GBS GOLD AUSTRALIA PTY LTD

ANNUAL EXPLORATION REPORT

MLN’s 13, 1130
MCN’s 317, 523, 1054, 1055, 4072, 4074

FOR PERIOD ENDING 15 JULY 2007

PINE CREEK GROUP

BURNSIDE PROJECT NT
Pine Creek SD5208 1:250,000
Pine Creek 5270 1:100,000

Titleholders: Territory Goldfields NL 50%
Buffalo Creek Mines Pty Ltd 50%

Distribution:
• DPIFM Darwin NT
• GBS Gold Australia P/L Perth
• Burnside Operations P/L Brocks Creek NT
• Union Reef Mine Site Pine Creek NT

GBS Report No. PC/BJV/07-32

Zia U. Bajwah
August 2007
SUMMARY

The Pine Creek tenement group is located approximately 220km SE of Darwin NT, and around the western side of the Pine Creek township boundary. GBS Gold Australia acquired the tenement group in 2005 by a friendly take over of Northern Gold NL (50%) and Buffalo Creek Mines Pty Ltd (50%). Historically, the tenements have been the focus of alluvial and hard rock gold mining activity since 1869. More recently, Pine Creek Goldfields mined its flagship deposit ‘Enterprise’ until late 1994, producing 744,000oz Au from open pit operations.

In August 2004 the Burnside JV purchased the Union Reefs mill, and an exploration programme began to outline potential ores for treatment at the Union Reefs mill. Initially, it involved data acquisition, and a drilling database review, followed by RC drilling. This allowed an update of the computer models showing residual mineralisation. The Czarina primary mineralisation was subjected to metallurgical testing that suggested only 70% recovery was achievable from the transition to fresh material.

A resource potential review in 2004 indicated that there was potential to prove up a body of economic mineralisation through programmes of infill RC drilling and further pit shell optimisation studies. In January 2005 a Total Indicated and Inferred Resource of 1,844,559t @ 1.72g/t Au for 102,062oz Au was outlined at Czarina, using a 1.0g/t Au cut-off. Drilling the down-plunge mineralised component at South Enterprise in November 2004 intersected the best mineralisation below the zone of oxidation, with recovery expected to be similar to Czarina.

During the reporting period, an up-dated resource estimate of the Czarina deposit is being undertaken by Geostat Services Pty Ltd to comply with CIM Definition Standards of Mineral Resources and Reserves. Statistical and grade continuity analyses were completed to characterise the mineralisation and subsequently used to develop grade interpolation parameters. These were applied to the supplied 3D lode wire-frames. Initial work suggest that current Indicated Mineral Resource above a cut-off of 0.7 g/t Au is 731,760 tonnes, grading 2.51 g/t Au for a total of 59,120 ounces Au, with the current Inferred Mineral Resource being 84,233 tonnes grading 2.36 g/t Au for 6,404 ounces.
1.0 INTRODUCTION
Pine Creek Group of tenements covers several gold deposits and prospects which have been exploited in the past. Still potential exits for the discovery of new mineralisation and proving up of existing deposits for treatment at Union Reefs gold processing facility.

2.0 LOCATION AND ACCESS
The project tenements abut the western limits of the town reserve of Pine Creek, some 230km SE of Darwin, NT (Figure 1). The Stuart Highway provides access to Pine Creek and the tenements may be accessed by tracks north, west and south west of town, although in some areas access may be blocked by gates. Previous versions of the old Stuart Highway pass through the tenement group. These were made redundant by previous mining operations that required that the Highway be relocated. The present Highway and Darwin-Adelaide railway pass just to the east of town.

MLN13 and MLN1130 host the majority of the previous open pits. The Enterprise open pit is located in the north eastern sector of MLN13. It is some 850m in length and up to 135m deep. It is now largely filled with stock-quality water and has a capacity of 6,800 megalitres.

The smaller Czarina open pit, situated on the east side of the Enterprise pit. Following completion in September 1993, it was completely back-filled with waste from the Gandys Hill open pit operation in adjacent MLN1130. The small Monarch pit to the north west of Enterprise has also been backfilled and rehabilitated.

The southwestern leg of MLN13 originally held the gold treatment facility, waste dumps, process water dam and tailings dam. All have been rehabilitated following completion of mining at International and Gandys orebodies in 1994-95. Saplings of acacia and eucalypt regrowth are now well established on most of the rehabilitated areas.

The topography of the tenements has been strongly modified by mining activity along the main line of lodes and also by previous routes of the Stuart Highway and railway. The
Figure 1: Tenement Location Map
relief was originally moderate and steeply undulating, marked by strike ridges up to 30-40m high. Pine Creek flows west to east past the north end of the Enterprise pit.

### 3.0 TENEMENT STATUS AND OWNERSHIP

The nine tenements that comprise the Pine Creek project grouping have a common report submission date of 15 August which is linked to the due date of EL23583. The following table sets out the individual details of the component tenements.

**Table 1: Pine Creek Reporting Group**

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AN416 is still held in the name of The Shell Company of Australia Limited, and is an Authorisation under Section 178. AN416 is the site of the accommodation camp originally built for Union Reefs by Billiton Australia (a Shell subsidiary), which then became Acacia Resources when listed on the ASX in 1994 (later Anglogold Australia Limited). The site is still used as an accommodation camp, and is within the Pine Creek township.

Underlying cadastre for the whole tenement group is mixed, with the dominant landholder being Crown Land (12 separate parcels). The northern part of MLN1130 is
covered by Pastoral Lease held by Equest Pty Ltd (Mary River Station?), while MCN’s 4072, 4074 and parts of MCN 523 are within Bonrook Station (PPL 643; Franz Weber). Other landholders include PPL 1058 (Taimatsu Australia Pty Ltd; Jindare Station) on MLN13, plus small portions of the railway corridor (AustralAsia Railways) on the western edge of MCN’s 4072 and 4074.

4.0 GEOLOGICAL SETTING

Regional geology is outlined in many publications, notably Ahmad et al. (1993), Needham and Stuart-Smith (1984) and Needham et al. (1988). The tenements are within the Pine Creek Orogen, a folded sequence of Palaeoproterozoic pelitic and psammitic sediments, with interlayered cherty tuff units. These rocks have been intruded by the late-orogenic Palaeoproterozoic granites, causing widespread contact/thermal aureole which contains most of the gold mineralisation (Bajwah, 1994) in the Orogen. An important tectonic feature – the Pine Creek Shear zone runs through the project area, which is known to host gold mineralisation in the area. Geology of the project area is shown in Figure 2.

In the central part of the tenement group, the tightly folded host greywacke-siltstone facies sequence (Mt Bonnie Formation of the South Alligator Group) lies within the thermal aureole of the Cullen Batholith. Outcrops of granite occur in the NW of MLN1130 and the adjacent sediments have been compressed and contact metamorphosed to spotted phyllite and hornfels of greenschist facies grade.

Gold mineralisation at Pine Creek is focused on the axial zones of parallel major upright folds. The most productive is termed the Enterprise Anticline; others include the less productive International-Czarina anticline. The folds plunge shallowly towards 135 degrees at around 10 degrees and the limbs dip southwest and northeast at around 65 degrees. The fold axes are sub-vertical.

South plunging Enterprise fold exposed a well-stratified succession of alternating
Figure 2: Geological setting of the project area
mudstones, nodular cherty siltstones and grey-wackes that has been correlated in detail throughout the Pine Creek gold field. To the south-east of the Enterprise pit, N-S faulting coincides with a kink in strike that imparts a more southerly strike and seems to offset the principal fold axes in a sinistral sense. The continued southerly fold plunge takes the Mt Bonnie sequence beneath the Burrell Creek Formation grits and lithic greywackes in MCN 523. These lithologies have been less gold-productive in the Pine Creek field but nevertheless host several historic gold workings at the south end of the field. (Cox’s, Battery Shear/Bashi Bazouk, Eleanor, Elsinore, Kohinoor, Jensens)

The Czarina Anticline lies parallel to and northeast of the Enterprise structure. Gold mineralisation is hosted within the western limb of this fold that has been extensively modified by thrust faulting. Again, gold mineralisation on the west limb extends northwest into MLN1130 as the Millwood and International deposits.

To the south of the Enterprise and Czarina pits, mineralisation continues into the upper strata of the Mt Bonnie Formation and into the lithic gritty greywackes of the Kohinoor Grit which is believed to represent the lowermost Burrell Creek Formation.

Strong 45 degree south-west dipping thrust faults such as the Jensens Fault and the Eleanor Fault have superimposed slices of the western fold limbs over the eastern limbs and have also been the locus of mineralisation. The Enterprise Anticline persists for some distance south of the pit but along with the Czarina and Bonus Anticlines loses identity under the effect of 335 degree to N-S cross-shearing and possible low angle reverse faulting south of 10250N.

The western part of MLN13, beyond the site of the plant infrastructure, has poor outcrop, however mapping showed the sequence is dominated by greywacke lithologies, with lesser siltstone. Hornfelsing is intense within 1km of the outcrop of the Cullen Batholith. Further east, the thermal effects are limited to cordierite spotting in shale-siltstone. The rocks are mostly west dipping and are correct way up. Faulting is associated with quartz veining and trend generally 350 degrees to 10 degrees magnetic. Dips are steep to the
east. Veins are either associated with faults or are bedding parallel as massive white to grey blows. Gold was present in some vein samples, up to 1.64g Au/t.

At Enterprise, oxidation due to weathering is relatively superficial and comprises decomposition of sulphide to limonite and minor clay generation in fault zones, silty lithologies and fractures. The oxidation front was gradational and structurally penetrated, with total oxidation averaging about 20-30m below surface (originally the highest point at Enterprise was 256.2m ASL with the town at 205m RL. Mine RLs added 1000m to actual). The first totally primary bench was reported at 1170RL. At the site of the Enterprise pit, there originally was a superficial iron rich proto-lateritic crust up to 1m thick that carried gold values.

Within Enterprise pit, the N-S fault set has generated several dextral offsets of the fold axis over a strike length of 550m and passes northwards out of the pit and through the Czarina deposit supporting the importance of the feature. Sets of easterly dipping sheeted veins are associated with these faults as are rare north striking granitic veins.

The higher grade gold cut offs parallel both the axial plane and the north striking fault sets.

Three classes of quartz veins have been described:

1. The radial vein sets tend to occupy sites in the Upper and Lower Mine Greywackes and include ladder vein style occurrences. They may amalgamate into axial zone masses of quartz that in detail are part of an arcuate set discordant to bedding.
2. The sheeted vein sets are characterised by their consistent northerly strike and relatively shallow easterly dip at 30-45 degrees, and are up to a metre thick. They often splay downwards off shallower dipping radial fracture veins. These sets tend to be restricted to the western fold limb. They are usually cut by the northerly striking vein sets.

3. The north-south, near vertical veins occupy the N-S faults and are characteristically of centimetre scale up to 0.5m. Thinner veins show a bimodal phase growth of an inter-laminated grey and milky white quartz. This feature occurs elsewhere such as in the hinge quartz and in the east dipping veins.

Gold occurs within quartz-sulphide veins or their alteration haloes, either as free gold which accounts for 2% to 50% of the total gold content, or with sulphides. Sulphide minerals include pyrite, pyrrhotite, arsenopyrite, marcasite, chalcopyrite, galena, sphalerite, bismuthinite, tetrahedrite and covellite. Rare native copper and bismuth are present. The associated gold is present as 2 to 30 micron inclusions in arsenopyrite in particular, as well as pyrrhotite and as intergrowths in bismuthinite. This would account for the relatively refractory character of the primary mineralisation (+/- 70% recovery).

Mining records from 1985 to 1996 show that the ore is moderately refractory with recovery grades averaging 79.3%. These ranged from 72.9% to 84.9% on an annual basis. The fine grain size and intimate relationship to arsenical and other sulphides probably have contributed.
5.0 PREVIOUS EXPLORATION

Shaw (2005) has outlined previous exploration at the Pine Creek tenements, and this is reported here.

The Pine Creek area marks the first discovery of gold as 1869 during construction of the Overland Telegraph line. There was no record of gold production until 1894. Between that date and 1915 some 75,000oz gold was won from 121,000 tons mined. The field was largely worked by Chinese tributors on both alluvial and bedrock plays. The principal mines and targets outlined by previous prospecting and exploration are listed as follows.

5.1 Enterprise Mine MLN13

Historically the site of the Enterprise pit was preceded by underground workings of the Enterprise Mine. The Government sponsored diamond drilling and shaft sinking to 79m in 1915. Some driving and crosscuts were developed before the WW1 caused closure. The mine was re-opened in the 1960s by R. and M. Blake who worked the deposit intermittently for some 20 years until it was sold in 1980 to Jingellic Minerals NL.

Enterprise Mines NL acquired the Enterprise and other adjacent leases from the tenement holders.

In late 1980 Goldfields Exploration Limited commenced a program of rock chip, road cut and underground channel sampling as well as surface geological mapping over all the areas of old workings. A diamond core drilling and RC program commenced in May 1981 and up to 1984 a total of 13,232m had been completed in the Enterprise mine area. Further geological mapping was carried out in 1983 and 1994.

A local mine grid was established that paralleled the axis of the Enterprise Anticline. The bearing of the grid was 41deg 29min 20 sec west of true north. Easting 11200E passed along the axis of the fold and 11000N was just beyond the southern crest of the
Enterprise pit. A complete set of topographic and contoured plans were generated at several scales by Geo-Spectrum Australia from Aerial Photography flown in 19/5/83.

Mining of the Enterprise pit commenced in September 1985 following a drill-out on sections 50m apart and holes on section 20m apart, and continued until closure in August 1993. A sectional geological reserve of 6.7Mt @ 3.33g Au/t was used prior to mining (0.7g/t oxide cutoff, 1.0g/t primary cutoff). A statistical gaussian estimate gave 4.5Mt @ 2.0g/t of oxide, and 10.1Mt @ 2.6g Au/t for primary using the same cutoffs. Following start-up, multiple indicator kriging was used to define mineable reserves and ore blocks.

Following the confirmation of geostatistically predicted ore by diamond drilling in 1986 mineable reserves at January 1987 were 9.2Mt @ 2.7g Au/t. The combined Enterprise-Czarina pit produced some 9Mt of ore and this was treated for the recovery of 600,000oz at an average head grade of 2.59g/t Au. Average mill recovery was 79%.

It was observed early in mining the Enterprise pit that blast hole and RC drilling gave a more accurate grade reconciliation and that diamond drilling under-called gold by a factor of 1.35.

The down plunge extension of the Enterprise mineralisation below the pit and beyond the southern mine limits was tested by drilling. There had been some suggestions of a possible steepening of plunge at the south end to around 45 degrees, or of cross faulting moving the axis up or down.

Diamond drilling programs were completed that had the objective of targeting the 40m to 60m wide mineralised zone that dipped west at 75 to 80 degrees within the southern limits of the pit.

High grades were known to be associated with linear/planar structures 100-150m in strike extent and relatively continuous down dip. Also the intersection of planar structures that form pods of variable orientations and average dimensions of 15m x 15m.

Half a dozen deep holes were targeted beneath the pit however these only met with narrow modest gold grades. There is up to 100m of untested zone beneath the pit floor to
the RL of the deep holes. The western pit crest required a very large step back and shallower, 45 degree angled holes would be needed to test the target.

If the (Findlay) zone of N-S faulting and veining is taken into account, the optimum target would be mid-pit on litho-axial contacts deeper than the Lower Mine Greywacke, such as those hosting the Gandys Hill deposits. Of necessity, any discoveries at this depth would have to be high grade and mine able by underground methods.

The southern extension of the axial plane between the pit crest and the boundary of MLN13 was previously subjected to small programs of RC drilling. Greywacke, siltstone and grit of the Kohinoor Grit Member was intersected. Mineralisation was extremely weak and spotty with few samples in excess of 0.5g Au/t and was fault-shear related. It is likely that the potential of this area is deeper than so far tested.

5.2 Czarina Pit

The Czarina pit commenced in January 1992 and closed at the same time as Enterprise. During that period the two pits produced just over 9Mt for the recovery of 597,824oz. The mill, upgraded to a design capacity of 1.4Mt per annum in 1987 recovered an average 79.3% with 82% recovery in the oxide zone. A low grade heap leach operation contributed 19,500oz of the Enterprise total between 1989 and 1991. The Czarina pit was basically a satellite pit to Enterprise and operated between January 1992 and September 1993. Its production was blended with the Enterprise feed.

5.3 Monarch Pit

The Monarch pit, to the north of Enterprise, was very shallow and small. It essentially supplied low grade feed to the mill towards the end of the operation. The Millwood pit on the International-Czarina structure between the latter pits was small in size and was also mined in this period.
5.4 Gandys and North Gandys, International MLN1130

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. Little systematic exploration and no drilling had been completed in the tenement prior to 1983. During 1982 (Renison) Goldfields Exploration, who held MLN13, announced a mineable resource at the Enterprise, and production began there in 1985.

In the period 1980-1994 the following activity was reported on tenements that predated the granting of MLN1130 and ownership of the field was split between Cyprus-Amoco-Arimco and Renison Group (Pine Creek Goldfields NL).

Tasbax P/L optioned the Gandys Hill property to Amoco Minerals in October 1983. Amoco carried out surface rock chip, dump sampling, and mapping followed by 15 RC holes for 1163m. An induced polarisation survey was completed to test the known association between the quartz sulphide bodies and gold mineralisation.

Amoco concluded a farmout agreement with Lightning Ridge Mining NL and subsequently joint ventured 80% of its interest to Terrex Resources NL. Terrex carried out further mapping and drilling which included both diamond and RC work. By September 1986 Tasbax put the managers in default and Cyprus (formerly Amoco) renegotiated the agreement. Some Terrex data was ‘lost’ during this change of interests.

During March 1987, Frith, an adjacent lease owner entered into an option with Cyprus and Hudspeth & Co. covering MLN790 over the International. At this time Tasbax also added the house and buildings on site to the agreement. By July 1988 Cyprus had purchased from Tasbax the house and all the leases including late MLN 39 in the “Carlton project area”.

Between 1987 and 1989 a number of RC drilling programs were completed on Gandys Hill and International along with geological mapping. An agreement for the transfer of exploration data with Pine Creek Goldfields was completed in November 1989.
By this time, a total of 8,932.1m of drilling had been completed at Gandys Hill and 8,581m on the International.

On 29 December 1989 Cyprus Gold Australia transferred their interests in the project to JV partner Arimco NL for other considerations as part of an Australia wide redistribution of assets on dissolution of the JV.

In January and February 1990 Arimco undertook an evaluation of the Carlton Project. The extra data from Pine Creek Goldfields was incorporated into the database. Geological modelling and geostatistical work was carried out by Taff Davies and D.Guibal.

The work was completed in June 1990 and it was concluded that the Gandys Hill deposits comprised 769,257t @ 2.41g Au/t (inferred global resources) and the International line comprised 1,607,821t @ 2.59g Au/t (inferred global resources).

All of Arimco’s “Carlton Project” leases were transferred to Pine Creek Goldfields in August 1992.

Pine Creek Goldfields NL held leases that surrounded the Arimco group and reported exploration activity concurrently on their sector of the Gandys Hill leases.

In the period 1980 to 1984 the leases were subject to joint venture between Enterprise Gold Mines (formerly Jingellic Minerals NT P/L) and Renison Goldfields Consolidated. RGC managed exploration on their sector of Gandys Hill. The original Gandys Hill leases were GML 163A-166A inclusive.

The Enterprise base line was extended through the area (318 degrees true) and pegged with 50m crosslines and pegs at 50m intervals on line. Colour aerial photography at 1:10,000 was flown over 75sq km centred on Pine Creek. Topographic maps were produced conforming to local grid at 1:500, 1:1000 and 1:5000 scale by Geospectrum.
Between 1984 and 1987 the Gandys Hill leases became MLN 785, 786, and 787. Seven leases comprising MCN 1056-1062 were pegged in 1985 and an agreement was concluded with the holder of MCN 157.

In 1986, 278m of RC drilling was completed on MLN785 at North Gandys. In 1987 ten diamond core holes were completed over Gandys North and a 7 hole RC program was completed over MCN157 and MCN969 on South Gandys. Evaluation of Gandys Hill area was fast-tracked in July 1988. A program of 445 vertical RC holes were drilled on MLN 786, 785, and MCNs 969, 1056 and 157. In December 1988 an oxide resource estimate was carried out. Between June and October 1989 nine diamond core holes were completed for 845m as well as 5000m of RC drilling. On MCN1058 (North International) and MCN1230 (south of Gandys Hill) a program of RC drilling was completed for 1169m.

Five costeans were dug over North Gandys and North International during November 1990.

In August 1991 title of eleven leases north east of Gandys Hill were transferred from Australian Energy and Gold NL to Pine Creek Goldfields.

Eight costeans were dug on the northern extensions of the Enterprise Anticline. PCG swapped part of MCN 1058 for the northern part of Arimco’s MLN39 for the re location of the Stuart Highway in Aug-Dec. 1991.

In October 1991 ten additional costeans were dug on the Gandys Hill trend.

Negotiation and final acquisition of all Arimco leases over Gandys Hill and International occurred in July-August 1992.

Following acquisition, the grid was extended and RC drilling was undertaken to infill the original work to 25m line spacing. Holes were drilled to 30m on a 50m by 20m pattern during October1992- January1993. A waste dump sterilisation was carried out north of the International comprising 21 holes vertical RC.
The Gandys Hill North, Gandys Hill South and International deposits were mined by open pit methods during this period, commencing in mid 1993. North Gandys was completed in November 1993 and the others were completed in 1994.

At **International** the pre mine resources were reported as:

Oxide to 1200mRL SG 2.3, 985,800t @ 1.36g Au/t

Primary to 1150mRL SG 2.6 1,288,800t @ 1.97g Au/t

At **Gandy’s Hill North** pre mine resources were reported as:

Measured oxide 325,000t @ 1.85g Au/t (1.0g/t oxide cutoff)

Indicated primary 204,000t @ 2.80g Au/t (1.6g/t primary cut off At **South Gandys** pre mine resources were reported as:

Oxide zone 1 495,000t @ 2.00g Au/t

Oxide zone 2 357,000t @ 1.79g Au/t

Primary zone 1 22,000t @ 1.98g Au/t

Primary zone 2 494,000t @ 1.79g Au/t

At the Gully Prospect between the original Gandys and International ridges, a program of RC drilling comprising 14 holes for 420m was completed. No significant gold values were met with in what was a synclinal structure.

The mined areas were rehabilitated, the Enterprise treatment plant was sold off and the area became quiescent in an exploration sense up to mid 2002.

**5.5 Battery Shear/Bashi Bazouk MLN13**

This prospect is situated at grid 10400N and 11350E south of Enterprise pit.

It lies between Cox’s Shear and Chinamans Shear and may be on a common structure set. It is covered with old workings aligned around 335 degrees. In the north the stratigraphy is dominated by greywacke and grit of the Kohinoor Grit and to the south, greywackes of the underlying Upper Mine Greywacke. It was interpreted that a fault at around 10225N has raised the southern block exposing older sequences. At the southern end of the prospect there are zones of anomalous mineralisation. The shoots occur in fold limbs and
fell in the range 0.5-0.9g Au/t. Mineralisation was thought to be better developed in the northern section in competent greywacke-grit and several interesting intercepts have been reported.

5.6 Cox’s – Henry George MLN13

This prospect has ranked higher than its peers among a suite of weak to moderately mineralised targets in the southern lease area.

Cox’s is situated at 10600N 10500E and originally comprised sets of poorly defined workings in strongly undulating terrain, on a major shear set striking 335-340° true and dipping 65-80 degrees westerly.

Mineralisation is best developed where the shear zone lies to the east of the Czarina syncline and defines a prominent easterly dipping resource. A large reverse fault dipping grid westerly at 50 degrees, similar to those at Jensen’s, Kohinoor, Eleanor and Czarina has been interpreted to cut the Czarina fold set.

On the surface, the Cox’s Shear faults are characterised by black gossanous oxidised sulphides and locally intense wall rock alteration including chloritisation and sulphidisation. The more eastern of the two faults comprises a zone 1-2m across made up of flat quartz veins with strongly sheared margins. Quartz veining is typically at a high angle to faulting and breccias are developed. Within the limits of the resource, bounded by major faults, mineralisation occurs in quartz veins that dip 40-55 degrees towards SE and ESE at a high angle to the faults.

Costeanning of the poorly exposed mineralised zone at Cox’s gave interesting results including 13.5m @ 7.32g Au/t. Follow up RC gave inconclusive results possibly due to poor understanding of the controlling structures.

5.7 Eleanor Mine MLN13

Alluvial gold workings and shallow prospect pits cover much of the southern leases area which is largely covered by the SE leg of MLN13, MCN 523 plus MCN1054 and MCN 1055. These workings were largely a product of early work by Chinese diggers between 1890 and 1915. Parts of this area have been encumbered by Heritage listings.
Although alluvial activity has been dominant in the southern sector of the Pine Creek field the Eleanor and Elsinore mines were among the first to be discovered in the region. The Eleanor Mine in particular attracted considerable underground development. The Eleanor Shaft within the SE leg of MLN13 was described by Jensen in 1919 as being one of many in the area and 200m true south of Jensens Adit. The area is mainly covered with mine spoil, rubble and alluvium.

He described the workings on the 56m level as comprising mineralised shoots that were short veins, pancake shaped, and stacked at frequent though irregular intervals. The better shoots strike NE at right angles to the bedding and dip SE at 30 degrees.

The area containing the shoots lies between fault controlled quartz lenses striking 320 degrees and dipping SW at high angles.

The location of the Eleanor open cut to the north of the underground workings suggests a south easterly plunge on the mineralisation that in detail was broken up into lenses by the influence of stress on more rigid or ductile bedding units or the proximity or reverse faults. This pattern probably extends south into the vicinity of the Elsinore, and it is not surprising that a drive beneath the mineralisation failed to intersect ore.

Drilling in the vicinity of Eleanor has so far failed to indicate payable concentrations of mineralisation. Recent interpretations indicate that Eleanor lies on or adjacent to a strong SW dipping reverse fault similar to Jensens.

5.8 Elsinore Mine MCN523

Being predominantly an alluvial mining area the tenement prior to 1981 was dredging claim 34A. MCN523 replaced the dredging claim on 20th August 1981. The local town dump was later established on excision MR817 and this is still excised from the group titles even though the rubbish tip is largely on MCN523 and old workings lie on the excision. There are several registered Heritage sites relating to Chinese mining activity in the immediate area and these are to be protected.
The Elsinore prospect is at the southern end of the Pine Creek field and the area has been mapped in detail (Steinert 1990 for Dominion Mining). It was concluded the area was underlain by a cyclic turbidite sequence of graded greywacke to siltstone with minor interbedded shale. Elsinore mineralisation appears to lie on the west limb of the Kohinoor Anticline.

Marker horizons include a grit greywacke unit and several thin chert beds. The grit-greywacke unit is best documented on the west limb of the Kohinoor Anticline. There the unit has been traced in outcrop, underground workings and diamond core holes for some 800m to the SW corner of reserve MR817. On the east limb of the anticline the unit has been traced south from Kohinoor to the NE corner of town dump reserve MR817.

The west limb sequence is 50-65m in thickness throughout and individual grit beds range to a maximum of 20m thickness. Rapid facies changes both lateral and down dip were reported. It is thought to continue to the vicinity of the Dashwood Shaft where colluvial and alluvial workings obscure the bedrock.

Diamond drilling at the Elsinore prospect and underground mapping at the Kohinoor prospect indicates that the anticline is simple, upright and moderately tight. The axial plane strikes grid north south and dips vertical to steep west. The grit marker has been symmetrically folded about the axis with a steep to overturned east limb and dips of 60-80 degrees on the west limb. Further south at Elsinore the limbs dip to either side at 50-75 degrees. The fold plunges gently to the south and the hinge zone is highly sheared at 9200N. The drilling also outlined a 75-85 west dipping fault on the west limb of the fold, parallel to the hinge.

Extensive old workings at Elsinore indicate that gold mineralisation was present in a steep easterly dipping, bedding-conformable quartz reef on the eastern limb, also in a vertically dipping crosscutting quartz reef on the west limb. The core drilling in 1990 (PCDH633-640) intersected minor quartz-veins(stockworks at depth. Limited sampling of the core returned a few significant gold values including PCDH636, 3m @ 6.8g/t Au from 43.5m; PCDH639, 1.5m @ 7.56g/t from 126m. Weak pyrite occurs both as disseminations throughout the wall rock and in quartz veins. Sulphide casts after
arsenopyrite are present locally. Weak to moderate pervasive chlorite alteration occurs throughout the hinge zone.

Hossfeld in 1936 described the Elsinore workings being on a large reef perhaps lying within a fold closure. The reef did not appear to continue at depth, as an east drive from the Dashwood Shaft that lies to the west of the prospect passed beneath it and did not cut the orebody. The flat lying nature of many of the quartz bodies south of the Eleanor he believed gave false impression of their size, and that they were associated with faults in the sandstones or tuffs. Poor exposures were a further complication on available interpretations.

To the east of Elsinore, Hossfeld described another line of workings as another vein network system that could be traced south from the Koh-i-Noor tunnel dump. He said the reefs occupy faults in the sandstones and slates that could not be said to occupy fold positions. Below water level the ores consist of white quartz with pyrite and arsenopyrite.

5.9 Koh-i-Noor Workings MLN13-MCN523

The Koh-i-Noor prospect that extends south into MCN523 is centred on the Koh-i-Noor Adit, which with Jensen’s Adit 70m to the south, have penetrated the ridge formed by folded grits and greywackes of the Kohinoor Anticline and associated gold mineralisation. The adit portal is close to 10,000N 11500E.

The prospect lies within the Pine Creek Heritage Zone which requires minimal disturbance from exploration activity. The Koh-i-Noor Adit contains a colony of ghost bats that have previously been the subject of concern to environmental groups. The foundations of the old battery site are also protected as are heritage features relating to Chinese miners.

The sequence comprises interbedded greywacke and siltstone-shale, poorly outcropping except in pits, shafts, and costeans. A 10m-15m wide grit unit of coarse wacke with granules and fine pebbles forms a distinctive marker and outcrops more frequently. Near the adit the grit unit has been folded about the anticline, with a steep to overturned east limb and dips of 60-80 degrees on the west limb. There are other folds in the portals of the adits. The grit unit is truncated by ‘Jensen’ reverse fault sets along strike to the NW.
Mineralisation falls into three domains. Most of the mineralisation is in a stratigraphically confined zone of saddle reef style conformable veins in the hinge zone of the Kohinoor Anticline (between 11450N and 11525N) and has a shallow southerly plunge. It is in conjunction with mineralisation on Jensen’s Fault, which is a 45 degree west dipping concordant reverse fault with modest displacement.

Another domain of veining lies west of 11450E. Numerous pits and shafts suggest gold mineralisation is present in ladder veins both in the grit marker horizon and in other greywacke beds and as bedding conformable veining. Strong alteration is indicated by the presence of disseminated arsenopyrite within sericitised and bleached greywacke.

A third vein domain is suggested by a zone of strong quartz veining associated with folding at the portals of the adits. Low grades are indicated by previous sampling.

Exploration drilling in this area has met with erratic but locally significant gold values. Kohinoor reef west limb gave intercepts including 16.5m @ 9.72g Au/t from 43.5m t, while Jensen’s Fault reported 9m @ 7.70g Au/t from 51m. and PH236 that met with 18m @ 36.0g Au/ where the fault intersected the anticline.

Drilling in 1991 showed that higher grade pods of gold mineralisation existed on the west dipping structures between 10140N and 10380N.

Grid south of the Battery at 10200N 11200E is a linear (structure driven) valley filled with cemented alluvium that trends just east of true north. Marjoribanks noted that there were extensive alluvial workings on this valley and that neither the basement nor the alluvium had been tested for gold. A trench in the material assayed 18m @ 1.5g Au/t.

5.10 Work Completed since Burnside JV management (2002)

Following acquisition by the Burnside Joint Venture, between July 2002-July 2004 the Pine Creek tenements were subjected to data acquisition, drilling database validation and geological modelling of the principal open pits.

The database initially contained 2,387 drill hole collars and assays were entered for 2,263 holes. Geological log data was entered for 1,028 holes. The initial interpretation showed
that there was residual gold mineralisation down plunge from and below the floor of the existing pits. Additional mineralisation was shown to be present in lower grade, near surface prospects outlined by previous explorers.

The resource potential outlined by the work in year one was further investigated by commissioning a geological consultant with local mining and structural experience to do an in-depth study of the field. (Bill Makar August 2004).

His brief was to determine the potential volume and grade of residual mineralisation with a view to proceeding to infill and exploratory drilling that would supplement the models. His findings indicated that with a choice of haulage distances to available mills in the region there was scope to prove up a body of economic mineralisation through programs of infill RC drilling and further pit shell optimisation studies. Following on from the resource reviews, Bill Makar designed an RC drilling program to test the potential of three mineralised entities in MLN13.

These are listed as low grade dumps, the Czarina lode and South Enterprise prospect. The results of the drilling were below expectation, even allowing for difficult drilling conditions and very poor recoveries particularly where fresh waste was present. It has been concluded that the dump materials are well below the grade necessary for economic returns on haulage and treatment at Union Reefs.

An RC program was implemented at Czarina pit that comprised eight cross sections 50m apart. All holes were collared on the west side of the infilled open pit, two holes per section, oriented on local grid east azimuth. The assays received for Czarina confirmed the model interpretation but indicted that the mineralised zone is weaker and breaks up more than expected on the southern sections, 11500mN and 11550mN.

In January 2005, a Classified Global Remaining Mineral Resource of 1,844,559t @ 1.72 g/t Au for 102,062 ounces was identified (Shaw 2005). The classified mineral resource reported is above a cut-off of 1.0 g/t Au. No economic constraints were imposed on the model.
To supplement the resource modelling at Czarina, it was decided to commission a first pass metallurgical investigation on the primary gold mineralisation recovered as drill chips in the November 2004 program. AMMTEC Australia was selected to do the work. The results of the gravity test indicate a low (3.1%) gravity gold component. Cyanidation leaching achieved 66.21% recovery after 48 hours. Total recovery was 69.32% with virtual completion of leach within a (rapid) 8 hours.

The results showed unfavourable recoveries from the Czarina primary, indicating that conventional CIL/gravity techniques were not likely to recover more than 70% of the contained gold. The degree of refractory behaviour is not exceptional for the Pine Creek field as the Enterprise primary gave similar results. Overall better recoveries in the previous milling operation was assisted by a good percentage of oxide ores.

The Burnside JV also investigated the down plunge mineralised component that remains SE of the Enterprise pit (‘South Enterprise’). It is controlled by the principal fault structures and stratigraphic packages that extend beyond the existing excavation. There had been limited drilling grid-south of the Enterprise crest however an optimised pit had been designed to capture gold mineralisation that has a preserved oxide component

Bill Makar designed an exploratory program to increase the drill density and confidence within the envelope. This RC program was completed in November 2004, comprising 5 holes for an advance of 652m. These are clustered some 150m south of the pit crest. It is noted that all the better intercepts are deep seated and below the zone of oxidation. This mineralisation would be expected to have similar recovery characteristics to Czarina and Enterprise.
6.0 WORK COMPLETED TO 15 JULY 2007

During the reporting period 2006-07, GBS Gold commissioned Geostat Services Pty Ltd to prepare an updated resource estimate for the Czarina deposit. The main requisite was that the resource estimation will comply with CIM (Canadian Institute of Mining, Metallurgy and Petroleum) Mineral Resource and Mineral Reserve definitions that are referred to in National Instrument (NI) 43-101, Standards of Disclosure for Mineral Projects. During this exercise re-interpretation of the geological model generated in 2005 was undertaken with additional resource definition drilling. The report is under preparation but some key points are presented below.

Mineral Resources at the Czarina Project have been estimated in accordance with CIM Definition Standards of Mineral Resources and Reserves (CIM 2004). Three dimensional (3D) modelling methods and parameters were adopted in accordance with best practice principles accepted in Canada. GBS provided 3D lode wire-frames interpreted from drillhole geology and assays. Statistical and grade continuity analyses were completed to characterise the mineralisation and subsequently used to develop grade interpolation parameters. These were applied to the supplied 3D lode wire-frames.

Surpac mining software was used for generating the 3D block model and subsequent grade estimate. Top-cuts were used to restrict the influence of statistical outliers during ordinary kriging of block grades. A bulk density model was generated by Geostat using data collected by GBS.

A Mineral Resource classification scheme consistent with CIM guidelines (CIM 2004) was applied. The estimate is categorised as Indicated and Inferred mineral resources and reported as a grade cut-off that is appropriate for a potentially mineable deposit.

The current Indicated Mineral Resource above a cut-off of 0.7 g/t Au is 731,760 tonnes, grading 2.51 g/t Au for a total of 59,120 ounces Au, with the current Inferred Mineral Resource being 84,233 tonnes, grading 2.36 g/t Au for 6,404 ounces. Figure 3 shows an oblique view of the model colour-coded by resource classification, with Indicated resource as magenta and inferred resource as green.
This program and other activities during the reporting period costed $31,834.00 and break down of each tenement is given in Table 2.

Table 2: Expenditure Statement for the Pine Group Tenements

<table>
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<th>Tenement ID</th>
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<td>Total</td>
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</tbody>
</table>
6.0 PLANNED EXPLORATION FOR 2007/08

Review presented above indicates that project area contains significant gold resource of several million tones and possibility exits to increase the resource base with further exploration. Close proximity of this project to the Union Reefs gold mill makes it a strategically important to sustain the gold mining and treatment activity in the future, which has a significant impact on the regional and local economies. It is expected that after the review, identified targets will be subject to geochemical sampling and drilling.

GBS Gold Australia plans to prepare a technical review of the Pine Creek Group of tenements and assign it a ranking for development with a budget of at least $10000.00. However, at present much attention is focused on the projects such as Maud Creek, Cosmo Deeps and Toms Gully to bring them online for mining and treatment with a budget of several million dollars.

7.0 REFERENCES


Pine Creek Goldfields Limited Annual Report MLN13 1/7/89-30/6/90


