C1 Introduction

Defunct gold workings are scattered over the NCGM hills and surrounding areas, which include areas around the Albion, Woodstock and Clutha gold mines. In the NCGM area, old gold workings include MMR, MMR South, Bluejackets, Mine Manger, Betty, Hard Cash, Hand Cash and Witkoppies (Figs. 1.3, C1). These old workings occur as shallow exploration pits, inclined shafts, vertical shafts, tunnels, adits and open pits. The gold workings preserve gold bearing reefs and stopes that allow kinematics studies to the shear fractures linked to gold mineralisation.

Below are the systematic descriptions of some of the above listed old gold workings. These include the following;

- Mine Manger
- Betty
- Hard Cash
- Witkoppies and MMR South
- Woodstock and
- Albion gold mines.

The descriptions outline the nature of the underlying geology, structural and mineralisation settings. Main emphasis has been on the nature of the mineralised fractures, focussing on the characteristics such as the type of fractures related to gold.

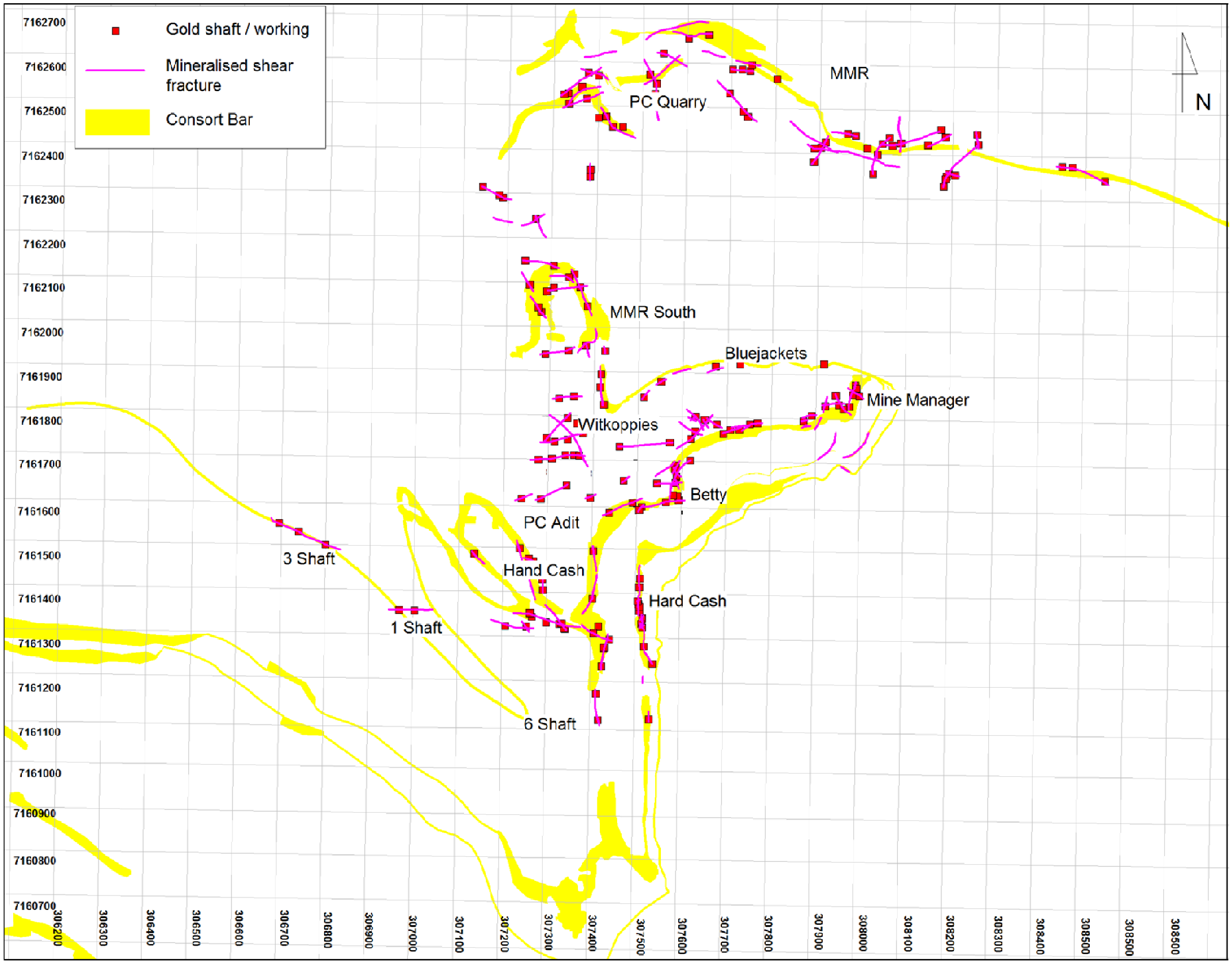


Figure C1: A map showing locations of defunct gold workings and associated D_{4NC} mineralised brittle-ductile shear fractures found in the NCGM area. Grid lines are 100 meters spacing.

C2 Mine Manager Gold Mine

The Mine Manager Gold Mine is located in the central part of the NCGM area, defined by a series of gold workings located along a generally ENE trending corridor, between the Witkoppies and the Mine Manager Quarry (Fig. C2). The gold workings are mainly located in the east-west trending part of the Consort Bar in the central NCGM (Fig. C2). In places, the old workings of the Mine Manager Gold Mine are pronounced in the greenstones of the Onverwacht Group (Fig. 1.3). The exposed Consort Bar is mainly mylonitic, and characterized by pronounced mineral lineation and mica flakes in places. The greenstones include serpentinite, amphibolite and tremolite-talc schist. The serpentinite is mainly pale-green, sheared, and weathers out easily. Pegmatites units are found in some of the old workings, especially in those workings developed along the Consort Bar.

The gold workings in the Mine Manger Gold Mine are in a form of open pits, shafts, tunnels and adits, but mainly dominated by larger open pits. Most of these pits have been developed into underground workings through tunnels and shafts. Gold workings that have been developed in the chert-rich unit tend to resist weathering than those developed in the greenstones. In many places, the outlines of the pits that were developed along the Consort Bar are preserved with minor collapses in places.

Along the Consort Bar, relatively larger-scale workings have been developed, mainly where the contact has been folded. In most workings, especially in the far east of the Consort Bar, these fold structures are relatively complex and rather difficult to determine fold characteristics such as fold axes and orientations of the limbs. These ductile structures are crosscut by mineralised D_{4NC} brittle-ductile shear zones, which define mineralised zones. Mineralised zones can be traced for few tens of meters before termination. In some places, developments of the workings run parallel to these mineralised zones.

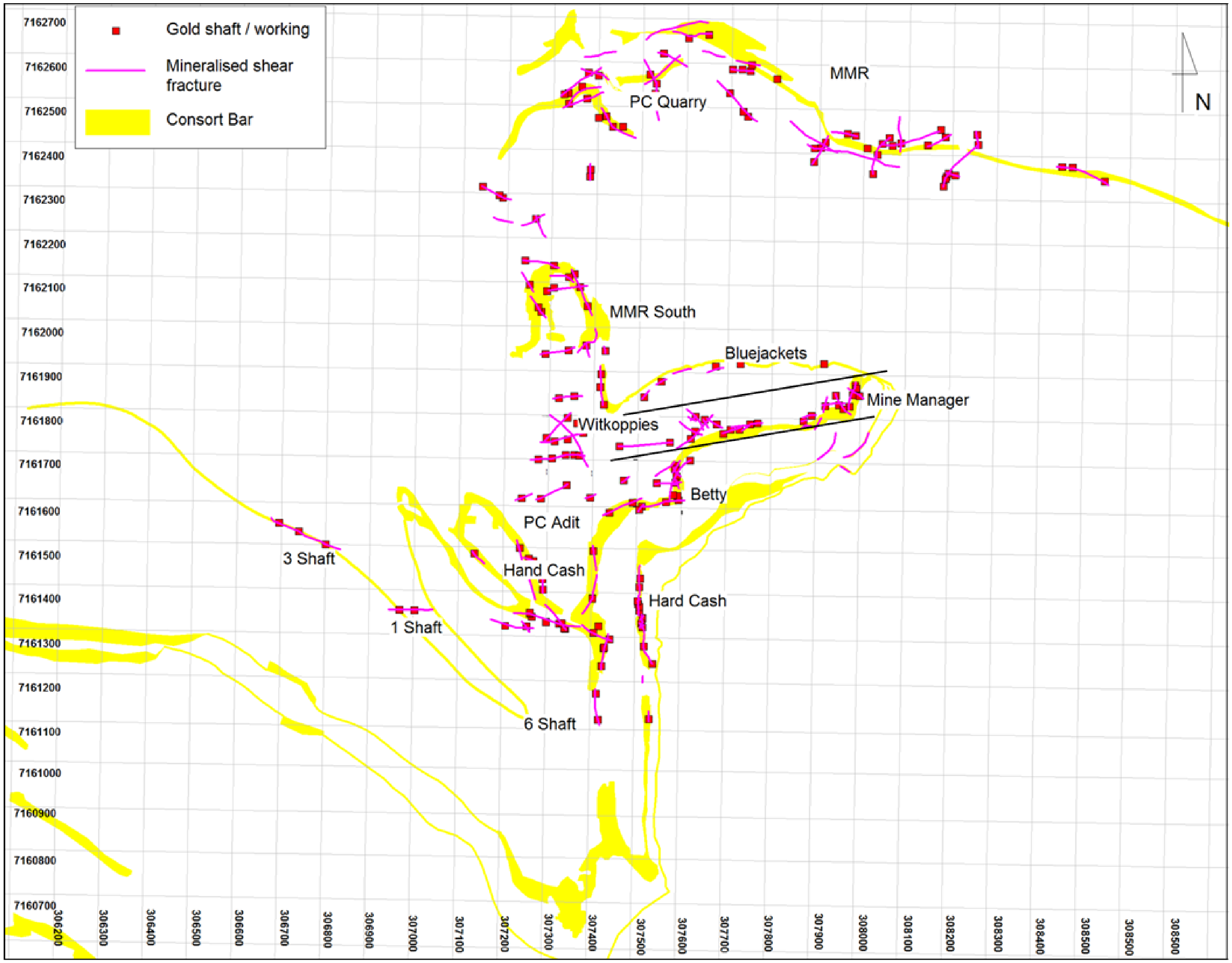
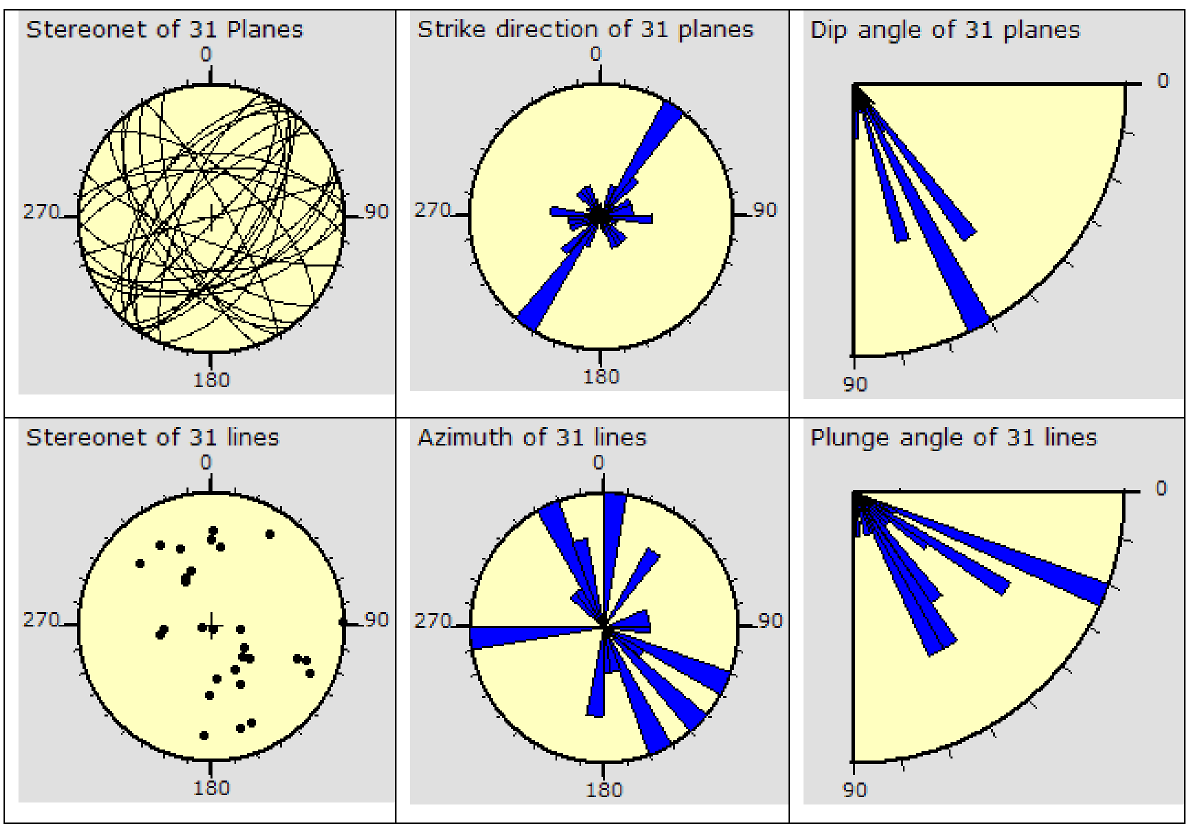


Figure C2: A map showing locations of gold workings that form the Mine Manger Gold Mine in relation to other gold mines in the NCGM area.

Brittle-ductile shear fractures planes are preserved in these mineralised zones and they dominantly strike to the northeast, east-west or southeast (Table C1). The northeast trending shear fractures are common, dipping either to the northwest or southeast (Table C1). Mineralised fracture planes dip between 50 and 90 degrees, but dominant angles range between 50 and 75 degrees (Table C1). Major gold workings are commonly found associated with the northeast and east-west trending fractures.

The shear fractures are characterized by mineral lineation and secondary mineral accretionary steps defined by quartz and calcite. These lineations generally trend northwest-southeast, plunging between 20 and 70 degrees (Table C1). Sinistral normal sense of movement is mainly indicated by these shear fractures.

Table C1: Schmidt lower hemisphere projections showing orientations of mineralised brittle-ductile shear fracture planes and mineral lineations from the Mine Manager Gold Mine (Fig. C2).



The typical example of these relatively larger workings includes the Mine Manager Quarry (Fig. 4.12), which is located on the far east of the Consort Bar (GR 307976-7161847; Fig. C1). The quarry is characterised by fold interference between D_{3bNC} and D_{3cNC} folds, producing complex folding of the Consort Bar. Large inclined folds are preserved and contain southwest dipping limbs (e.g. 254/40 and 194/56) with southwest plunging fold axes (e.g. 250-40). The cores of these folds are characterized by pegmatite intrusion that is folded and intensely mylonitized (Fig. C3). Conjugate box and kink folds, discussed shortly, are also associated with the exploited areas in some places.

The ductile folds are crosscut by D_{4NC} brittle-ductile shear zones, which are commonly mineralised. These mineralized zones are reddish-brown in colour and have schistose fabric in places, defined by fine-grained micas (Fig. C4).

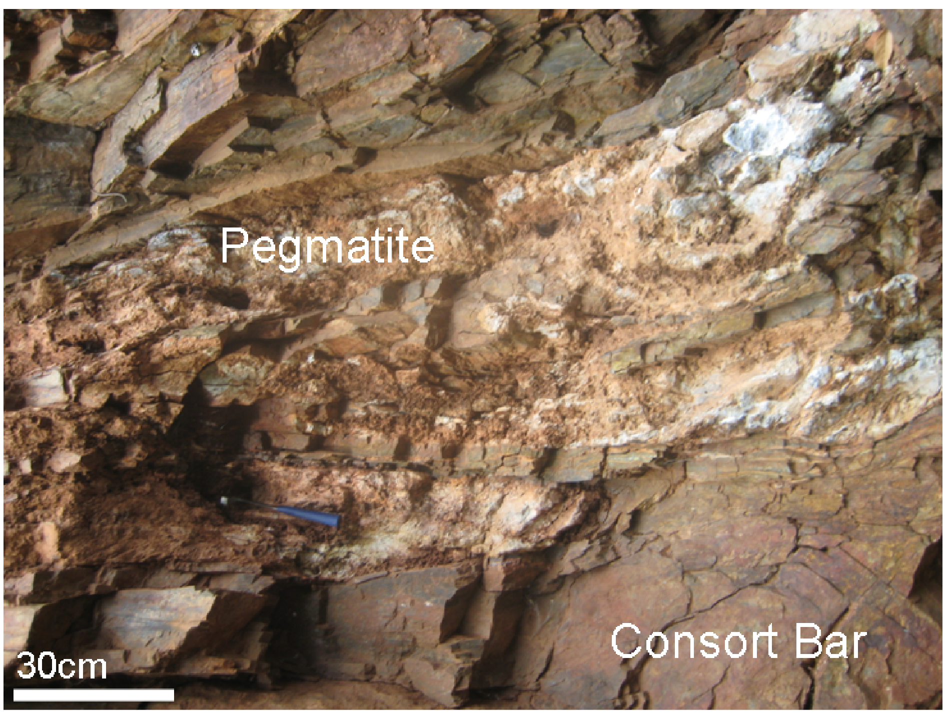


Figure C3: A section showing a mylonitised pegmatite that intruded a fold that record the interference between F_{3bNC} and F_{3cNC} folds in the Mine Manager Quarry (Fig. C2, GR 307970-7161842).

The contact between the mineralised zones and surrounding rocks are in places characterised by discontinuous stringers of chert and quartz veins that penetrate the surrounding rocks. These mineralised zones vary in orientation, and can be about 20- 40 cm wide and 30 to 40 m long. The zones are characterized discrete shear fractures that are about 5mm in width, and contain quartz and calcite overgrowth and secondary mineral lineation, defining slickensided surfaces. These slikensided surfaces dominantly record normal sense of movement.

D_{4NC} kink folds have been exposed in the Mine Manager Quarry. Typical example includes a 5 meters wide fold exposed on a 3 to 4 meters high section (Fig. C5). This kink fold comprises two limbs that are transected by a normal fault in the core. This normal fault is parallel to some of the mineralised fractures observed in the quarry.

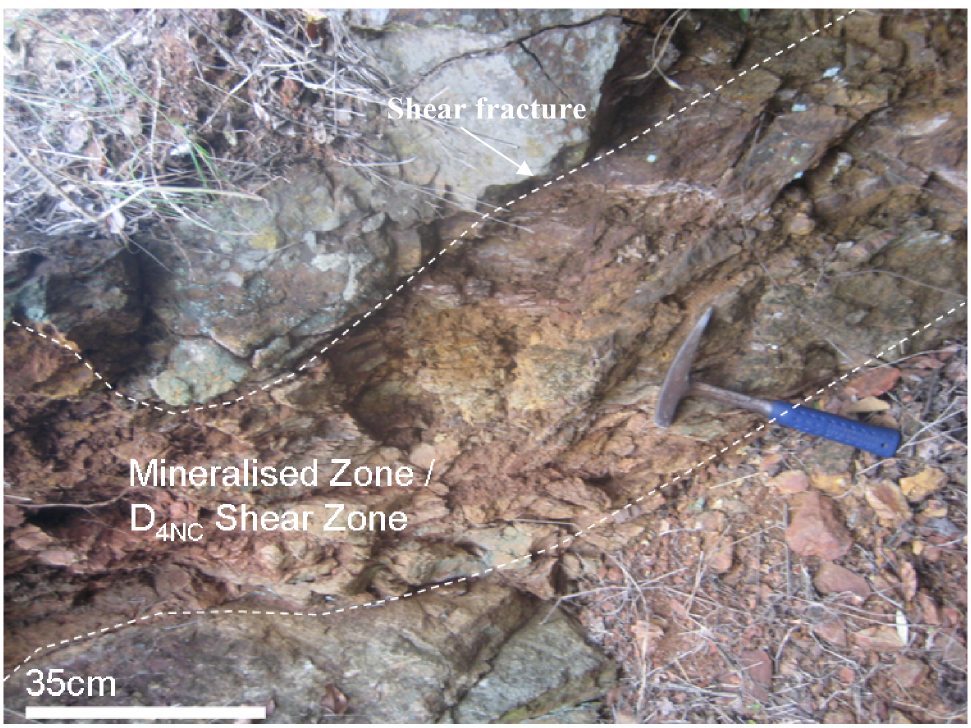


Figure C4: A section example of a D_{4NC} ore zone from the Mine Manager Quarry. The red-brown zone is an oxidised zone, which is schistose, mineralised and bounded by discrete shear fractures (GR 307982-7161896).

Figure C5: A section of a D_{4NC} kink fold preserved in the Fig Tree greywacke-shale found in the Mine Manager Quarry. D_{4NC} normal brittle-ductile shear fractures transect the core of the fold (GR 307970-7161842).

C3 Betty Gold Mine

The Betty Gold Mine is also located on the central parts of the NCGM (Fig. C1, GR 307565- 7161632), to the northeast of the Prince Consort Shaft. The mine occurs to the south of the Mine Manager Gold Mine, defining a 50 meters wide en-echelon array to the Mine Manger Gold Mine (Fig. C6). The mine comprises several gold workings in a form of shafts, adits and open pits. These gold workings are mainly located in a serpentinised tremolite-talc-schist unit, with some workings along the Consort Bar and the greywacke (Fig. 1.3). The serpentinised tremolite-talc schist is light to dark-green, soapy, medium-grained, sheared and mylonitised in places.

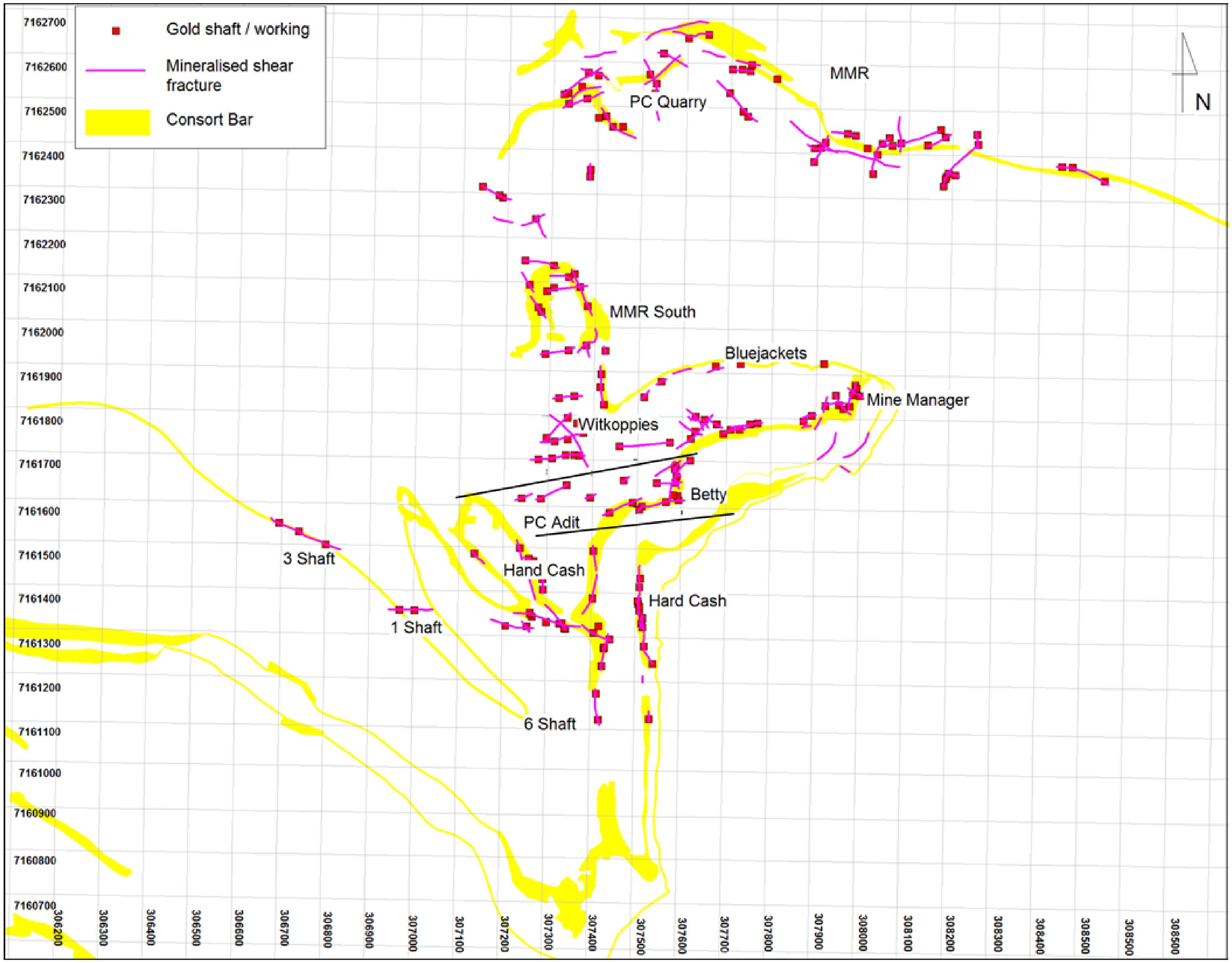


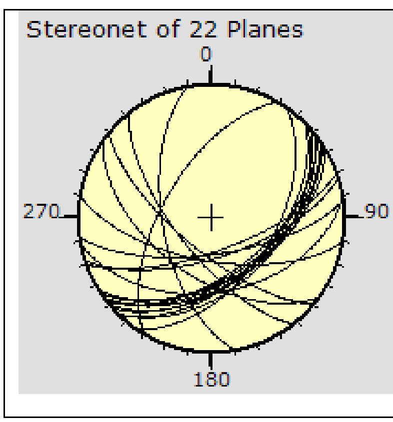
Figure C6: A map showing locations of gold workings that form the Betty Gold Mine in relation to other gold mines in the NCGM area.

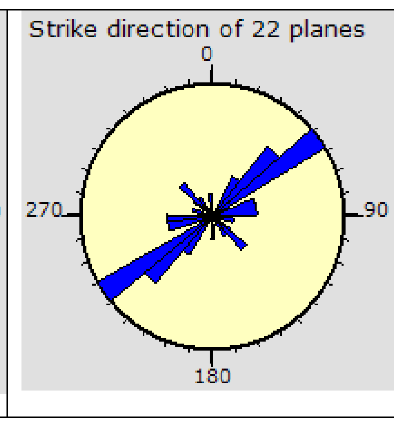
Mineral assemblage includes serpentine, talc and plagioclase, with minor biotite and muscovite. The greywacke is dark-grey, medium- to coarse grained, and silicified in places.

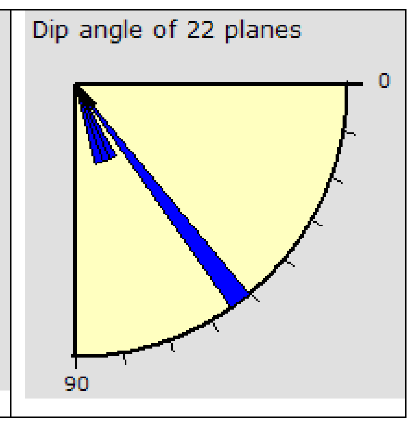
Most pits and shafts around the Betty Gold Mine, especially those that are located in the serpentinite, have collapsed and impose difficulties in analysing them. The workings are mainly rounded with rectangular shapes in places. These individual workings are characterized by mineralised crosscutting D_{4NC} brittle-ductile shear zones. The mineralised zones define an ENE trending corridor, similar to that of the Mine Manger Gold Mine (Fig. 4.13).

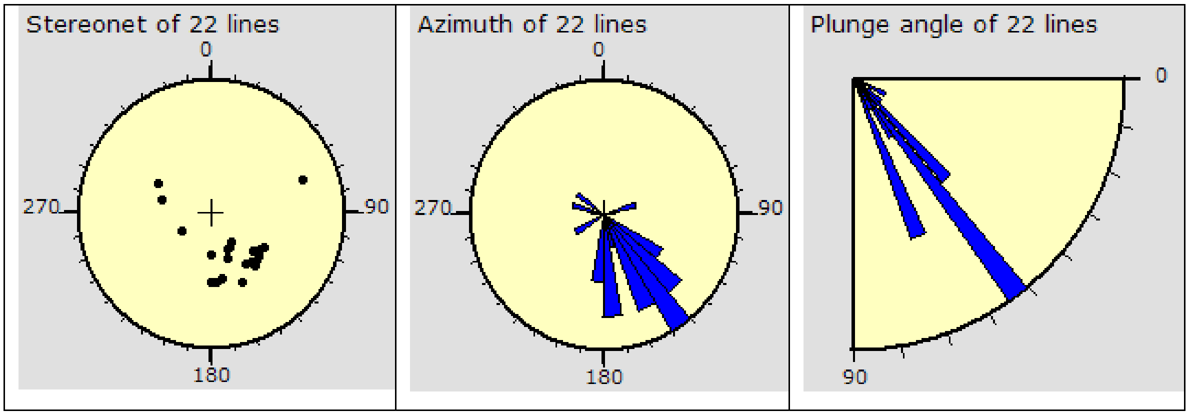
Mineralized zones are mainly exposed on the edges, sidewalls and floors of the pits. In places, zones can be traced on surface to a developed shaft or pit. The zones are red-brown in colour, dominantly oxidised, and sulphidised. They vary in width from 2 to 10 centimetres and contain discrete mineralised brittle-ductile shear fractures that trend NE, dipping moderately to the SE (Table C2). Shear fractures contain secondary quartz and calcite fibre growths, stretching mineral lineations, which dominantly plunge moderately to the SE (Table C2). These fault characteristics generally record normal sense of movement.

Table C2: Schmidt lower hemisphere projections showing orientations of mineralised fracture planes and mineral lineations from the Betty Gold Mine (Fig. C6).









The Betty Quarry is a typical example of an old working found in the Betty Gold Mine. The quarry is located about 250 metres northeast of the PC Shaft (GR 307565-7161632). This quarry is mainly located in the serpentinised units, Consort Bar and part of the silicified greywacke units (Fig. 1.3). Generally, the quarry is on the contact between the greenstones of Onverwacht Group and meta-sediments of Fig Tree Group, but its major part is found in the greenstones. The foliation orientation around the Betty Quarry mainly trends northeast, dipping southeast.

The quarry comprises shallow pits, shafts and adits that are interconnect at deeper levels. Mineralised zone, similar to those described above, are common. Much of the stoping observed in the quarry, is parallel to if not along these mineralised shear zones. These zones and their associated surrounding rocks are characterised by an occurrence of pure white calcite and quartz alteration. This alteration assemblage is clearly visible inside most adits that define deeper workings of the quarry.

Shear fractures within mineralised zones trend northeast and almost east-west, dipping moderately and shallowly to the southeast and south, respectively (Fig. C7). These shear fracture planes are characterized by quartz and calcite fibre growth lineation, striation marks and secondary minerals (quartz and calcite) accretion steps. The lineations on the northeast trending mineralized fractures plunge moderately to the southeast (Table C2). The three characteristics of shear fractures mainly show top block down movement with minor sinistral components (sinistral normal).

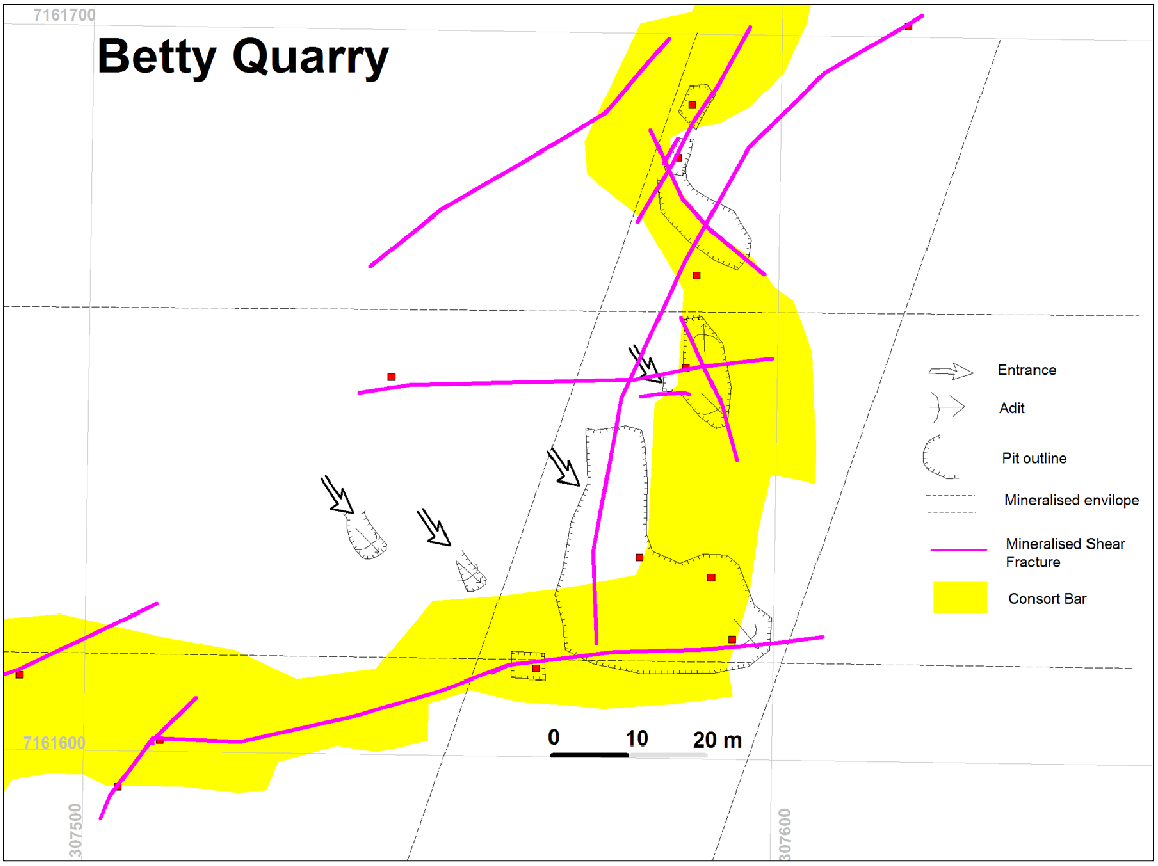


Figure C7: A map showing an outline and trends of the D_{4NC} mineralised brittle-ductile shear fractures found in the Betty Quarry, a typical example of workings in the Betty Gold Mine (Fig. C6, GR 307565-7161632) (Table C2).

C4 Hard Cash Gold Mine

The Hard Cash Gold Mine is also located in the central NCGM, about 250 meters to the southeast of the Prince Consort Shaft (GR 307519-7161357; Figs. C8, 1.3). The mine is found in the western silicified unit (Consort Bar) of the Hangingwall Band (Fig. 1.3). The carbonated tremolite-talc schist forms the hangingwall, whilst the greywacke forms the footwall of the mine. Lenses of amphiboles bearing units have been reported within the greywacke unit (Pearchey and Mawson, 1984). The Consort Bar is made up of clasts of vein-quartz, chert, shale and greywacke (Fig. 4.2a). The clasts are mainly rectangular to sub-angular and compacted to produce a clast-supported silicified (chert) unit.

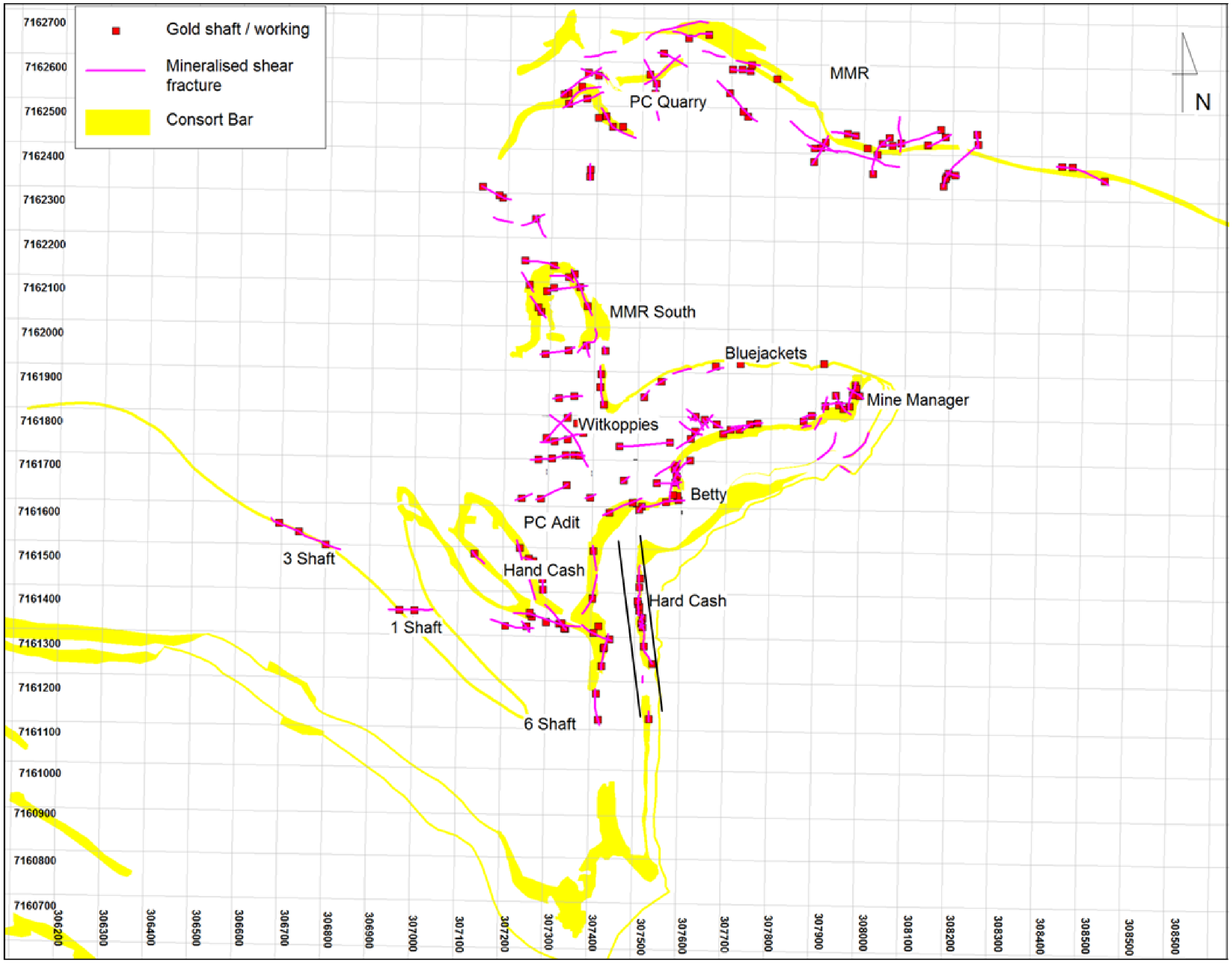


Figure C8: A map showing locations of gold workings that form the Hard Cash Gold Mine in relation to other gold mines in the NCGM area.

Bands and veinlets of recrystalised quartz have been observed on the 2 ½ level of the mine (Pearchey and Mawson, 1984).

The Hard Cash Gold Mine is about 80 meters long, defined by two north-south trending workings, which are relatively narrow and elongated (Fig. C9). These workings are arranged in an en-echilon fashion, similar to a fault jog, and are about 2.5 meters in surface width (Fig. C.9). The southern working, which is less developed, ranges from 1-3 meters in depth. The deepest part is at its northern end, where it jogs for a meter to the northern working. The southern end of the southern working shallows drastically to less than a meter. The northern working comprises tunnels, adits and shafts connecting to deeper underground workings. These adits and tunnels have been developed towards the hangingwall greywacke units.

Unlike the Mine Manager and the Betty Gold Mine, a NNW trending corridor encloses workings found in the Hard Cash Gold Mine (Figs 4.13, C9). This corridor encloses each of the two D_{4NC} mineralised shear zones found in the two workings (Fig. C9). As expected, the mineralised zones are at en-echillon to one another. These mineralised zones are sulphidised and oxidised, and are known for relatively poor gold grade (about 5-6 g/t) (Pearchey and Mawson, 1984). Where the unit is highly silicified, higher abundance of sulphide mineralization has been reported (Pearchey and Mawson, 1984).

These sulphides include pyrhotite and arsenopyrite, commonly found along the upper and lower contacts of the bar (Pearchey and Mawson, 1984). The sulphides occur as disseminated stringers and bands, which can reach up to 10 cm within the chert-rich unit (Pearchey and Mawson, 1984). Better sulphides mineralization was found to be associated with sheared parts of chert-rich unit that contained bands and veinlets of re-crystallised chert (Pearchey and Mawson, 1984). The abundance of sulphides in the workings is positively related to the higher gold values (Pearchey and Mawson, 1984).

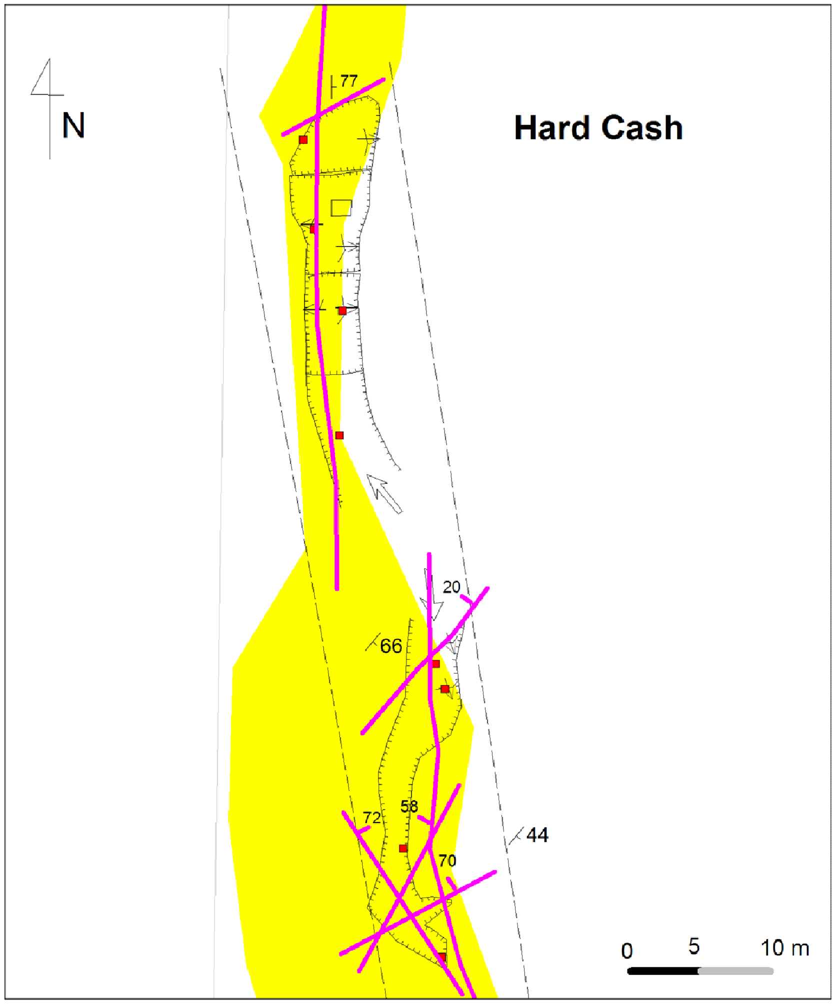
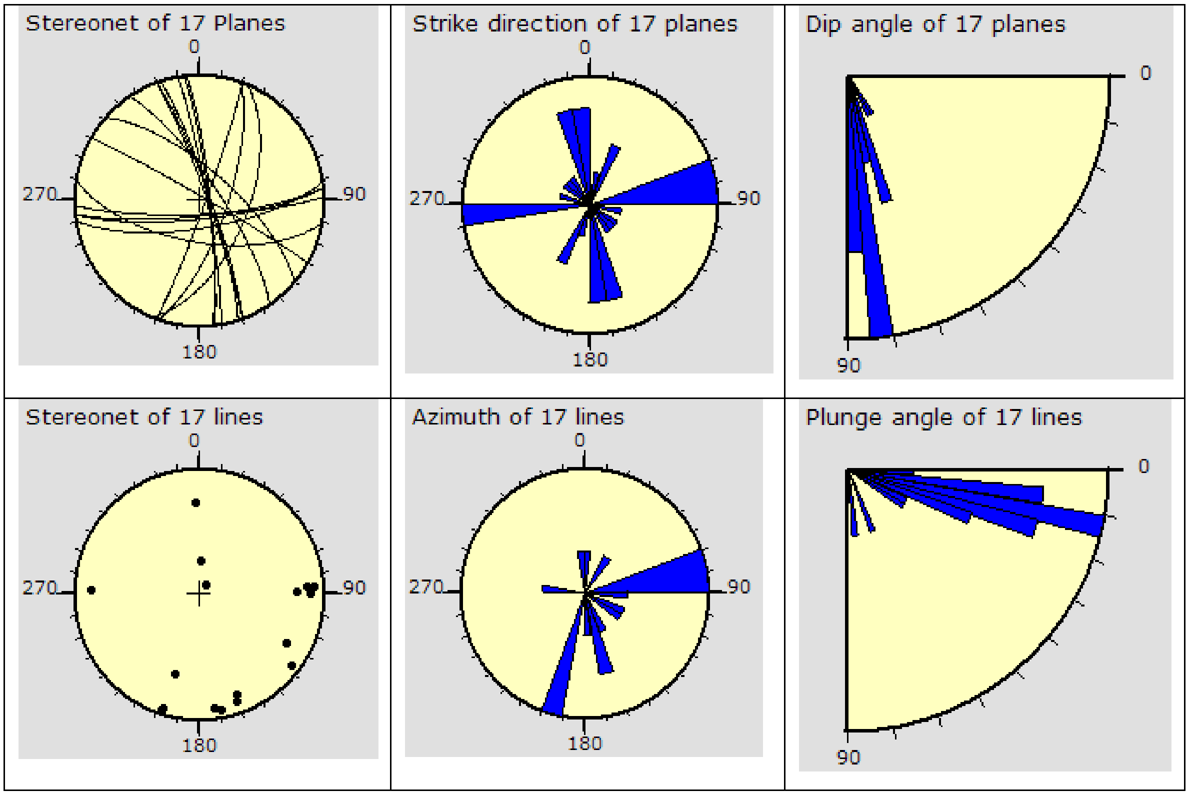


Figure C9: A map showing an outline and trends of D_{4NC} mineralised brittle-ductile shear fractures found in the Hard Cash Gold Mine (Table C3).

Channel sampling at 2 meters interval that extended for about 15 meters on either sides of the original 30 meters long zone was done around the 2 ½ level (Pearchey and Mawson, 1984). The sampling was aimed at investigating the known occurrences of about 5 to 6 g/t over 1 meter on the strike length of 30 meters. Through sampling, a shoot of gold values at 3.30 g/t over 1 meter with strike length of 20 meters was identified.

Preserved shear fractures within the mineralised zones are limited, and fault analyses data was collected from two main trends, north-south and east-west (Table. C3). The ore shoot plunges at 70 degrees to the north (Pearchey and Mawson, 1984).

Table C3: Schmidt lower hemisphere projections showing orientations of mineralised fracture planes and mineral lineations from the Hard Cash Gold Mine (Fig. C8).



These shear fractures are also characterised by mineral lineation and secondary quartz overgrowth recording a dominant strike-slip faulting with occasional normal faulting.

C5 Witkoppies Gold Mine

The Witkoppies Gold Mine is situated 150 meters to the north of the Prince Consort Shaft (GR 307368- 7161745; Figs. 1.3, C10). The mine is a large pit that is about 130 meters long and 70 meters wide. This pit is found in a porphyritic unit known as the Witkoppies Granite (Harris, 1992). The unit is generally grey in colour, coarse-grained, and composed of dark- to light-green amphiboles and white plagioclase. The plagioclase occurs as vesicles that can attain a length of 10 millimetres. These vesicles are mainly elliptical with some few exceptions of cubic to rounded shapes.

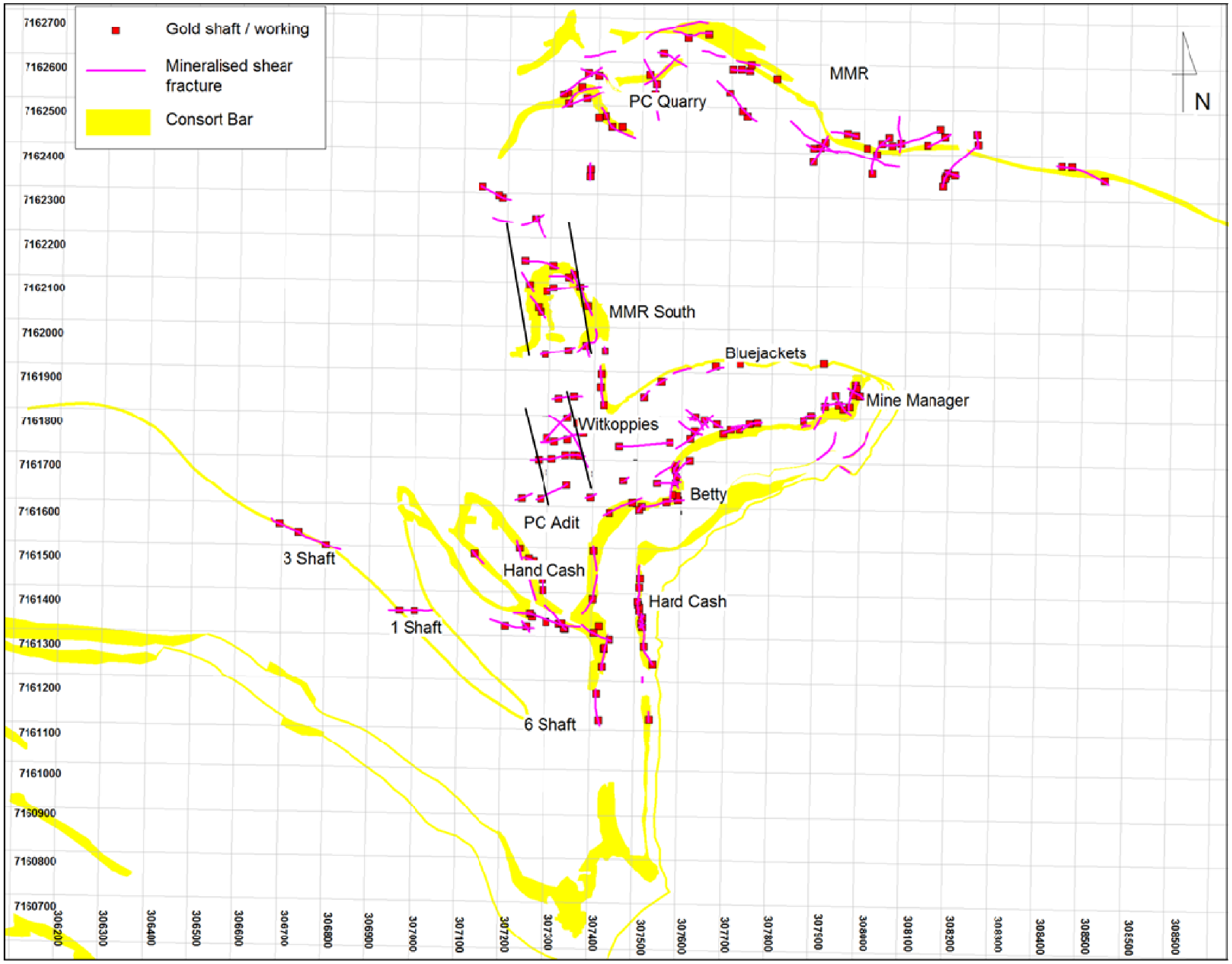


Figure C10: A map showing locations of gold workings that form the Witkoppies, MMR South and MMR Gold Mines in relation to other gold mines in the NCGM area.

The amphiboles appear to be the ground-mass supporting the plagioclase crystals. Few grains of biotite flakes are observed in handspecimen.

The unit is mainly silicified, characterised by crosscutting silica veins, resulting to a relatively competent porphyritic unit that resists weathering. Silica replacement is in places observed in some interstitial parts amongst the primary grains. This silicified unit generally dips moderately towards southwest.

The pit contains adits and shafts connected to deeper levels of underground workings (Fig. C11). The adits that have been developed in the most silicified parts of the pit are well preserved and stable, whilst collapsed and collapsing roofs characterize those developed in less silicified areas.

Figure C11: A typical example of the adits that were developed in the Witkoppies Gold Mine (Fig. C10, GR 307380- 7161742).

D_{4NC} kink folding and shear zones preserved in the quarry are commonly seen in the mined-out areas. In places, adits and shafts have been developed in the cores of these kink folds. The D_{4NC} shear zones are mineralised and dominantly trend NNW and ENE, defining the shape and orientations of pits in the quarry (Figs. 4.13; C11). These mineralised zones, which can be traces for couples of tens of meters, are mainly oxidised with sulphide precipitations in places and contain quartz veins that connect to the surrounding rock units in other parts.

The red-brown colour of these zones can be easily differentiated from the grey coloured granitic rock that is common in the pit (Fig. C12). The mm scale discrete shear fractures associated with this mineralised zones dip moderately to the SE, S or SW (Table C4). These shears fractures contain secondary calcite and quartz overgrowths associated with slikenlines, which plunge shallowly to moderately to the SE-SSE (Table C4). Although the sense of movement deduced from these shear fractures associated with mineralised zones is dominantly normal, thrust and strike-slip movement has been observed in other parts.

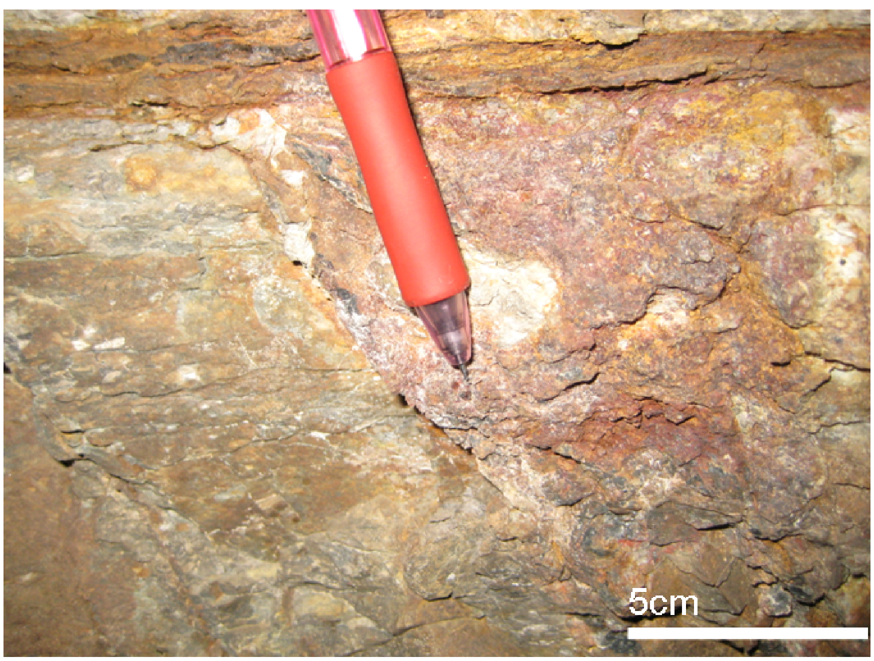
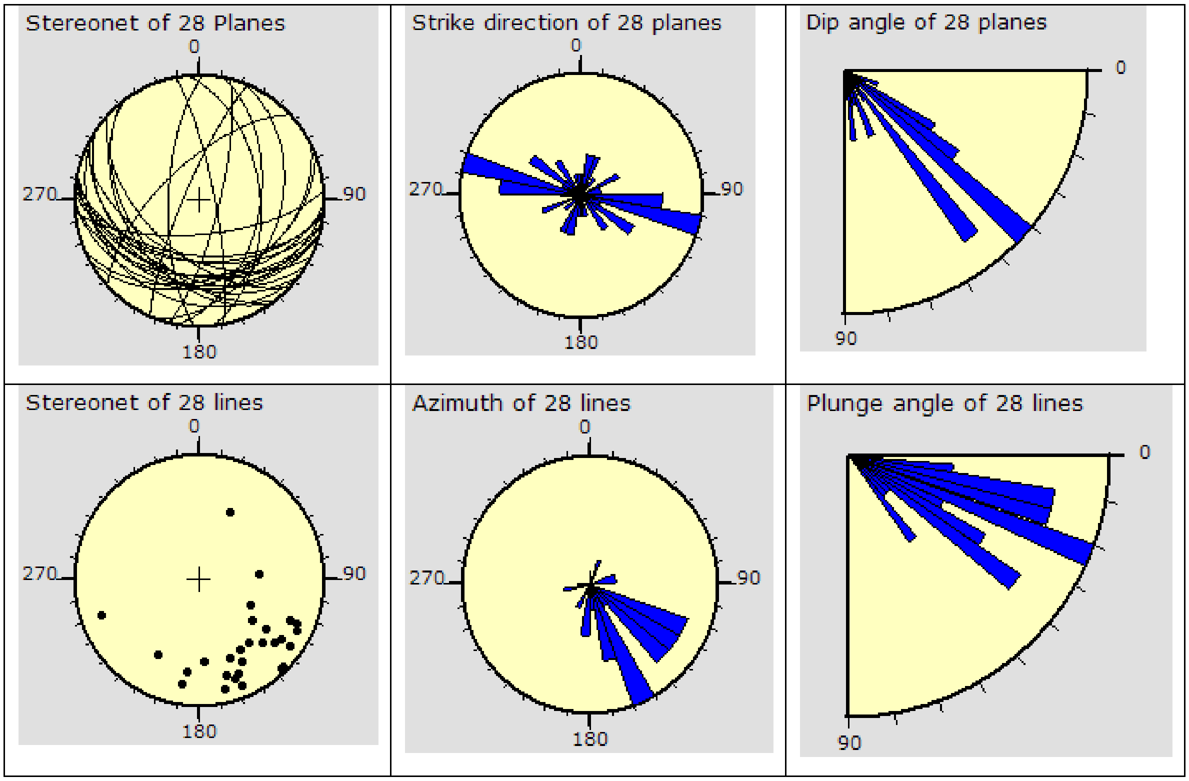


Figure C12: A typical example of a D_{4NC} mineralized brittle-ductile shear fracture characterized by red-brown oxidized and sulphidised zone (Fig. C10, GR 307380- 7161742).

On a larger scale, the Hard Cash, Witkoppies Quarry and MMR South define a NNW mineralised trending corridor (Fig. 4.12). The MMR South Gold Mine is an open pit, which is located on the Consort Bar, to the north of the Witkoppies Quarry (Fig. C10).

Table C4: Schmidt lower hemisphere projections showing orientations of mineralised fracture planes and mineral lineations from the Witkoppies Gold Mine (Fig. C10).



This pit contains mineralised zones associated with discrete shear fractures, which in part define similar trends to those found in the Witkoppies Quarry (Table C5).

The NNW corridor is transected by the ENE, which is defined by set of workings including Mine Manager, Betty and Bluejackets, and WNW trending corridor, which includes the MMR Gold Mine that is defined by workings in the eastern limb of the Top Section Syncline (Fig. 4.13). The MMR Gold Mine, which is located to the north of MMR South, is also characterised by discrete mineralised shear fractures that dominantly trend east-west, dipping steeply to the south (Table C6). Associated mineral lineations dominantly plunge towards east and southeast (Table C6).

Table C5: Schmidt lower hemisphere projections showing orientations of mineralised fracture planes and mineral lineations from the MMR South Gold Mine (Fig. C10).

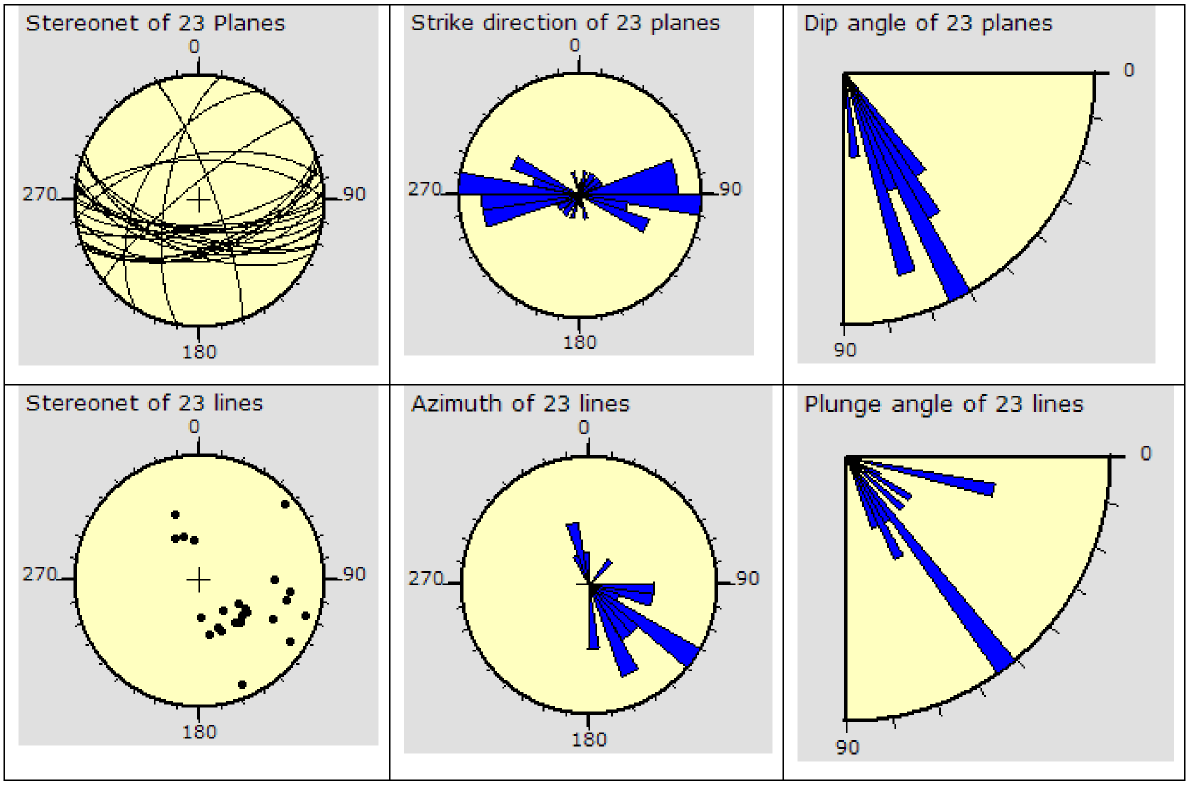
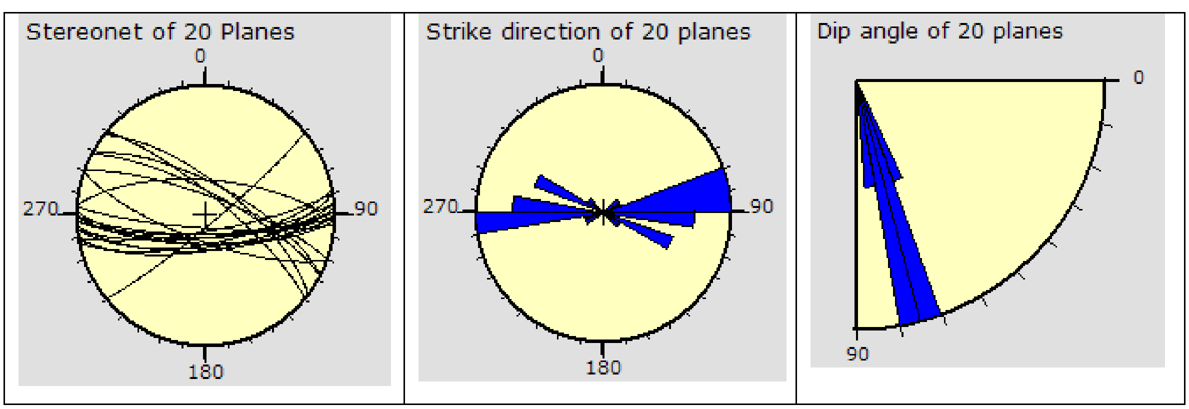
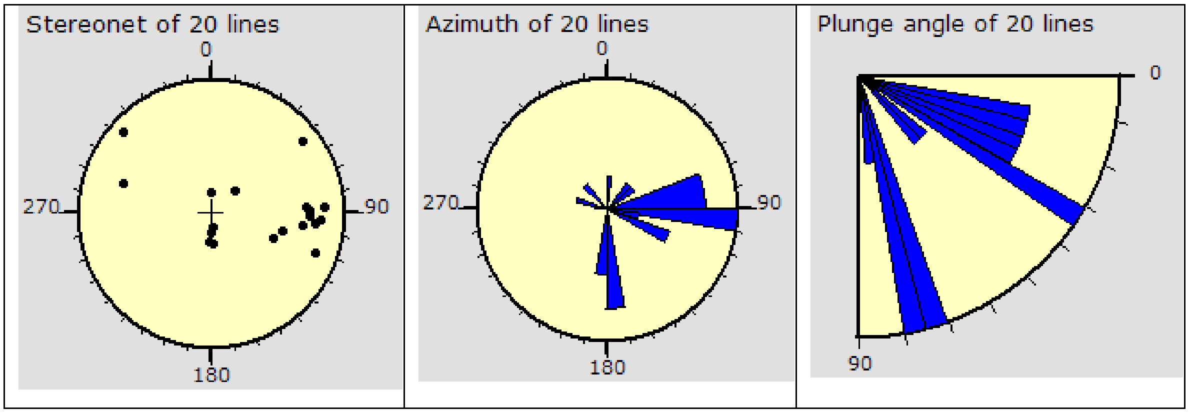


Table C6: Schmidt lower hemisphere projections showing orientations of mineralised fracture planes and mineral lineations from the MMR Gold Mine.





C6 Woodstock Gold Mine

The Woodstock Gold Mine is a set of workings that are located to the north of the Eureka Syncline, along and just south of the Woodstock Fault (GR 308963-7158993; Fig. 4.14). The workings are mainly located adjacent to the Woodstock Bar chert unit, which forms a relatively elevated ridge striking almost east-west (Fig. 414).

The Woodstock Bar is immediately surrounded by the rocks of the Onverwacht Group, which are overlain by agglomerate and greywacke-shale units to the north and south, respectively (Fig. 2.9). Conglomerate and sandstones of the Moodies Group overlie the agglomerate. The agglomerate and conglomerate units are relatively thin in contrast to thick units of sandstones. Dacitic and granitic clasts, which are supported by tuff matrix, composed the agglomerate. The conglomerate, which is relatively thinner than the agglomerate, is characterized by black chert clasts and sandy matrix. The clasts of both the agglomerate and conglomerate units are flattened and elongated. Ultramafic rocks define the rock units to the south of the Woodstock Bar. The typical example of the ultramafics includes the sheared talc-schist.

The Woodstock Bar, which dips between 60 and 70 degrees mainly towards 200 degrees, is medium to fine grained. The bar is partly mylonitised with pronounced planar fabric defined by mineral lineation (Fig. C13). In some places clear sense of movement indicators are present. A typical example of these includes the stair-stepping structures, showing top to the NE movement (Fig. C13).

Figure C13: A D_{3aNC} mylonitised Woodstock Bar that contains sense of movement indicators such as stair-stepping structures.

Major minerals in the bar include quartz, chert and fuchsite. The fuchsite provide the green colour that is found in most parts of the unit. Green rounded crystals (ooids), which are found in some parts of bar, are the characteristic features of the Woodstock Bar (Fig. C14). These non-deformed, rounded and coarse-grained materials, show compositional zonation within them. Light- and dark-green colours in the outer and inner parts, respectively, define the zonation in the ooids. The zones preserved sharp contacts between them.

Where the fuchsite content decreases, the bar becomes more massive with cross-cutting silica veins in places (Fig. C15). In relatively larger scale, these massive alteration silica-units occur as blobs that are relatively more elevated than other parts of the bar. At least two major silica blobs have been noted around the area. It was also noted that old gold workings, discussed shortly, appear to be more abundant and major in close proximity to these thick and massive silica bodies (Fig. 4.14).

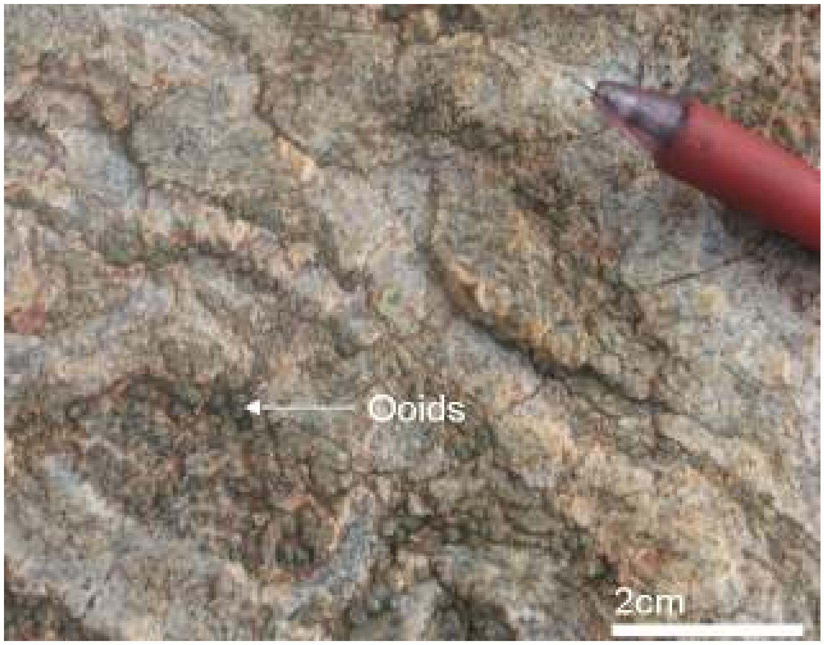


Figure C14: Green, rounded crystals (Ooids) that are found in some parts of the Woodstock Bar.

Figure C15: A massive silicified unit that is characterized by the presence of cross-cutting veins.

Folding of the bar and other rock units is preserved in some parts around the area, especially on the far east of the Woodstock Bar. D_{4NC} structures including crenulation folds, kink folds and shear zones, are common in the rock units found in the Woodstock Gold Mine. The kinks occur as either single or conjugate pairs, characterised by shear normal fractures on the cores of the folds (Figs. C16, C17).

Figure C16: A D_{4NC} kink fold characterised by normal brittle-ductile shear fracture in a silicified, laminated sandstone of the Moodies Group.

The workings of the Woodstock Gold Mine mainly occur along strike with the bar (Fig. 4.14). These occur as open pits, tunnels, inclined and vertical shafts. The most common workings in the area are vertical and incline shafts that have been developed into major and deep underground workings in places. The intervals between the old workings mainly do not exceed 100 meter and can be traced for about 950 meters along strike (Fig. 4.14). The open pits are sizeable (Fig. C18), but not as deep as the shafts.

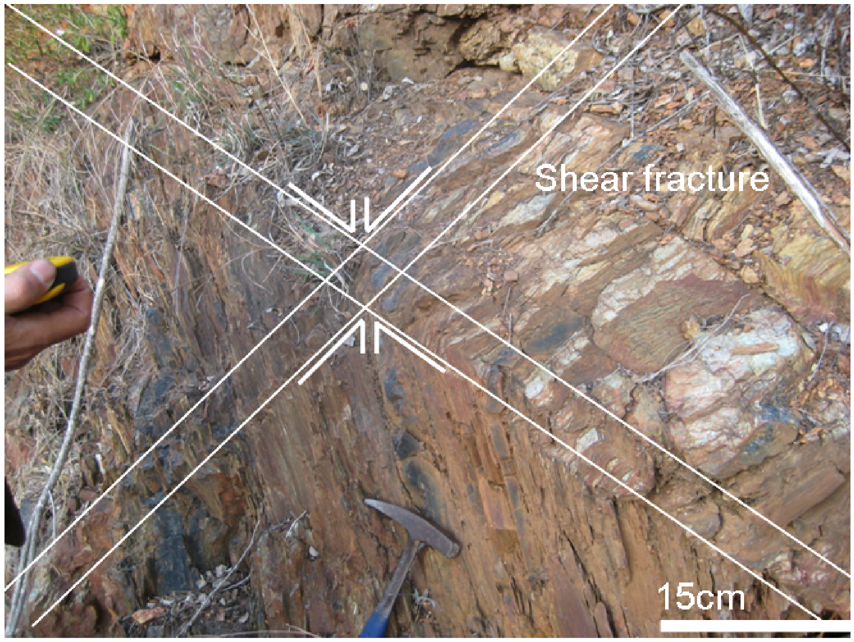


Figure C17: D_{4NC} conjugate pairs of kink bands in the sandstone of the Moodies Group. Normal shear fractures transect the cores of the fold.

Figure C18: A typical example of sizable open pits that are found in the Woodstock Gold Mine.

The old workings occur along an east-northeast corridors (Fig. 4.14), which is composed of D_{4NC} mineralised shear zones. At least two main shear zones, which occur at en echelon arrangement, are defined by the locations of the old workings which are found in the Woodstock Gold Mine (Fig. 4.14). Each of the two mineralised $D4_{NC}$ shear can be traced for about 400 meters. The thickness of these zones are about 50 cm, but can thin out to few centimetres. The zones are oxidised, red-brown in colour, and sulphidised in places. Dark grey dykes with few sulphides such as pyrite and chalcopyrite are associated in places with these zones (Fig. C19).

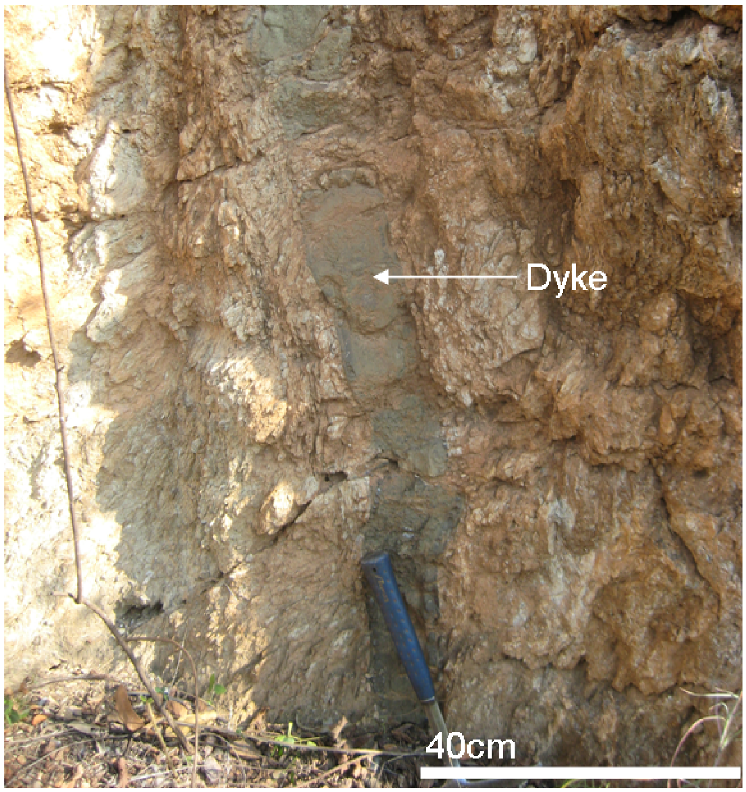


Figure C19: A dyke cross-cutting a serpentinised schist that host some of the major gold workings in the Woodstock Gold Mine.

Discrete shear fractures of mm scale are common in the mineralised zones. These shear fractures dominantly trend E-W along the zones, and mainly dip at about 60 degrees to the S, SE and SW (Table C7). Amongst other secondary mineral alteration, calcite and quartz define groves or steps on the shear planes (Fig. C20). These minerals are associated with stretching lineation, which dominantly plunges to the ESE and WNW (Table C7). Gouge marks defined by coarser materials are also common on the shear fractures. These fault planes characteristics dominantly record sinistral normal sense of movement with few exceptions of dextral reverse faulting.

Table C7: Schmidt lower hemisphere projections showing orientations of mineralised fracture planes and mineral lineations from the Woodstock Gold Mine.

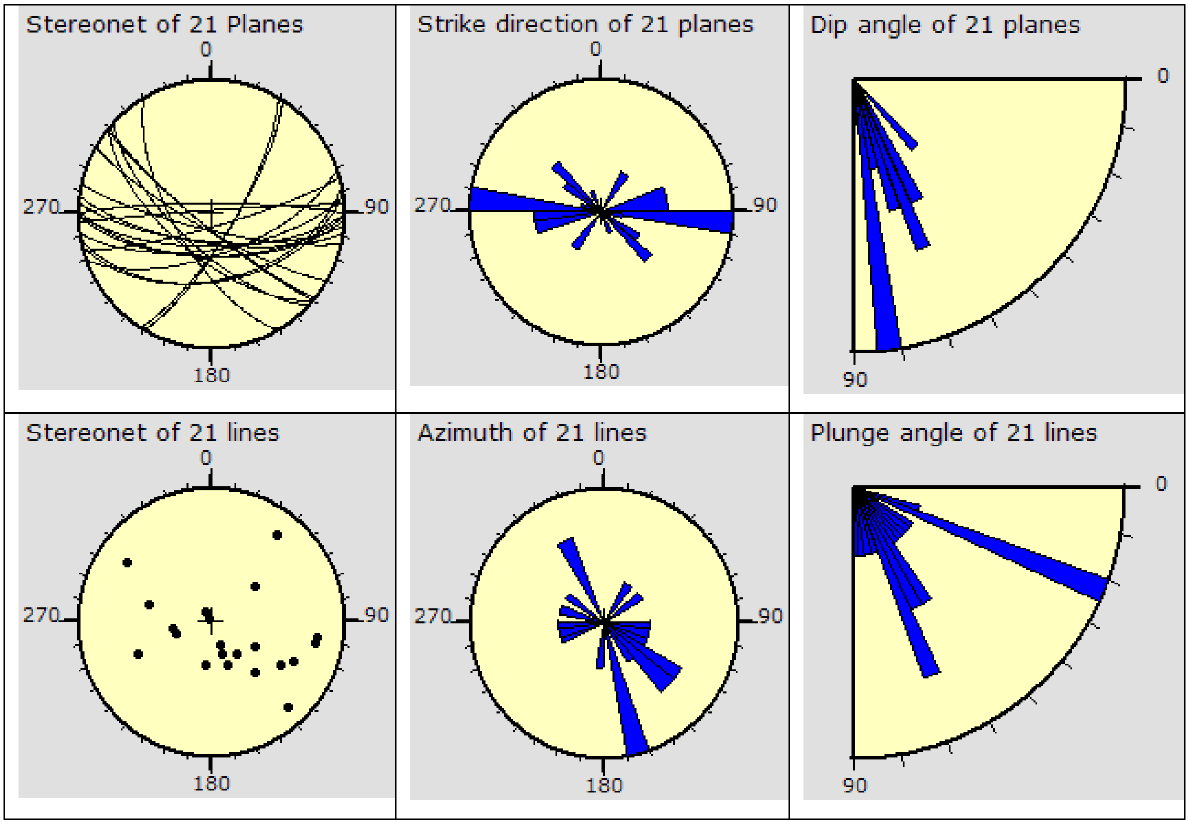


Figure C20: A typical example of a shear fracture associated with mineralisation and characterised by the striations, mineral lineation and the development of secondary mineral accretion. Striations and lineation trends are parallel to the trend of the red pointer.

C7 Albion Gold Mine

The Albion Mine is located to the north of the Kaap Valley Pluton and about 5.4 kilometres WSW of the Prince Consort Shaft (GR 302120-7160337; Figs. 2.9, 4.13). The rock units around the mine include serpentinite, chert and vein quartz. The serpentinite is green, fine- to medium-grained and sheared. Shearing is more intense towards the Albion Fault; otherwise, massive serpentinite in distal parts of the fault. Sizable S-C fabrics that are defined by bedding and cleavage show top block to the west on the Albion Fault (Fig. 4.15). Talc is the characteristic mineral of the sheared serpentinite. Quartz veining, which is characterized by its colourless to white colour, is dominant over black chert.

The gold workings in the Albion Gold Mine occur as a series of minor and major, deep and relatively narrow pits that are interconnected at deeper levels. These workings define at least two en-echelon D_{4NC} mineralised shear zones, which define a NW trending mineralised corridor, which crosscut the D_{3aNC} Albion Fault (Fig. 4.13). Each of these shear zones extends for about 100-150 meters and about a meter wide (Fig. 4.13). The zones are dominantly red-brown in colour with sulphide precipitations in places. These zones, which are represented by cataclaysite in places, are commonly associated with quartz and chert veins. On plan view, these veins mainly connect to the mineralised zones at a low angle. Quartz and chert veins can be about 0.5 meters, but generally 10 to 20 centimetres in thickness.

The mineralised zones contain discrete mm scale shear fracture planes that are parallel to the orientations of the mineralised zones. These shear fractures are in places characterised by sulphidisation, carbonatizasion and oxidation, and dipping to SE and SW at about 60 degrees (Table C8). Quartz and calcite mineral overgrowths with associated slikenlines are preserved on the shear fractures. The slikenlines associated with these steep dipping fractures plunges to the NE or NW (Table C8), showing normal sense of movement.

D_{5NC} NE and NW trending fractures, which dip shallowly to the SE and SW, crosscut the D_{4NC} mineralised zones and associated shear fractures. These crosscutting fractures are associated with carbonate and silica alteration including late-staged quartz veining. These are about 5 mm wide and contain slikensided surfaces that record reverse faulting.

Table C8: Schmidt lower hemisphere projections showing orientations of mineralised fracture planes and mineral lineations from the Albion Gold Mine.