APPENDIX 1 - SAMPLING METHODS AND ANALYTICAL TECHNIQUES

1.1 SAMPLING METHODS

SURFACE AND VACUUM DRILL SAMPLES

CRC (Composite Rock Chip)

Approximately 1kg of material, generally collected from outcrop as 10-15 chips, comprises a composite rock chip sample.

GPS equipment is used to determine reconnaissance sample locations in the absence of a local grid. Sampled sites have been marked with flagging tape and numbered aluminium permatags affixed to the outcrop or nearby tree.

LAG

Lag is any hard residual surficial material varying from a coarse sand to rock fragments.

The sample is obtained via a shallow surface scrape, sieved to obtain approximately 250g of material and collected into a plastic zip seal bag. The size of the sieved fraction, which is variable from project to project, is listed in the sample logs.

Reconnaissance spaced sample sites are not marked, however infill sample sites are flagged in the absence of a local grid. Sample type, quality, description and size is noted at the time of collection and recorded via codes outlined in Appendix 2.

The samples are submitted for multielement analysis to provide a screen for other mineralisation styles.

MMI (Mobile Metal Ions)

MMI samples are collected from approximately 15-20cm depth and screened to pass 80# (180μm). Approximately 300g is collected however only 50g is dispatched to AMDEL for analysis via proprietary leaches (Deep Leach 5 and 11).

RAB DRILLING

RAB drilling is contracted to Rockdril Contractors Pty Ltd.

All holes are plugged on completion by inserting an Octaplug approximately 1m below surface. The cavity was then back filled and mounded.

Composite Samples

RAB drillholes are typically composite sampled at 3m intervals where the geology is considered to be prospective. Depending on the program budget, the drillhole may be comprehensively sampled from surface, sampled only at particular lithologies or have been restricted to a bottom of hole sample. Drill spoil is riffle split to obtain 2kg composite samples. While this sample is customarily a 3m composite sample, the sample interval is ultimately left to the geologist's discretion. The sample intervals are clearly documented in the drillhole logs accompanying this report.

RC DRILLING

RC drilling is contracted to Rockdril Contractors Pty Ltd.

All holes are capped on completion as a temporary measure, with the hole number recorded in black paint on the plastic cap. Permanent rehabilitation is achieved by the removal of the protruding collar and insertion of a concrete plug 0.3m below ground and the cavity is back filled and mounded. The drillhole number is inscribed on a metal tag attached to a wooden peg, positioned adjacent to the plug.

Composite Samples

Drill cuttings are collected over 1m intervals and riffle split to obtain 2kg composite samples. When wet, grab samples are taken.

DIAMOND DRILLING

Diamond drilling was contracted to Rockdril Contractors Pty Ltd.

All holes are capped on completion as a temporary measure, with the hole number recorded in black paint on the plastic cap. Permanent rehabilitation is achieved by the removal of the protruding collar and insertion of a concrete plug 0.3m below ground and the cavity is back filled and mounded. The hole number is inscribed on a metal tag attached to a wooden peg, positioned adjacent to the plug.

CC (continuous cut)

half cut is typically sampled at 0.5m intervals, however this interval is adjusted where necessary to conform to lithological boundaries. The sampling intervals are clearly documented in the drillhole logs (Appendix 3). The sample is crushed on site.

Scan (scan cut)

10cm intervals of half cut core are collected every 30cm over a 3m length, providing a representative 3m composite sample. This is undertaken as a cost effective method of analysing less prospective rock units. The sample is crushed on site.

SF (screen fire assay)

uncrushed cut core is dispatched for Screen Fire assay when visible gold is observed.

F (fire assay)

uncrushed cut core from the interval bracketing the SF sample is dispatched for fire assay.

1.2 ANALYTICAL METHODOLOGY

The Company uses a range of analytical laboratories depending on the project and sample medium. While the laboratory is identified in the discussions of work undertaken, what follows are tables describing analytical techniques and relevant detection limits for the elemental determinations.

The Normandy NFM database reports a two to three character summary of the analytical method code ascribed by the laboratory. The Normandy NFM database code is listed in brackets in the tables below.

All detection limits quoted in parts per million except where otherwise indicated.

ANALABS

Analabs Method (NFM code)	Element [Detection Limit]
GA101 (101) 0.2g sample, perchloric acid digest, AAS	**As** [100] **Bi** [25] **Co Crr Ni Pb** [5] **Cu Zn** [4] **Ag** [0.05]
114* perchloric acid digest, hydride generation, AAS	**As** [1]
GA115 (115) 30g sample, aqua regia digest, AAS	**As Pb** [5] **Mo** [1] **Ni Co Cu Pb Zn** [0.5] **Ag** [0.1]
117* aqua regia/perchloric acid digest, hydride generation, AAS	**Sb** [0.5] **Se** [0.1]
192* aqua regia digest, AAS	**As** [20]
201* perchloric/hydrochloric/hydrofluoric acid digest, ICPMS	**Ag Cu** [5] **Ti** [10]
GA201 (201) 0.2g sample, aqua regia/perchloric/hydrofluoric acid digest, AAS	**Bi** [20] **Mo Se** [10] **Co Ni Pb** [5] **Cu Zn** [4] **Ag** [2]
GI201 (201) 0.2g sample, aqua regia/perchloric/hydrofluoric acid digest, ICPOES	**Ca** [50] **Mg** [20] **Cr Mo Ni Nb** [10] **Co** [5] **V** [2] **Sc Sr V** [1]
GS201 (201) 0.2g sample, aqua regia/perchloric/hydrofluoric acid digest, ICPMS	**Se** [10] **Zn** [5] **Cu** [2] **Pb** [1] **Sn** [0.5] **Co** [0.2] **Ag Bi Mo W** [0.1] **Sb** [0.01]
GS222 (222) hydrochloric/perchloric/hydrofluoric acid digestion, ICPMS	**Cu Zn Pb** [1] **Ag Bi Mo W** [0.1] **Mn Tl** [0.5] **Sb** [0.05]
GG309 (309) Fire Assay Fusion, AAS	**Au** [0.008]
GG315 (315) Screened Fire Assay (weighted average gold value is reported for a 1000g sample after pulverising and screening at 75 microns and assaying the coarse and fine fractions separately)	**Au** [0.004]
GG329 (329) 30g sample, aqua regia digest, AAS	**Au** [0.02]
333* 50g sample, Fire Assay, Lead Collection, ICP-MS	**Au** [0.001]
GS333 (333) 50g sample, Fire Assay, Lead Collection, ICP-MS	**Pd Pt** [0.5ppb]
GG334 (334) 30g sample, aqua regia digest, carbon rod	**Au** [0.001]
401* pressed powder XRF – Trace Determination	**Sb** [3] **W** [20]

*no alpha code prior to 1992

AMDEL

Amdel Method (NFM code)	Element [measurement in ppb]
IC8M (IC8) mobile metals ions partial leach, measurement by ICP-MS	*detailed below*
IC8/3 deep leach method 3 employing partial digestion techniques	**Ca K Mg Na**
IC8/5 deep leach method 5 employing partial digestion techniques	**Au As Bi Cu Pb Sb Zn**
IC8/11 deep leach method 11 employing partial digestion techniques	**Au**

AUSTRALIAN LABORATORY SERVICES (ALS)

ALS Method (NFM code)	Element [detection limit]
AA202-206 (202-206) aqua regia digest, flame AAS (in conjunction with gold PM202-206)	**As** [5]
PM205 (205) 50g aqua regia digest, solvent extraction, graphite furnace AAS	**Au** [0.001]

GENALYSIS LABORATORY SERVICES

Genalysis Method (NFM code)	Element [detection limit]
B/ETA (BE) Digestion B, Graphite Furnace Atomic Absorption Spectrometry	**Au** [1 ppb]
A/MS (AM) Digestion A, Induced Coupled Plasma Mass Spectrometry - ICP-MS	**As** [2] **Sb** [0.2] **Sn** [1] **Mo Bi Ag Cd** [0.5] **La Nb Yb W U** [0.1]
A/AAS (AA) Digestion A, Atomic Absorption Spectrometry	**Ni** [5] **Pb** [2] **Zn Sn** [1] **Fe** [0.1%]
AP/MS (AP) BP/MS (BP) Digestion A or B, precipitation and concentration, ICP-MS	**Se** [0.2]
A/OES (AO) Digestion A, Induced Coupled Plasma Light Emission Spectrometry - ICP-OES	**Fe** [0.01%] **Zr** [5] **As Ba Ni** [2] **Ca** [10]
B/AAS (BA) Digestion B, Atomic Absorption Spectrometry	**Ag** [0.1] **Cu Co Zn** [1]

Digestion A - multiacid digestion including HF
Digestion B - aqua regia digestion (nitric, perchloric and hydrochloric acids)