

11 JAN 1982

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82-1768

E.L. 19/77 GREAT NORTHERN PLAIN

AND CONSOLIDATED LEASE 42M/76

QUARTERLY EXPLORATION PROGRESS REPORT

FOR PERIOD ENDING 11 JANUARY, 1982

769c.

MICROFILMED

D of M	A.O.	C.G.	E.O.	D.S.M.E.
Received Answered				11 JUN 1982
DEPT. OF MINES				Registrar E & IL
REF. No. 4411/82				

E.L. 19/77 GREAT NORTHERN PLAINANDCONSOLIDATED LEASE 42M/76**OPEN FILE**QUARTERLY EXPLORATION PROGRESS REPORTFOR PERIOD ENDING11 JANUARY, 1982HELLYER MINING & EXPLORATION PTY LTD

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of M.	A.O.	C.G.	E.O.	D.S.M.F.
Received Answered				11 JUN 1982
DEPT. OF MINES				E & IL
REF. No.				

APPENDIX I CHURN DRILL HOLE ASSAY DATA

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FIGURE 1 CHURN DRILL HOLE LOCATION PLAN

1. TENEMENT

Exploration Licence 19/77 has been renewed until 11 October, 1982, and Consolidated Mineral Lease 42M/76 is valid until 31 October, 1997. Both licences have now been transferred from Mineral Holdings Australia Pty Ltd to Hellyer Mining & Exploration Pty Ltd.

SANTOS Limited was advised on 23rd December, 1981, that its tender for the Ringarooma River Prospect (formerly SR 32/70) has been accepted. SR 32/70 lies within the boundary of E.L. 19/77.

2. WORK COMPLETED2.1 Churn Drilling

Eight churn drill holes, numbers GNP69-GNP76, totalling 277 metres were completed in the Bowlers Lagoon area prior to the Christmas-New Year break. See attached plan for approximate collar locations. Preliminary details of these holes are listed below:

Hole No.	Total Depth (m)	Bottom Sample	Tin (visual)
GNP 69	36	Marine bottom	Trace
GNP 70	33	Marine bottom	Moderate
GNP 71	33	Marine bottom & gravel	Minor
GNP 72	29	Marine bottom	Moderate
GNP 73	26	Marine bottom & fine sand	Minor
GNP 74	38	Clay & fine sand	Good
GNP 75	40	Clay & fine sand	Good
GNP 76	42	Marine bottom	Moderate

The wash zone from each hole except GNP 69 has been sampled over 0.5 metre intervals rather than the previous 2 metre intervals.

2.2 Assay Results

Assay data for hole numbers GNP 22, 35, and 38 have been received. Complete results are listed in Appendix I.

Grades calculated using the actual recovered volumes are as follows:

Hole No.	Hole Average (g/m ³ 70% SnO ₂)	Wash Zone (g/m ³ 70% SnO ₂)
GNP 22	0 - 36 m : 122.2 (to base of main wash zone)	24 - 36 m : 224.6 (12m)
	0 - 56 m : 82.1 (to bottom of hole)	
GNP 35	0 - 20 m : 19.3 (to base of wash zone)	12 - 20 m : 43.3 (8m)
GNP 36	0 - 15.5 m : 2.5 (to bottom of hole)	10 - 15.5 m : 4.6 (5.5m)
GNP 38	0 - 20 m : 14.0 (to base of wash zone)	14 - 20 m : 36.0 (6m)

Minor rutile and zircon were detected in holes GNP 22 and GNP 36 while the only appreciable gold recovered was from the interval 2 - 6 m in GNP 38.

2.3 Recoveries from Bulk Sample Hole (GNP 20A)

All material from churn drill hole (6 inch diameter) number GNP 20A (see attached plan for location) was retained and submitted to the Department of Mines, Launceston laboratories for concentration and analysis. The purpose of this work was to check recoveries of heavy minerals, particularly rutile and zircon as well as tin and gold, against those obtained from on-site concentration using a sluice-box and dish.

Samples were taken at 2 metre intervals (except for the bottom sample 28-29 m) and weighed between 24.8 kg and 80.5 kg. Complete details of the concentration method and assay results are listed in Appendix II.

The principal conclusions of the study were:

- a) tin recoveries in holes GNP 20 and GNP 20A were similar while recoveries of rutile and zircon in GNP 20A were significantly better than in hole GNP 20. Gold occurrence is too erratic to make any comparison;

b) the g/tonne values are probably more accurate than the g/m³ values due to the considerable variation in the mass of individual samples submitted. This variation could have been caused by one or more of the following:

- (i) loss of sample material;
- (ii) excessive rise of material in the borehole;
- (iii) deficient sample volume due to obstructions.

2.4 Resource Estimate CML 42M/76

Examination of the data from the WANEX drilling carried out in the vicinity of the old MacGregor's workings in 1972 - 1973 has led to a revised estimate of the resource present in the area. The current probable in-situ reserves are 3,397,000 cubic metres of wash averaging 254 g/m³ (70% SnO₂) Economic recoverable (dredgeable) reserves would probably be considerably less than this volume.

3. PROPOSED WORK

Exploration is expected to recommence on 11th January, 1982, and will include the following work:

- a) Churn Drilling: utilising two or three rigs on lines between 200 m and 500 m apart with a hole spacing between 100 m and 200 m;
- b) Bulk Sample Drilling: 30 inch diameter, cased holes are to be drilled using a Calweld rig to provide bulk samples for grade checking, engineering and metallurgical testing. Holes will be located adjacent to existing churn drill holes and actual locations will be partly dependent on access availability. This work is planned for January-February, 1982;
- c) Treatment Plant: Treatment plant to concentrate the bulk samples will be set up on-site;
- d) Metallurgical and Engineering Testing: Bulk sample concentrates will be submitted for sizing and mineralogical test work as well as for tin and gold assay. Engineering tests will be conducted on overburden samples as required;
- e) Aerial Photography: Low-level colour aerial photography is scheduled to be flown over the mineralised trend early in January, 1982;

- f) Survey and Gridding: Selected drill holes and landmarks will be marked and surveyed prior to flying the photography. Basemaps and detailed contour maps will be prepared as required. Gridding for drill hole location will be carried out as necessary;
- g) Environmental Studies: A preliminary environmental study, including a survey of the historical and current land use and prevailing socio-economic conditions in the area, will be conducted during the first half of 1982; and
- h) Development Options: Investigation of the available development options and preliminary assessment of the economic viability of those options will be pursued as data becomes available.

4. EXPENDITURE

Expenditure for the three months ending 31 December, 1981, has been as follows:

	(\$)
. Salaries	1,520.00
. On costs	456.00
. Australian Travel & Accommodation	904.00
. Rented Equipment	197.00
. Data Reproduction	61.00
. Contract Geological/Geochemical Services	613.00
. Access & Site Preparation	3,200.00
. Drilling	25,184.00
. Laboratory Services	1,030.00
	<hr/>
TOTAL	\$33,165.00
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APPENDIX I

CHURN DRILLHOLE ASSAY DATA



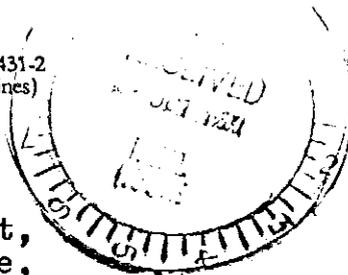
DEPARTMENT OF MINES—TASMANIA

TELEPHONES:

Metallurgical Research	} 44 2431-2 (2 lines)
Laboratory	
Mines Inspection	
Explosives & Inflammable Liquids	

LAUNCESTON OFFICES
287 WELLINGTON STREET
SOUTH LAUNCESTON 7250

Santos Ltd,
183 Melbourne Street,
Lower North Adelaide,
South Australia 5006



30th September 1981

Attent. Simon Lee.Reg. Nos 813718-45

Dear Sir,

Please find attached results of samples submitted to this laboratory on the 7th Aug'81 and stated to be from G.N.P. 22.

All samples were subjected to a magnetic separation using a low intensity hand magnet to remove iron chips that were present in most samples.

Samples marked with * were passed over the Rapid high intensity magnetic separator so that any ilmenite present would be removed to allow a rutile content to be determined.

The mass of sample reported is the mass of the non-magnetics in each case and with the samples marked * the mass reported refers to the non-magnetics from the second magnetic separation.

The P under the Zr column indicates that Zr was seen to be present.

Yours faithfully,

(H. K. Wellington)
Chief Chemist & Metallurgist.

Santos Reg. Nos 813718-44 & 45.

<u>Reg. No.</u>	<u>Description</u>	<u>Mass.</u> g.	<u>% Sn</u>	<u>% Zr.</u>	<u>% Ti</u>	<u>Au Mass</u> mg.
813718	GNP 22 0 - 2	48.3	0.10	P		Nil
	719 2 - 4	41.1	0.24	P		Nil
	720 4 - 6	34.9	0.11	P		Nil
	721 6 - 8	59.9	0.03	P		Nil
	722 8 - 10	74.3	0.01	P		Nil
813723	10 - 12	58.8	15.6	P		Nil
	724 12 - 14	47.9	4.8	P		Nil
	725 14 - 16	84.1	5.6	P		Nil
	726 16 - 18	73.1	8.6	P		Nil
	727 18 - 20	47.5	2.5	P		Nil
813728	20 - 22	53.8	0.55	P		Nil
	729 22 - 24	29.2	0.19	P		Nil
	730 24 - 26	34.6	0.06	P		Nil
	731 26 - 28	38.4	0.46	P		Nil
	732 28 - 30	40.9	1.1	P		Nil
813733	30 - 32	51.2	2.5	P		Nil
	734 32 - 34	63.2	9.4	P		Nil
	735* 34 - 36	188.3	19.3	0.52	0.20	Nil
	736* 36 - 38	86.4	0.61	0.17	0.16	Nil
	737* 38 - 40	79.4	1.13	0.47	0.29	Nil
813738*	40 - 42	41.7	0.75	1.29	1.20	Nil
	739* 42 - 44	36.8	0.50	0.97	1.21	Nil
	740* 44 - 46	62.5	0.18	0.92	0.92	Nil
	741* 46 - 48	52.1	0.08	1.50	1.41	Nil
	742* 48 - 50	59.0	0.11	1.68	1.86	Nil
813743*	50 - 52	34.8	0.19	2.58	2.04	0.02
	744* 52 - 54	58.4	0.09	1.04	0.96	Nil
	745 54 - 56	54.8	0.05			Nil

Analyses by *A. Brooks, R. J. Kelly, R. J. Kelly*

NOTE Ti results should be multiplied by 1.67 for rutile content.

H. K. Wellington
(H. K. Wellington)

Chief Chemist & Metallurgist

769010



DEPARTMENT OF MINES—TASMANIA

TELEPHONES:

Metallurgical Research	} 44 243 (2 lines)
Laboratory	
Mines Inspection	
Explosives & Inflammable Liquids	

LAUNCESTON OFFICES
287 WELLINGTON STREET
SOUTH LAUNCESTON 7250

10th November 1981

Santos Ltd,
183 Melbourne Street,
Lower North Adelaide,
South Australia 5006

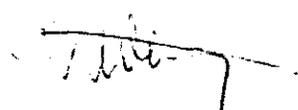
Attent. Simon Lee.

Reg. Nos 813746-813782 GNP Holes 35, 36 & 38

Dear Sir,

Please find attached results of analyses from these holes. Such analyses have been done in the same manner as indicated in my letter to you dated 30th Sep'81.

Yours faithfully,


(H. K. Wellington)
Chief Chemist & Metallurgist

Santos Reg. No 813746 - 813782

<u>Reg. No</u>	<u>Description</u>	<u>Mass</u> g.	<u>% Sn</u>	<u>% Zr</u>	<u>% TiO₂</u>	<u>Au Mass</u> mg.
813746	GNP 35	0 - 2	67.4	0.09		Nil
747		2 - 4	29.0	0.28		
748		4 - 6	45.2	0.04		
749		6 - 8	55.6	0.17		
750		8 - 10	35.3	0.50		
813751		10 - 12	62.0	0.02		
752		12 - 14	119.2	0.62		
753*		14 - 16	99.5	2.26 +	1.30	0.49
754		16 - 18	156.1	0.34		
755		18 - 20	48.4	0.56		
813756		20 - 22	53.4	0.29		
757		22 - 24	42.0	0.13		
758		24 - 26	27.9	0.08		
759		26 - 28	72.7	0.14		
760		28 - 30	80.7	1.14		
813761*		30 - 32	91.1	1.11	0.19	0.66
762*		32 - 34	65.1	0.43	0.14	0.47
763	GNP 36	0 - 2	50.7	0.06		
764		2 - 4	40.2	0.13		
765*		4 - 6	53.2	0.07	0.42	1.87
813766		6 - 8	47.2	0.05		
767		8 - 10	54.1	0.04		
768*		10 - 12	78.4	0.12	0.36	1.27
769		12 - 14	52.6	0.01		
770*		14 - 16.5	28.0	0.45	0.33	1.18
813771*	GNP 38	0 - 2	49.3	0.11	0.53	0.43
772		2 - 4	53.9	0.27		Nil
773		4 - 6	53.2	0.35		0.18
774		6 - 8	40.2	0.27		0.06
775		8 - 10	38.3	0.12		Nil

769012

<u>Reg. No</u>	<u>Description</u>	<u>Mass</u> <u>g.</u>	<u>% Sn</u>	<u>% Zr</u>	<u>% TiO₂</u>	<u>Au Mass</u> <u>mg.</u>
813776	GNP 38	21.2	0.34	P		Nil
777	12 - 14	37.2	0.20	P		
778*	14 - 16	54.7	3.70+	2.30	0.96	
779	16 - 18	54.4	1.26	P		
780	18 - 20	44.0	0.73	P		
813781	20 - 22	32.4	0.91	P		Nil
782*	22 - 24	78.1	0.15	0.17	0.13	

+ These tin assays are subject to review by wet assay method.

Analyses by.....
[Handwritten signature]

[Handwritten signature]
(H. K. Wellington)
Chief Chemist & Metallurgist



Laboratory, 287 Wellington Street
Launceston, Tas. 7250

12th November 1981

CERTIFICATE OF ANALYSIS

To Santos Ltd

183 Melbourne Street Lower North Adelaide S.A.

The sample of received
from on the
and stated to be from has been
examined, with the following results:—

	Registered Number	Description	% Sn
2.11.81	813853	GNP 35 14-16	2.3
	813778	" 38 14-16	4.7
<p>The above are wet chemical assays to check XRF results given on 10.11.81</p> <p>Analyses by. <i>J. H. Tedborg</i></p> <p><u>No. charge</u></p>			

J. H. Tedborg

Chief Chemist and Metallurgist

APPENDIX II

BULK SAMPLE HOLE RECOVERIES



DEPARTMENT OF MINES—TASMANIA

LAUNCESTON OFFICES
287 WELLINGTON STREET
SOUTH LAUNCESTON 7250

TELEPHONES:

Metallurgical Research	} 44 2431-2 (2 lines)
Laboratory	
Mines Inspection	
Explosives & Inflammable Liquids	

12th November 1981

Santos Ltd,
Melbourne Street,
Lower North Adelaide
South Australia

attent. Simon Lee

R812: Great Northern Plains Drilling

Dear Sir,

This project is an extension of work previously done in R808 to investigate the occurrence of zircon and rutile in alluvial cassiterite deposits in North Eastern Tasmania.

In this case the whole of the drill material was submitted for concentration in this laboratory. The results show that the normal field concentration methods do not recover zircon and rutile well hence conclusions based on those results are likely to be misleading.

Another factor that needs to be taken into account is the mass recovered from each two metre section of bore hole. This varies considerably from as little as 24.8 kg to as much as 80.5 kg. Accordingly we have expressed these results two ways in the table on page ten namely as a mass of tin per unit volume and as a mass of tin per unit of mass, the latter probably giving the more accurate picture.

Yours faithfully,

(H. K. Wellington)
Chief Chemist & Metallurgist



DEPARTMENT OF MINES—TASMANIA

LAUNCESTON OFFICES
287 WELLINGTON STREET
SOUTH LAUNCESTON 7250

TELEPHONES:

Metallurgical Research	} 44 2431-2 (2 lines)
Laboratory	
Mines Inspection	
Explosives & Inflammable Liquids	

11th November 1981

R812

Concentration of Heavy Minerals from Material Derived
from Drilling at Great Northern Plains.

Introduction

Santos Ltd. have conducted an extensive drilling programme at Great Northern Plains and concentrates from two metre intervals from various holes have been submitted to the Mines Dept. for assay for tin, gold, zirconium and rutile.

When hole No. 20A was drilled all the material recovered from each two metre intervals was submitted to the Mines Dept., for concentration tests for recovery of heavy minerals. This hole was said to be about 50 metres from a previous hole, No. 20.

The purpose of this exercise was to check the concentration method used at the drill site on normal samples.

The samples submitted, their registered numbers and their masses are as follows:-

<u>Registered No.</u>	<u>Hole 20A Interval</u> (m)	<u>Mass</u> (kg)
813929	0 - 2	32.1
813930	2 - 4	34.6
813931	4 - 6	53.3
813932	6 - 8	51.6
813933	8 - 10	43.0
813934	10 - 12	34.5
813935	12 - 14	40.7
813936	14 - 16	80.5
813937	16 - 18	59.0
813938	18 - 20	54.5
813939	20 - 22	53.3
813940	22 - 24	54.7
813941	24 - 26	65.4
813942	26 - 28	24.8
813943	28 - 29	25.8

Method

Each sample was pulped, and then wet screened using a 457mm diameter Sweco screen fitted with 1.24mm, 315µm and 108µm screens.

No further work was done on the +1.24mm screen fraction. When the mass of this fraction was of significance in relation to the mass of the whole sample, the fraction was sampled and assayed for tin.

The -1.24mm + 315 µm screen fraction was concentrated by jiggling using the Denver laboratory mineral jig (No. 1M)

The -315 µm + 108 µm screen fraction and the -108 µm screen fraction were concentrated separately by tabling on the Deister table.

The gravity concentrates were separately passed over the Rapid dry magnetic separator to produce four magnetic products and a non-magnetic product in each case. In most cases there was insufficient non-magnetic product from the jig concentrate and in these cases this product was bulked with the non-magnetic product from the -315 µm + 108 µm table concentrate. The non-magnetic products were assayed for tin, gold, zirconium and rutile. In test N13 there was an abundance of sulphide present in the non-magnetic products from the table concentrates and these were subjected to leaching with nitric acid to remove the sulphides to facilitate the search by microscope for any gold present.

Results

The results of tests for each interval are as follows:-

Test N1 813929 0 - 2m

<u>Product</u>	<u>% mass</u>	<u>Assay</u>			<u>Gold Mass mg.</u>	<u>Sn Dist. (%)</u>
		<u>% Sn</u>	<u>% Zr</u>	<u>%TiO₂</u>		
+1.24mm	0.75					
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	42.16	243g/t				91.1
-315µm + 108µm TC M/A	0.11					
-1.24mm + 108µm JCN+TCN	0.12	0.11%	2.2	8.8	Nil	0.9
-315µm + 108µm TT	54.23	11 g/t				5.3
-108µm TC M/A	0.05					
-108µm TCN	0.11	0.06%	3.0	5.0	Nil	0.9
-108µm TT	2.46	84g/t				1.8
	100.00	(112g/t)				100.0

Test N2 813930 2m - 4m

<u>Product</u>	<u>% mass</u>	<u>Assay</u>			<u>Gold Mass mg/</u>	<u>Sn Dist (%)</u>
		<u>Sn</u>	<u>%Zr</u>	<u>%TiO₂</u>		
+1.24mm	0.18					
-1.24mm + 315µm JO M/A	0.00					
-1.24mm + 315µm JT	58.07	4g/t				66.7
-315µm + 108µm TC M/A	0.06					
-1.24mm + 108µm JCN+TCN	0.10	26g/t	<0.1	0.04	Nil	0.0
-315µm + 108µm TT	38.74	Nil				0.0
- 108µm TC M/A	0.02					
- 108µm TC $\frac{N}{H}$	0.04	0.13%	5.5	8.4	0.01	0.0
- 108µm TT	2.79	29g/t				33.3
	100.00	(3g/t)				100.0

Test N3 813931 4m - 6m

+1.24mm	0.23	8g/t				0.0
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	37.75	Nil				0.0
-315µm + 108µm TC M/A	0.05					
-1.24mm + 108µm JCN + TCN	0.04	0.16%	3.9	10.3	Nil	50.0
-315µm + 108µm TT	59.22	Nil				0.0
-108µm TC M/A	0.03					
-108µm TC N	0.04	0.14%	9.5	11.3	Nil	50.0
-108µm TT	2.64	1g/t				0.0
	100.00	(2g/t)				100.0

Test N4 813932 6m - 8m

<u>Product</u>	<u>% Mass</u>	<u>Assay</u>			<u>Gold Mass mg</u>	<u>Sn Dist. (%)</u>
		<u>Sn</u>	<u>% Zr</u>	<u>%TiO₂</u>		
+1.24mm	0.44					
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	18.82	Nil				0.0
-315µm + 108µm TC M/A	0.06					
-1.24mm + 108µm JCN + TCN	0.09	0.06	1.6	8.3	nil	50.0
-315µm + 108µm TT	77.09	Nil				0.0
-108µm TC M/A	0.04					
-108µm TCN	0.05	0.17	9.4	13.6	nil	50.0
-108µm TT	3.41	3 g/t				0.0
	100.00	(2g/t)				100.0

Test N5 813933 8m - 10m

+1.24mm	2.14					
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	41.58	<6g/t				16.7
-315µm + 108µm TC M/A	0.05					
-1.24mm + 108µm JCN + TCN	0.06	0.31%	3.1	11.2	nil	33.3
-315µm + 108µm TT	52.18	<6g/t				33.3
-108µm TC M/A	0.03					
-108µm TCN	0.07	0.08%	5.1	8.4	nil	16.7
-108µm TT	3.89	nil				0.0
	100.00	(6g/t)				100.0

Test N6 813934 10m - 12m

<u>Product</u>	<u>% Mass</u>	<u>Assay</u>			<u>Gold Mass mg</u>	<u>Sn Dist. (%)</u>
		<u>Sn</u>	<u>% Zr</u>	<u>%TiO2</u>		
+1.24mm	3.96					
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	35.27	73g/t				68.4
-315µm + 108µm TC M/A	0.03					
-1.24mm + 108µm JCN + TCN	0.06	0.33%	1.8	8.3	nil	5.3
-315µm + 108µm TT	55.63	15g/t				21.1
-108µm TC M/A	0.03					
-108µm TCN	0.16	0.08%	2.8	5.5	nil	2.6
-108µm TT	4.86	11g/t				2.6
	100.00	(38g/t)				100.0

Test N7 813935 12m - 14m

+1.24mm	0.81					
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	52.96	70g/t				77.1
-315µm + 108µm TC M/A	0.03					
-1.24mm + 108µm JCN + TCN	0.09	0.49%	1.4	4.7	nil	8.3
-315µm + 108µm TT	40.86	12g/t				10.4
-108µm TC M/A	0.02					
-108µm TCN	0.07	0.13%	4.1	5.9	nil	2.1
-108µm TT	5.16	11g/t				2.1
	100.00	(48g/t)				100.0

Test N8 81393614m - 16m

<u>Product</u>	<u>Assay</u>				<u>Gold Mass mg.</u>	<u>Sn Dist. (%)</u>
	<u>%Mass</u>	<u>Sn</u>	<u>%Zr</u>	<u>%TiO₂</u>		
+1.24mm	18.69	35g/t				11.3
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JC N	0.01	1.65%	0.1	0.05	Nil	3.2
-1.24mm + 315µm JT	58.72	23g/t				22.6
-315µm + 108µm TC M/A	0.02					
-315µm + 108µm TC N	0.06	2.6%	1.6	2.5	Nil	25.8
-315µm + 108µm TT	19.46	99g/t				30.7
-108µm TC M/A	0.01					
-108µm TC N	0.03	0.73%	5.5	5.6	Nil	3.2
-108µm TT	3.00	57g/t				3.2
	100.00	(62g/t)				100.0

Test N9 81393716m - 18m

+1.24mm	26.68	48g/t				23.7
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	44.41	14g/t				10.9
-315µm + 108µm TC M/A	0.02					
-1.24mm + 108µm JCN+TCN	0.07	3.9%	1.2	2.1	Nil	47.3
-315µm + 108µm TT	21.69	8g/t				3.6
-108µm TC M/A	0.01					
-108µm TC N	0.03	0.87%	7.4	7.2	Nil	3.6
-108µm TT	7.09	88g/t				10.9
	100.00	(55g/t)				100.0

Test N10 81393818m - 20m

<u>Product</u>	<u>%Mass</u>	<u>Assay</u>			<u>Gold Mass mg.</u>	<u>Sn Dist. (%)</u>
		<u>Sn</u>	<u>%Zr</u>	<u>%TiO₂</u>		
+1.24mm	0.25					
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	66.94	252g/t				79.3
-315mm + 108µm TC M/A	0.05					
-1.24mm + 108µm JCN + TCN	0.10	1.96%	4.3	4.6	N11	8.5
-315µm + 108µm TT	27.68	64g/t				8.4
-108µm TC M/A	0.03					
-108µm TC N	0.10	0.36%	6.8	5.4	N11	1.9
-108µm TT	4.85	91g/t				1.9
	100.00	(213g/t)				100.0

Test N11 81393920m - 22m

+1.24mm	0.26					
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	65.30	32g/t				17.7
-315µm + 108µm TC M/A	0.05					
-1.24mm + 108µm JCN+TCN	0.10	1.24%	4.0	4.1	N11	10.9
-315µm +108µm TT	25.22	305g/t				64.7
-108µm TC M/A	0.03					
-108µm TC N	0.05	0.72%	17.2	5.4	N11	2.5
-108µm TT	8.99	60g/t				4.2
	100.00	(119g/t)				100.0

Test N12 81394022m - 24m

<u>Product</u>	<u>%Mass</u>	<u>Assay</u>			<u>Gold Mass mg.</u>	<u>Sn Dist. (%)</u>
		<u>Sn</u>	<u>%Zr</u>	<u>%TiO₂</u>		
+1.24mm	21.03	22g/t				1.5
-1.24mm + 315µm JC M/A	0.00					
-1.24mm + 315µm JT	53.93	148g/t				24.6
-315µm + 108µm TC M/A	0.08					
-1.24mm + 108µm JCN + TCN	0.09	13.7%	5.3	4.2	0.04	38.8
-315µm + 108µm TT	18.69	488g/t				28.0
-108µm TC M/A	0.03					
-108µm TCN	0.08	1.25%	6.2	2.6	N11	3.1
-108µm TT	6.07	208g/t				4.0
	100.00	(325g/t)				100.0

Test N13 81394124m - 26m

+1.24mm	35.22	37g/t				6.5
-1.24mm + 315µm JC M/A	0.04					
-1.24mm + 315µm JCN	0.05	4.2%	0.6	0.08	N11	10.9
-1.24mm + 315µm JT	41.72	209g/t				43.3
-315µm + 108µm TC M/A	0.78					
-315µm + 108µm TCN	0.15	2.8%	1.0	0.8	N11	21.4
-315µm + 108µm TT	13.63	223g/t				14.9
-108µm TC M/A	0.33					
-108µm TCN	0.07	0.76%	5.0	1.2	N11	2.5
-108µm TT	7.79	16g/t				0.5
Acid Loss	0.22					
	100.00	(201g/t)				100.0

Test N14 813942 26m - 28m

<u>Product</u>	<u>% Mass</u>	<u>Assay</u>			<u>Gold Mass mg</u>	<u>Sn Dist. (%)</u>
		<u>Sn</u>	<u>% Zr</u>	<u>%TiO2</u>		
+1.24mm	30.02	27g/t				5.5
-1.24mm + 315µm JC M/A	0.01					
-1.24mm + 315µm JT	35.03	13g/t				3.5
-315µm + 108µm TC M/A	0.69					
-1.24mm + 108µm JCN + TCN	0.23	0.68%	0.5	0.9	nil	11.0
-315µm + 108µm TT	17.66	217g/t				26.2
-108µm TC M/A	0.14					
-108µm TCN	0.15	0.20%	1.9	1.3	nil	2.1
-108µm TT	16.07	468g/t				51.7
	100.00	(145g/t)				100.0

Test N15 813943 28m - 29m

+1.24mm	17.59	2g/t				0.0
-1.24mm + 315µm JC M/A	0.01					
-1.24mm + 315µm JT	37.27	177g/t				17.8
-315µm + 108µm TC M/A	0.86					
-1.24mm + 108µm JCN + TCN	0.15	1.13%	0.7	1.6	nil	4.6
-315µm + 108µm TT	24.27	270g/t				17.7
-108µm TC M/A	0.13					
-108µm TCN	0.12	0.27%	3.6	1.9	nil	0.8
-108µm TT	19.60	1124g/t				59.1
	100.00	(372g/t)				100.0

The recovery of heavy minerals per tonne and per cubic metre for hole 20A are shown in the following table together with the recovery of heavy minerals per cubic metre from hole 20 for comparison.

Hole 20

Hole 20A

Hole 20A

Interval	g/m ³			mg/m ³	g/m ³				mg/m ³	g/t				mg/t		
	Sn	Zr	TiO ₂	Au	Sn	Zr	TiO ₂	Au	Sn	Zr	TiO ₂	Au	Sn	Zr	TiO ₂	Au
0 - 2	1.4			N11	1.6	48	129	N11	1.9	62	162	N11				
2 - 4	2.0	1	2	N11	0.4	18	27	0.25	0.6	20	32	0.29				
4 - 6	1.1			N11	1.6	72	118	N11	1.3	54	90	N11				
6 - 8	1.3			N11	1.8	83	187	N11	1.6	64	147	N11				
8 - 10	1.6			N11	2.5	57	131	N11	2.3	54	123	N11				
10 - 12	3.4			N11	2.7	47	116	N11	3.2	55	136	N11				
12 - 14	3.9			N11	5.3	43	86	N11	5.4	42	86	N11				
14 - 16	4.8			N11	41.2	52	64	N11	20.6	26	32	N11				
16 - 18	5.3	12	4	N11	41.0	38	46	N11	28.0	27	32	N11				
18 - 20	8.1			N11	29.9	148	133	N11	22.2	108	99	N11				
20 - 22	3.8			N11	21.4	160	89	N11	16.1	124	68	N11				
22 - 24	24.4			N11	185.5	137	82	0.99	136.3	100	60	0.73				
24 - 25	120.6	24	12	N11												
24 - 26					114.3	85	34	N11	70.3	52	20	N11				
26 - 28					11.5	25	25	N11	19.0	40	40	N11				
28 - 29					25.8	70	60	N11	20.2	54	47	N11				

Discussion

The mass of material submitted varied considerably for each two metre interval suggesting that some of the material could have been lost in the sampling procedure.

Alternatively, the walls of the bore may have collapsed during some intervals allowing for a bigger mass recovery than should have been taken.

It is suggested therefore that the grams per tonne figures in the above table may be a more accurate figure of what can be expected than the grams per cubic metre figures.

No cassiterite was seen greater in size than about 800µm.

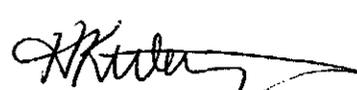
Conclusions

Tin recoveries in holes 20 and 20A follow each other fairly closely with recoveries from hole 20A being slightly improved.

But zircon and rutile recoveries appear to be significantly better from hole 20A than from hole 20.

Gold occurrence is too erratic to make any comparison.

Senior Metallurgist.....


(H. K. Wellington)
Chief Chemist & Metallurgist

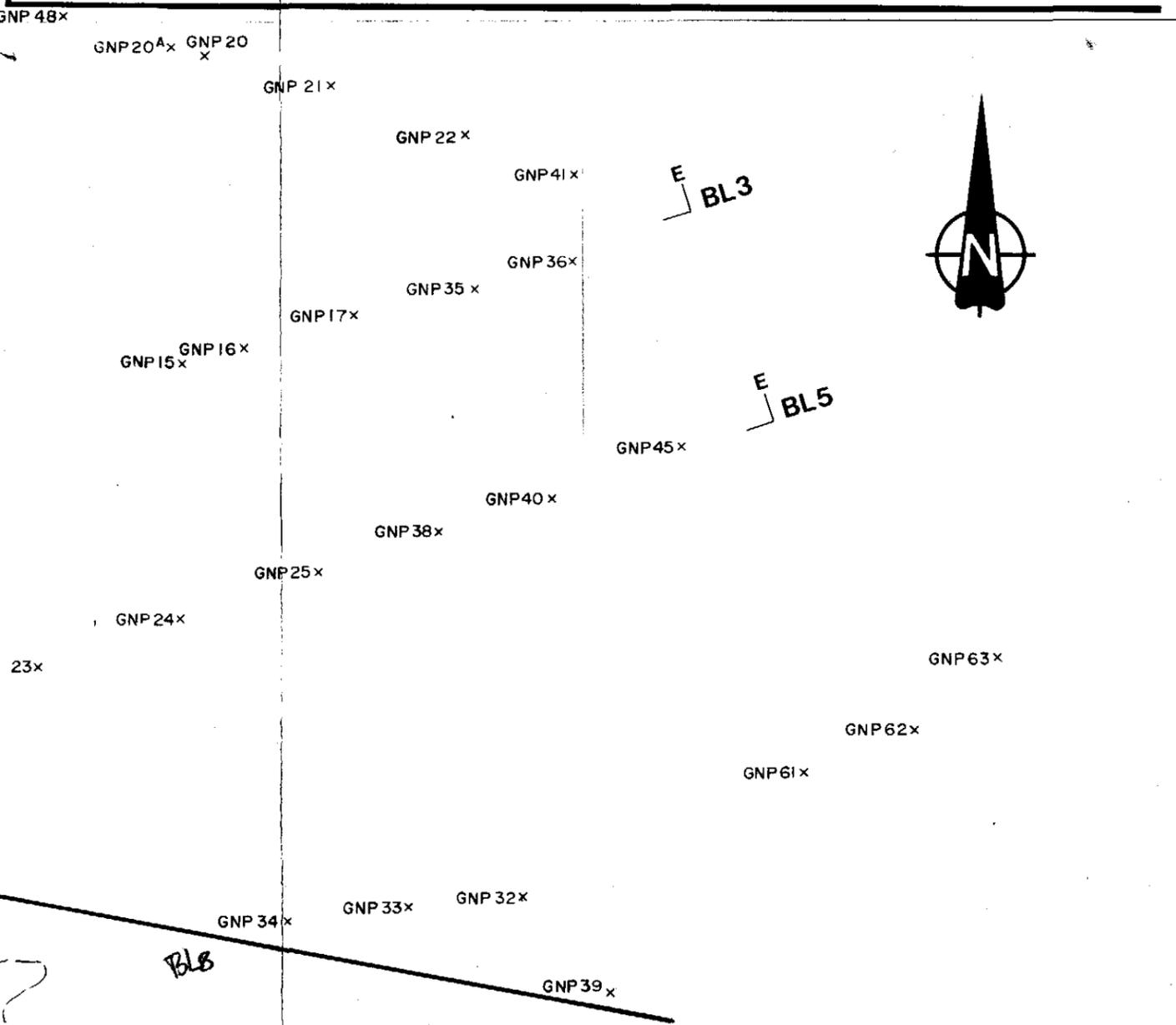
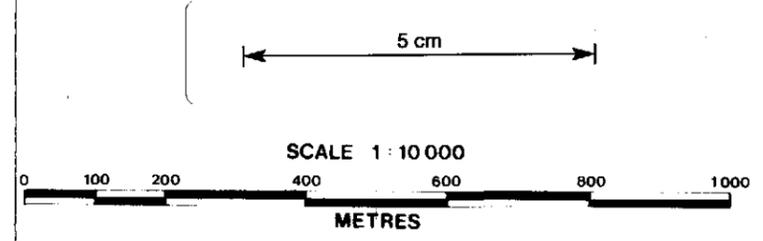
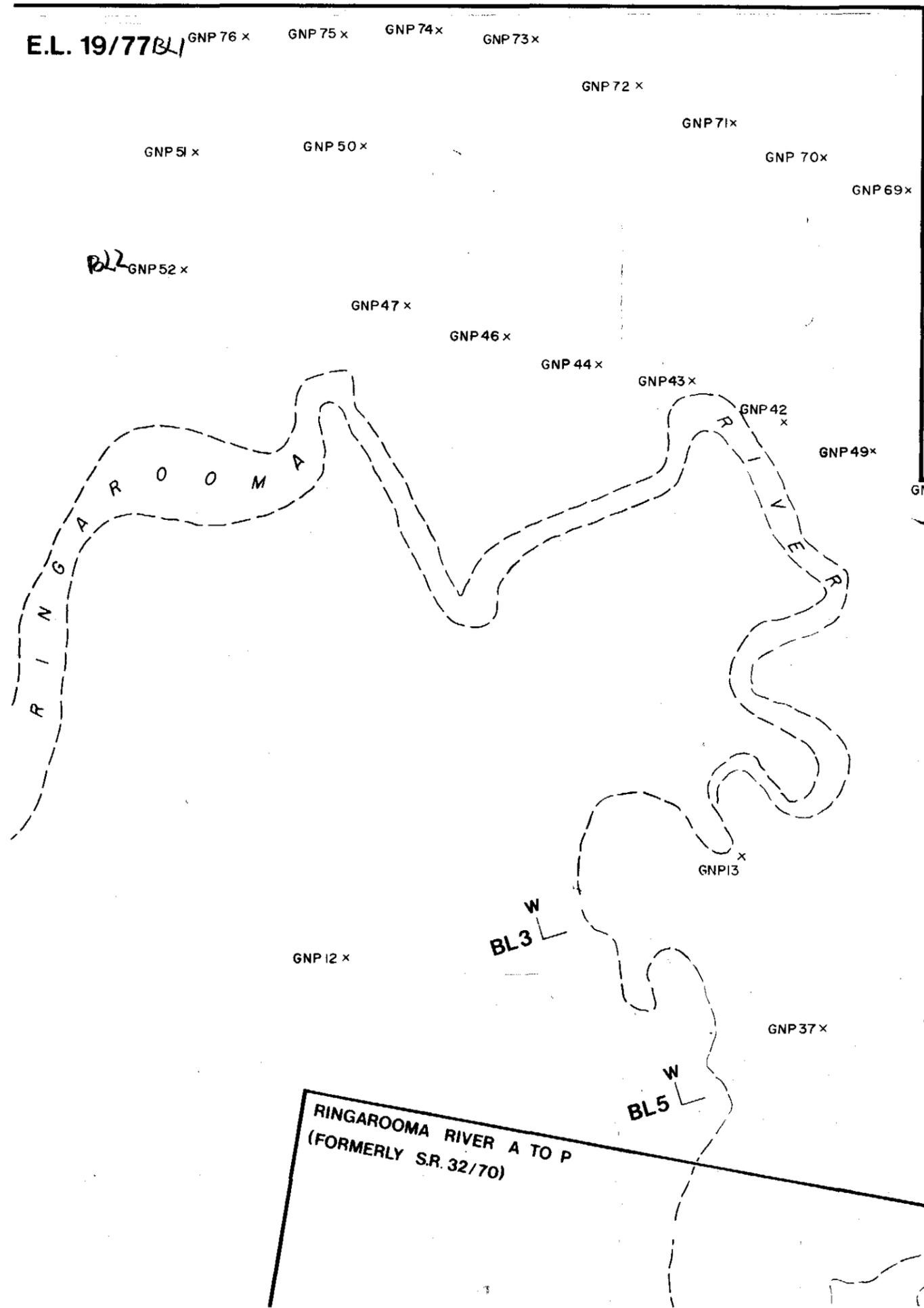
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