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1980/1981

ANNUAL REPORT ON

EXPLORATION LICENCE 1997 (and EL 2251)

BY

TERRITORY MINING PTY. LTD.

FOR

THE DEPARTMENT OF MINES & ENERGY,

DARWIN, NORTHERN TERRITORY

AUTHOR

J. N. CRAGO
AUGUST 1981

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APPENDICES

TENEMENT INFORMATION

TENEMENT:	EXPLORATION LICENCE 1997
HOLDER:	TERRITORY MINING PTY. LTD.
LOCALITY:	WINGATE MOUNTAINS, N.T.
AREA:	125.55 sq. miles (325 sq. km.)
MINES DEPARTMENT MAP REFERENCE:	20/1 - 1:100,000 TENEMENT SERIES
DATE GRANTED:	26.6.79
YEARLY REPORT FOR:	2nd YEAR OF TENURE (26.6.80 to 25.6.81)

INTRODUCTION

Territory Mining Pty. Ltd., acquired this licence from Darwin Tug & Line in 1979. The agreement was registered on the 26 March, 1980.

The only vehicle access to the licence is the old Fletchers Gully goldmine track which ends about 3 mile inside the north boundary of the licence. The rest of the licence is accessible only by foot or helicopter.

Outcrops over the licence area is good owing to a very youthfull topography and sharply incised juvenile streams, the main ones being Muldiva Creek and Spring Creek.

Recorded mineralization is gold at Fletchers Gully and some alluvial tin production from the vicinity of this gold mine. Reconnaissance panning revealed some rich tin tantalite concerntrations on Upper Spring Creek and minor, but interesting tin values near the head of Allia Creek. No proved source was found for the Spring Creek mineralization which, although adjacent to Buldiva, is of a completely different character. Access to Spring Creek has been the major problem in carrying out a methodical evaluation of the alluvium. It had been planned to follow up encouraging earlier work with either auger drilling or back-hoeing. These plans were frustrated by the failure of the final drive on the D9 necessitating a down time of two months and subsequently the overburden removal at Mt. Wells fell behind and the machine has not since been available for other projects as the back log of work at the mine is first priority.

WORK PROGRAME : 25.6.80 to 25.6.81

During the period 25 June 1980 to 25 September 1980 an attempt was made to gain vehicle access from near Fletchers Gully to Spring Creek via Muldiva Creek, as after flying around the area in 1979 it appeared to be possible. Also Adrian Vanderplank thought that when he was with the B.M.R. some B.M.R. Geologists reached Spring Creek by vehicle. My attempts were unsuccessful.

Some samples were panned from Muldiva Creek and Lower Spring Creek and gave sub economic grades of tin from stream gravels.

It was decided to reach Spring Creek via Soldiers Creek as economic grade gravels had previously been located in 1979 on Exploration Licence 2251 and Exploration Licence 2541.

In the period 25 September 1980 to 25 December 1980 it was decided to evaluate the area by costeaning and pitting. G. Brown, Mine Foreman, and myself began the sampling project. The only machine available was a Caterpillar 977 Traxcavator which was transported to the Oolloo crossing on the Daly River on a low loader. After off-loading, the machine was walked to Collia where a base camp was established in a demountable, left behind for the express purpose of Exploration in the Collia-Wingate area.

The track from Collia to the junction of East Soldiers Creek and main Soldiers Creek was cleared of tree re-growth from 1978 and the dray track located during reconnaissance

prospecting was widened and upgraded to allow vehicle access to the head of West Soldiers Creek. Driving two shifts, this work took about 5 days to complete. Pits were then dug in areas where large widths and depths of wash seemed likely. Several dishes were panned from these pits and two (2) concentrates produced, one for Soldier's Creek West and the other for Soldier's Creek Central, the purpose being to establish tin tantalite ratios (Assay Number 1.) This established that West Soldier's Creek had the higher tantalite ratio.

The sampled area was mapped by W.S. Parsons and the location of pits plotted on the base map. R. Birrell, Greenex geologist, and W.S. Parsons took and recorded the samples which were channeled where practicable and from around the spoil heap where wet ground was encountered. The samples were transported to Collia Waterhole and panned by Amelio Undzucum and myself. A rough pan concentrate was made of the heavy minerals then bagged and despatched to the Greenbushes grain counting laboratory. The results of these assays are shown in Assay Table 2. It was found that while some samples approach economic grade, overall values were sub-economic at present tin-tantalite prices. It also shows that further testing of West Soldier's Creek is necessary to define the extent of the mineralization.

As stated in R. Birrell's report the source of the tantalite is probably an area of narrow but very linear pegmatites on the Soldier's Creek, Spring Creek divide. The tin tantalite found in Spring Creek is identical in size, colour and accessory minerals to that found in

West Soldier's Creek. R. Birrell also spent two days walking the area prospecting the base of the Petrel formation for old stream channels.

Following completion of the testing programe in October 1980 the northern part of the licence was prospected, via the Daly Crossing, and using an access road that is west of Alligator Lagoon joining the old Fletcher's Gully goldmine road. It is possible to drive to the junction of Spring Creek and Muldiva Creek.
Several pegmatites were located in the vicinity of Muldiva Creek. Most contained sporadic tin mineralization. Only one appears to have economic possibilities. Several samples have been taken for assay to determine whether any tantalite is present with the tin. Dimensions of the pegmatite are, 110 metres long, average width .5 metre, maximum observed width 3 metres. The grade appears to be about 1% on the basis of sampling to date. If assay shows the presence of significant tantalite further work will be carried out to define the extend of the pegmatite. Both ends disappear under alluvium so the full strike length is unknown.

The Fletcher's Gully gold mine and environs was sampled and no significant values have been received to date. As the general mine area possesses excellent outcrop I assume the potential for previously unfound lodes nil. The extent of the known mineralization is not at all impressive and I consider no further work on the area for gold is warranted.

Several gravel samples have been panned to a heavy mineral concentrate. These are being assayed for tin, tantalite and gold and checked for diamond indicator minerals.

Our joint venture partners, Dampier Mining Company Limited, in diamond exploration of the area, have reported that initial sampling has been carried out over the joint venture exploration licences, including exploration licence 1997. Results from sampling will be available in late September, 1981. In the meantime a sample location map is included.

GREENEX

REPORT ON WINGATE MTS

(SOLDIERS/SPRING CREEKS)

PROSPECT N.T.

R. BIRRELL
GEOLOGIST

AREA : SPRING/SOLDIERS' CREEKS, DALY RIVER AREA N.T.

DATE : 25/10/80 - 31/10/80

TENEMENT : E.L.2251 - Territory Mining P/L. 45 sq. miles
E.L.1997 - " " " 125 "

INTRODUCTION

Following encouraging results from a field excursion undertaken in 1979 a more detailed sampling program was planned for the 1980 field season and has been completed. Interest in the area centers around four prominent drainages.

1. Soldiers Creek West
2. " " Central
3. " " East
4. Spring Creek

SUMMARY

A more organised and methodical sampling program has

(i) Confirmed two sources of mineralisation - small pegmatite stringers and old Jurassic conglomerate beds 'fossil drainages'.

(ii) In recent alluvial drainages samples are approaching ore grade with 3 - 8% tantalite in concentrates.

(iii) The conglomerate beds are rich in tin but have no significant tantalite.

(iv) The drainages have large volumes of potential mineral bearing wash.

(v) No diamond indicator minerals were identified in concentrates.

GEOLOGY

General

The three dominant lithologies in the area are the Soldiers Creek granite, the Buldiva sandstone member of the Tolmer Group, and remnants of Jurassic capping - the Petrel formation. The area has been severely faulted and this in turn has resulted in rejuvenation of watercourses to produce incised drainage systems.

The watershed is close to the granite sediment contact with the most active erosion cycle to the east into the Soldiers Creek system. This watershed is a predominant topographic feature of the area with the Jurassic capping forming shear cliffs on the break of slope. Small pegmatite dykes have invaded the country rock and generally there are narrow (1 m) but often can be traced for over .5 km.

Mapping (see appendix 1)

A base map at scale 1:15000 has been compiled from air photos. The following information has been added.

1. Costean locations
2. Sample locations - alluvial, eluvial and rock samples.
3. Approx. extent of alluvial area available.

Results (See appendix II)

Alluvial samples from costeans were panned to a concentrate and despatched to Jewell Mineralogical Services for grain counting and Mineralogical Services for grain counting and mineralogical examination.

Rock specimens were despatched to S.G.S. laboratories, Perth.

Discussion

Field work carried out this year confirms that mineralisation apparently is derived from two sources.

1. Small pegmatite/quartz stringers intruded into the country rock.

2. Mineralisation liberated from fossil river channels in the Jurassic beds.

Current Drainages

Material collected from an old working (Kaolin Show) on a fossil Jurassic drainage revealed that these coarse gravels contain high tin values but no tantalite. In addition rounded pebbles of cassiterited (1.5 cm dia) were found at the mouth of the old workings as well as at central Soldiers Creek.

This confirms that some mineralisation has been liberated and has travelled in the more recent drainage system. Values of mineralisation were patchy within the creeks however it does appear that the concentrates average between 3 - 8% tantalite. While only a few of the samples could be regarded as 'approaching economic grades' the large volume of alluvial material available may have significant potential. Generally the wash is friable and would pose no significant treatment problems. Many of the tributories and creeks are 'boney' but again this would not be a major problem.

Fossil (Jurassic) Drainages

From the results of sampling the actual wash of the kaolin show, this source holds the most mineral potential for the area, however depth of overburden would make economic extraction impossible in this locality. It may be possible to locate other conglomerate beds at the base of the Jurassic further west on Allia Creek and thus determine if the thickness of overburden has decreased significantly to allow a viable operation. In several other locations, the conglomerate beds can be seen on the walls on the valleys.

CONCLUSIONS

1. From results sufficient encouragement was given to suggest an economic potential may exist within the Soldiers Creeks system.

2. The topography of the upper Spring Creek system suggests :

    1. A large volume of Jurassic material has been eroded and most likely transported down Spring and Allia creeks.

    2. The head waters of Spring Creek rise on country that has a myriad of quartz/quartz pegmatite stringers - the inferred source of the tantalite in the area.

SGS Australia Pty. Ltd.

NEW SOUTH WALES
74 McEvoy St., Alexandria, Sydney, N.S.W. 2015
Telephone 699 7625 Telex: SGSSYD AA22395

WESTERN AUSTRALIA
80 Railway Parade, Queens Park
Telephone 458 1421 Telex: SGSPTH AA92624

Our ref LP1976

Your ref 1164

Date received 14.11.80

Date completed 3.12.80

Issued at ..... PERTH

ANALYTICAL REPORT

Sample Ref.	Ta_2O_5	SnO_2	Nb_2O_5	Fe_2O_3	TiO_2		Wt (g)			
0042	<.01	0.19	<.01	9.85	0.11		13.1			
AMELIO 3	0.98	62.1	0.53	1.50	0.26		2.8			
AMELIO STN 4	3.20	51.2	0.78	7.00	0.39		0.8			
S.A.? 1	2.25	74.7	0.87	1.75	0.33		1.0			
CASTEON A12?	1.80	81.3	0.80	1.40	0.24		5.8			
	ppm									
METHOD:	XRF									

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Greenex,
P.O. Box J646, G.P.O.
PERTH W AUST 6001

Our ref LP 1985

Your ref 1082

Date received 17.11.80

Date completed 28.11.80

Issued at Perth

ANALYTICAL REPORT

Sample Ref.	Ta_2O_5	Sn	Nb_2O_5	Fe_2O_3	TiO_2
3/10/21	45	95	50	0.69	<0.01
22	40	120	55	1.25	0.01
23	<10	25	30	0.39	<0.01
24	17	100	45	1.45	0.06
25	18	70	55	1.00	0.04
26	45	75	50	0.98	0.01
27	40	270	130	1.85	0.06
28	18	<10	<10	0.74	0.01
3/10/29	10	40	19	3.40	0.33
	PPM	PPM	PPM	%	%

METHOD: XRF

SGS Australia Pty. Ltd.

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PERTH WA 6000

Our ref LP1976

Your ref 1164

Date received 14.11.80

Date completed 3.12.80

Issued at PERTH

cc

ANALYTICAL REPORT

Sample Ref.	Ta_2O_5	SnO_2	Nb_2O_5	Fe_2O_3	Ti_2O		Wt (g)			
0001	0.78	35.4	0.46	3.55	0.31		2.3			
02	2.15	71.2	1.10	1.95	0.30		2.7			
03	1.90	82.2	0.97	1.45	0.18		16.6			
04	1.55	62.8	0.67	2.10	0.29		2.2			
05	1.80	84.8	0.88	1.40	0.31		4.2			
06	3.45	35.7	0.81	4.20	0.49		1.8			
07	5.05	24.6	1.95	18.5	0.61		4.4			
08	4.00	21.8	1.60	6.95	0.61		1.6			
09	2.10	11.4	0.60	7.65	0.41		1.1			
10	6.75	37.5	2.90	5.85	0.69		2.2			
11	0.88	2.50	0.29	8.50	0.60		0.8			
12	1.85	53.8	0.74	9.45	0.29		6.2			
13	0.88	71.9	0.52	2.70	0.44		4.3			
14	1.65	14.3	0.58	21.9	0.30		7.0			
15	0.85	61.4	0.50	2.95	0.86		0.2			
16	2.10	21.6	0.80	7.70	1.50		0.1			
16 (wash)	0.17	4.25	0.12	3.55	0.55		0.6			
17	0.92	77.1	0.34	0.98	0.62		1.0			
18	0.04	41.8	0.10	7.85	0.56		10.7			
19	1.40	72.2	0.60	2.30	0.57		5.0			

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Sample Ref.	Ta_2O_5	SnO_2	Nb_2O_5	Fe_2O_3	TiO_2		Wt (g)		
0021	2.90	29.0	1.40	6.35	1.05		0.4		
22	6.05	43.1	2.55	3.90	1.15		1.0		
23	5.00	22.6	2.20	4.10	0.65		0.6		
24	0.61	4.00	0.41	16.1	1.00		0.9		
25	1.15	2.00	0.59	17.2	1.30		0.5		
26	3.40	17.8	0.86	7.20	0.67		3.3		
27	6.15	35.8	2.00	8.65	0.95		4.9		
28	2.70	16.1	0.74	2.85	0.98		0.3		
29	4.40	30.9	1.75	11.3	0.74		5.4		
30	6.40	38.2	2.95	6.25	0.68		3.6		
31	1.85	57.8	0.70	4.00	0.53		8.0		
32	0.02	91.0	0.13	0.33	0.64		12.4		
33	0.03	15.0	0.04	0.96	0.36		13.1		
34	0.03	90.9	0.16	0.24	0.67		24.0		
35	0.15	82.9	0.20	0.61	1.60		16.8		
36	0.09	3.75	0.05	2.30	0.52		3.5		
38	0.11	4.20	0.06	10.0	0.64		6.9		
39	0.01	1.95	0.01	22.6	0.50		6.8		
40	<.01	0.03	<.01	2.90	0.10		18.5		
41	0.18	1.50	0.07	20.4	0.80		4.2		

R A C.

RESULTS

ROCK SAMPLES

Sample No.	Area	Description
3/10/21	Soldiers Creek Central	Pegmatite med. grained mica rich
3/10/22	" " "	Pegmatite coarse grained
3/10/23	" " "	Pegmatite feld rich coarse grained
3/10/24	" " "	Pegmatite very coarse grained (contact zone)
3/10/25	Soldiers Creek West	Soldiers Creek granite
3/10/26	" " "	Pegmatite med. grained in granite
3/10/27	Muldiva Creek	Very coarse pegmatite mica rich
3/10/28	Soldiers Creek East	Seds. with chert bands
3/10/29	Cretaceous/Kaolin Show	Sandstone med-fine grained

	Results ppm			Results %	
	Ta_2O_5	Sn	Nb_2O_5	Fe_2O_3	TiO_2
3/10/21	45	95	50	0.69	< 0.01
22	40	120	55	1.25	0.01
23	10	25	30	0.39	< 0.01
24	17	100	45	1.45	0.06
25	18	70	55	1.00	0.04
26	45	75	50	0.98	0.01
27	40	270	130	1.85	0.06
28	18	< 10	< 10	.74	0.01
29	10	40	19	3.40	0.33

Sample No.	Mesh Size	DESCRIPTION Minerals	Appearance
0001	+10	Quartz, ironstone, Tin	Angular grains
	-10 +30	Tin, tant. quartz, ironstone	Angular
	- 30	Tin, tant. quartz, tourmaline	Angular
0002	+10	Tin, 1 grain tant.	Angular
	-10 +30	Tin, few grains tant.	Angular
	- 30	Tin, tant, quartz, tourmaline	Angular
0003	+10	Tin, iron stone, some larger grains	Rounded
	-10 +30	Tin, few grain tant.	Angular grains
	-30	Tin, tant. quartz, tourmaline	Angular grains
0004	+10	Tin - slightly rounded, quartz	
	-10 +30	Tin, quartz, tant. tourmaline	Angular grains
	-30	Tin, quartz, tourmaline	Angular grains
0005	+10	Tin	A few rounded grains
	-10 +30	Mostly tin, angular grains	
	-30	tin, tant. quartz, tourmaline	Angular grains
0006	+10	Tin and ironstone	A couple of rounded grains
	-10 +30	Tin, tant. tourmaline & quartz	Angular grains
	-30	Tourmaline, quartz, tin, tant. zircon	Angular grains
0007	+10	Tin, tourmaline ironstone	Angular grains
	-10 +30	Tin, tant. ironstone, tourmaline & 1 pyrochlore	Angular grains
	-30	Tin, tant. tourmaline, quartz	Angular grains
0008	+10		
	-10 +30	Tin, tant. tourmaline, ironstone	Angular grains
	-30	Tin, tant. tourmaline, quartz	Angular grains
0009	+10	Ironstone	
	-10 +30	Tin, tant. tourmaline, quartz ironstone.	Angular grains
	-30	Tin, tant. quartz, tourmaline	Angular grains
0010	+10	Tin and tourmaline	Slightly rounded grain
	-10 +30	Tin, tant. tourmaline	Angular grains
	-30	Tin, tant. tourmaline, quartz	Angular grains

Sample No.	Mesh Size	DESCRIPTION	
		Minerals	Appearance
0011	+10	Nil	
	-10 +30	Tin, tant. tourmaline	Angular grains
	-30	Tin, tant. tourmaline, quartz	Angular grains
0012	+10	Tin & ironstone	A few slightly rounded grains
	-10 +30	Tin, tant. ironstone, quartz tourmaline	Angular grains
	-30	Tin, tant. quartz, tourmaline	Angular grains
0013	+10	Tin & ironstone	Fairly worn grains
	-10 +30	Tin, tant. tourmaline and ironstone	A few rounded grains
	-30	Quartz, tourmaline, tin, tant.	Angular grains
0014	+10	Tin and ironstone	Angular grains
	-10 +30	Tin, tant. quartz, tourmaline ironstone	Angular grains
	-30	Tin, tant. tourmaline, quartz	Angular grains
0015	+10	Tin & tourmaline	Angular grains
	-10 +30	Tin & tourmaline	Angular grains
	-30	Tin, tant. tourmaline, quartz zircon	Angular grains
0016	+10	Nil	
	-10 +30	Tin and tourmaline	Angular grains
	-30	Tin, tant. tourmaline, quartz	Angular grains
0016 (wash)	+10	Quartz and tourmaline	
	-10 +30	Tourmaline, quartz & tin	Angular grains
	-30	" " "	Angular grains
0017	+10	Tin	Larger grains fairly rounded
	-10 +30	Tin, tant. tourmaline, quartz	Angular grains
0018	+10	Tin, tourmaline, ironstone, quartz	A few rounded grains
	-10 +30	Tin, tant. tourmaline, ironstone, quartz	A few rounded grains
	-30	Tin, tourmaline & quartz	Angular grains
0019	+10	Tin & ironstone	A few rounded grains
	-10 +30	Tin, tant. tourmaline, quartz	A few rounded grains
	-30	Tin, tant. tourmaline, quartz	Angular
0021	+10	Nil	
	-10 +30	Tin, tourmaline, quartz	Angular grains
	-30	Tin, tant. tourmaline, quartz	Angular grains

Sample No.	Mesh Size	DESCRIPTION Minerals	Appearance
0039	+10	Mostly ironstone, 2 grains cassiterite	Angular grains
	-10 +30	Quartz, ironstone, cassit.	Angular
	-30	Quartz & cassiterite	Angular grains
0040	+10	Ironstone	
	-10 +30	Quartz & ironstone	Fairly worn grains
	-30	Quartz - trace tin	
0041	+10	Ironstone	
	-10 +30	Ironstone, quartz, tin, trace tantalite	Slightly rounded grains
	-30	Quartz, tin, tourmaline tantalite	Slightly rounded
0042	+10	Ironstone	
	-10 +30	Quartz & some tin	Slightly rounded grains
	-30	Quartz - trace tin	
Amelio Stn 4	+10	Mostly tin, 1 grain tant.	Grains fairly rounded
	-10 +30	Tin, tant., quartz, tourmaline	Angular grains
	-30	Quartz, tourmaline, tin & tant.	Angular grains
0001	+10	Quartz, ironstone, tin	Angular grains
	-10 +30	Tin, tant, quartz, ironstone	Angular
	-30	Tin, tant, quartz, tourmaline	Angular

Sample No.	Mesh Size	DESCRIPTION Minerals	Appearance
Amelio 3	+10	Tin	A few rounded grains
	-10 +30	Mostly tin	1 or 2 rounded grains
	-30		
Casteon A-12?	+10	Tin & ironstone	1 or 2 rounded grains
	-10 +30	Tin, tant., tourmaline	A few larger grains rounded
	-30	Tin, tant., tourmaline quartz	Angular
0031	+10	Cassiterite & tourmaline	Angular grains
	-10 +30	Cassiterite & tourmaline	Angular grains
	-30	Cassiterite, tourmaline & quartz	Angular grains
0032	+10 Coarse fraction	11.5 out of 12.46 grams cassiterite quartz and tourmaline in fine fractions	Grains rounded around edges (slightly worn)
0033		Crushed sample	
	+10	Cassiterite and quartz	fairly rounded grains
	-10 +30		some rounded grains mostly angular
	-30		Angular grains
0034	+10	Cassiterite and a few grains quartz	(Some large grains slightly worn on edges
	-10 +30	Cassiterite and quartz	Angular grains
	-30	Cassiterite and quartz	Angular grains
0035	+10	Cassiterite	Angular grains, 1 or 2 with rounded edges
	-10 +30	Cassiterite and quartz	Mostly angular. A few rounded
	-30	Cassiterite, tourmaline and leocorene	Angular
0036	+10	Quartz and iron oxide	
	-10 +30	Quartz, cassiterite	Angular grains
	-30	Quartz, cassiterite, tourmaline	Angular grains
0038	+10	Iron stone	
	-10 +30	Ironstone, quartz, cassiterite, trace tant.	Angular grains
	-30	Quartz, tourm. cassit.	Angular grains

JEWELL MINERALOGICAL SERVICES

SHEET No. 1 AREA: N.T. HOLE CO-ORDINANCE:

FIELD SCHEDULE

Drill Superviser:

Drill Operator:

Date Drilled:

Sample Type:

LABORATORY SCHEDULE

Laboratory Superviser: J.E. Vickers gibb

Laboratory Operator: K Lamm

Date Despatched: 31-10-80

Description		Vol.	Weight of H.M. from Panning			CASSITERITE ($Sn O_2$)						Total Weight Cass.	Weight in Grams VOL = Kg/M3	TANTALITE (Fe Mn) $(Ta Nb)_2 O_6$						Total Weight Tant.	Weight in Grams VOL = Kg/M3
						Weight % $Sn O_2$			Weight $Sn O_2$					Weight % Tant.			Weight Tant.				
			1	2	3	4	5	6	7	8	9	10 7+8+9		11	12	13	14	15	16	17 14+15+16	
			Mesh Size			Mesh Size			Mesh Size					Mesh Size			Mesh Size				
LAB No	SAMPLE No.		+10	−10 +30	−30	+10	−10 +30	−30	+10	−10 +30	−30			+10	−10 +30	−30	+10	−10 +30	−30		
L1061	0032	6	12·46	·01	·07	92·33	46·82	10·68	11·5	·004	·007	11·51	1·918	Nil	Nil	NIL					NIL
L1062	0031	6	2·99	1·95	3·10	79·83	75·61	38·06	2·38	1·47	1·18	5·03	0·838	NIL	TR	1·6			·049	·049	0·008
L1063	0033	6	5·6	4·23	3·6	24·74	24·65	TR	1·38	1·04	TR	2·42	0·403	NIL	NIL	NIL					NIL
L1064	0034	6	22·12	1·10	·16	95·26	36·07	19·27	21·75	·45	·03	22·73	3·788	NIL	NIL	NIL					NIL
L1065	0035	6	11·2	3·18	2·59	100	98·42	7·95	11·2	3·13	·20	14·53	2·42	NIL	·25	1·53	NIL	·007	·04	·047	0·007

[redacted] EWELL MINERALOGICAL SERVICES

FIELD SCHEDULE

Drill Superviser:

Drill Operator:

Date Drilled:

Sample Type

SHEET No. 2 AREA: N.T. HOLE CO-ORDINANCE:

LABORATORY SCHEDULE

Laboratory Superviser: J.Pickergill Laboratory Operator: D.Kamm

DATE RECEIVED 30-10-80 Date Despatched: 4-11-80

[redacted] B No	Samp No	Description	Vol. LITRES	CASSITERITE ($Sn O_2$) Weight of H.M. from Panning 1	2	3	Weight % $Sn O_2$ 4	5	6	Weight $Sn O_2$ 7	8	9	Total Weight Cass. 10 = 7+8+9	Weight in Grams VOL = Kg/M3	TANTALITE (Fe Mn) $(Ta Nb)_2 O_6$ Weight % Tant. 11	12	13	Weight Tant. 14	15	16	Total Weight Tant. 17 = 14+15+16	Weight in Grams VOL = Kg/M3
				Mesh Size			Mesh Size			Mesh Size					Mesh Size			Mesh Size				
				+10	−10 +30	−30	+10	−10 +30	−30	+10	−10 +30	−30			+10	−10 +30	−30	+10	−10 +30	−30		
[redacted] 1066	0036		6	.27	.16	3.23	NIL	31.13	10.84	NIL	.05	.35	.40	0.06	NIL	NIL	NIL	NIL	NIL	NIL		NIL
[redacted] 1067	0038		6	.78	.29	5.94	NIL	47.22	12.47	Nil	.136	.74	.876	0.146	NIL	.98	Nil	Nil	.003	Nil	.003	0.005
L1068	0039		6	1.9	.45	4.51	5.05	10.12	3.36	.09	.04	.15	.28	0.046	NIL	NIL	NIL	Nil	Nil	Nil		NIL
[redacted] 1069	0040		6	.61	3.23	14.62	NIL	NIL	TR	NIL	NIL	TR		TRACE	NIL	NIL	NIL	NIL	NIL	NIL		NIL
L1070	0041		6	.52	.52	3.25	NIL	14.99	2.82	NIL	.078	.09	.168	0.028	NIL	2.57	2.90	NIL	.01	.09	.10	0.016
[redacted] 1071	0042		6	1.78	1.07	10.28	NIL	6.58	TR	NIL	.07	TR	.07	0.011	NIL	NIL	NIL	NIL	NIL	NIL		NIL
[redacted] 1072	AMELIO	STN 4	6	.34	.18	.41	77.09	11.85	21.81	.26	.13	.09	.48	0.08	15.85	6.29	1.23	.05	.01	.005	.065	0.01
L1073	0001		6	.17	1.75	1.50	13.32	82.05	45.14	.02	1.4	.67	2.09	0.348	NIL	1.6	1.81	Nil	.028	.027	.055	0.009
[redacted] 1074	0002		6	.71	1.19	.88	94.29	96.29	89.0	.67	1.14	.25	2.06	0.343	5.71	.89	2.17	.04	.01	.019	.069	0.011
L1075	0003		6	11.71	2.78	2.2	97.14	96.08	46.73	11.37	2.67	1.02	15.06	2.51	NIL	1.22	.32	NIL	.03	.007	.037	0.006
[redacted] 1076	0004		6	.35	.97	1.01	95.96	89.17	52.64	.33	.86	.53	1.72	0.28	NIL	1.06	.27	NIL	.01	.002	.012	0.002
[redacted] 1077	0005		6	1.34	1.99	.94	100	98.21	59.78	1.34	1.95	.56	3.85	0.64	Nil	.92	2.09	Nil	.018	.019	.037	0.006
L1078	0006		6	.32	.36	1.23	76.92	84.23	28.09	.25	.30	.34	.89	0.148	NIL	7.57	.68	NIL	.027	.008	.035	0.005
[redacted] 1079	0007		6	.84	.93	2.79	14.81	66.85	23.34	.12	.62	.65	1.39	0.23	NIL	12.23	9.6	NIL	.11	.26	.37	0.06
[redacted] 1080	0008		6	NIL	.25	1.4	NIL	69.06	21.89	NIL	.17	.31	.48	0.08	NIL	8.87	1.03	NIL	.02	.01	.03	0.005
[redacted] 1081	0009		6	.07	.16	.99	NIL	58.35	9.38	NIL	.09	.09	.18	0.03	NIL	6.37	3.62	NIL	.01	.03	.04	0.006
L1082	0010		6	.03	.48	1.81	68.63	76.02	39.2	.02	.36	.70	1.08	0.18	NIL	21.28	13.52	NIL	.10	.24	.34	0.05

[redacted] EWELL MINERALOGICAL SERVICES — SHEET No. 3 — AREA: N.T. Stream Samples — HOLE CO-ORDINANCE:

FIELD SCHEDULE — LABORATORY SCHEDULE

Drill Superviser: — Laboratory Supervisor: J Etheridge — Laboratory Operator: D Gunn

Drill Operator:

Date Drilled: — DATE RECEIVED: 30-10-80 — Date Despatched: 5-11-80

Sample Type:

Description		Vol.	CASSITERITE (SnO_2) Weight of H.M. from Panning			CASSITERITE (SnO_2) Weight % SnO_2			CASSITERITE (SnO_2) Weight SnO_2			Total Weight Cass.	Weight in Grams VOL = Kg/M3	TANTALITE (Fe Mn) $(Ta\ Nb)_2O_6$ Weight % Tant.			TANTALITE (Fe Mn) $(Ta\ Nb)_2O_6$ Weight Tant.			Total Weight Tant.	Weight in Grams VOL = Kg/M3
			1	2	3	4	5	6	7	8	9	10		11	12	13	14	15	16	17	
			Mesh Size			Mesh Size			Mesh Size			7+8+9		Mesh Size			Mesh Size			14+15+16	
Lab No.	Samp No	Litres	+10	-10 +30	-30	+10	-10 +30	-30	+10	-10 +30	-30			+10	-10 +30	-30	+10	-10 +30	-30		
L1083	0011	6	NIL	·02	·89	NIL	31·28	5·11	NIL	·006	·04	·046	0·007	NIL	32·17	·45	NIL	·006	·004	·01	0·001
L1084	0012	6	1·54	2·37	2·37	62·07	86·78	26·58	·95	2·05	·63	3·63	0·605	NIL	2·76	3·08	NIL	·06	·07	·13	0·02
L1085	0013	6	2·98	·15	1·20	91·43	59·91	11·08	2·72	·11	·13	2·96	0·49	NIL	4·47	7·00	NIL	·008	·08	·088	0·014
L1086	0014	6	1·66	·88	4·52	9·92	64·58	16·47	·16	·57	·74	1·47	0·245	NIL	7·03	·89	NIL	·06	·04	·10	0·016
L1087	0015	6	·08	·05	·15	100	74·46	24·09	·08	·037	·04	·157	0·026	NIL	NIL	3·18	NIL	NIL	·004	·004	0·0006
L1088	0016	6	NIL	·03	·05	NIL	33·21	35·61	NIL	·009	·017	·026	0·004	NIL	NIL	3·39	NIL	NIL	·001	·001	0·0001
L1089	0016 (WASH)	6	·07	·06	·54	NIL	36·19	15·37	NIL	·02	·08	·10	0·016	NIL	NIL	NIL	NIL	NIL	NIL		NIL
L1090	0017	6	·52	·24	·29	100	92·23	36·62	·52	·22	·11	·85	0·14	NIL	4·47	9·4	NIL	·01	·03	·04	0·01
L1091	TERRACE 0018	6	5·76	·49	4·60	62·7	29·36	5·24	3·61	·14	·24	3·99	0·67	NIL	·37	·60	NIL	·001	·02	·021	0·003
L1092	0019	6	1·65	1·71	1·87	95·92	92·42	53·4	1·58	1·58	·99	4·15	0·69	NIL	2·4	7·4	NIL	·04	·14	·18	0·03
L1093	0021	6	NIL	·04	·41	NIL	55·38	43·29	NIL	·02	·18	·20	0·03	NIL	NIL	9·93	NIL	NIL	·04	·04	0·006
L1094	0022	6	·02	·32	·79	100	83·05	43·6	·02	·26	·34	·62	0·10	NIL	12·75	7·34	NIL	·04	·057	·097	0·016
L1095	0023	6	NIL	·12	·54	NIL	71·46	29·72	NIL	·08	·15	·23	0·038	NIL	18·57	7·93	NIL	·02	·04	·06	0·01
L1096	0024	6	·13	·12	·71	NIL	10·34	10·5	NIL	·01	·07	·08	0·01	NIL	2·65	5·4	NIL	·003	·038	·041	0·006
L1097	0025	6	·02	·12	·45	NIL	8·02	9·87	NIL	·009	·04	·049	0·008	NIL	2·06	1·1	NIL	·002	·007	·009	0·001
L1098	0026	6	·10	·62	2·71	NIL	65·46	18·34	NIL	·40	·51	·91	0·15	NIL	11·29	1·27	NIL	·07	·03	·10	0·016
L1099	0027	6	·34	1·67	3·06	NIL	52·64	43·10	NIL	1·21	1·32	2·53	0·42	NIL	17·54	7·63	NIL	·29	·23	·52	0·08
L1100	0028	6	·02	·07		NIL	53·33	20·05	NIL	·037	·06	97	0·016	NIL	7·48	5·95	NIL	·005	·019	·024	0·004

FIELD SCHEDULE

Drill Superviser:

Drill Operator:

Date Drilled:

Sample Type:

LABORATORY SCHEDULE

Laboratory Superviser: J.E. Lechowicz

Laboratory Operator: D. Hamm

DATE REC'D : 30-10-80

Date Despatched: 6-11-80

Description		Vol.	CASSITERITE ($Sn O_2$) Weight of H.M. from Panning			Weight % $Sn O_2$			Weight $Sn O_2$			Total Weight Cass.	Weight in Grams VOL = Kg/M3	TANTALITE (Fe Mn) $(Ta Nb)_2 O_6$ Weight % Tant.			Weight Tant.			Total Weight Tant.	Weight in Grams VOL = Kg/M3
			1	2	3	4	5	6	7	8	9	10		11	12	13	14	15	16	17	
			Mesh Size			Mesh Size			Mesh Size			7 + 8 + 9		Mesh Size			Mesh Size			14 + 15 + 16	
A. No	SAMP No	LITRES	+ 10	−10 +30	−30	+ 10	−10 +30	−30	+10	−10 + 30	−30			+ 10	−10 + 30	−30	+ 10	−10 + 30	−30		
101	0029	6	·53	1·22	3·31	NIL	71·79	28·62	NIL	·87	1·09	1·96	0·326	NIL	12·08	5·84	NIL	·147	·22	·367	0·06
102	0030	6	·04	·72	3·08	NIL	65·46	56·85	NIL	·47	1·75	2·22	0·37	NIL	20·76	9·99	NIL	·15	·31	·46	0·076
103	S.A? 1.? (LABEL ENCLOSED)	6	·12	·63	·31	100	93·19	46·17	·12	·587	·14	·847	0·141	NIL	2·04	3·52	NIL	·01	·01	·02	0·003
104	AMELIO (3)	6	·31	1·34	1·28	100	98·29	31·89	·31	1·32	·41	2·04	0·34	NIL	·52	·66	NIL	·007	·008	·015	0·002
105	CASTEON A. 12?	6	2·39	2·31	1·27	98·85	97·28	41·53	2·36	2·25	·50	5·11	0·85	NIL	2·19	5·39	NIL	·05	·06	·11	0·018

SCHEDULE OF EXPENDITURE

FIELD STAFF

2 PROSPECTORS	(SIX WEEKS @ $400 PER WEEK EACH)	$4,800.00
1 GEOLOGIST	(1.5 WEEKS)	750.00
1 CONSULTANT	(3 DAYS)	900.00
1 PLANT OPERATOR	(4 WEEKS @ $500 PER WEEK)	2,000.00
1 FITTER	(FOR REPAIRS TO 977 - 1 WEEK @ $800 PER WEEK)	800.00

CONSULTANTS

R. THOMSON J. LINDEN	PLUS AIR FARES	2,200.00

DRAFTING, MAPPING & RECORDING	800.00

VEHICLES

CHARGED AGAINST THE PROJECT ON THE BASIS OF 800 KM. PER WEEK @ 13 CENTS A KILOMETRE	1,969.00
MESSING & ACCOMMODATION	1,920.00
AIR CHARTER	350.00
CAT. 977 (240 HOURS @ $60 PER HOUR)	14,400.00
HEAD OFFICE & ADMINISTRATION	14,500.00
	$45,389.00

SUMMARY OF RESULTS

1. A sub-economic area of tin-tantalite mineralization was outlined at the head of West Soldiers Creek.

2. Indications of mineralization was found over a large area of West Soldiers Creek, within Exploration Licence 1997 and adjacent Exploration Licence 2251.

3. A zone of narrow linear pegmatites on the divide between West Soldiers Creek and Spring Creek were found to carry some tantalite and at present are regarded as the tantalite source for the area.

4. No outcropping reefs assayed around Fletchers Gully contained economic gold values.

5. An interesting pegmatite was located on Muldiva Creek containing zones of strong mineralization.

6. No diamonds or diamond indicator minerals were discovered.

CONCLUSIONS

Exploration Licence 1997 has been proved to have potential for profitable tin-tantalite deposits, both lode and alluvial. Further work is warranted to test this potential and access to Spring Creek is vital as this appears, from reconnaissance panning, to have the largest volume of gravels and the best grades. The isolation and poor access necessitates higher than average mining grades would have to be proved to make a mine in this location viable - that is grade in the order of 0.6 kg. Sno 2 and 0.05 kg Ta 2 05 per loose cubic metre.

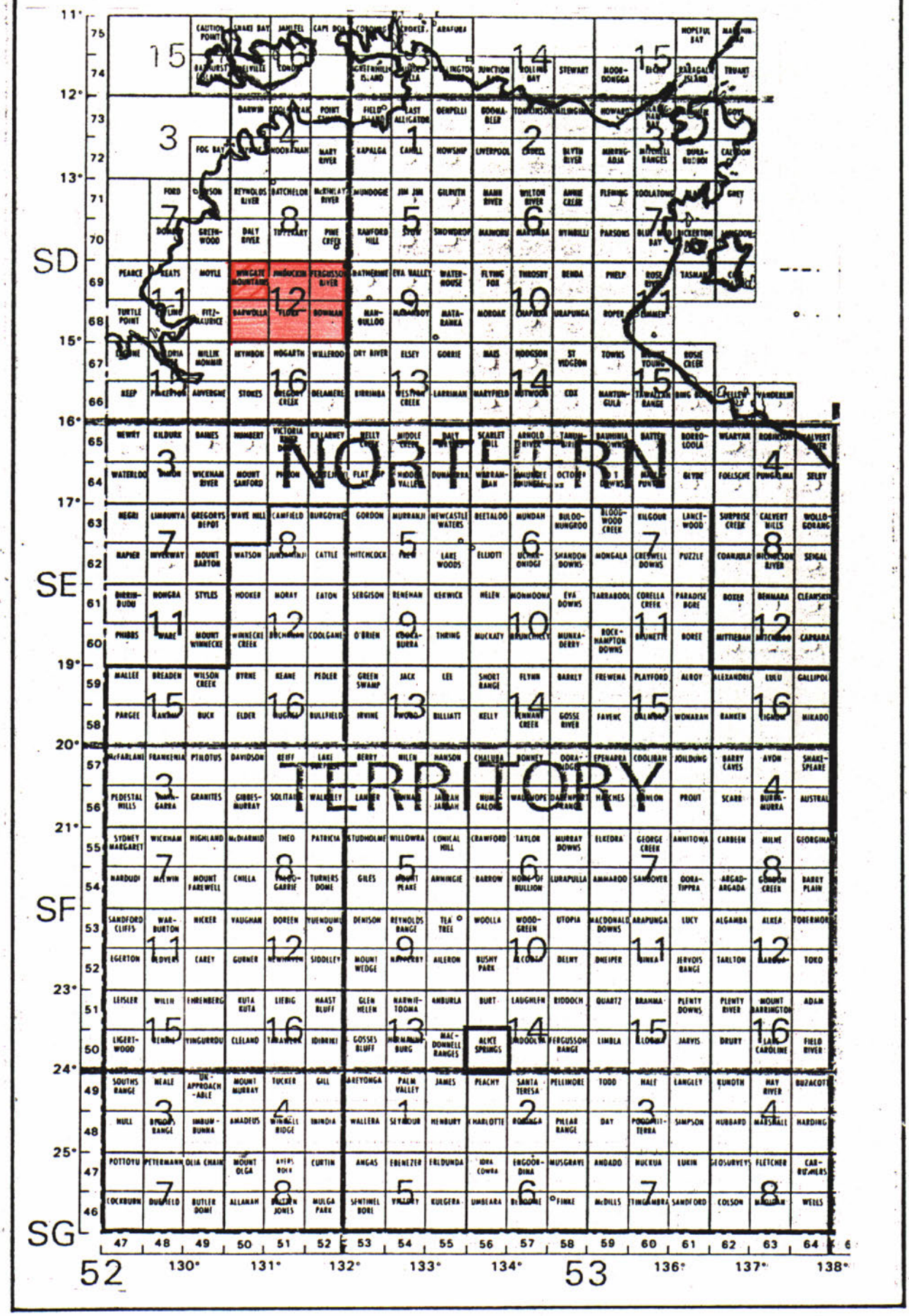
Sufficient work has now been done to indicate that these grades may be achieved.

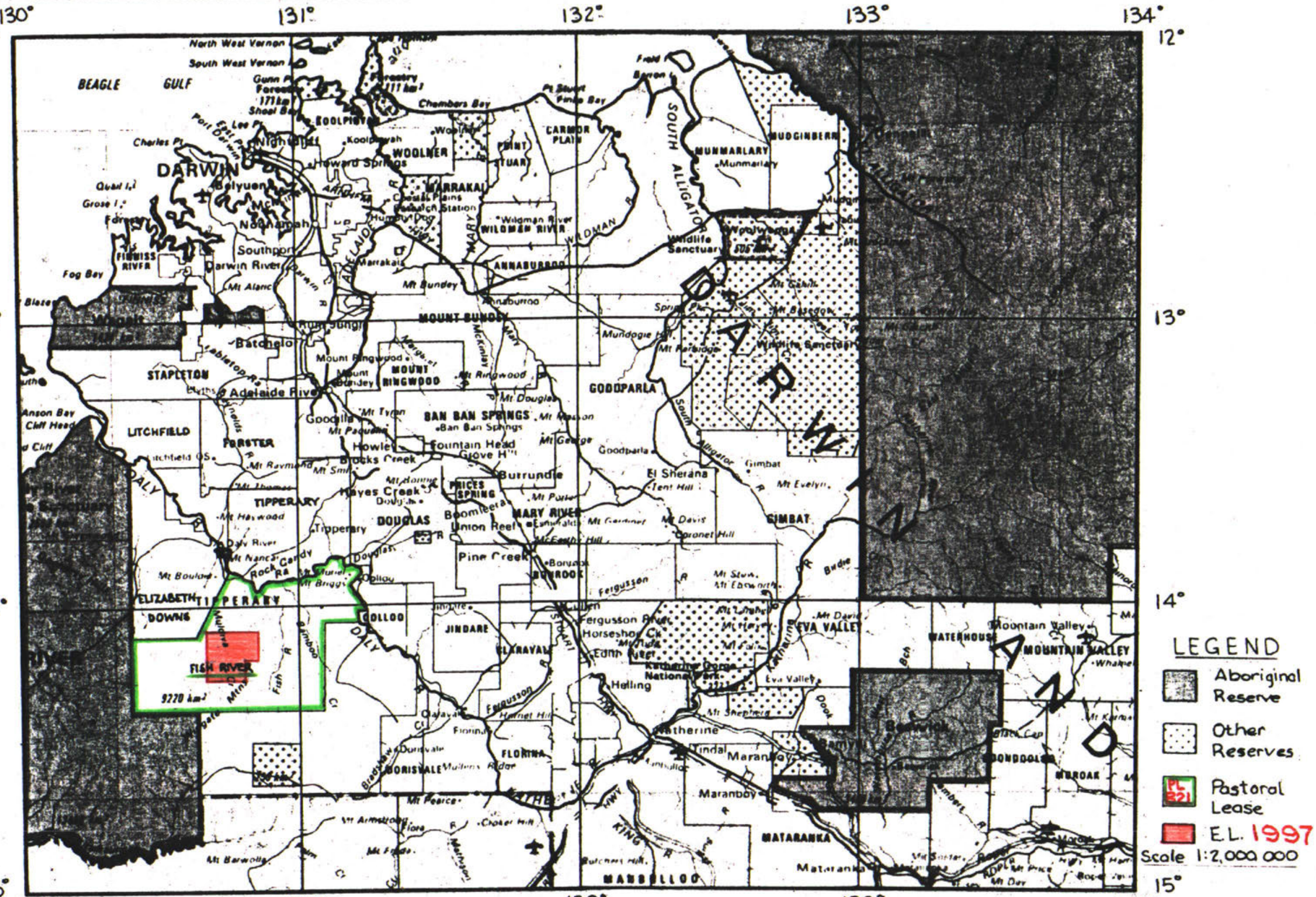
Gold prospects have not been encouraging.

No results have been received from DAMCO but all Territory Mining samples despatched to Greenbushes Tin Ltd. contained diamond indicator minerals.

MAP REFERENCE

Fergusson River 1:250,000 SERIES SD52-12

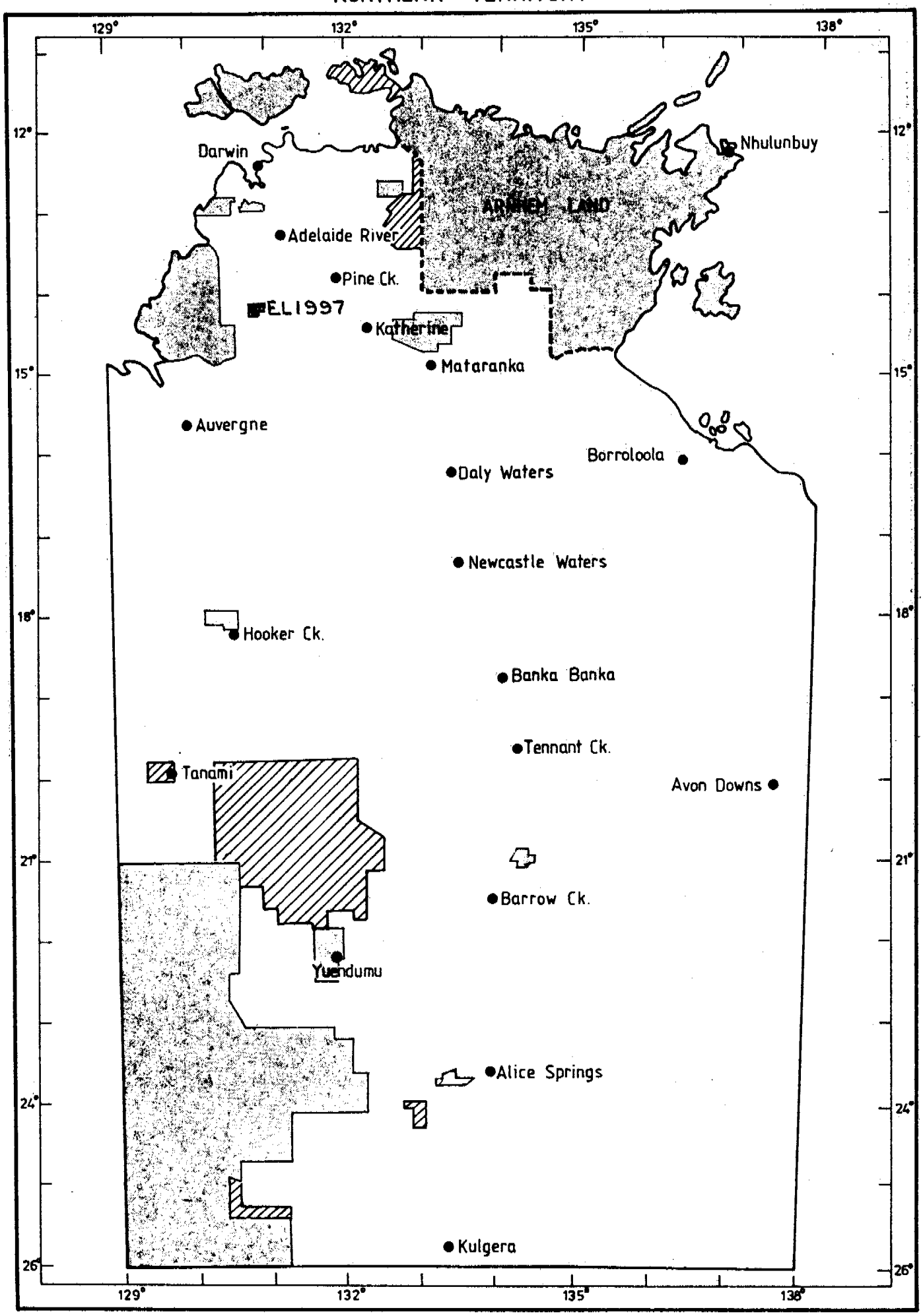




LOCALITY MAP - DARWIN & DISTRICTS

LOCALITY MAP

NORTHERN TERRITORY



NTF&MS

14° 10'

276

296

297

293

130° 46'

134° 16'

133° 53'

EL 1997

ELA 2541

EL 2251

Spring Ck

East Soldiers Ck

West Soldiers Ck

Central Soldiers Ck

To Oallaa

Muldiva

Kaolin Show

Buldiva

Priors Knob

Rock hole & falls

Narrow very shallow rocky wash with Ni Tin

70°

R8 Limestone Outcrop

To Celtic Water Hole

001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025 026 027 028 029 030 031 032 033 034 035 036 037 038 039 040 041 042

R1 R2 R3 R4 R5 R6 R7 R8 R9

NS

0 1 2 3 km

Scale 1:15,375

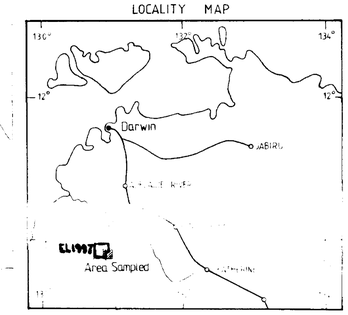
LEGEND

- Costean or pit.
- Access track.
- Abandoned mine workings.

GEOLOGICAL REFERENCE

- Alluvial.
- Terrace.
- R2 Rock sample location.
- 006 Alluvial sample location (In a costean)
- X Sample location (Other than in a costean)
- NS No sample taken.

LOCALITY MAP



TERRITORY MINING PTY LTD

SAMPLE LOCATION

EL 1997, EL 2251, EL 2541

SOLDIERS & SPRING CK AREA

N.T.

CR 81/215