BURNSIDE OPERATIONS PTY LTD

ANNUAL EXPLORATION REPORT
MCN 1054

YEAR ENDING 23rd JUNE 2003

PINE CREEK PROJECT NT

Pine Creek 1:100,000 sheet 5270

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August 2003

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1. SUMMARY

MCN1054 is situated in the Pine Creek mining centre, 1600m south of the townsite.

It comprises a small infill sliver of ground 35m in width between MLN 13 to the north and MCN523 to the south.

During 2002 the tenement was purchased from Silver Coin Mining and Prospecting by the Burnside Joint Venture. The ground is managed by Burnside Operations P/L as part of a larger parcel of tenements that cover the majority of the historic Pine Creek mining centre.

During the year the company has conducted an extensive review of the Pine Creek field with emphasis on the drilling that was conducted in the vicinity of the Enterprise and other open pits west of town. The drilling database has been re established and a terrain model and geological framework for the central area has been computerised.

Modelling of drill targets based on the stratigraphic and structural controls on gold mineralisation in the field has been completed. Work on MCN 1054 is peripheral to this work but has been included in the above activity.

The tenement has attracted a small proportion of the expenditure on the Pine Creek project and is calculated as $300 for the 2002-2003 report year.

The Burnside Joint Venture has decided to suspend exploration activity during the 2003 year pending an improvement of economic factors.

In the year to June 2004 it is hoped that drilling of targets on the Pine Creek project will commence. The tenement will receive a proportion of expenditure on the project and it is planned to apply for a Group Report Status for the whole Pine Creek tenement schedule. An expenditure of $150 is anticipated for the tenement comprising geological traversing and data reviews.
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1. INTRODUCTION

The tenement forms part of a larger acquisition of ground by the Burnside Joint Venture at the Pine Creek Mining Centre during 2002. The tenements are managed by Burnside Operations P/L.

Since the acquisition, the joint venture parties have conducted a detailed review and compilation of previous exploration and mining work in the Pine Creek field.

The focus of this historic work has been shown to lie north of MCN1054 in the vicinity of the Enterprise, Gandys, Czarina and International open pits.

The tenement is only 35m wide and fills a gap between much larger tenements. Around MCN 1055, historically there has been extensive prospecting, mapping and drilling carried out in the search for extensions to the Enterprise fold structures.

It is planned to apply for a group report status for all the Pine Creek tenements due to the holistic view of structure and geology that is being adopted. This means that MCN1054 will automatically be included as part of the overall exploration effort.

2. TENEMENT DETAILS

MCN1054 comprises 4.17ha and adopts an irregular infill ‘S’ shape between MCN 523 and MLN13. To the north it abuts the Pine Creek townsite reserve. See Fig.1.

The tenement was granted on 24th June 1994 and expires at the end of 2003. It is registered in equal shares between Territory Goldfields NL and Buffalo Creek Mines P/L.

3. GEOLOGICAL SETTING

The tenement encloses a sector of folded Lower Proterozoic metasediments that are part of the Pine Creek Geosyncline. On a broad scale the Pine Creek area occupies an enclave of geosynclinal sediments surrounded and probably underlain by various phases of the Cullen Batholith. See Fig 1.

The rock suite within the central axis of the Pine Creek field is thought to belong to the Mt Bonnie Formation, the uppermost member of the South Alligator Group comprising siltstones, chert and shale horizons and greywackes. This is conformably overlain by coarse lithic greywackes and subordinate siltstones of the Mt Burrell Formation that at Pine Creek is the basal member of the Finniss River Group. Both Formations are truncated by the Tabletop Granite, a phase of the Cullen Batholith that outcrops to the north west of town.
The tenement sequence has been subject to regional greenschist metamorphism and lies within the thermal aureole of the Tabletop granite. The latter has imparted cordierite-andalusite spotting of siltstone units and fine spessartite garnet has been reported from more carbonaceous horizons.

The sequence is tightly folded on NW striking axes that have a very shallow (0 –20 degree) south easterly plunge and a tendency for the north east limbs to be steeper than the south west limbs.

The axial zones of anticlines have been the focus of gold mineralisation in the Pine Creek field and two principal adjacent parallel structures have most of recorded production attributed to them. These are the Enterprise Anticline and the International-Czarina Anticline that have been mapped over a strike length of 5km.

In the vicinity of MCN1055 the axis of the Enterprise Anticline is not well defined but is thought to pass just west of the tenement, while the Czarina axis may lie just east. Rocks of the Burrell Creek Formation underlie the tenement and are greywacke dominant. The Chinaman’s Shear Zone, a low rise with vein quartz, occurs just west of the tenement and may truncate the Enterprise axis or represent a failure of the structure.

The eastern leg of the tenement crosses strike and terminates at the Kohinoor Fault. This fault is a well mineralised trend that represents a failed anticlinal axis in basal Burrell Creek Formation and possible Upper Mine Greywacke.

Outcrop is poor within the tenement and the area is affected by minor roads, tracks and cultural disturbances.

**Gold Mineralisation**

No gold occurrences are known within the tenement and it lies east of the main centre of historic gold mineralisation and is thought to be largely underlain by Kohinoor Siltstone in the footwall of the Kohinoor thrust fault.

The area is considered to have a lower priority than ground to the north west that was the focus of open pit mining at the Enterprise and Czarina deposits. A strong set of north striking shears are thought to have dextrally offset the main mine sequence just south of the Enterprise and Czarina systems.

Within the field the axial planes and west limbs of the major folds have been the focus of economic gold deposits. Within these structures gold has further been recognized as concentrating within siltstone lithologies near the contacts with greywacke units. Prima facie, the Burrell Creek Formation, having a lower percentage of siltstone has lesser prospectivity. Though massive lithic greywacke units within the Burrell Creek Formation have undergone some brecciation and cross-fracture veining along the Kohinoor thrust fault system to the south.
4. PREVIOUS EXPLORATION

4.1. Early Mining Activity

Gold was first discovered in the Pine Creek area in the early 1870s and alluvial deposits were worked largely by the Chinese diggers under tribute.

Prior to 1894 no systematic records were kept but by 1915 a total of 135,000t @ 32.14g Au/t had been recovered from batteries and a further 7.65g Au/t from cyanide plant. Production between 1915 and 1985 was small scale and sporadic. The Pine Creek mines were the largest producers in the region and reported total production of nearly 3000kg of gold to 1985.

Underground development below the water table to 80m was carried out on Enterprise, Elsinore and Eleanor Mines.

Prior to open pit mining in 1993 the historic workings on Gandy’s Hill and International were all shallow; none appeared to be deeper than 15m. Two adits, one 63m and the other 25m long were driven under the eastern side of Gandy’s Hill, some 20m below the crest. Adits were also driven through the Kohinoor Fault in the southern part of the field at Jensens and Kohinoor.

Little systematic exploration and no drilling had been completed in the area prior to 1980. During 1982 following a rise in the gold price, (Renison) Goldfields Exploration announced a mineable resource at the Enterprise, and following a drilling campaign production began there in 1985.

4.2. Recent Exploration 1980-2001

Most of the reported exploration activity was carried out in areas north and west of MCN1054, with a focus on the Enterprise, Czarina and International Anticlines. This is the subject of separate reports.

At the southern end of the field, described as the Southern Leases, programs of geological mapping, rock chip sampling, RAB, RC and diamond drilling were carried out for 2km south of Pine Creek focusing on the Kohinoor Fault and interpreted extensions of the Enterprise Anticline.

Other programs addressed the historic workings at Eleanor and Elsinore, the Battery Shear, Bashi Bazouk, and the Chinamans Shear.

No modern mine developments arose from this work, though some good gold intercepts were reported. None of the work apart from geological mapping at 1:5000, (Marjoribanks) and aerial photography, covered MCN1054. Its prospectivity at this stage therefore, is governed by the results of work on adjacent MCN523 and MLN 13. A review of this data will be provided in the annual report for those tenements.

The main mining areas were rehabilitated, and between 1994 and 2001 the field was dormant with no significant exploration activity being reported.
5. EXPLORATION DURING 2002-2003

During the year, the Burnside Joint Venture purchased the Pine Creek group of tenements including MCN1054. All available data were collected and collated. A complete data review of the field commenced that focused on the principal resource areas in MLN13 and MLN1130 further to the north.

MCN1054 was included in the broad interpretation of the geological setting and in the generation of drill hole collar plans, contour maps and aerial photography from pre existing databases and hard copy plots.

The cost of reviews of MCN 1054 as part of the above was estimated at $200.00.

6. PROPOSED EXPLORATION 2003-2004

The review and database consolidation that the Burnside Joint Venture conducted during 2002 has generated several RC drilling targets within the project area. Most of these relate to the Enterprise, Gandys and Gandys North resources that lie adjacent to the open pit shells.

It is anticipated that while specific work on MCN 1054 will be limited due to its small size, shape and location, it is expected there will be ground traverses and further reviews. An application is being made for a group report covering all of the tenements held by the Burnside JV in the Pine Creek area.

It is expected that expenditure on MCN 1054 during 2003 will amount to $150.00.
7. LIST OF REFERENCES


Pine Creek Goldfields Ltd, annual report MLN13, 1988-89.


Report on the exploration activities December 1989-March 1990, at the Eleanor prospect MLN 13 and the Elsinor prospect MCN523, Pine Creek NT.