OTTER GOLD NL

5th ANNUAL REPORT & FINAL REPORT FOR EL9592

23 OCTOBER 2000 – 22 OCTOBER 2001

TANAMI REGION NORTHERN TERRITORY

COMPILED BY: M MUIR

DISTRIBUTION:
NT Dept of Mines & Energy
Otter Gold NL
File copy

TITLE: 5th Annual Report for Exploration Licence EL9592

PERIOD: 23 October 2000 to 22 October 2001

AUTHOR: Maryanne Muir

LOCATION: Birrindudu 1:250,000 SE 52-11

COMMODITY: Gold

DATE: December 2001

SUMMARY

Exploration Licence 9592 (Birrindudu) was granted on the 23rd of October 1996, for a period of six years. During the fifth year of the Exploration Licence it was decided because of escalating tenement costs and the granting of adjacent Exploration Licences 22152 & 22378 that EL9592 and the recently granted licences become part of two adjoining SELs (23367 & 23368).

Fifth year exploration was minimal with work centring on a field trip to the region with DME geologists during August.

Total expenditure for EL9592 in the fifth year was $ 13,033.66.

Ongoing tenure of this Licence (EL 9592) by Otter Gold NL through SEL 23367 & SEL 23368 means that this report should remain a **CLOSED FILE**.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1.0 INTRODUCTION

During the 2000 - 2001 field season minimal work has been completed within EL 9592 with a site visit being the most significant. Work concentrated on the reduction of costs associated with the tenement and its amalgamation into two SELs that cover the region.

This report documents the work undertaken on EL 9592 during the fifth term and outlines the previous work programmes from 1996-2000.

2.0 LOCATION AND EXPLORATION HISTORY

2.1 Location and Leasing

Exploration Licence 9592 (Birrindudu) was granted to Otter Gold NL on the 23 October 1996 for a period of six years. The exploration licence was subject of a joint venture agreement between Otter Gold Mines Ltd. and Stockdale Prospecting Ltd (SPL). In January 1999 SPL requested the withdrawal of EL 9592 from the Birrindudu Agreement.

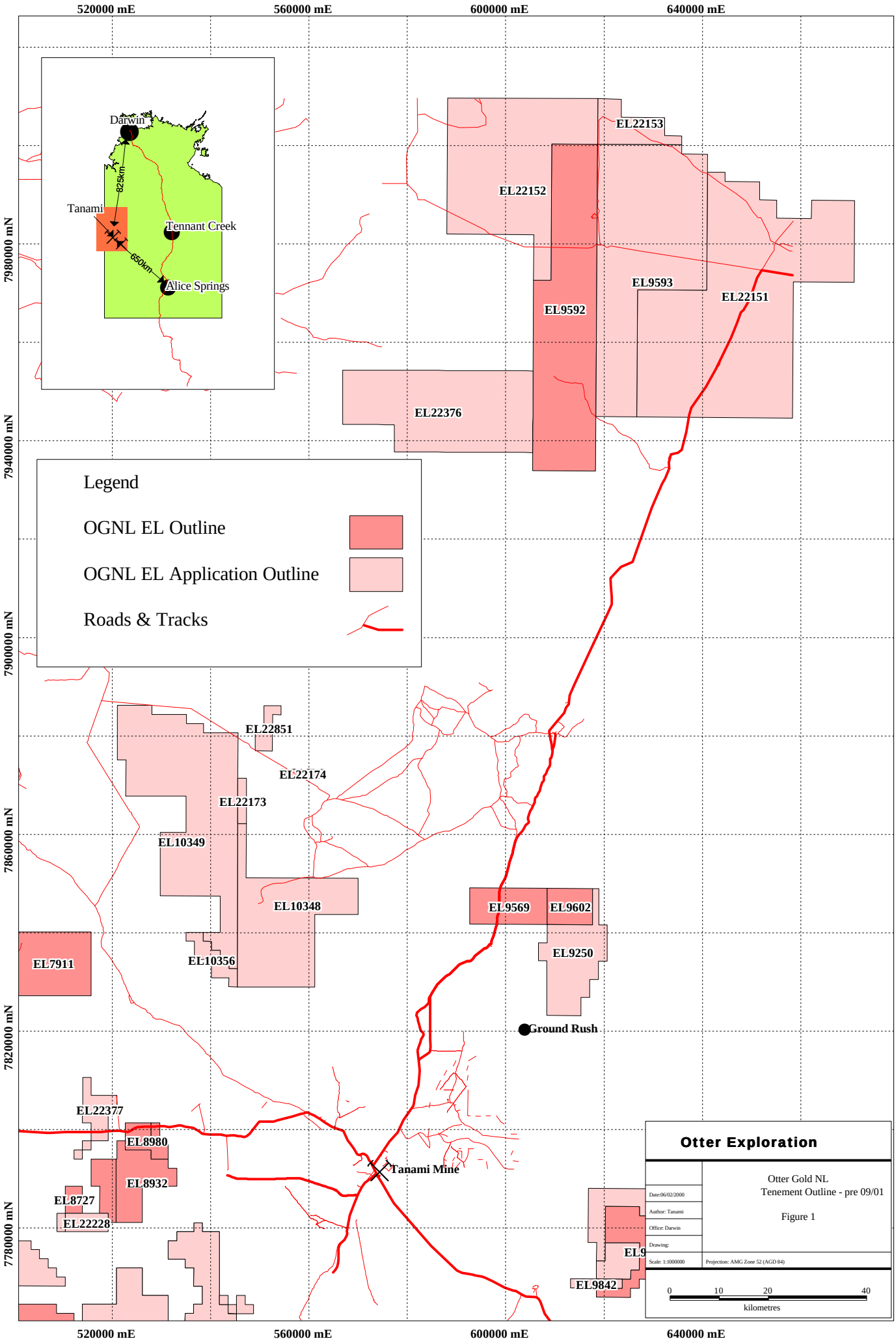
The tenement comprises 258 blocks covering an area of 838 square kilometres west of the Lajamanu Road, on the Birrindudu and Riveren pastoral leases. Exploration Licence (EL) 9592 is located on the western margin of the Styles and Mount Winnecke 1:100,000 map sheets. EL 9592 is located approximately 170km north-north east of the Tanami Mine Site via the Lajamanu Road.

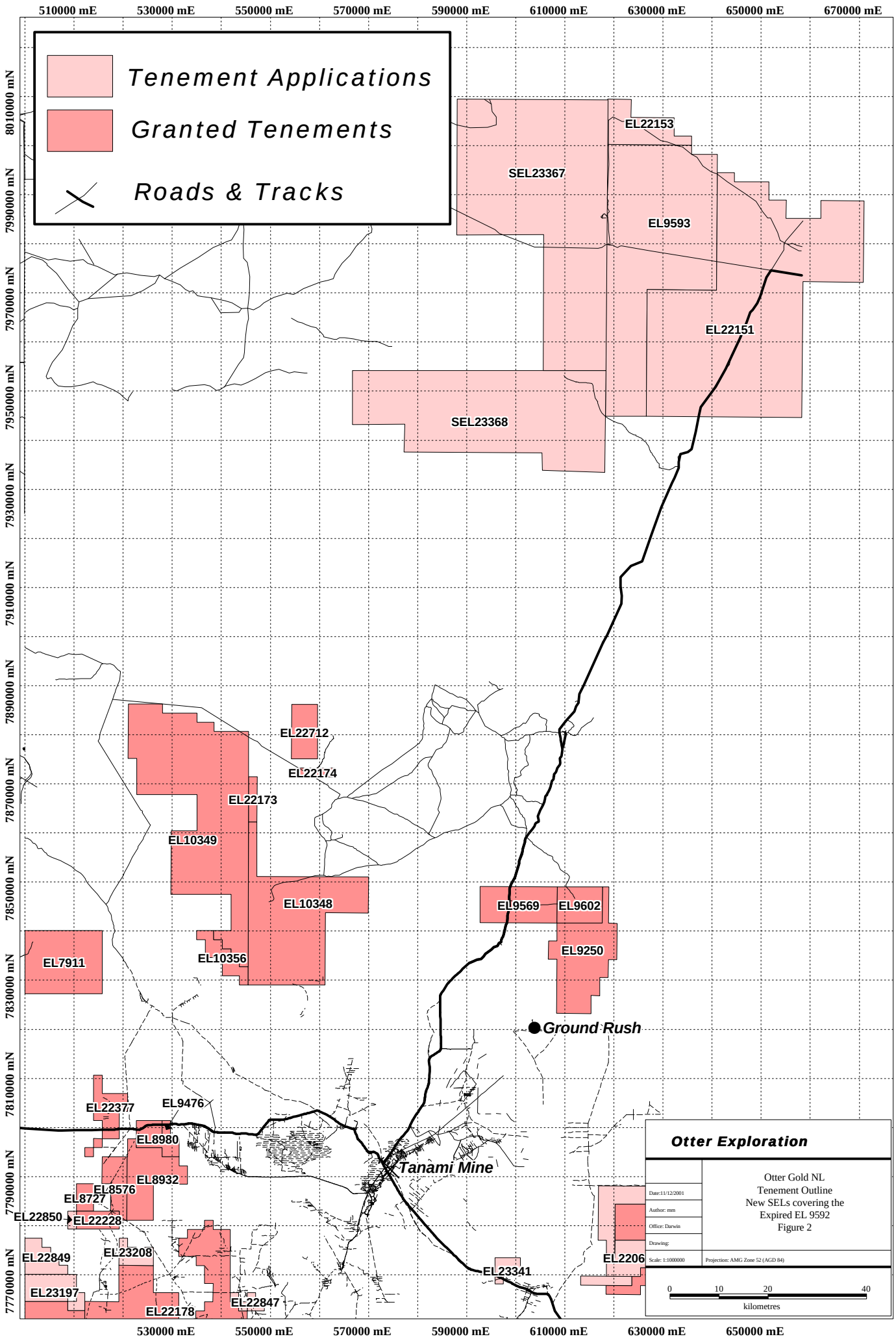
During 2001 it was decided because of escalating tenement costs and the granting of adjacent Exploration Licences 22152 & 22378 that EL9592 and the recently granted licences become part of two adjoining SELs (23367 & 23368). The SELs were applied for on the 24th of September 2001. See Figure 1 and 2 for comparison of regions.

2.2 Exploration History

1996 – 1997: Otter Gold NL had recently targeted the interpreted northerly continuation of the Tanami Mine Complex beyond the Central Desert Joint Venture tenements centred on the Tanami mine site which lead to the acquisition of EL 9592. Delays experienced arranging and conducting sacred site clearances prevented any on-ground exploration of this licence in the first year of its term.

1997 – 1998: Reconnaissance loam sampling carried out by Stockdale during 1997 on a 2km by 2km grid. Whilst sampling, a second smaller, sample was collected, these were then re-assayed by Otter Gold NL for low level gold using the ALS ZARG method. These results were reported in 'Supplement to Annual Report for Exploration Licence 9592 23 October 1997–22 October 1998. Analysis of results from this broad grid showed anomalism that appears coherent over several kilometres.


520000 mE
560000 mE
600000 mE
640000 mE
7980000 mN
7940000 mN
7900000 mN
7860000 mN
7820000 mN
7780000 mN
Darwin
825km
Tanami
Tennant Creek
650km
Alice Springs
EL22153
EL22152
EL9593
EL22151
EL9592
EL22376
Legend
OGNL EL Outline
OGNL EL Application Outline
Roads & Tracks
EL22851
EL22174
EL22173
EL10349
EL10348
EL10356
EL7911
EL9569
EL9602
EL9250
Ground Rush
EL22377
EL8980
EL8932
EL8727
EL22228
Tanami Mine
EL9842
Otter Exploration
Otter Gold NL
Tenement Outline - pre 09/01
Figure 1
Date:06/02/2000
Author: Tanami
Office: Darwin
Drawing:
Scale: 1:1000000
Projection: AMG Zone 52 (AGD 84)
0
10
20
40
kilometres


Tenement Applications
Granted Tenements
Roads & Tracks
510000 mE
530000 mE
550000 mE
570000 mE
590000 mE
610000 mE
630000 mE
650000 mE
670000 mE
8010000 mN
7990000 mN
7970000 mN
7950000 mN
7930000 mN
7910000 mN
7890000 mN
7870000 mN
7850000 mN
7830000 mN
7810000 mN
7790000 mN
7770000 mN
EL22153
SEL23367
EL9593
EL22151
SEL23368
EL22712
EL22174
EL22173
EL10349
EL10348
EL10356
EL7911
EL9569
EL9602
EL9250
Ground Rush
EL22377
EL9476
EL8980
EL8932
EL8576
EL8727
EL22850
EL22228
EL22849
EL23208
EL23197
EL22178
EL22847
Tanami Mine
EL23341
EL2206
Otter Exploration
Otter Gold NL
Tenement Outline
New SELs covering the
Expired EL 9592
Figure 2
Date:11/12/2001
Author: mm
Office: Darwin
Drawing:
Scale: 1:1000000
Projection: AMG Zone 52 (AGD 84)
0
10
20
40
kilometres

1998 – 1999: Third year exploration included regional soil sampling programmes and infill of targets generated within these programmes, with follow up of one target by Angle RAB. Drilling figures for the period were 21 RAB holes for 1,368 metres. The highest significant intercept values were 2m @1.70 g/t Au, 6m @ 0.78g/t Au and 2m @ 1.46g/t Au. Several zones of 0.2g/t Au significant intercepts were detected in eighty percent of the lines. Over 1,268 surface samples were collected, including infill samples over Happy Jack. See Figure 3 and 4.

A mapping exercise was undertaken in the third year of exploration over the Happyjack region for three days and concluded that finer grained 'intrusions' exists within a coarse grained porphyry. There were also two types of quartz veins, igneous and mesothermal. The mesothermal veins tend to parallel the 'intrusions'. The igneous veins appear to produce alluvial gold in near by creeks.

1999 – 2000: During the 1999 - 2000 field season a significant helicopter surface sampling programme was completed over the region with limited success. The aim was to find targets on a larger scale than the Happyjack prospect.

Approximately 2306 soil samples were taken on a 400m x 400m grid from a 425 square kilometre region within the Birrindudu Lease. Analysis was conducted using the ZARG method. Anomalies from 0 to 2.6ppb Au were reported in the results. Approximately 14 of these were above 0.5ppb Au. See Figure 3 and 4.

Relatively small areas of geophysics inclusive of radiometrics were flown over the Happy Jack and Jumping Jack regions by UTS geophysics at the beginning of the Licence year. A 5km x 8km survey was flown over the Happyjack region in the north of EL 9592, and a 5km x 5km survey was flown over a region known as Jumping jack to the south.

600000 mE

620000 mE

8000000 mN

7980000 mN

7960000 mN

7940000 mN

SEL23367

Happy Jack Prospect

SEL23368

EL9593

Jumping Jack Prospect

SEL23368

Otter Exploration

	Otter Gold NL EL 9592 - Birrindudu Sample Sites
Date:12/12/2001	
Author: mm	
Office: Darwin	
Drawing:	
Scale: 1:65000	Projection: AMG Zone 52 (AGD 84)

0 1 2 4

kilometres

600000 mE

620000 mE

8000000 mN

7980000 mN

7960000 mN

7940000 mN

SEL23367

Happy Jack Prospect

2.00m @ 0.21
2.00m @ 0.72
4.00m @ 0.97
8.00m @ 0.26
2.00m @ 0.49
2.00m @ 1.46
2.00m @ 0.39
12.00m @ 0.29
2.00m @ 0.48

EL9593

Jumping Jack Prospect

SEL23368

EL9592 surface sample
Au (ppb)

5	to	5,000	(38)
1	to	5	(75)
0.5	to	1	(68)
0.1	to	0.5	(1545)
0.05	to	0.1	(3023)
0	to	0.05	(15)

Otter Exploration

Otter Gold NL
EL 9592 - Birrindudu
Sample Sites
assays & drill sig intercepts

Date:12/12/2001
Author: mm
Office: Darwin
Drawing:
Scale: 1:65000
Projection: AMG Zone 52 (AGD 84)

0 1 2 4
kilometres

3.0 GEOLOGY

3.1 Regional Geology

The Granites – Tanami Block is bounded to the west by the Canning Basin, and to the east by the Wiso Basin and is considered to be one of the western most Palaeoproterozoic inliers of the Northern Australian Orogenic Province. The block is thought to have developed around the Barramundi Orogeny – major event 1845 – 1840 Ma (Blake et al., 1979).

The stratigraphy of the Tanami Region has been revised as a result of an intensive study recently completed by the NTGS (Hendrickx et al., 2000). The stratigraphy outlined by Blake et al (1979) has had some significant modifications (Table 1).

<table>
<tr><th colspan="7">Blake et al (1979)</th><th colspan="3">Hendrickx et al (2000)</th></tr>
<tr><td colspan="2" rowspan="3">Birrindudu Group</td><td colspan="5">Coomarie Sandstone</td><td rowspan="3">Birrindudu Group</td><td>Coomarie Sandstone</td><td rowspan="3">Suplejack Downs Sandstone</td></tr>
<tr><td colspan="5">Talbot Well Formation</td><td>Talbot Well Formation</td></tr>
<tr><td colspan="5">Gardiner Sandstone</td><td>Gardiner Sandstone</td></tr>
<tr><td colspan="7">Suplejack Downs Sandstone</td><td colspan="2" rowspan="3">Nanny Goat Creek Volcanics
Mount Winnecke Group
Mount Charles Formation</td></tr>
<tr><td colspan="7">Mount Winnecke</td></tr>
<tr><td colspan="7">Pargee Sandstone</td><td>Pargee Sandstone</td></tr>
<tr><td rowspan="2">Tanami Complex</td><td>Mt. Charles Beds</td><td>Killi Killi Beds</td><td>Nanny Goat Creek Beds</td><td>Nongra Beds</td><td>Helena Creek Beds</td><td rowspan="2"></td><td rowspan="2">Tanami Group</td><td rowspan="2">Killi Killi Formation
Twigg Formation
Dead Bullock Formation</td></tr>
<tr><td colspan="6">MacFarlane Peak Group</td></tr>
<tr><td colspan="7">Archaean</td><td colspan="2">Browns Range Metamorphics
“Billabong Complex”</td></tr>
</table>

Table 1. Comparison of stratigraphic nomenclature (Hendrickx et al, 2000).

The Archaean Billabong Complex and Browns Range Metamorphics are the oldest rocks in the area. Browns Range Metamorphics comprise granitic gneiss and muscovite schist intruded by fine-grained granite, thin granitic sills, aplite and pegmatite. The Billabong Complex comprises banded granitic gneiss', which are generally elongated and fault bound.

Lying unconformably above the Archaean basement is the Palaeoproterozoic McFarland Peak Group. These rocks are characterised by a thick sequence of mafic volcanic, volcaniclastic and clastic sedimentary rocks, which possess a distinctive magnetic and gravity signature. This package of rocks is structurally complex and is considered to have a tectonic contact with the overlying Tanami Group.

The Tanami group is subdivided into three formations:

Twigg Formation:	purple siltstone with minor sandstone and chert
Killi Killi Formation:	turbiditic sandstone
Dead Bullock Formation:	siltstone, mudstone, chert and banded iron formation

The Dead Bullock Formation occurs at the base of the Tanami Group and is dominated by fine-grained sedimentary rocks. The rocks outcrop at Dead Bullock Soak, Lightning Ridge and Officer Hill. At the Granites the rocks have been metamorphosed to amphibolite facies to form andalusite, garnet and hornblende bearing schists. The Dead Bullock formation is host to significant gold mineralisation at the Granites and Dead Bullock Soak.

The Killi-Killi Formation conformably overlies the Dead Bullock Formation and is the most extensive formation in the group. The sequence of turbidites includes micaceous greywacke, quartzwacke, and lithic greywacke, quartz arenite and lithic arenite, interbedded with siltstone, mudstone and occasional thin chert beds. Detrital mica is a characteristic feature. The Killi-Killi is metamorphosed to lower greenschist facies and is interpreted to be up to 4km thick.

The Twigg formation is confined to a narrow package of rocks immediately west of the Tanami Mine corridor. It comprises a sequence of interbedded purple siltstone with thin-bedded chert and minor medium bedded greywacke.

The Pargee Sandstone unconformably overlies the Tanami Group and is exposed on the western side of the Coomarie Dome extending into Western Australia. The Pargee Sandstone comprises thick-bedded quartz arenite, lithic arenite and conglomerate with pebbly sandstone and conglomerate at the base.

The Mount Charles Formation comprises an intercalated package of basalts and turbiditic sediments, which occur on the western side of the Frankenia Dome. The Mount Charles Formation is host to structurally controlled vein hosted gold mineralisation in the Tanami Mine Corridor. Sediments include sandstone, mudstone, carbonaceous mudstones and intraclast conglomerate. Basalts are predominantly massive units with pillow basalts and basaltic breccias also evident.

The Mt Winnecke Group is also interpreted to lie unconformably over the Tanami Group. This group is divided into two units including siliciclastic sediments and felsic volcanics.

The Nanny Goat Volcanics are characterised by extrusive volcanic rocks including quartz-feldspar ignimbrite, feldspar ignimbrite, rhyolite lava, basalt and minor siliciclastic sediments.

The Birrindudu group comprises 3 units with Gardiner Sandstone at the base, overlain by Talbot Well Formation and Coomarie Sandstone. The Suplejack Down sandstone is interpreted to belong to this group but is relationship is unclear. The Birrindudu group lie unconformably over the Browns Range Metamorphics, MacFarlane Peak Group, Tanami Group, Pargee Sandstone, Nanny Goat Creek Volcanics and Mount Winnecke Group.

Cenozoic laterite, silcrete, calcrete, and Quaternary debris cover 60 – 70% of the Tanami Desert. The Quaternary sediments are generally unconsolidated, representing the most recent phase of erosion and deposition of sands, gravels and lithic fragments.

3.2 Local Geology

The major rock types within the Birrindudu region (EL9592) are the Winnecke Granophyre and its varieties. Outcrop of Helena Creek Beds is described as greywacke, tuff, phyllite, conglomerate, lithic arenite and acid porphyry. To the north the granophyre is overlain by a thick sheet of Cambrian Antrim Plateau Volcanics described as tholeiitic basalt (silica oversaturated, calcium rich with orthopyroxenes (iron and magnesium – the major type of basalt)) with minor tuffaceous sandstone, lithic arenites and cherts.

Within the Happyjack region, more intensive field mapping programme was undertaken during the 1998 – 1999 field season. Essentially, granitoid porphyries have intruded an older granitoid lithology. These porphyries generally stand out as ridges (running in a north-south direction and dipping to the east). The porphyries are host to an early, igneous style of quartz veining (associated with potassic alteration). These are then cut by a later phase of mesothermal style quartz veining (associated with phyllic alteration).

4.0 EXPLORATION FOR 23 OCTOBER 2000 TO 22 OCTOBER 2001.

4.1 Field Trip and Rockchip Results

Aim: Over the weekend of the 3rd to the 5th of August 2001 an excursion was made to the Birrindudu Lease of EL 9592. The aim was to show the DME geologists the location of the Happyjack quartz veins that ran at approximately 20g/t Au and visit some of the BMR mapped north south trending quartz veins that occur to the south of the Happyjack prospect. The additional benefit arose that further ground could be checked and rockchipped prior to reductions.

Results: The 3rd of August involved arriving at the Happyjack prospect – one major crossing at Helena creek was encountered. DME geologists took samples of the high grade veins for fluid inclusion work. The lower grade north south trending veins associated with the shear were not noted. The results from this work should be returned around December. Fluid inclusions noted by Antony Coote previously indicated boiling of the fluid (gaseous and liquid filled?????). Ergo epithermal – mesothermal environment.

The 4th of August commenced with a traverse on foot 1kilometre to the west of the Happy jack prospect. Several samples were collected for assay, mostly of quartz veins of different types and some of greisen veins. The following table describes the

sample sites with sample numbers. Several igneous type veins were noted on the same scale as the Happyjack vein. It was hoped that these veins would return a similar grade. Quartz float was noted with calcite rhomb casts. It is uncertain the significance of the green 'greisen' apparent in the outcrop – it appeared to be veined and shot with smaller veins.

The next outcrop visited was approximately 5km to south and was aimed at visiting some of the major veins mapped by the BMR geologists on the 1:250,000 geological map. Outcrop was prominent – and also appeared as a possible dilational zone. Quite intense stockwork was noted in an altered host – I would hazard a guess at granite. However on inspection of the geological map the host is logged as Helena Creek Beds. Finer grained host was noted, could this be the sediment? Cross cutting age relationships could be determined from the stockwork with sulphides being noted in the older veining (see attached picture). Buck quartz veining was noted with finer (<1cm) translucent veining. Also intensely silicified zones were noted that paralleled the outcrop.

It was noted that the region had the potential for poddy high grade veins. Also the two types of granitoid noted in the region (fine grained [brecciated in the fault zone] and the coarser grained) were noted to possibly have a different back ground gold values. The coarser grained granitoid was seen to contain very little gold whereas the fine grained granitoid was seen to have an average value around 0.2g/t Au.

The 5th of August entailed returning to Tanami Mine around midday after a short stop around Suplejack station to view the remnant amethyst/quartz inclusions within the Antrim Plateau Volcanics. Results returned for the rockchips were less than detection (<0.02ppm Au).

Table 2 Location of Rockchip sample sites.

Points	Easting	Northing	Sample No	Comment
1	617123	7985820	655748	greisen vein, ?30cm width, subcrop, NE trend
2	616886	7985875	655749	quartz float, bleached plain, similar to Happyjack, igneous veining & VQM
3	616831	7985854	655750	quartz vein, N-S trend dog tooth features, intersection with NW vein.
4	616775	7985885		bleached plain, similar to Happyjack, with variety of quartz veining float
5	616597	7985888	655751	grey quartz vein, <2mm + sulphide casts
6	616591	7985887	655752	greisen vein "green"hill + <1mm igneous veins
7	616549	7985871		qtz vein float with relict quartz vein rhombs
8	616339	7985899	655753	<1/2m wide igneous veins near quartz vein blow on hill
9	616405	7985911	655754	igneous vein <10cm wide ? <5m long on ridge
10	616694	7985876		granular quartz & intermingled feldspars
11	619076	7981586	655755	grey quartz vein near stone cairn hill, hm + go
12	621111	7976087	655756	VQM, approx 4m wide, approx 50m long - infilled, 2 phases VQM <1m, VQT <1cm
13	621098	7976057	655757	greisen + VQT criss crossing veins <5cm wide
14	621088	7976030	655758	silicified veins in chert ?dilational zone
15	621111	7976016	655759	criss crossing veins - that have age relationships
16	621116	7975978	655760	stock work, silicified altered granite granite
17	620346	7976063		fresh resorped feldspars/quartz winnecke granophyre phase

Cross cutting stockwork veins in altered granitoid?? – Location 621111E 7976016N

5.0 EXPENDITURE FOR PERIOD 23/10/1996 TO 22/10/2001.

5.1 Expenditure for period 23/10/1996 to 22/10/2001 on EL 9592

Table 2 summarises the expenditure for the five licence years. The 5th year covenant was not met because of executive decisions to focus work on core Otter Gold NL tenements with the Fractal Graphics multi scale edge analysis technique. Work focussed on a field visit with Department of Mines and Energy Geologists to visit regions of anomalism and rockchipping. Note Year 3 drilling costs are included in "geology".

TABLE 2 Expenditure Summary for EL9592 (1996-2001)

	1997	1998 - Otter	1998 - Stockdale	1999	2000	2001
Geology	$4,936.80	$8,533	$26,000	$26,013	$257	$10,225.03
Computer Support						
Survey		$1,895		$3,600		
Field Costs/Access		$1,435	$37,164	$4,058	$864	$2,291.54
Assaying				$14,382		
Drilling			$7,009			
Geophysics			$24,595		$46	$517.09
Geochemistry		$2,470	$14,823	$22,885	$78,090	
Petrology						
Administration	$871.20	$3,597	$29,502	$10,907	$28,509	
Covenant						$30,000
TOTAL	$5808.00	$17,930	$139,093	$81,845	$107,766	$13,033.66

6.0 REFERENCES

Blake D.H., Hodgson I.M., and Muhling, P.C., 1979. Geology of the Granites-Tanami Region, Northern Territory and Western Australia. Bull. 197, Bureau of Mineral Resources, Geology and Geophysics.

Burgess H., and Muir M., 3rd Annual Report for EL9592, 23 October 1998 – 22 October 1999. Tanami Region NT. Otter Gold NL.

Burgess H., and Muir M., 1999, December., Otter Gold NL, Exploration Quarterly Report.

Burgess H., and Muir M., 2000, January., Otter Gold NL, Exploration Quarterly Report.

Clewett J., 2nd Annual Report for EL9592, 23 October 1997 – 22 October 1998. Tanami Region NT. Otter Gold NL.

Hendrickx M.A., Slater K.R., Crispe A.J., Dean A.A., Vandenberg L.C., and Smith J.B., 2000. Palaeoproterozoic stratigraphy of the Tanami Region: regional correlations and relation to mineralisation – preliminary results. Northern Territory Geological Survey. Geological Survey Record GS 2000-13.

Muir M., 4th Annual Report for EL9592, 23 October 1999 – 22 October 2000. Tanami Region NT. Otter Gold NL.

Wedekind M.R., 1st Annual Report for EL9592, 23 October 1996 – 22 October 1997. Tanami Region NT. Otter Gold NL.

Winzar D.J., Progress Report for EL9592, October 1998. Tanami Region NT. Stockdale Prospecting Limited (Otter Gold Mines Ltd Joint Venture)