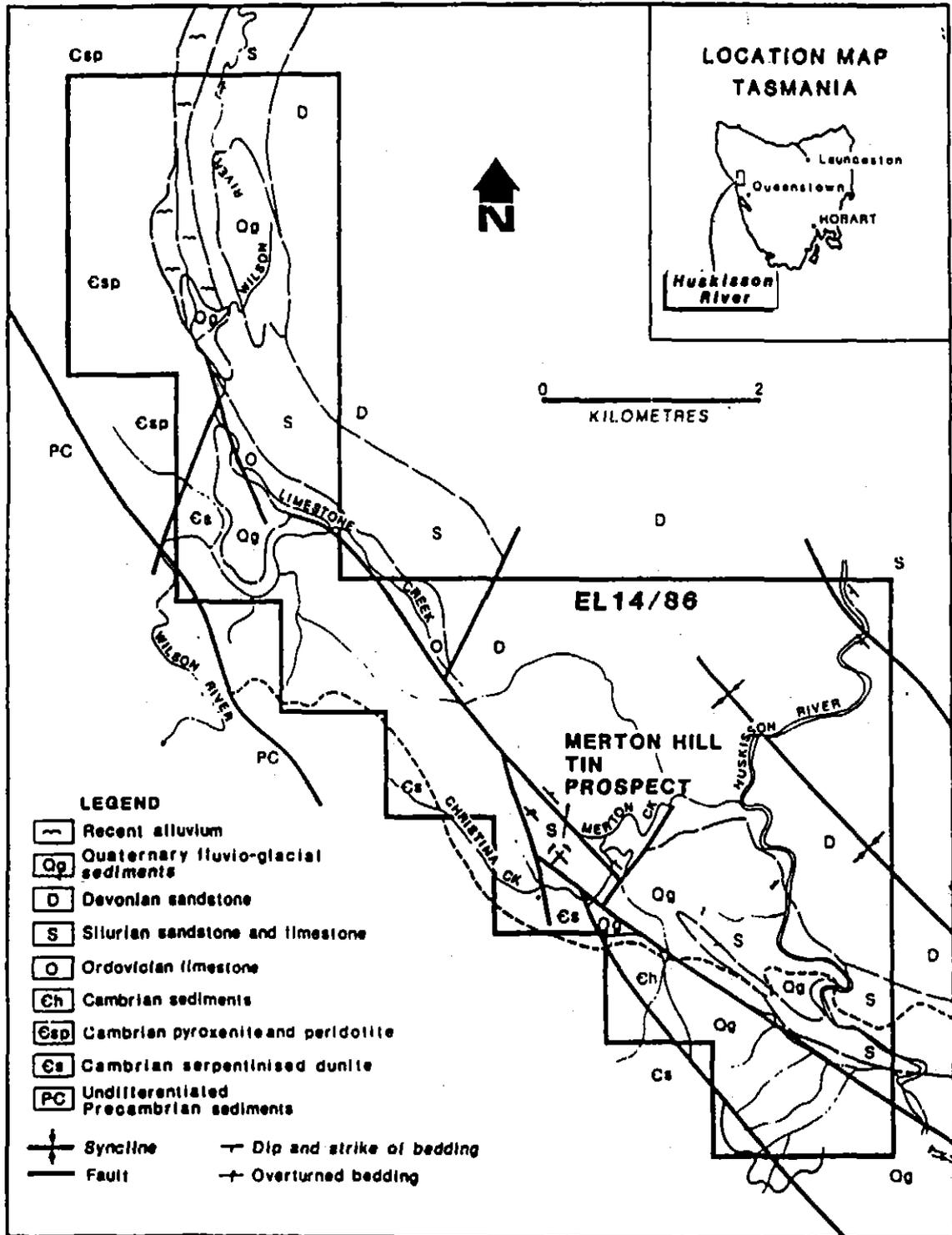


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HUSKISSON RIVER Tenement and Regional Geology



EXPLORATION REPORT

EXPLORATION LICENCE 14/86, HUSKISSON

INTRODUCTION

The Huskisson Exploration Licence, 14/86, 12km northwest of Rosebery has been the subject of exploration for chromite, gold, platinum group metals (PGM), gold and tin alluvials. Previous work suggested high level gravels in the northeast corner of the lease together with those in the Chromite Creek catchment are possible sources for these commodities, particularly chromite-PGM.

1. EXPLORATION ACTIVITIES

During the period 1.1.90 to 24.7.90 management and control of Black Horse changed. Exploration was reviewed with the present data to hand and the lease area was also the subject of an assessment for hard rock gold mineralisation.

1.1 Chromite - PGM project

The attraction of the lease related to the occurrence of ultramafics associated with the Huskisson Syncline. However, exploration has shown that liberation of associated chromite (and PGM's) has not yielded significant (large) concentrations of these minerals. Likewise, historic alluvial workings, e.g. gold in the Barnes Creek drainage, are confined to small scale recent stream deposits which represent reworked fluvioglacial sediments. Gold concentrations are extremely limited in size and do not represent a viable economic target.

It is thought that economic success of continued exploration for large scale chromite-(PGM) alluvials with associated gold and tin will be unrewarding.

1.2 Gold assessment E14/86

The potential for hard rock gold mineralisation on E14/86, similar in style to Beaconsfield or Henty River, was investigated. This concept was derived from the premise that alluvial gold on the licence was possibly derived from such mineralisation. Reconnaissance sampling and panning disproved this theory, refer Appendix I. Alluvial gold mineralisation appears to have been mined in the past from reworked fluvioglacial remnants of the once extensive West Coast Ice Cap. Detrital gold within these fluvioglacial deposits was probably derived from one or a number of remote sources away from the licence area.

2. EXPENDITURE

During the period \$34,122 was spent on the licence.

APPENDIX I

Hard rock gold potential – Wilson River Project, Tasmania



27 JUL 1990

MEMORANDUM

TO : DR. B.L. FARRELL - CALLINA N.L.
FROM : R.J. YEATES
DATE : 21 JULY 1990
SUBJECT : HARD-ROCK GOLD POTENTIAL - WILSON RIVER PROJECT, TASMANIA

1. Introduction

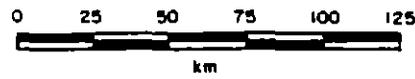
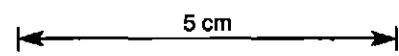
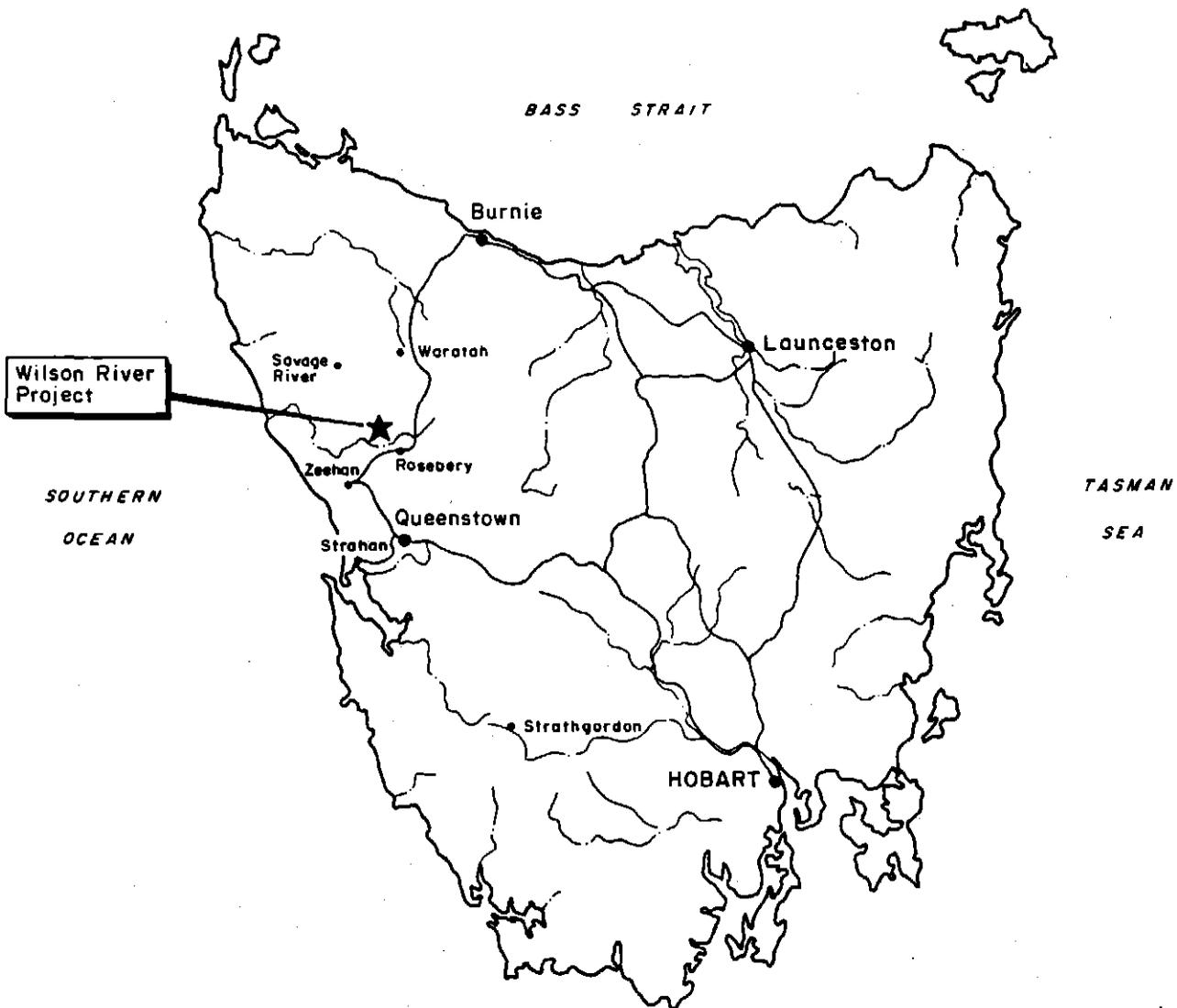
The Wilson River Project is situated approximately 10 kilometres northwest of Rosebery on the West Coast of Tasmania (Figure 1). Exploration activities are based from an extensive camp located near Merton Hill, immediately north of the Pieman Development Road.

The Project consists of three Exploration Licences, E24/85, E14/86 and E18/86, however this report refers largely to work carried out on E14/86 (Figure 2).

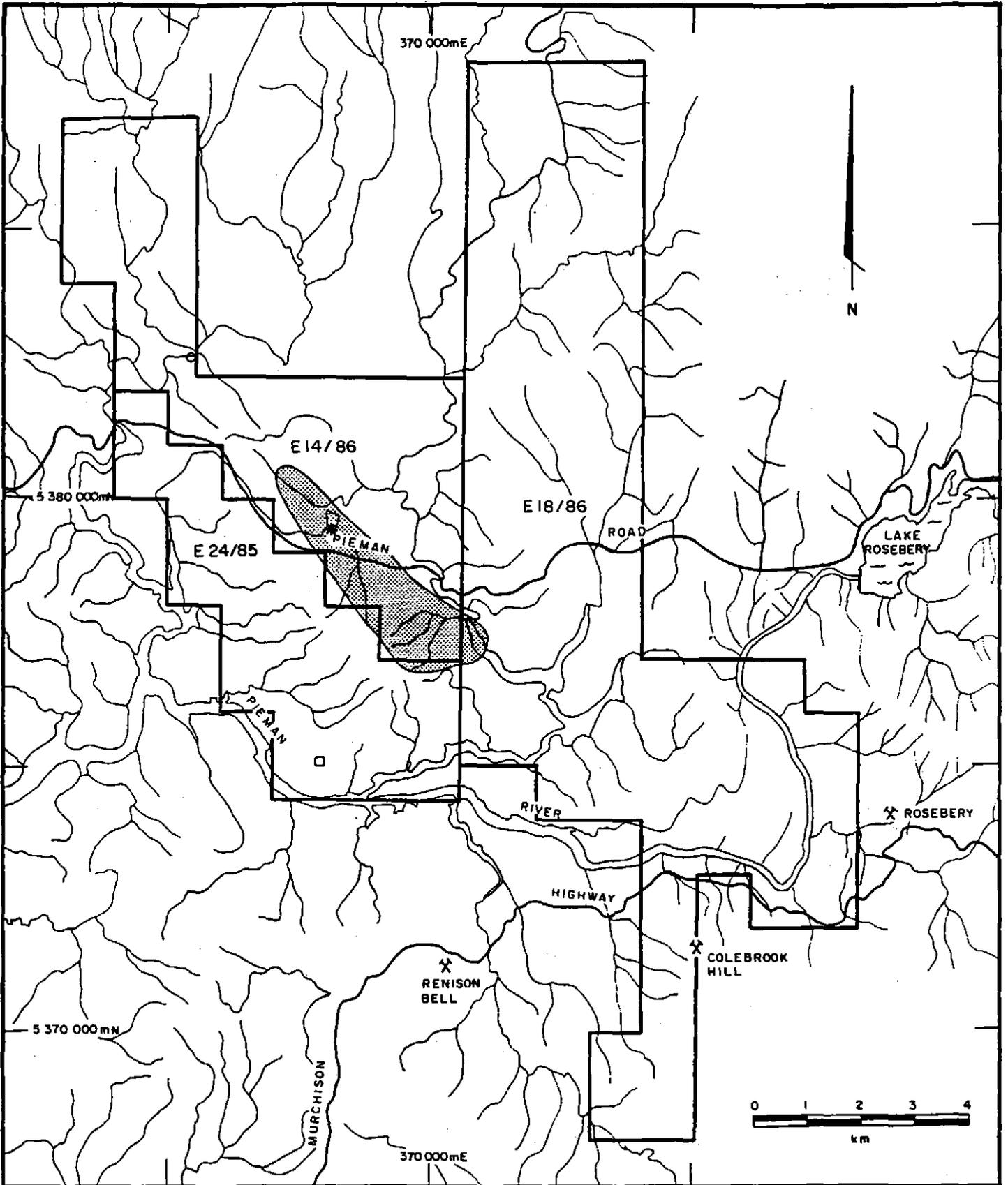
2. Conceptual Geology

Mr. M.G. Creasy, Geological Consultant and 20% equity holder in E14/86, developed a conceptual geological model to explain the reported presence of alluvial gold within E14/86. This concept is based on the premise that alluvial gold is derived from hard-rock mineralisation similar in style to either the Beaconsfield or Henty models.

The prospective geology was defined as a sequence of limestones, sandstones, conglomerates and shales of Cambrian, Silurian and Ordovician age which occupy a portion of the western limb of the Huskisson Syncline. Geological mapping by A.V. Brown and Renison Limited indicate that this sequence is separated from the Huskisson ultramafics by a major fault and that the entire sequence has been disrupted by numerous other faults which are both conformable and cross-cutting. This is particularly the case in the vicinity of the Merton Hill tin prospect.

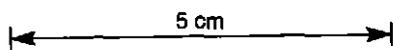


 RESOURCE SERVICE GROUP		
CALLINA N.L.		
PROJECT: WILSON RIVER		
<h2>LOCATION PLAN</h2>		
Comp: RJY	Date: 6/90	Scale: 1:250 000
AMB:	Lot:	Long:
Drawn: FR	PLAN N°:	



LEGEND

- * Wilson River Exploration Camp
-  Main area of Gold Exploration interest
- o 22g/t Au Pyritic Cobble found in Wilson River
- 0.5 g/t Au in Pyritic Concentrate (approximate location)



 RESOURCE SERVICE GROUP		
CALLINA N.L.		
PROJECT: WILSON RIVER		
TENEMENT PLAN		
Comp: RJY	Date: 6/90	Scale: 1:100000
AMG:	Lat:	Long:
Drawn: FR	PLAN N°:	

The location of historical alluvial mining is largely coincident with Quaternary fluvioglacial deposits which lie on or adjacent to the structure separating the Huskisson ultramafics and adjacent sediments.

The geology of the relevant portion of E14/86 is presented in Figure 3.

3. Previous Exploration

A report by McIntosh Reid in 1921 refers to gold and osmiridium being won from streams in the Wilson and Huskisson River areas. Poltock (1988) discusses these gold occurrences and their possible origins. *"Fluvioglacials are confined to the lower parts of the Pieman valley. These deposits consist of varved clays, gravel beds and scattered boulder erratics. The detritus has been primarily derived from the West Coast Range Conglomerate, Jurassic dolerites and Cambrian volcanics. Streams cutting these gravels have been worked for gold and osmiridium in the Wilson River area to the west of E18/86"*.

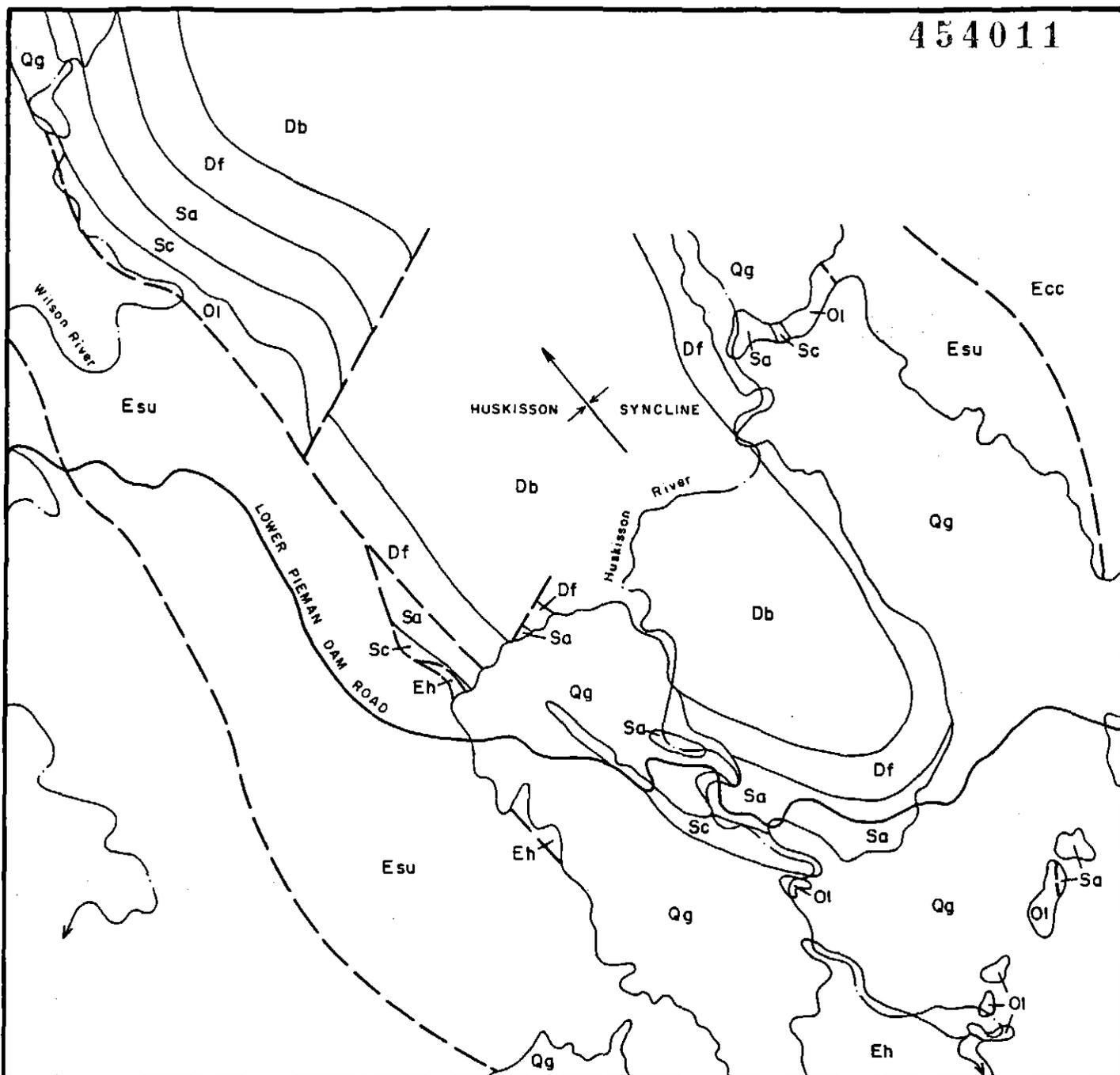
Mark Creasy, with the assistance of contract geologist Roger Poltock, investigated the gold potential of all areas within the Wilson River Project. Encouraging results are almost exclusively confined to recent alluvials draining areas of Quaternary fluvioglacials or the fluvioglacials themselves.

A prospecting pit was located on Conglomerate Plain, immediately northwest of the confluence of the Pieman and Huskisson Rivers. A pyritic/ pyrrhotitic panned concentrate from this area assayed 0.5 ppm Au.

A pyritic cobble from a gravel bank in the Wilson River, near its confluence with Limestone Creek, reportedly assayed 22 ppm Au. Further sampling of similar material in this area failed to duplicate the result. The origin of the cobble is unknown.

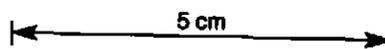
Literature and field evaluations by Mark Creasy centred on the Merton Hill area as representing the most promising gold exploration target. In early 1990, Creasy undertook a programme of panning and -200# stream sampling within the Barnes Creek and McArthur Creek drainages between Merton Hill and the Huskisson River. A total of 19 samples produced a maximum result of 21 ppb Au from -200# sampling. Panning of recent stream gravels produced a maximum of 30 gold colours. The best results were achieved from the Barnes Creek area, immediately west of the Huskisson River.

Sampling results are displayed in Figure 4.



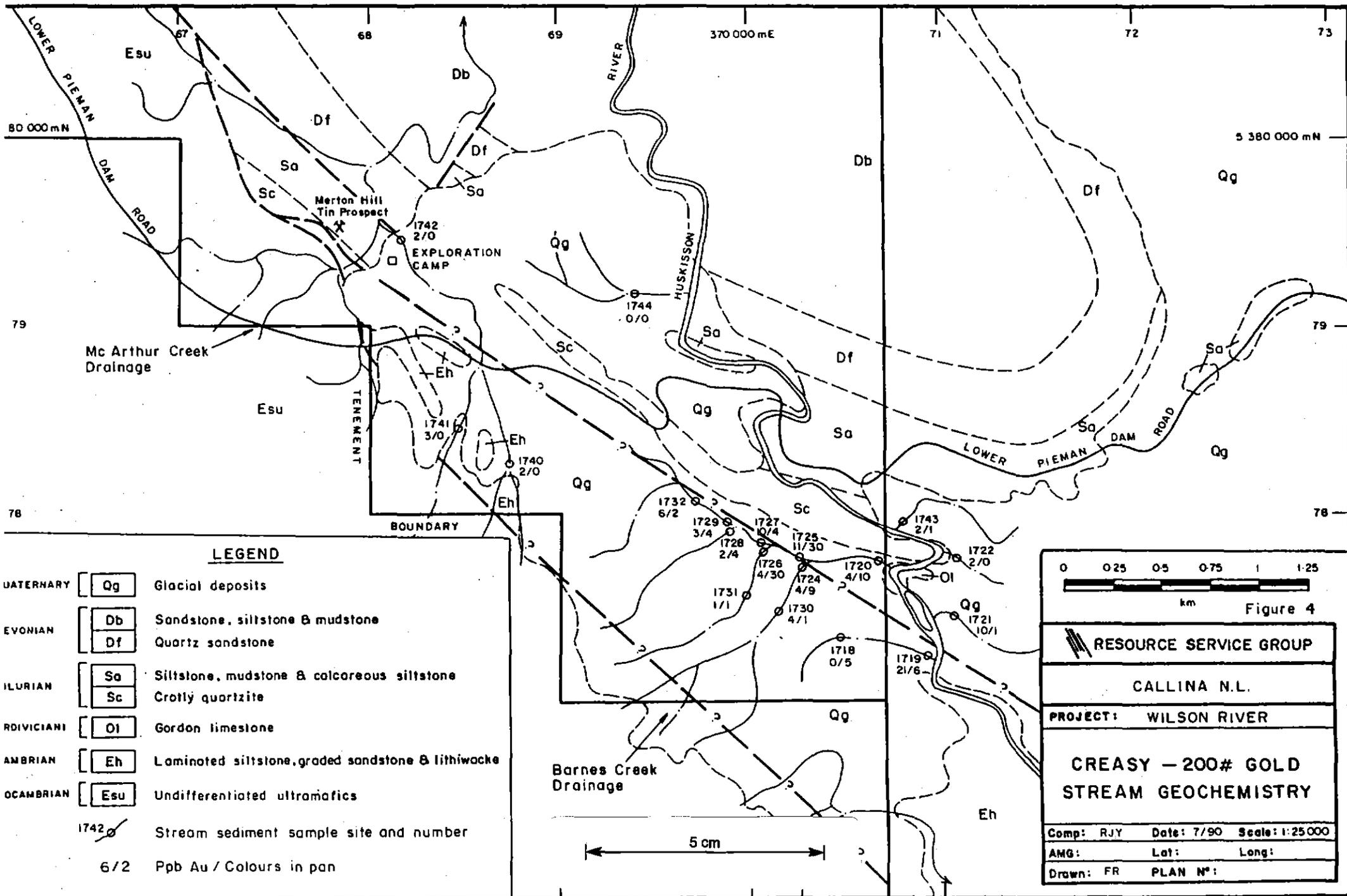
LEGEND

- Geological boundary
- - - Fault



QUATERNARY	Qg	Glacial deposits
DEVONIAN	Db	Sandstone, siltstone & mudstone
	Df	Quartz sandstone
SILURIAN	Sa	Siltstone, mudstone & calcareous siltstone
	Sc	Crotty quartzite
ORDOVICIAN	Ol	Gordon limestone
CAMBRIAN	Eh	Laminated siltstone, graded sandstone & lithiwick
EOCAMBRIAN	Ecc	Volcaniclastic, lithiwick, siltstone & mudstone with minor carbonate & tholeiitic basalt
	Esu	Serpentinite (undifferentiated)

RESOURCE SERVICE GROUP		
CALLINA N.L.		
PROJECT: WILSON RIVER		
GEOLOGY (RELEVANT TO GOLD EXPLORATION)		
Comp: RJY	Date: 7/90	Scale: 1:50 000
AMG:	Lat:	Long:
Drawn: FR PLAN N°:		



LEGEND

QUATERNARY	Qg	Glacial deposits
DEVONIAN	Db	Sandstone, siltstone & mudstone
	Df	Quartz sandstone
SILURIAN	Sa	Siltstone, mudstone & calcareous siltstone
	Sc	Crotyl quartzite
ORDOVICIAN	OI	Gordon limestone
AMBRIAN	Eh	Laminated siltstone, graded sandstone & lithiwickie
OCAMBRIAN	Esu	Undifferentiated ultramafics
	1742	Stream sediment sample site and number
	6/2	Ppb Au / Colours in pan

0 0.25 0.5 0.75 1 1.25
km

Figure 4

RESOURCE SERVICE GROUP

CALLINA N.L.

PROJECT: WILSON RIVER

**CREASY - 200# GOLD
STREAM GEOCHEMISTRY**

Comp: RJY Date: 7/90 Scale: 1:25000
 AMG: Lat: Long:
 Drawn: FR PLAN N°:

454012

The distribution of anomalous results led to development of the conceptual model referred to in Section 2. While the association of anomalous results with areas of previous alluvial operations and the Quarternary fluvio-glacials was recognised, it was suggested that the ultimate source of the gold may be underlying Paleozoic stratigraphy.

4. Recent Exploration

The author visited the project in June 1990 to confirm the results of previous sampling and assess the geological merit of the conceptual model.

A programme of panning and -20# BLEG stream sampling was completed over the area sampled previously. The results, plotted in Figure 5, range from 0.11 to 8.70 ppb Au. The 8.70 ppb value was derived from the first site to be sampled and may possibly be the result of contamination in the pan used to collect the screened fraction for analysis. However, panning from the same site produced one gold colour.

Sample results broadly confirm the earlier work with higher values being largely confined to the Barnes Creek drainage where ample evidence exists of past alluvial mining operations. Results in this area range from 1.04 ppb Au to 6.77 ppb Au.

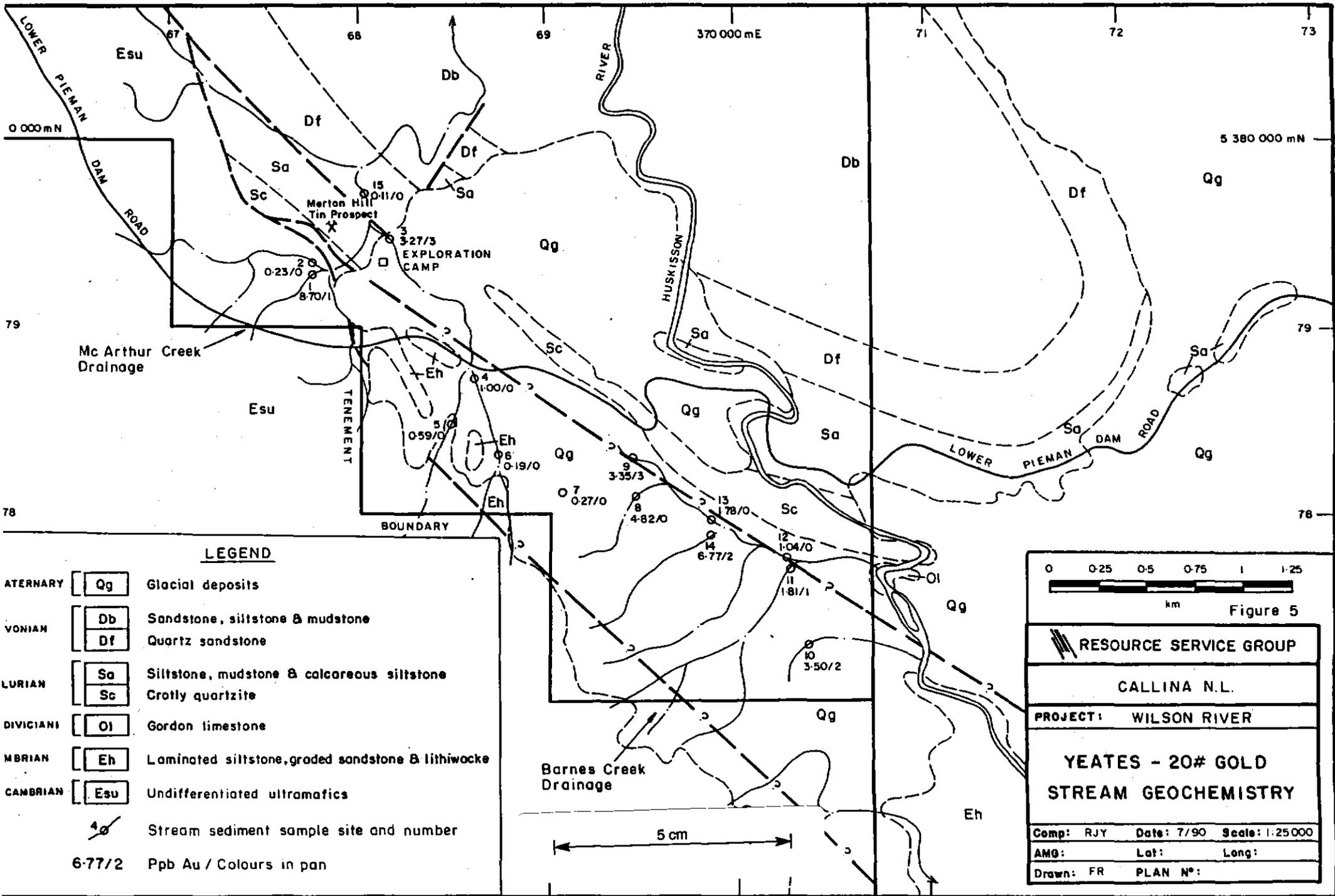
Results from sample sites 5 and 6, which drain directly off the Cambrian basement and target structure, are both low (0.19 and 0.57 ppb Au respectively). Results increase in tenor (1.00 and 3.27 ppb) within these drainages in the downstream direction. This may be due to the progressive accumulation of gold as the stream passes through Quarternary fluvio-glacials.

Sample sites 2 and 15, which are located on streams draining the Merton Hill tin prospect, produced values of 0.23 and 0.11 ppb Au respectively. This would tend to suggest that no gold is associated with this mineralisation or target structures in this area.

Panning at each site produced a maximum of 3 gold colours, considerably less in almost all cases than that achieved in earlier exploration. The presence of gold colours in the pan corresponds well with -20# analytical results.

5. Conclusions

McIntosh Reid (1921) noted the coincidence of gold workings in the Wilson and Huskisson River areas with fluvio-glacial sedimentation. This conclusion is substantiated by Poltock (1988).



454014

Stream sediment sampling and a thorough field investigation in the McArthur and Barnes Creek drainages indicates that the source of alluvial gold is almost certainly the Quaternary fluvioglacial clays, sands and conglomerates. These deposits represent the remnants of the once extensive West Coast Ice Cap. The provenance of these glacial deposits is highly varied and frequently remote from the site of deposition. Detrital gold within these deposits may have similarly been derived from one or a variety of remote sources.

Fluvioglacial depositional processes characteristically involve limited winnowing and concentration of heavy mineral species and as such gold concentrations in these deposits are unlikely to approach economic proportions.

Historic alluvial gold operations in the Barnes Creek drainage are confined to recent stream deposits in which reworking of the fluvioglacial sediments has resulted in marginally economic gold concentrations. The concentrations, however, are extremely limited in size and do not represent a viable economic target.

Exploration data gleaned from the Wilson River Project to date indicates little potential for economic alluvial or hard-rock gold deposits.



27 JUL 1990

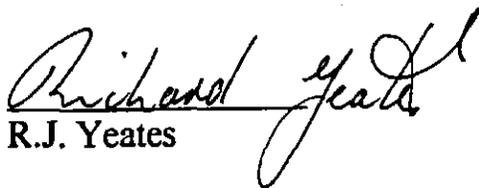
MEMORANDUM

TO : B.L. FARRELL
FROM : R.J. YEATES
DATE : 26 JULY 1990
SUBJECT : WILSON RIVER REPORT/ MEMO

Please find attached the original of the completed Wilson River memo with figures.

One point which I did not raise in the report is the high silver value (10.5 ppb) from stream site 15. This sample site drains the Merton Hill tin prospect. While this result is not unexpected, it provides a high level of confidence in the sampling and analytical technique.

Regards,


R.J. Yeates

File: Callina - Wilson River. 454017

YEATES - 20# Streams.

Page 1

Method: BLEG (Au,Ag,Cu)

Order: RSG 243

Report: 3803/690

Sample Number	ppb Au	ppb Ag	ppm Cu
WRB 001	8.70	0.50	0.01
WRB 002	0.23	1.70	0.02
WRB 003	3.27	0.50	<0.01
WRB 004	1.00	0.50	0.01
WRB 005	0.57	0.50	0.02
WRB 006	0.19	0.50	<0.01
WRB 007	0.27	0.50	<0.01
WRB 008	4.82	0.50	0.01
WRB 009	3.35	0.50	<0.01
WRB 010	3.50	0.50	0.01
WRB 011	1.81	2.25	0.02
WRB 012	1.04	0.50	<0.01
WRB 013	1.78	0.50	<0.01
WRB 014	6.77	1.19	0.01
WRB 015	0.11	10.5	<0.01
WRB 016	SNR	SNR	SNR
Detection Limit:	0.01	0.01	0.01