PO/KD/3196

PINE CREEK GOLDFIELDS LIMITED

CESSATION REPORT ON ~~MEN~~ MeN 1162 AND ~~MEN~~ MeN 1163

BONROOK NORTH PROJECT

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Rec 12/10/90.

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FIGURES

1. SUMMARY

This relinquishment report outlines all work carried out on the two 18 hectare mineral claims (N1162 and N1163) granted to Pine Creek Goldfields Limited on 20/8/86 (see locality map 1).

During the subsequent four year holding, grids have been established, and detailed geological mapping undertaken. Rock-chip and soil sampling has also been carried out.

Geologically, the leases cover a westerly dipping greywacke sequence which hosts discontinuous quartz veins. Geochemical analysis indicated the majority of these areas are barren of significant gold mineralisation.

2. WORK UNDERTAKEN

1987: A grid was established over the zone of interest covered by these two tenements.

1988: Work was restricted to reconnaissance visits by geologists. Work was programmed to start early in the 1988 season but exploration commitments elsewhere on PCG tenements during July to December meant this had to be postponed.

1989: Early in the 1989 field season, the grid was re-established and extended. Detailed geological mapping to produce a fact map at 1:1,000 scale was undertaken. This was followed by rock chip and soil sampling.

Soil sampling was conducted at 25m intervals along four 300-400m long lines, spaced 250m apart. The 5-15cm depth interval was sampled, the top 5cm of float and vegetation being removed.

Rock chip sampling was carried out across many of the quartz outcrops. Rock chips were taken evenly across the strike of the outcrop where possible. Otherwise grab samples of the subcrop were taken. In addition selective grab samples of strongly weathered, Fe-rich quartz, and gossanous material were also taken.

3. GEOLOGY

3.1 General

Detailed mapping of both leases indicate quartz blows and veins within N.W. to S.E. striking greywackes and conglomerates of the Burrell Creek Formation. These sediments lie within an embayment of the Cullen Batholith.

Outcrop over both leases is quite variable. A strongly outcropping band of greywacke, and conglomerate runs through the central eastern area of MCN 1163 and the northern area of MCN 1162. Outcrop is rubbly with insitu boulders ranging from 30 cm to 2 m in diameter. Similar good rubbly outcrop of greywacke at the far S.W. corner of MCN 1162 and of a thick quartz blow in the centre of MCN 1163.

Float is a mixture of quartz and greywacke rubble, which occurs over most of the area. The low relief (maximum of 10 m) suggests that much of this float is near its original location.

Some of the extreme southern area of MCN 1163 and, much of the central and southern area of MCN 1162 is alluvium with no float or outcrop.

3.2 Stratigraphy

The leases contain south-west facing and dipping greywackes and conglomerates of the Burrell Creek Formation. The dominant lithology is greywacke with two mappable conglomerate beds of variable thicknesses in the east. Minor silt and quartzites were also observed. These sediments have been intruded by the Cullen Batholith which encloses the leases to the south and east. Isolated outcrops of granite have been found in both leases. Numerous quartz blows and veins generally parallel to bedding occur within the greywackes.

The greywackes have a hornfelsic texture being massive and crystalline with occasional layering and sedimentary structures such as cross-bedding. They generally occur in two forms, the most common crops out as dark grey, medium grained, quite siliceous, and hard rock micas in this type coarsen considerably to 1 cm or more near the granite in the south western corner of MCN 1162. The second variety is more feldspathic and micaceous, weathering easily, and often having a spotty appearance.

The conglomerates are matrix supported, the matrix being a crystalline quartz-feldspathic mass. The pebbles are of quartzite and other lithic fragments, well rounded and generally less than 1 cm long although some are up to 30 cm across. The pebbles are flattened and aligned in a plane slightly oblique to bedding, although the coarser pebbles which are more spheroidal cut across this foliation. Inverse grading from greywacke to grit to conglomerate was observed in out outcrop. Isolated float of conglomerate was also found through the greywackes.

The thicknesses of the conglomerates varies considerably suggesting a lensoidal nature. The greatest thickness observed was 12 m.

Quartz occurs as blows, pods and thick veins within the greywackes. The largest blow is approximately 170 m long with a maximum outcrop width of 20 m. The quartz is generally bedding parallel mostly occurring as large pods which are probably confined to particular stratigraphic horizons with the greywacke. Thick quartz veins generally less than 1 m in outcrop width were also observed oblique to, and occasionally cross-cutting the bedding. No stockwoking was found.

The quartz is white-grey generally massive though occasionally vughy. Some of these vughy areas contain gossanous (Fe-rich) material and hematite. No sulphides were found in the quartz. Late stage milky white quartz veining with hematite was observed in several blocks at GR 380E 745N. Apart from these veins, hematite and gossanous material is quite common here. Boxwork texture were also observed on some hemetite.

Outcrop of granite occurs to the northeast, east and south of the leases as well as isolated outcrops within both leases. At GR 660E 165N is a granite outcrop 1 m across and surrounded by quartz and greywacke. These outcrops, and nearby outcrops to the northeast and southwest suggests that the roof of the granite is not far beneath the surface.

Petrologically the granite is coarse grained equigrainular with an average grainoize of 3 mm, the coarsest being 10 mm. Modal composition is 50% quartz, 10% brolite and 40% feldspar (white-pale green-phagioclare?). The northern outcrops of granite are strongly weathered, finer grained and contain pink K-feldspar.

3.3 Structure

The beds maintain a constant NW-SE strike and south westerly dip. In the far southwest corner of N1162 the strike of the beds trends east-west with a southerly dip. Cleavage is developed in the more micaceous greywackes being subparallel to bedding. A strong foliation shown by alignment of pebbles is found in the conglomerates.

In the north east of MCN 1163 at GR 660E 940N is an outcrop of strongly foliated greywacke with near-horizontal slicken-sides suggesting movement along a penetrative plane (fault plane?) striking 106° May and subvertically dipping.

The line of good rubbly outcrop of greywacke and conglomerate ends abruptly in the south. This may reflect stratigraphic changes or perhaps faulting.

4. GEOCHEMISTRY

4.1 Rock Chip Sampling

Rock chip sampling indicated the majority of quartz is essentially barren, yielding values of 0.2-0.1 g/t. Only three samples assayed 0.7 g/t. These were samples from the main quartz blow (one carrying 8.56 g/t) and samples separate but along strike from this quartz blow.

4.2 Soil Sampling

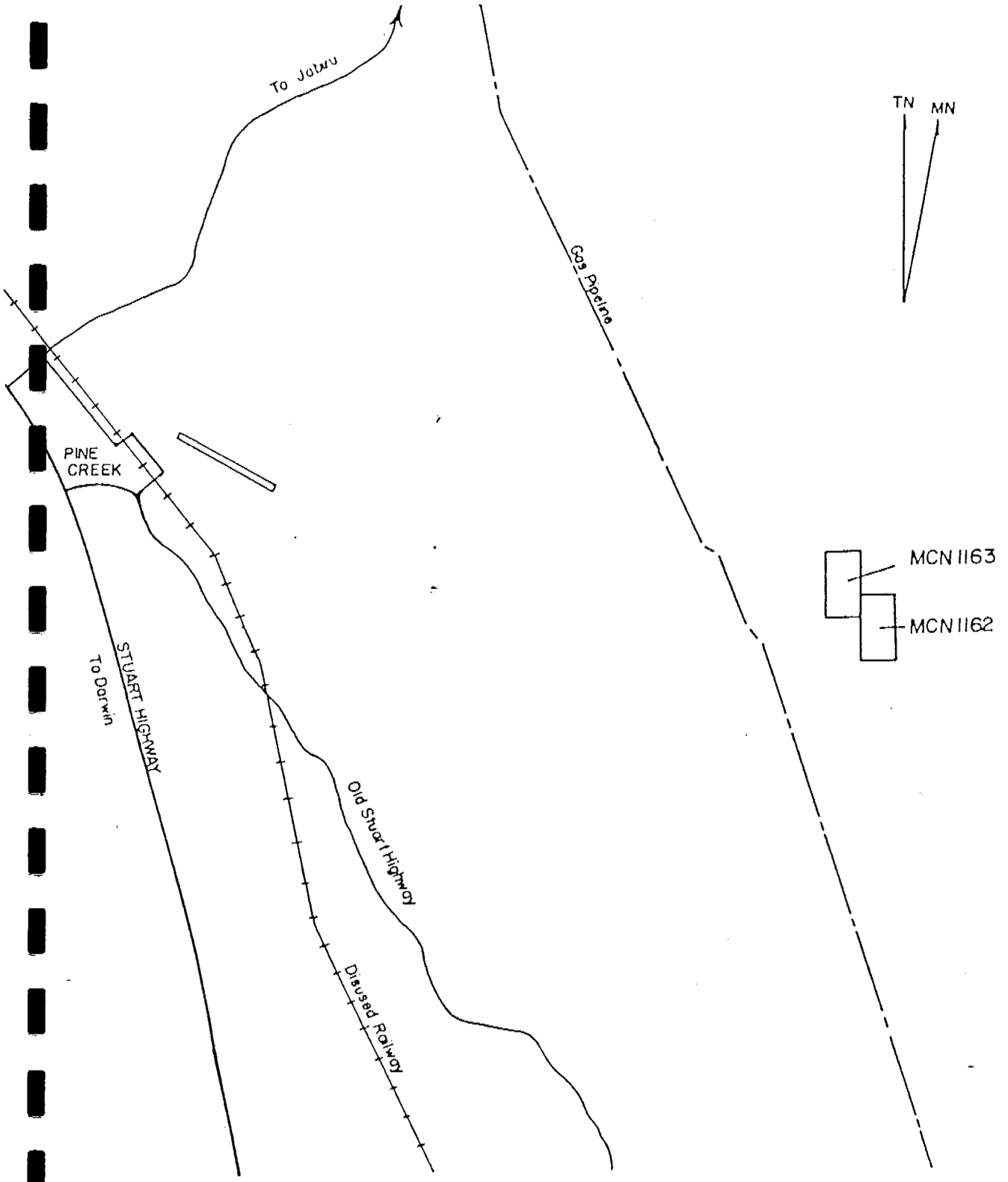
The results of soil sampling indicated that the majority of the area is barren of gold. Most samples are 0.1 g/t gold. One anomalous value of 0.56 g/t from the SW corner of the grid appears to be due to supergene effects.

Copper values range from 17 to 116 ppm. The higher values of 30-50 ppm were from the west side of the ridge, possibly indicating, dispersion from the quartz blow as a source. There was no obvious correlation with Au grade.

Arsenic values range from 115 to 1337 ppm and reflect a high background value g 100-300 ppm. The highest values occur on the southernmost sample line. There is no proportional correlation with anomalous gold values.

5. EXPENDITURE FOR TENEMENTS MLN 1162 AND MLN 1163, BONROOK NORTH

1987/88:	$2,000 (unspecified)	
1988/89:	$1,936	
		$
1989/90:	Salaries and Wages	300
	Consumables	50
	Tenement Costs	180
	Subtotal	350
	Overheads at 10%	35
	TOTAL	385



1 0 2Km

Scale 1:50,000

PINE CREEK GOLDFIELDS LIMITED

MCN's 1163, 1162

Fig. 1

LOCATION PLAN

DRAWN	SJR	DATE	Dec. '86