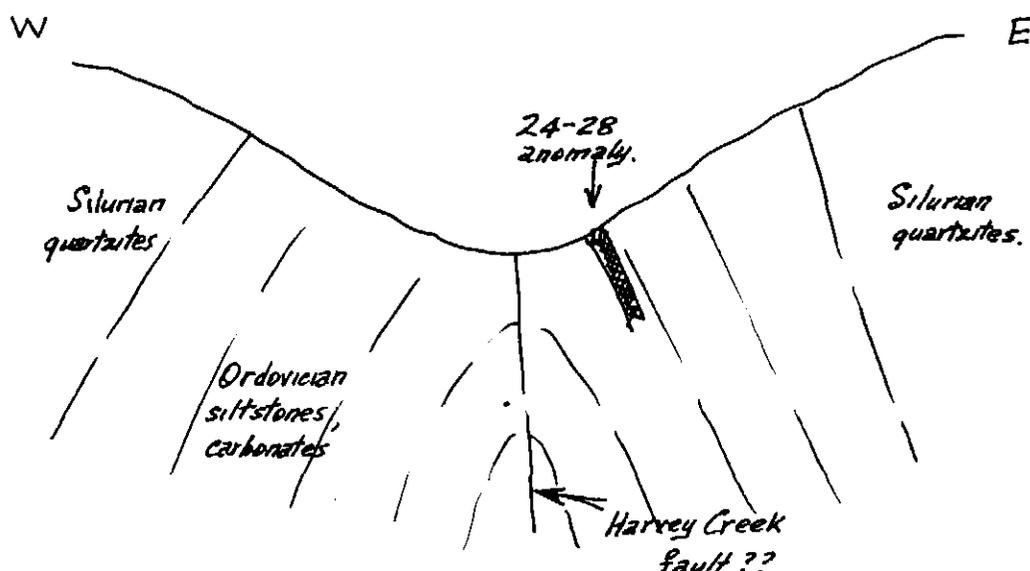
Interestingly, we located an old cart track cutting the northern end of the anomaly around Cyprus line 28 N. It was following the contours at a gentle gradient and fragments of insulators suggested it was accompanied by a telegraph line, thereby indicating it was a significant track. It was cut by a landslip (still moving?), to the west, and heavily overgrown to the east. It may have connected Rinadeena with Woody Hill Mines late in the 19th century.

4.2.2 Geology:

A feature of this area was the dearth of outcrop. The topography was steep and the soft sediments were extensively slumped down hill and deeply weathered. The best outcrops were along the cart track described above, where soft, cleaved iron stained siltstones were essentially as mapped by Cyprus along line 28 N.

As mapped by others, 24-28 Anomaly occurs in the core of a north plunging anticline consisting of harder Silurian sediments overlying softer Ordovician pelites. The Harvey Creek Fault is thought to occupy the axial plane of this anticline.

An alternative interpretation is that the Harvey Creek Fault does not exist.



One adit on the east bank of the creek was located and was accessible (with great care) to approximately 15 m, where it was blocked by a roof cave. It appeared to extend beyond the cave.

A depressed area approximately 20 m north from this adit was highly suggestive of a collapsed adit portal, and may well represent a second, parallel adit.

Cyprus suggested the main adit was developed along a strong iron rich shear zone. I was unable to substantiate this because of the unstable nature of the adit. The sediments in the walls were certainly strongly cleaved (? bedded), and quartz veined. The adit appears to have been driven perpendicular to sedimentary strike, thereby suggesting it may have been driven to intersect a stratabound body. Alternatively, it may have been driven along a shear or fault zone almost perpendicular to strike. I prefer the stratabound option.

4.2.3 Sampling:

Because of the extremely poor outcrop in the area, only eight rock samples were taken for assay. Sample locations and descriptions are attached as Appendix 1 and assay results as Appendix 2. Locations and some results are shown on Figs 7 and 8.

Three (3) of the samples were from the old cart track to the north, one (1) from the creek bed near the adit, and two (2) each from the adit portals.

4.2.4 Results:

The siltstone samples from the old cart track were quite low in most elements, but weakly anomalous in As.

The two samples from the portal of the main adit were anomalous in Au (0.5 g/t), As (600 ppm), and Sb (30 ppm). These results are similar to those obtained by Cyprus.

One of the two samples (31466) from the possible collapsed adit to the immediate north (along strike) of the main adit returned similar values. This supports the suggestion that the target here may be stratabound.

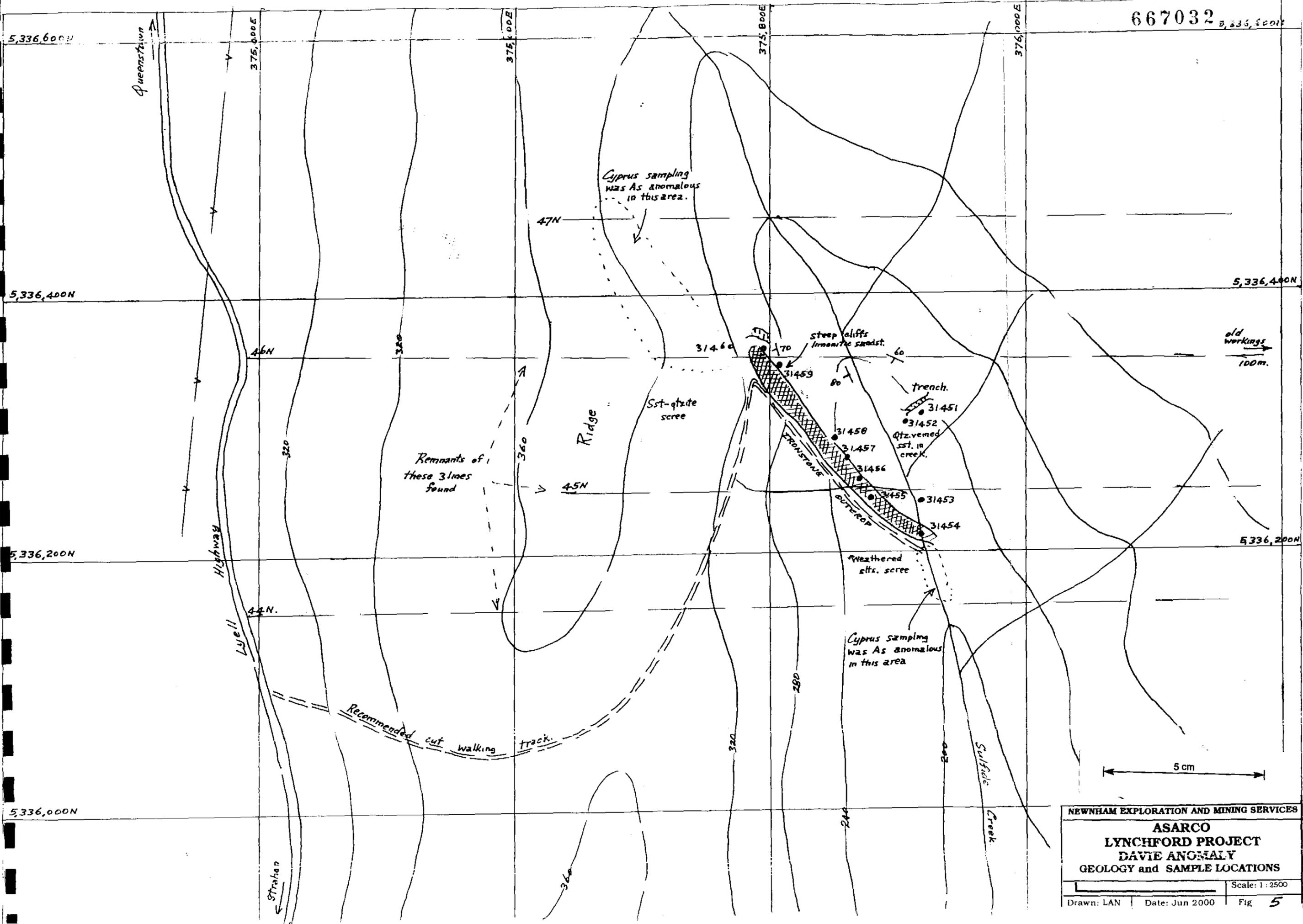
4.2.5 Comments:

Sampling in this area was hampered by extremely poor outcrop. However, sampling around the old workings confirmed and complimented the Cyprus results and suggests there is a Au-As-Sb anomalous stratabound deposit just east of the creek, which former

prospectors tested by way of one and possibly two adits.

The strike extent of this body could not be estimated, apart from the fact that Cyprus did obtain anomalous As values in soils up to 400 m north of the adit.

- (g) No further work is recommended at 24-28 anomaly at this stage. However, if detailed work at Davle is encouraging, this could be reviewed and a more detailed sampling effort could be warranted.

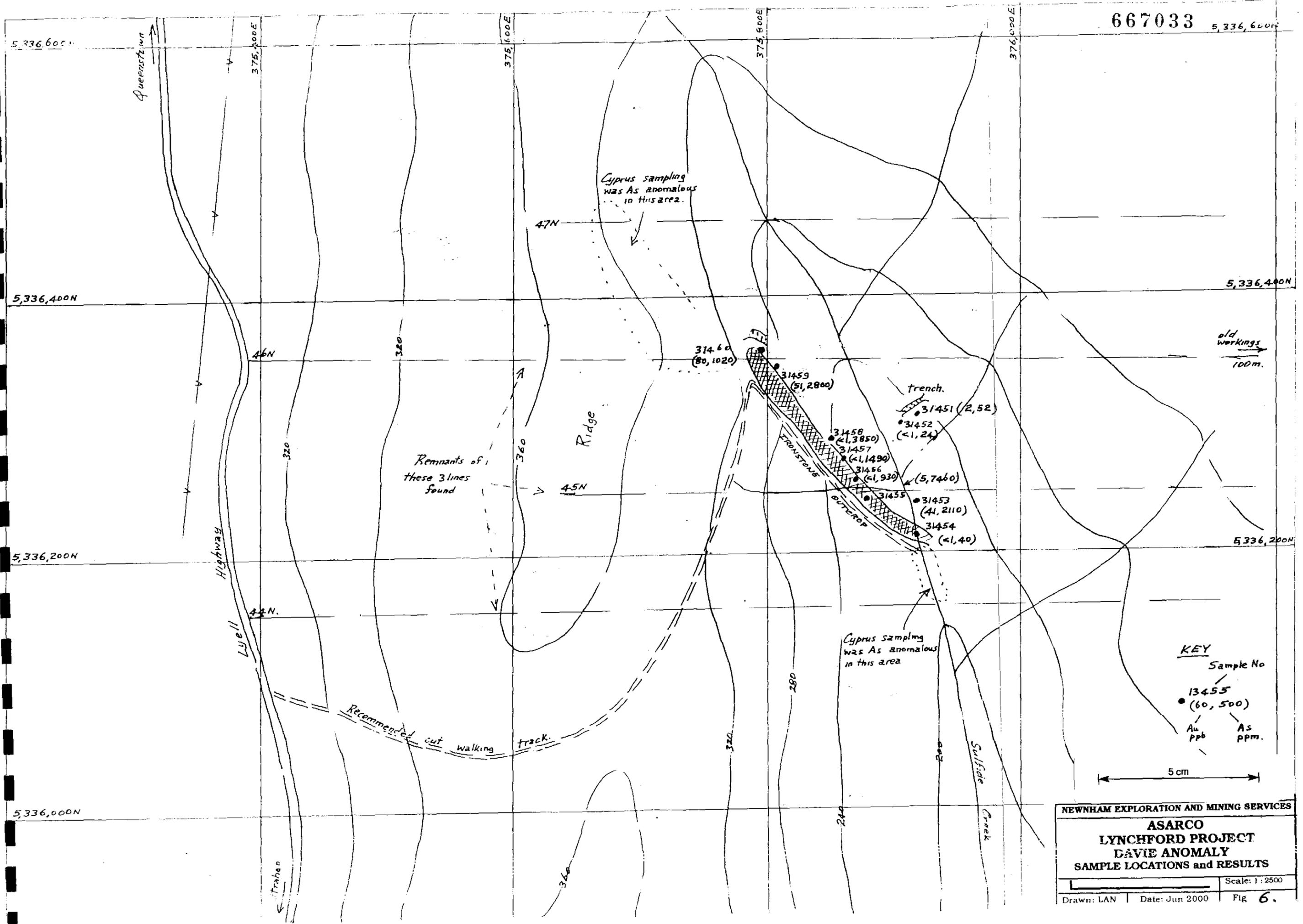


NEWNHAM EXPLORATION AND MINING SERVICES

ASARCO
LYNCHFORD PROJECT
DAVIE ANOMALY
GEOLOGY and SAMPLE LOCATIONS

Scale: 1 : 2500

Drawn: LAN | Date: Jun 2000 | Fig 5



KEY
 Sample No
 13455
 (60, 500)
 Au ppb As ppm.

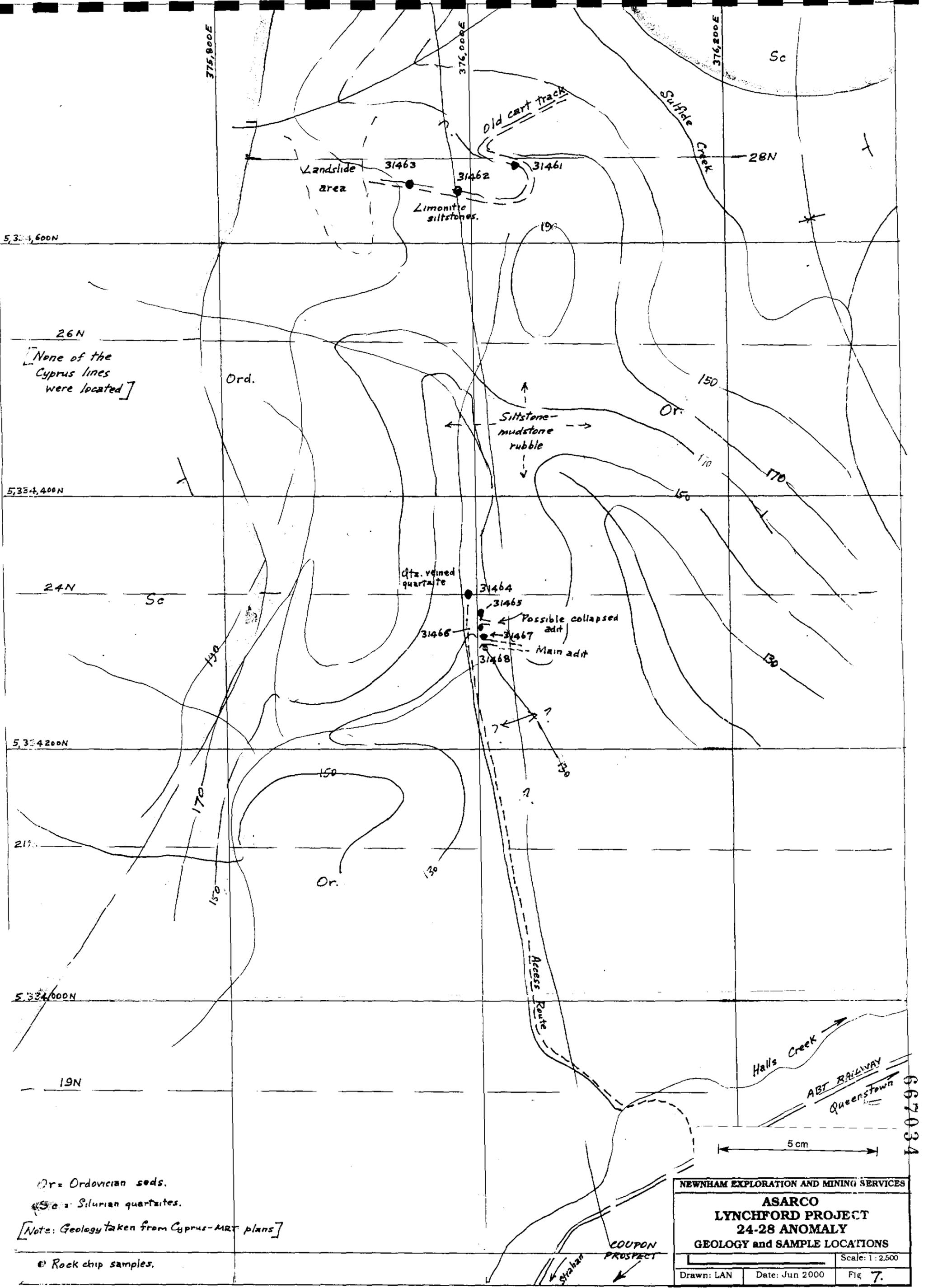
5 cm

NEWNHAM EXPLORATION AND MINING SERVICES

ASARCO
LYNCHFORD PROJECT
DAVIE ANOMALY
SAMPLE LOCATIONS and RESULTS

Scale: 1:2500

Drawn: LAN | Date: Jun 2000 | Fig 6.

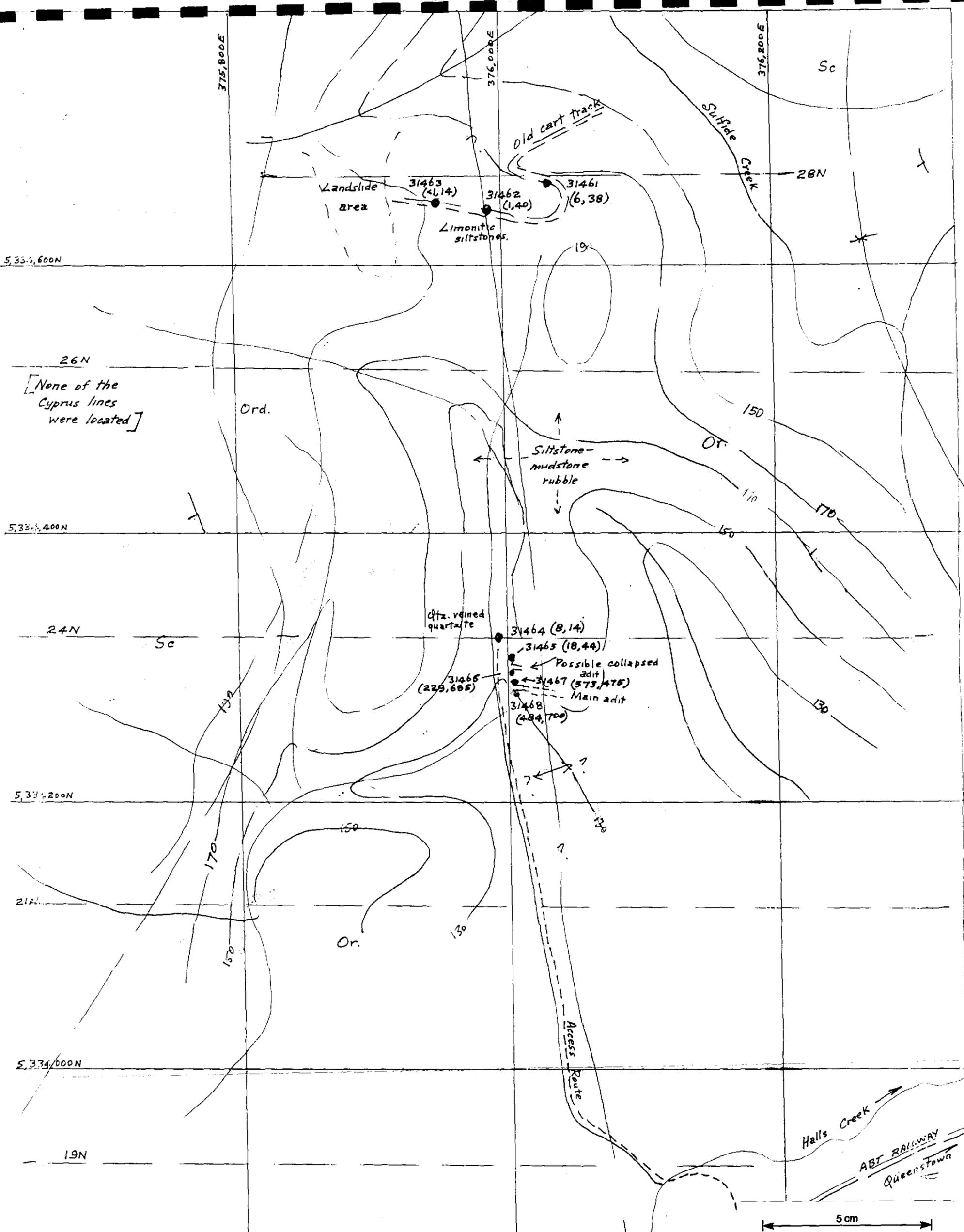


[None of the Cyprus lines were located]

Or = Ordovician seds.
 Sc = Silurian quartzites.
 [Note: Geology taken from Cyprus-MRT plans]

© Rock chip samples.

NEWNHAM EXPLORATION AND MINING SERVICES		
ASARCO		
LYNCHFORD PROJECT		
24-28 ANOMALY		
GEOLOGY and SAMPLE LOCATIONS		
Scale: 1 : 2,500		667034
Drawn: LAN	Date: Jun 2000	
Fig 7.		



[None of the Cyprus lines were located]

Or = Ordovician seds.
 Sc = Silurian quartzites.

[Notes: Geology taken from Cyprus-MRT plans]

• Rock chip samples.
 Sample no
 31465
 Au ppb. (210, 520) As ppm

NEWNHAM EXPLORATION AND MINING SERVICES		
ASARCO		
LYNCHFORD PROJECT		
24-28 ANOMALY		
SAMPLE LOCATIONS and RESULTS		
Scale: 1:2,500		
Drawn: LAN	Date: Jun 2000	Fig 8.

667035

5. RECOMMENDATIONS

Of the two prospects, Davie is the more impressive. This is in spite of the higher Au values at 24-28.

The reason Davie has not been more aggressively evaluated in recent times is probably the physically difficult nature of the area.

A further modest program of sampling and mapping is recommended at Davie, preceded by access upgrading.

The following is recommended:

- (a) A walking track be cut from the Strahan road into the north end of the Davie outcrop, then along its strike, possibly with a few short cross lines.
- (b) A track be cut through to the workings shown east of Davie.
- (c) Three days be spent by a 2-person crew mapping and detailed-sampling the Davie outcrop, followed by a brief search and examination of the eastern workings.
- (d) If results of this work are encouraging, it may be possible to go straight to the drilling stage with 1-2 holes being drilled from the ridge top to test the down dip extension.
- (e) For reasons of program efficiency and crew motivation, this work should not be undertaken before October.
- (f) A budget of \$13,000 would be required for this work, as follows:

	\$
- access tracks: 2,000 m @ \$1,500/km	3,000
- 2-person crew: 4 days @ \$900/day (all costs)	3,600
- analyses: 150 samples @ \$20/sample	3,000
- petrology: 4 samples @ \$100/sample	400
- reporting, drafting:	<u>3,000</u>
TOTAL:	<u>\$13,000</u>

APPENDIX 1

Sample Details

**NEWNHAM EXPLORATION and MINING SERVICES
SAMPLE RECORD**

Project	Davie	Wkgs	Sampler	LAN	Sample Type	Rock	Laboratory	Analabs	Sampling Period	May 00
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Sample Number	Co-ordinates		Description	Assays						Comments
	N	E		Au	As	Pb	Zn	Fe	Sb	
31451	5336305	375915	weakly limonitic quartzite-sandstone rubble; base of trench	2	52	<20	108	3.35	<10	sub-outcrop
31452	5336300	375910	friable, weakly limonitic quartzite in trench; 40/vertical strike;	<1	24	<20	110	3.25	<10	outcrop
31453	5336240	375910	gossan float in creek; siliceous-limonitic; boxworks (pyrite)-sandstone;	41	2110	<20	501	61.5	<10	float
31454	5336210	375920	friable decomposed limonitic siltstone in clay in creek bank;	<1	40	<20	14	1.5	<10	slumped down hill ?
31455	5336250	375880	soft limonitic siltstone in creek; crackeled and infilled with orange-black limonite	5	7460	3460	258	42.6	15	outcrop
31456	5336260	375870	limonitic siltstone outcrop	<1	930	34	409	15.9	<10	South end large outcrop
31457	5336275	375860	limonitic siltstone-sandstone on south side of outcrop ridge;	<1	1490	<20	325	16	<10	large outcrop ridge
31458	5336290	375845	limonitic siltstone outcrop;	<1	3850	88	120	15.2	<10	south side large outcrop
31459	5336345	375800	very large outcrop of limonitic siltstone/ sandstone; gossanous appearance;	51	2800	54	141	20.7	11	cliffs
31460	5336360	375795	bleached white and orange limonitic siltstone;	80	1020	<20	36	6.1	<10	cliffs
				ppb	ppm	ppm	ppm	%	ppm	

667038

667039

APPENDIX 2

Assay Results



Our reference : BU017905
 Your reference : 128533
 Project code :
 Date received : 23/05/00
 Date reported : 13/06/00

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

Lindsay Newnham

Newnham Exploration & Mining Services
 PO Box 132
 RIVERSIDE

TAS 7250

Number of pages of results : 3
 Number of Samples : 18
 First Sample : 31451
 Last Sample : 31468

Invoice to:

Electronic Data Transmission :
 Modem Y 13/06/00
 Facsimile / /
 Disk Report / /

Preliminary Reports :
 06/06/00 Report

Results to:

Results to:

Remarks :

Authorised by
 On behalf of:

Rob Chapman
 Laboratory Manager

