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# Tennant Creek Gold (NT) Limited Annual Report EL 23569 Woolgni Project N.T.

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Tennant Creek Gold Limited (1)



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### **Executive Summary**

EL 23569 is centred approximately 30 km SSE of Pine Creek NT. The licence is 100% owned by Tennant Creek Gold Limited and comprises an area of 161 square blocks within the Pine Creek geosyncline. The area is dominated by Proterozoic Burrell Creek Sedimentary Formation and Cullen Granite. The area has a history of gold occurrences, earlier drilling intersected, small uneconomic auriferous lodes. However there are no active mines, or economic resources located on the tenement. A small non-JORC resource of 150,000 T @ 2.7 g/t Au has been previously been calculated within the Woolgni leases. Target commodities on this lease include gold, uranium, tungsten, tin and copper.

Work completed upto 16 May 2005, includes literature research, geophysical interpretation, structural modeling, drafting and GIS database compilation. Future work will involve reconnaissance and geochemical sampling, based on the results of our desktop studies.



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## **1.0 Introduction**

Tennant Creek Gold Limited (TNG) fully owns Exploration Licence (EL) 23569 comprises 499 square blocks (1656.6 km<sup>2</sup>). In conjunction with the adjacent 100% fully owned EL 23568, these 2 leases comprise TNG's "Woolgni Prospect" (figure 1.1), part of the historic Woolgni Goldfield.

A number of old workings are located immediately east of the EL, these have basically targeted Au, Sn, Cu, Mo, W and U mineralisation. To date, no modern mining, or economic resources have been evaluated within the lease.

## **2.0 Tenure**

EL 23569 was granted on the 17 June 2003 to a private company also named Tennant Creek Gold. However on the 16 March 2004 this lease was transferred to a publicly listed company "TNG". The prospect is now fully owned 100% by TNG. Annual report commitments are required one year from that date.

## **3.0 Location and Access**

EL 23569 is located approximately 220km SSE of Darwin and 35 km SSE of Pine Creek (figure 3.1) and lies within the Pine Creek and Katherine 1:250K map series. The lease is located immediately west of the Stuart Highway. Access roads and tracks off the Stuart Highway are normally limited to dry weather only. The area varies from flat terrain to moderately undulating.

## **4.0 Native Title**

Aboriginal communities are found at nearby Katherine and Pine Creek. The EL lies on Aboriginal freehold land. There are currently no native title claims. A cadastral map is shown in figure 4.1



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## **5.0 Regional Geology**

The Woolgni prospect is located within the Pine Creek Inlier, which on a regional scale, hosts a number of major gold deposits. The workings are hosted and surrounded by Lower Proterozoic Burrell Creek formation, which consists of folded greywackes, siltstones, minor conglomerate and rare tuffs. More locally, the Burrell Creek Formation forms a 60km<sup>2</sup> inlier surrounded by the Mid-Proterozoic Cullen Batholith. In the southern portions of the tenements the Edith River volcanics have pierced the Cullen Granite and Burrell Creek formation and in places extrusive volcanics now form a shallow cap over the older units (figure 5.1)

Historically exploited mineralisation at Woolgni, has been associated with two trends termed the East and West workings. Gold mineralisation in both areas is often associated with quartz veins, stockworks or disseminations in the host rock. There appears to be no direct relationship between gold grade quartz, quartz veining and/or sulphide content. The sulphide assemblages consist of pyrite, pyrrhotite and arsenopyrite varying from trace amounts up to 25%. Weathering and oxidation is intense to about 20m and locally to 40m. In the areas of economic importance shearing, jointing and quartz veining are more intense.

The Western system has been extensively mined to shallow depths along 400m of strike. Trenching failed to provide economic assay data due to old workings. Two of the four sections drilled penetrated stopes at the north end where high grade material was historically mined to depths in excess of 30m. Deeper holes in this area yielded disappointing results and the scope for additional ore appears limited to small tonnages. The stopes and veining appear to be conformable to steep west-southwest dipping sediments.

The Eastern system has been mined to shallow depths over a strike length of approximately 450m. The most extensive old workings occur at the “E2” group of workings in the mid portion of the east system, where east and north trending quartz veins are unconformable to bedding. Most of the best trenching and drilling results were obtained from the “E2” workings where several parallel to sub-parallel one are interpreted



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## **6.0 Previous Exploration**

Mining dates back to 1897 when Chinese miner's first extracted alluvial gold shed from the reefs. Mining of the hard rock source commenced soon after. Two adits were driven into the western portion of the reef system and numerous shafts sunk. Hand picked ore reportedly averaged 30oz/ton. Recorded production is 3840 oz upto 1905.

Modern exploration commenced in 1981 when Zapopan NL was granted EL's 3199 and 3200. Seventh State drilled five diamond holes for 263m targeting immediately under the gold workings. The drilling returned narrow 1-2m zones of low to high grade gold mineralisation including 1.1m @ 47g/t Au from 31m. A zone of 8.3m @ 3.0 g/t Au from 20.1m was returned from the same hole.

Further work including geological mapping and rock chip sampling. A total of 143 samples were taken and analysed for gold, copper, arsenic and nickel.

In 1990, Hilltop Enterprises farmed in to earn 50% of the project. Hilltop completed 17 trenches at 50m intervals over the old workings for a total of 1070m of trenching. Results of the trenching confirmed narrow to moderate widths of sub-economic to economic gold grades. Better results included 3m @ 2.33 g/t, 10.7m @ 4.44 g/t, 4.3m @ 5.18 g/t and 1.6 m @ 7.0 g/t.

The results of the trenching were considered sufficiently encouraging to commence RC drilling on the Woolgni West and east workings. A total of 26 RC holes were drilled for 1791m. A small non JORC inferred resource of 150,000 T @ 2.7 g/t Au using a 1.0 g/t lower cut was calculated.

## **7.0 Work Summary and Expenditure 2004/2005**

Remote Sensing Data Analysis	\$2,000
Salaries/Wages	\$10,000
Camp and field costs	\$5,000
Drafting and Computing	\$3,000
Aerial Photos	\$2,000
Vehicles/ Fuel	\$3,000
Travel /Accommodation	\$5,000
Administration/Overheads	\$5,000

**Total = \$35,000**



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#### **8.0 Expenditure Commitments 2005/2006**

In regards to EL 23569, it is proposed that TNG spend another \$35,000 for the year ending 16/05/06. The work will be completed in conjunction with EL 23568. The proposed activities include:

1. Prospect scale detailed mapping
2. Surface rock and soil geochemical survey
3. Interpretation and target generation

This anticipated expenditure comprises:

Field Work (rock chips, mapping, assaying)	\$10,000
Salaries/Wages	\$12,000
Vehicles/ Fuel	\$3,000
Travel /Accommodation	\$5,000
Administration/Overheads	\$5,000

**Total = \$35,000**

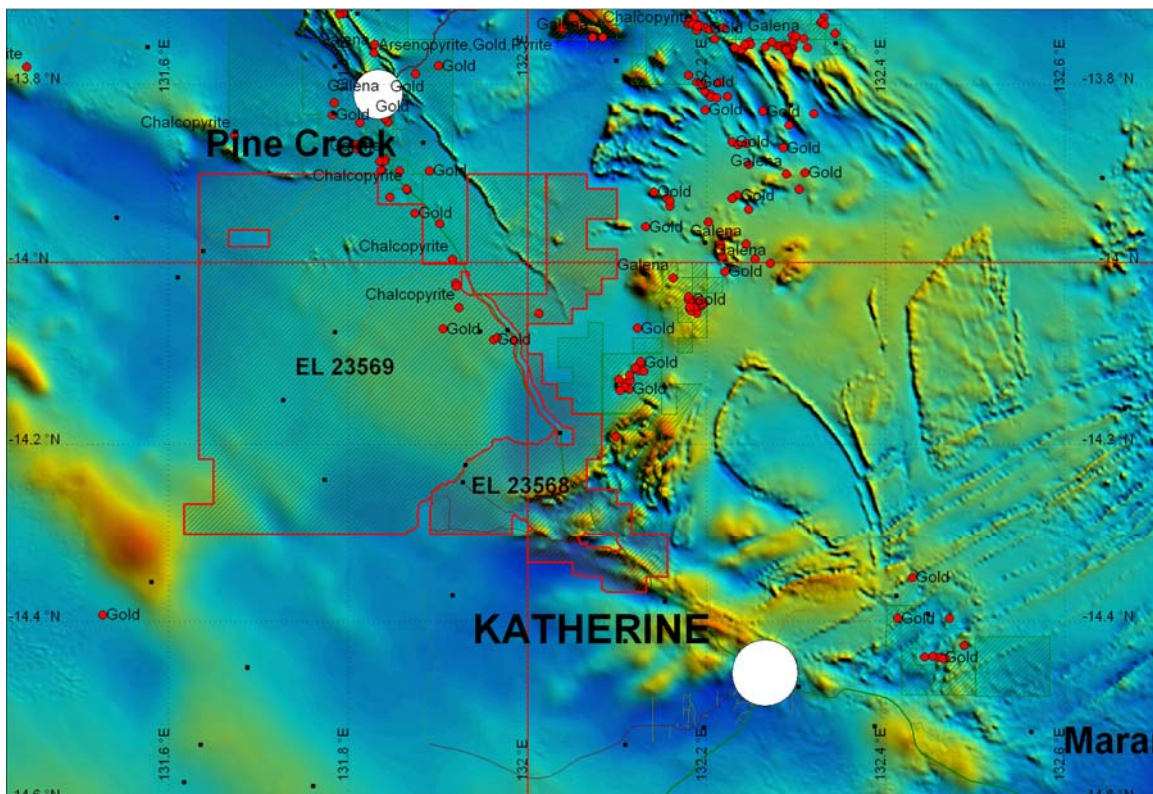




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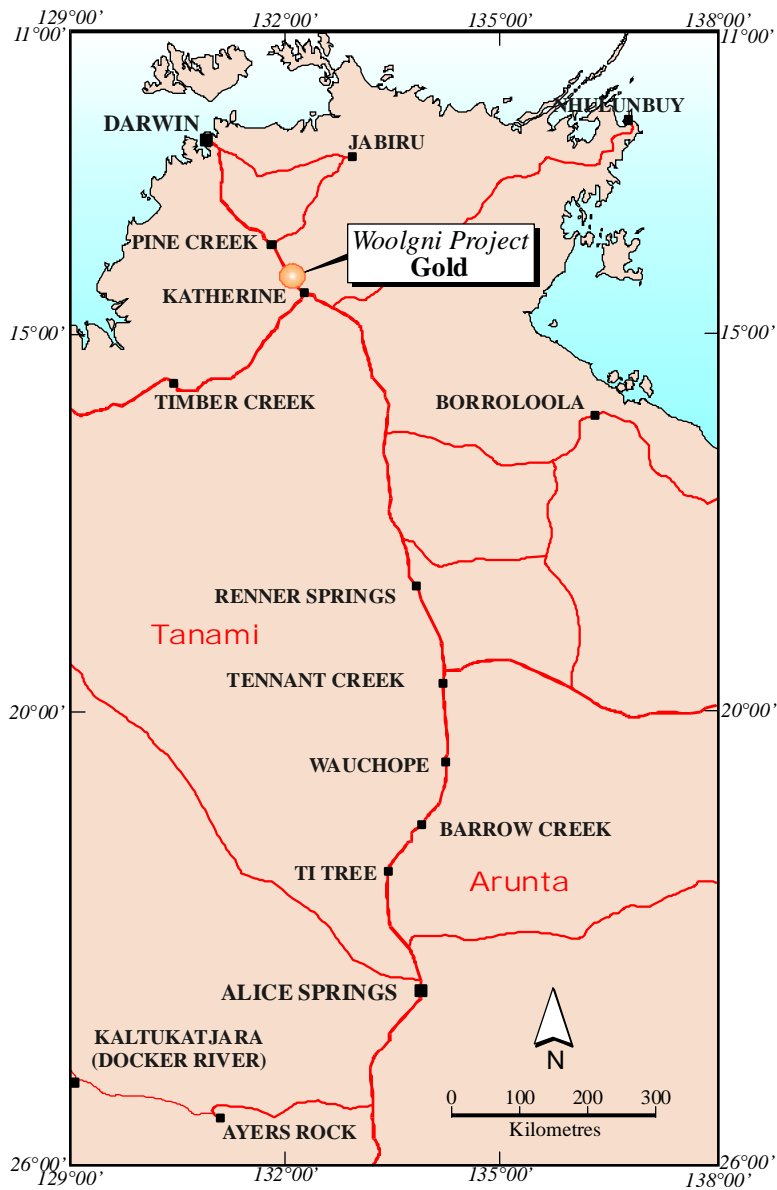
Figure 1.1 Woolgni Prospect





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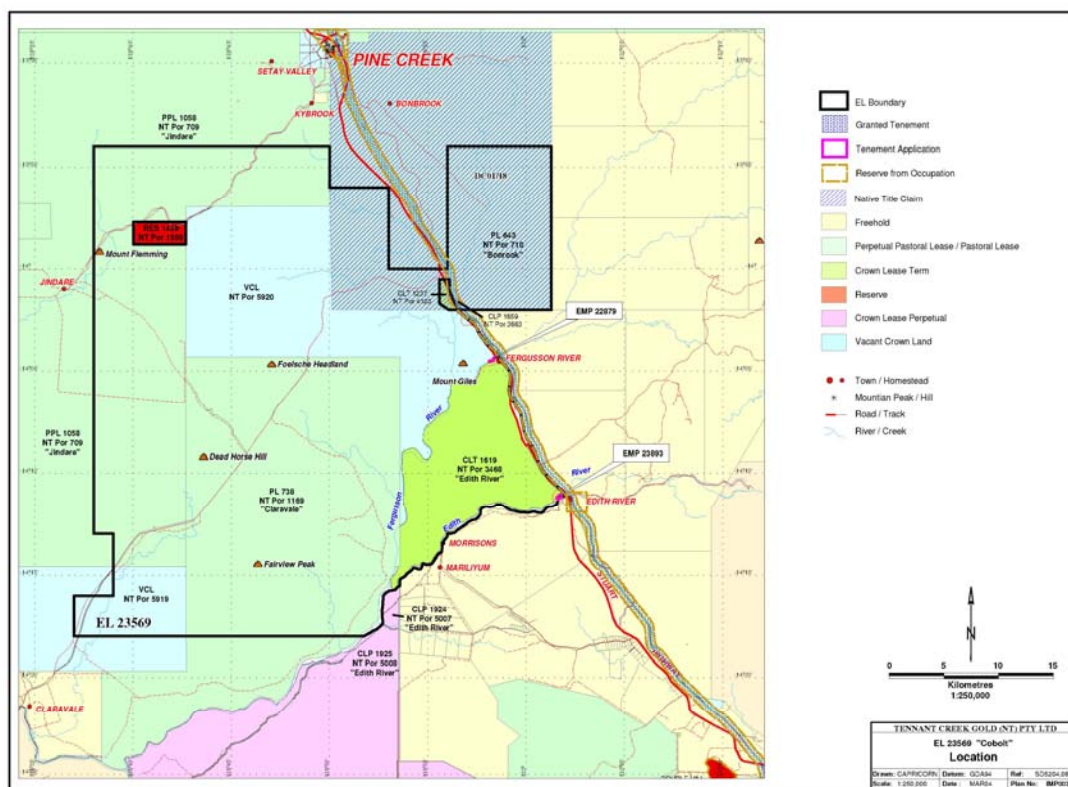
Figure 3.1 Location Map of Woolgni Prospect





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Figure 4.1 Woolgni Cadastral Map





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Figure 5.1 Regional Geology Map EL 23569

