SNOWDEN

Final

Monument Mining Ltd: Buffalo Reef Gold Deposit, Malaysia,
NI43-101 Technical Report
Project No. 2015

Mineral Resource Estimate
May 2011

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Tables

Figures

Appendices

1 Summary

Snowden Mining Industry Consultants Pty Ltd ("Snowden") was engaged by Monument Mining Ltd ("Monument") to generate a Mineral Resource estimate for the Buffalo Reef gold deposit, located to the north of the Selinsing Gold Mine, within the Pahang State of Malaysia. This Technical Report has been prepared in accordance with the requirements of Form 43-101F1.

The dominant rock types within the Buffalo Reef area are Permian argllites and limestones, which are cross-cut by later granitic to intermediate intrusives. Gold mineralisation is structurally controlled within a 200 m wide shear zone that sub-parallels the regional scale Raub-Bentong suture to the west. Gold occurs within veins and is typically associated with pyrite, arsenopyrite and stibnite.

Preliminary metallurgical studies conducted prior to Monument's acquisition of the project, suggest that reasonable recoveries of gold can be obtained within the oxide mineralisation with direct cyanidation. However the sulphide mineralisation at Buffalo Reef is classified as refractory to direct cyanidation procedures. Preliminary metallurgical studies completed by Monument in 2011 have shown promising results using roasting or bioleaching to pre-treat material from the Buffalo Reef sulphide zones.

Three dimensional (3D) resource modelling methods and parameters were adopted in accordance with best practice principles accepted in Canada. A geological volume model was created from the drillhole logs and assay data. Statistical and grade continuity analyses were completed in order to characterize the mineralisation and were subsequently used to develop grade interpolation parameters.

Datamine software was used for generating the 3D block model and subsequent grade estimates. Ordinary block kriging was used to estimate gold grades into the block model. Default bulk density values were assigned based on previous estimates and are, in the author's opinion, appropriate for the mineralisation style. At this stage, no bulk density testwork has been completed with which to validate the assigned values.

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 above a grade cut-off that reflects the likely cut-off for mining. Snowden has made no allowance for historic mining at Buffalo Reef in the resource estimate, however any historic mining is estimated to be minor and unlikely to have a material impact on the resource tonnage or grade.

At a block cut-off grade of 0.5 g/t Au, the currently defined Buffalo Reef Indicated Mineral Resource is 2.30 million tonnes grading 2.24 g/t Au for a total of 165,500 ounces of Au. At the same Au block cut-off grade, the currently defined Inferred Mineral Resource is 1.36 million tonnes grading 1.31 g/t Au for a total of 57,300 ounces of Au. The Mineral Resource is summarised in Table 1.1.

Snowden considers that this resource estimate is appropriate for use in a Scoping Study or a Pre-Feasibility Study or a Preliminary Assessment.

Table 1.1 Buffalo Reef Mineral Resource report, as at December 2010, reported above a 0.5 g/t Au cut-off grade

Classification	Oxidation state	Zone	Tonnes kt	Au g/t	Au Oz
Indicated	Oxide	South	272	2.35	20,500
		Central	32	1.62	1,700
		North	159	1.57	8,000
	Sulphide	South	1,298	2.66	111,300
		Central	246	1.36	10,700
		North	291	1.42	13,300
	Total (Indicated)		**2,298**	**2.24**	**165,500**
Inferred	Oxide	South	125	1.23	4,900
		Central	52	1.44	2,400
		North	26	2.79	2,400
	Sulphide	South	411	1.36	17,900
		Central	548	1.07	18,800
		North	201	1.69	10,900
	Total (Inferred)		**1,363**	**1.31**	**57,300**
Grand Total (Indicated + Inferred)			**3,661**	**1.89**	**222,800**

2 Introduction and Terms of Reference

Snowden Mining Industry Consultants Pty Ltd ("Snowden") was engaged by Monument Mining Ltd ("Monument") to estimate the Mineral Resources at the Buffalo Reef gold deposit, located 2 km to the north of the Selinsing Gold Mine, within the Pahang State of Malaysia. This Technical Report has been prepared in accordance with the requirements of Form 43-101F1.

Mr. Jean-Pierre Graindorge, an employee of Snowden, served as the independent Qualified Person responsible for preparing this Technical Report.

Jean-Pierre Graindorge visited the Selinsing area, which includes the Buffalo Reef deposit, between the 4th and 6th of August 2010. The author observed the general geology of the area, including mineralisation and mining activities within the Selinsing open-pit, which occurs approximately 2 km to the south of Buffalo Reef along the same structural trend.

Snowden gives Monument permission to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities law, any other use of this report by any third party is at that party's sole risk.

The results and opinions expressed in this report are based on the author's field observations and assessment of the technical data supplied by Monument. Snowden has carefully reviewed all of the information provided by Monument and believe it is reliable from the checks made.

Unless otherwise stated, information and data contained in this report or used in its preparation has been provided by Monument. This Technical Report has been compiled by Mr Jean-Pierre Graindorge, Senior Consultant Snowden and Mr Frank Wright, P.Eng., Principal of F. Wright Consulting Inc. The responsibilities of each author are provided in Table 2.1.

Table 2.1 Responsibilities of each co-author

Author	Responsible for section/s
Jean-Pierre Graindorge	1: Summary; 2: Introduction; 3: Reliance on other experts; 4: Property description and location; 5: Accessibility, climate, local resources, infrastructure, and physiography, 6: History; 7: Geological setting; 8: Deposit types; 9: Mineralisation; 10: Exploration; 11: Drilling; 12: Sampling method and approach; 13: Sample preparation, analyses, and security; 14: Data verification, 15: Adjacent properties, 17: Mineral Resource and Mineral Reserve Estimates, 18: Other relevant data and information; 19: Interpretation and conclusions; 20: Recommendations
Frank Wright	1: Summary; 16: Mineral processing and metallurgical testing; 20: Recommendations

The coordinate system used for the Buffalo Reef mineral resource is a local mine grid, which was originally set-up by Avocet Mining PLC ("Avocet"). The conversion between the local mine grid and UTM coordinates (WGS84 Zone 47) is outlined in Table 2.2.

Table 2.2 Local grid to UTM grid coordinate conversion (after Cavey & Gunning, 2007)

Point	Local Grid		UTM	
	Easting	Northing	Easting	Northing
1	21194.410	51900.309	809891.521	473698.159
2	18735.326	50176.195	807567.935	472090.193

All measurement units used in this document are metric unless stated otherwise.

3 Reliance on Other Experts

The author has not reviewed the land tenure situation and has not independently verified the legal status or ownership of the properties or any agreements that pertain to the Buffalo Reef area.

Otherwise no reliance on other experts who are not qualified persons was made in the preparation of this report.

4 Property Description and Location

The Buffalo Reef gold deposit is located in the Pahang State of Malaysia (Figure 4.1), approximately 30 km west-northwest of the town of Kuala Lipis and 2 km north of the Selinsing Gold Mine, which is run by Monument (Figure 4.2).

Figure 4.1 Location of Buffalo Reef gold deposit (modified from GoogleEarth)

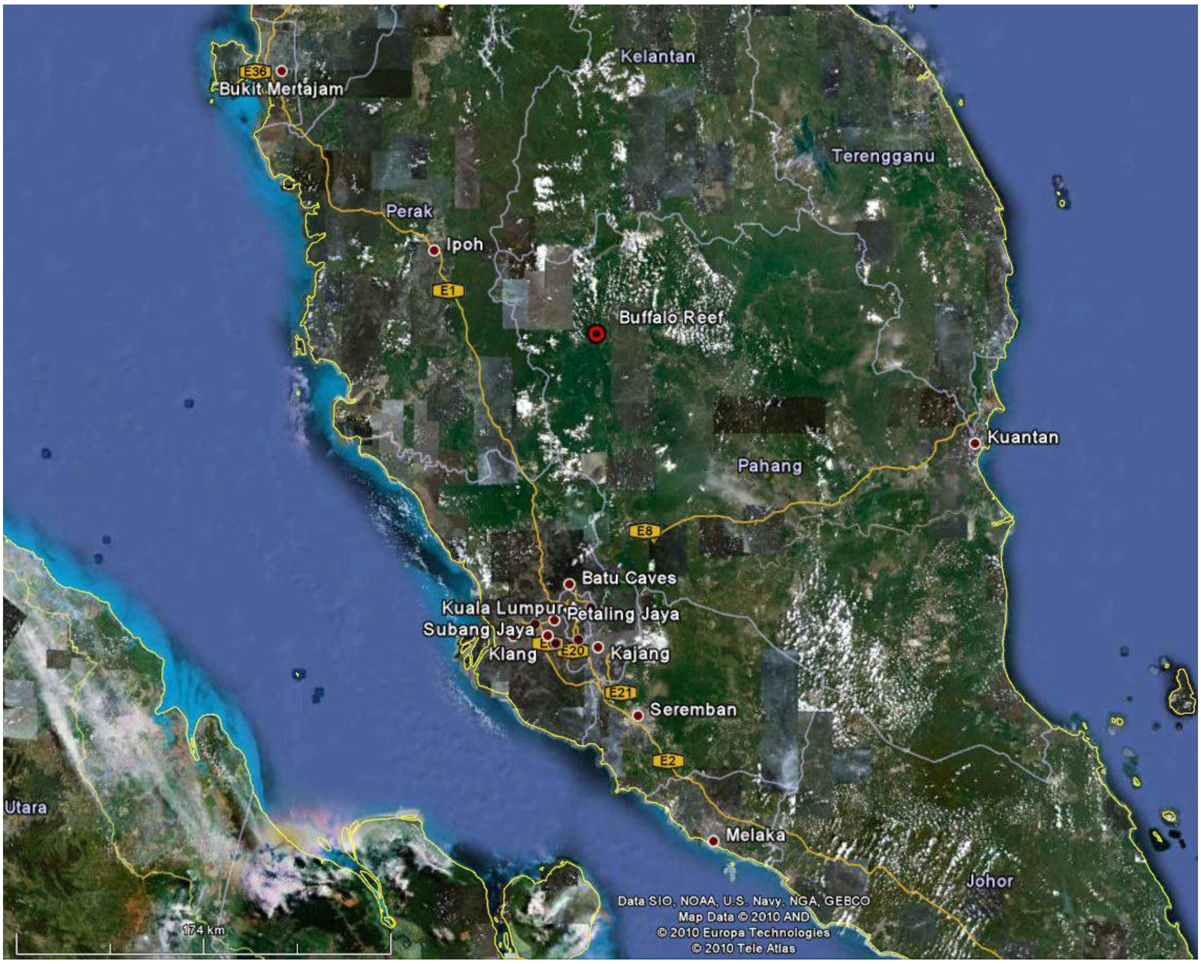
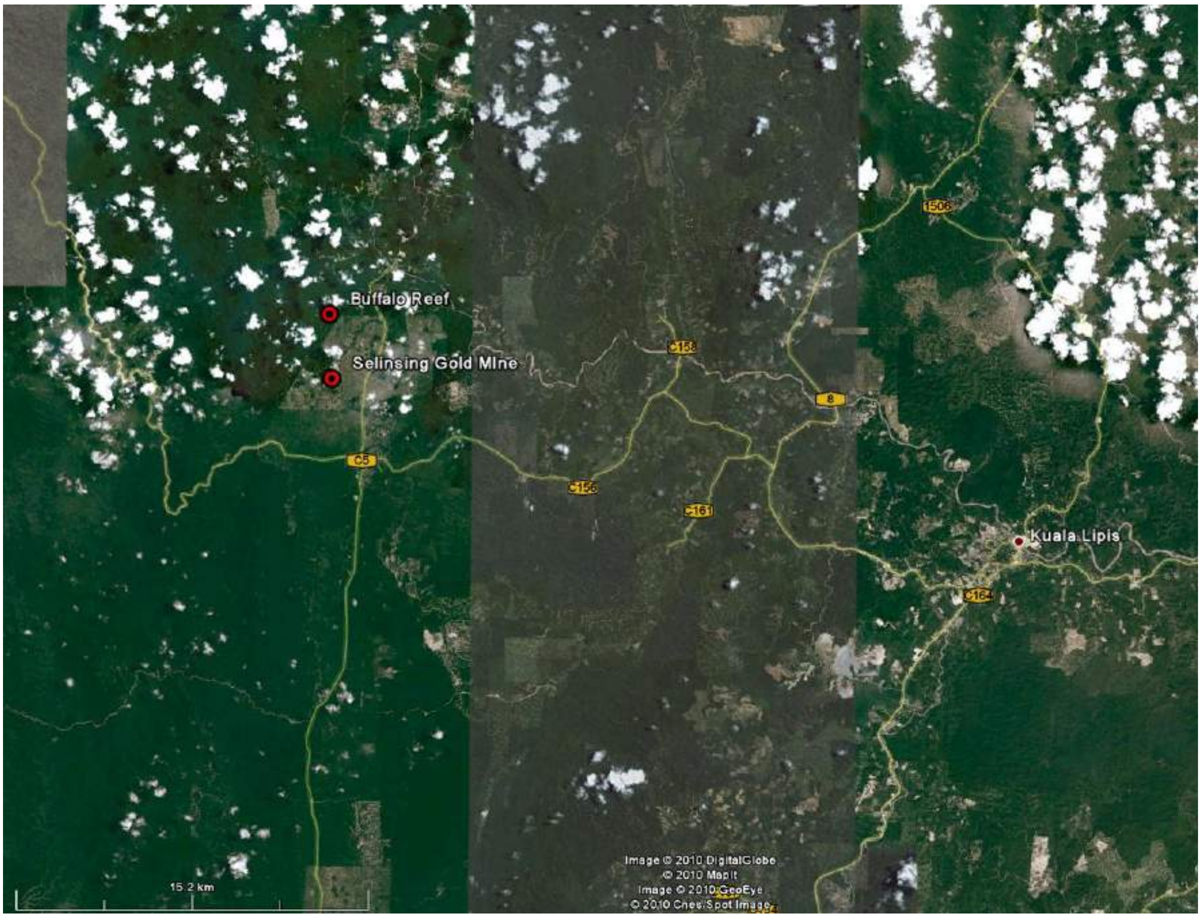


Figure 4.2 Location of Buffalo Reef gold deposit in relation to Selinsing Gold Mine (modified from GoogleEarth)

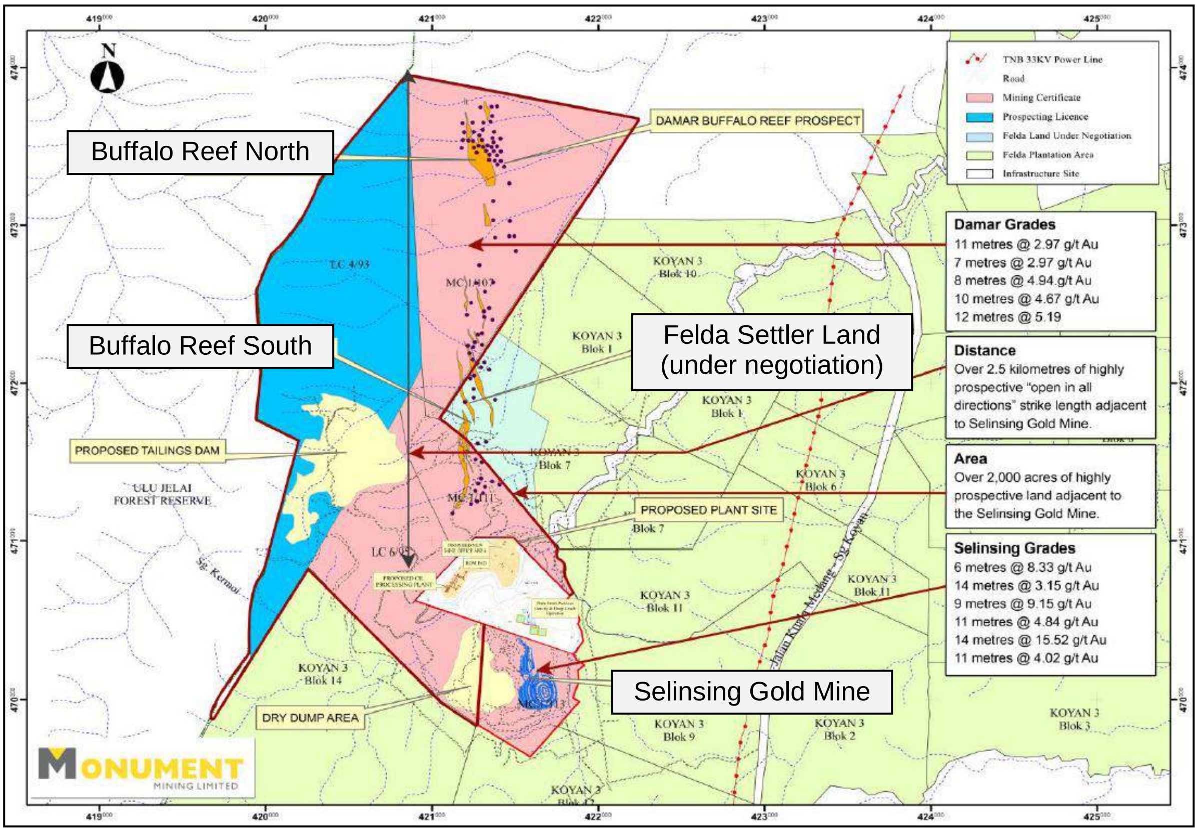


The Buffalo Reef deposit is covered by Mining Certificate MC 1/107 in the north and MC 1/111 in the south (Figure 4.3), both of which were acquired from Avocet by Monument in 2007. A wedge of land between these two Mining Certificates is Felda Settler land (pale blue area in Figure 4.3). Snowden understands that Monument is currently negotiating with the local land holders to obtain access for further exploration activities.

The author has not reviewed the land tenure situation and has not independently verified the legal status or ownership of the properties or any agreements that pertain to the Buffalo Reef deposit.

Figure 4.3 Buffalo Reef tenement location map

(blue = prospecting license; pink = Mining certificate; pale blue = Felda settler land; modified from Monument corporate presentation[1])



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[1] *http://www.monumentmining.com/userfiles/file/PowerpointNovember2010PDF.pdf, accessed 15th December 2010.*

5 Accessibility, climate, local resources, infrastructure and physiography

5.1 Accessibility and infrastructure

The Buffalo Reef deposit is primarily accessed via unsealed tracks from the Selinsing Gold Mine, which can be accessed via the sealed highway number C5. Alternative access tracks (unsealed) off the highway C5, access the northern parts of Buffalo Reef.

A major power line, running roughly north-south occurs approximately 1 km to the east of the Buffalo Reef deposit.

The nearby Selinsing Gold Mine (owned by Monument) comprises a 400,000 tpa carbon-in-leach processing plant and associated infrastructure, including office facilities, laboratory (used for grade control samples) and worker accommodation.

5.2 Climate and physiography

The central Malaysian peninsula has a tropical climate, with the annual temperature ranging between 23° C and 36° C. Annual rainfall averages approximately 230 cm per annum. Peak rainfall periods are September through to December and March through to May.

The Buffalo Reef area ranges in elevation from approximately 100 m to 200 m above sea level, with an average of approximately 120 m above sea level. The surrounding area has relatively moderate to gentle relief.

The southern portion of the Buffalo Reef deposit is situated within palm oil plantations, with secondary jungle occurring in the northern portions of the deposit. Prior to clearing of any plantation trees (e.g. to establish drill sites), agreement with the local land holders, and possibly compensation, would be required.

6 History

6.1 Ownership history

The Buffalo Reef deposit was acquired by Monument in July 2007 through its acquisition of Damar Consolidated Exploration Sdn Bhd ("Damar"), a wholly owned subsidiary of Avocet (Cavey & Gunning, 2007). Damar (and Avocet) owned the project from 1993 through to 2007, when initial exploration commenced.

6.2 Historical mining

Small scale mining at Buffalo Reef dates back to the early 1900s although details from this period are not reported. According to Naidu (2005), underground workings at Buffalo Reef were most actively developed in 1934 by a British company, who completed approximately 1,000 m of underground development, including adits, drifts, crosscuts, winzes and shafts. Snowden notes that production details, in terms of tonnes extracted and/or processed and the amount of metal produced, are not available although it is assumed to be relatively small.

Additionally, fossicking for antimony in the 1970s occurred at Buffalo Reef (Naidu, 2005). The amount of material removed is assumed to be very small. Antimony occurs at Buffalo Reef in the form of stibnite, which occurs in the gold bearing veins.

6.3 Historical estimates

Avocet defined a historical estimate at the Buffalo Reef deposit in October 2006 of 2.5 Mt grading at 2.26 g/t Au, for a total of 185,300 oz of contained gold (Potter, 2006). The resource was completed by Avocet personnel and was classified as a combination of Indicated and Inferred Resources based on the guidelines of the 2004 JORC Code. This historical estimate was estimated using inverse distance weighting (raised to a power of 2) as, according to Potter (2006), no variography was possible. Top-cutting of the drillhole grades to reduce the influence of outliers was not deemed necessary and this assumption was confirmed by a sensitivity analysis. Bulk density values of 2.6 t/m^3, 2.2 t/m^3 and 1.8 t/m^3 were applied to fresh, transitional and oxide material respectively for tonnage calculations.

This historical estimate is not considered a Mineral Resource or Mineral Reserve as defined under sections 1.2 and 1.3 of NI 43-101.

7 Geological setting

7.1 Regional geology

The regional setting of the Buffalo Reef deposit area is detailed in Yeap (1993).

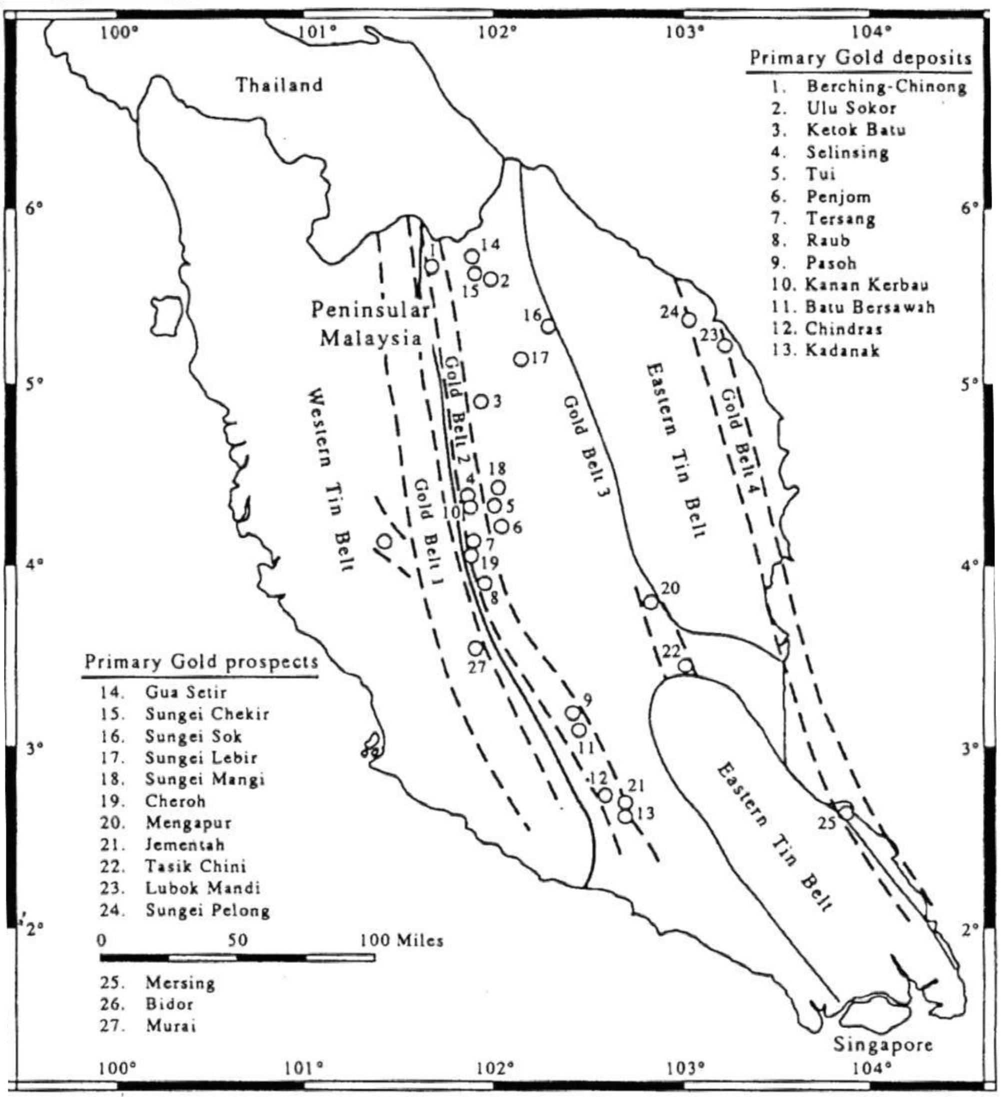
Peninsular Malaysia can be divided into two main regional blocks separated by the Raub-Bentong Line which is a major suture zone. This fault zone divides the Sibumasu Block (Western Block) in the west from the Manabor Block (Eastern Block) in the east (Yeap, 1993). By the late Carboniferous, the Western Block was attached to a continent, possibly Gondwana, and the eastern margin of this was occupied by a shelf which quickly gave way to open ocean.

By the Late Carboniferous to Early Permian, westward subduction of oceanic lithosphere beneath the Western Block, close to the Raub-Bentong suture, was initiated. Riding on this oceanic lithosphere were many continental fragments which were accreted onto the Eastern Block to form the Timur and Tengarra Foreign Terranes. This subduction led to the granitic intrusion that now makes up the Western Tin Belt.

Subduction ceased temporarily and the subduction zone shifted to the east. By the Early Triassic, subduction was reinitiated along a new zone to the east of the earlier zone. With time, gold-bearing fluids are believed to have been released as oceanic lithosphere was subducted beneath the newly accreted wedges of shelf carbonates and marine sediments. These fluids migrated upwards along large regional fractures cutting the sediments that were newly accreted onto the eastern margins of the Western Block and deposited the gold deposits which constitute Yeap's "Gold Belt 2". Yeap's gold belt 2 or the Berching-Raub-Bersawah Gold Belt (Figure 7.1) is the best defined of the four gold belts. The gold mineralisation typically takes the form of veins, reefs and lodes striking from 345° to 360° in moderately to strongly metamorphosed sediments.

In terms of historical gold production this belt is the most significant as the Raub Australian Gold Mine produced an estimated one million troy ounces of gold bullion between 1889 and the 1960s. Yeap (1993) gives details of the primary gold occurrences within this belt.

Figure 7.1 Peninsular Malaya mineral occurrences (from Yeap, 1993)

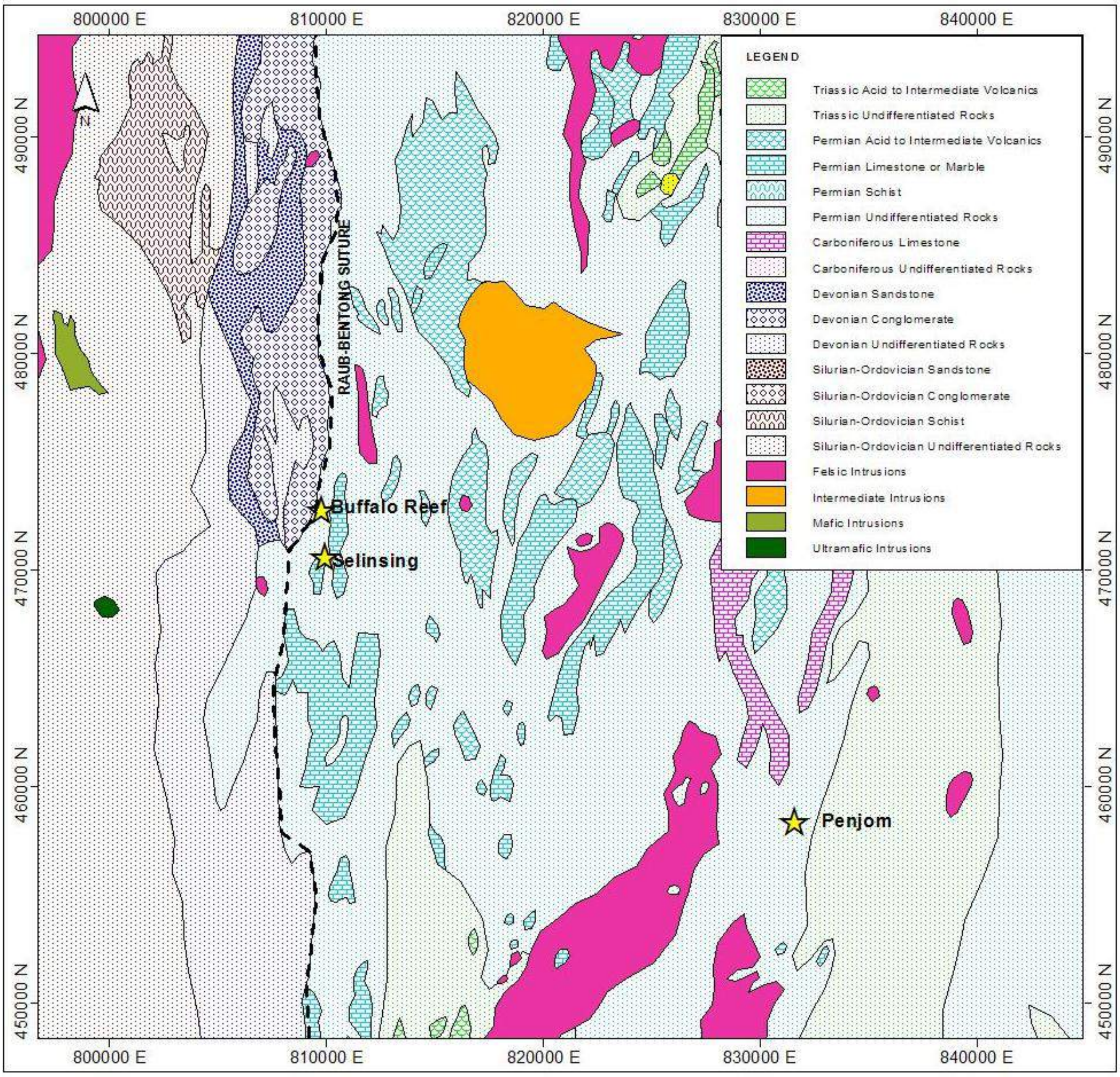


7.2 Property geology

The Buffalo Reef deposit occurs approximately 1 km to the east of the Raub-Bentong suture. The area is dominated by argillite and limestone of Permian age to the east, with conglomerates and sandstones of Devonian age to the west (Figure 7.2). Low-grade regional metamorphism up to Greenschist facies (locally up to Amphibolite facies) occurs throughout the area (Naidu, 2005). The sediments have subsequently been intruded by granitic bodies of approximately Jurassic age. These intrusive bodies occur to the east of Buffalo Reef and generally form elevation highs.

The dominant structural feature present is a 200 m wide, north-south striking shear zone, with an apparent sinistral sense of displacement, which parallels the tectonic Raub-Bentong suture to the west. The shear zone is composed of graphitic shale with minor interbedded fine-grained sandstone and tuffaceous rock (Naidu, 2005). Bedding within the sediments typically dips 65-75° to the east and strikes towards a bearing of 330° to 360° (Flindell et al., 2003).

Figure 7.2 Geology of the Buffalo Reef area (modified from Naidu, 2005)



8 Deposit type

The Buffalo Reef gold deposit is thought to be a mesothermal lode gold deposit, with auriferous quartz-pyrite-arsenopyrite±stibnite veining with associated hydrothermal alteration. The deposit is structurally controlled and thought to be similar in style to the Selinsing gold mine, which occurs 2 km to the south and is along-strike from the Buffalo Reef deposit.

9 Mineralisation

Gold mineralisation at Buffalo Reef is structurally controlled and associated with Permian sediments within a 200 m wide shear zone that parallels the north-south trending Raub-Bentong suture. Mineralisation occurs over a total strike length of 2.6 km. Rocks within the Buffalo Reef shear zone have typically undergone silica-sericite-pyrite alteration to varying degrees (Flindell et al., 2003).

The gold occurs within moderately to steeply east-dipping veins and fracture zones, which range in thickness from 1 m up to 15 m in thickness (average thickness is approximately 10 m in the main mineralised veins), although local flexures in the veins can host mineralisation up to 25 m in thickness. Veins, which are boudinaged in some areas, are generally composed of massive quartz with 1-5% (by volume) sulphide minerals, namely pyrite and arsenopyrite, along with varying amounts of stibnite. The stibnite generally occurs in association with elevated gold grades; however the presence of gold does not necessarily indicate high stibnite levels (i.e. the stibnite tends to be associated with gold, rather than the gold being associated with stibnite).

10 Exploration

10.1 Exploration history

10.1.1 Pre-2007 (Damar and Avocet)

Initial exploration was conducted by Damar and Avocet. This initial exploration at the Buffalo Reef deposit consisted of regional mapping along with rock chip/float sampling and soil sampling and began in 1993.

Damar and Avocet excavated some 139 trenches at Buffalo Reef between 1993 and 2003, totalling approximately 6,800 m (Flindell et al., 2003), however the majority of this data was either not recorded or the data has since been lost.

Between 1994 and 1995, Damar drilled 74 reverse circulation (RC) and 4 diamond drillholes at Buffalo Reef.

In 1999, a VLF-EM (very low frequency – electromagnetic) geophysical survey was conducted at Buffalo Reef over an area measuring 1 km wide by 2.8 km long. The results of the survey concluded that the technique was not able to map the quartz veins and gold mineralisation, although it was useful for mapping the geological fabric (Flindell et al., 2003).

Snowden notes that no systematic recording of the exploration data (especially trench sampling) occurred until 2002 (Flindell et al., 2003), when Avocet combined the available data into an exploration database. As such some of the exploration data has been lost.

10.1.2 Post-2007 to December 2010 (Monument)

Since acquiring the Buffalo Reef deposit in 2007, Monument has completed 165 RC drillholes for a total of approximately 11,880 m of drilling (as at the end of November 2010).

10.2 Future exploration strategy

Given the advanced state of exploration at the Buffalo Reef deposit, future activities will focus on infill drilling to increase the level of confidence in the geological interpretation and resource estimation. To facilitate this, Monument is negotiating with local land holders in order to gain access to the Felda settler land for further resource definition drilling.

Additionally, diamond core drilling will be required to provide material for bulk density measurement and metallurgical testwork, along with geotechnical data.

11 Drilling

As at the end of November 2010, approximately 23,417 m of drilling has been completed at Buffalo Reef (Table 11.1).

Table 11.1 Summary of Buffalo Reef drilling to end of November 2010

Type	Number of holes	Meters drilled
Damar / Avocet (1993 to 2007)		
Diamond	10	985
RC	148	10,552
Sub-total	**158**	**11,537**
Monument (2007 to Nov 2010)		
Diamond	-	-
RC	165	11,880
Grand Total	**323**	**23,417**

Snowden notes that information relating to the drilling completed by Damar and Avocet between 1993 and 2007 is poorly recorded.

11.1 Collar surveying

Avocet identified errors in the early drillhole collar surveys (prior to 1996) which were resurveyed, however not all drillhole collars were able to be located for resurveying (Flindell et al., 2003). Moreover the relative accuracy of the collar surveys is not recorded and Snowden is unable to comment on the quality of the Damar-Avocet drillhole collar coordinates.

For the Monument drilling, drillhole collars were surveyed using a Total Station Topcon GTS 303 (Harun, 2011). A numbered steel peg was placed at each drillhole collar.

11.2 Downhole surveying

No downhole surveys were conducted for the Damar, Avocet or Monument RC drilling.

Damar (2002) mentions that all diamond drillholes were surveyed downhole after the end of hole had been reached. Downhole survey measurements were taken at depth intervals of either 30 m or 50 m. Snowden notes that the downhole surveying methodology for the diamond drillholes is not stated and as such cannot comment on the accuracy of the measurement technique.

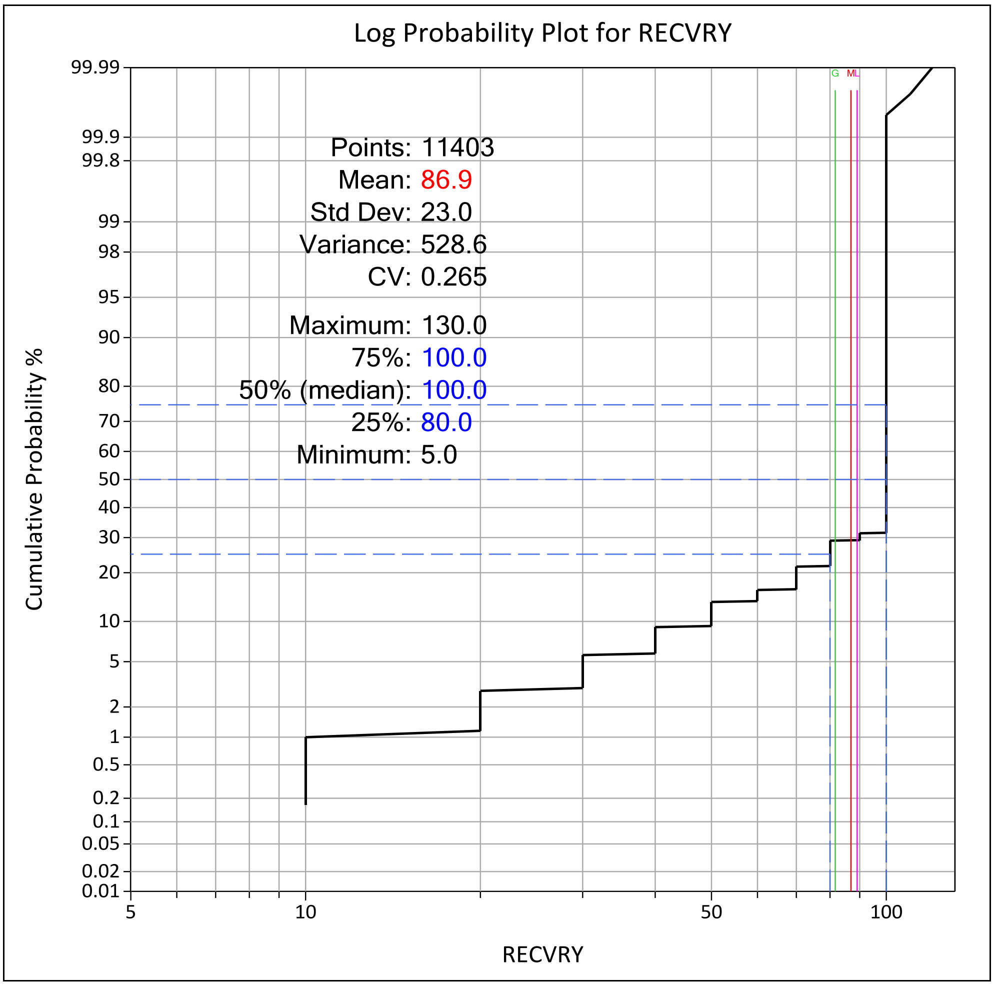
In the author's experience, inclined drillholes will typically lift (i.e. the dip shallows) as they are drilled. Snowden recommends that downhole surveys are conducted at regular depths for any future drilling to ascertain the amount of deviation of the drillhole. Moreover, it is recommended that some holes are surveyed using techniques which are unaffected by magnetism from the surrounding rocks (e.g. gyroscopic or optical techniques) to ascertain if there is any magnetic interference.

11.3 Sample recovery

Sample recovery information has not been recorded for the Buffalo Reef drilling completed by Damar or Avocet and as such, Snowden is unable to comment on the sample recovery. However, Lauricella (2002) mentions that the drilling encountered wet ground conditions below the water table at approximately 60 m downhole depth which may have resulted in sub-optimal sample recoveries.

Sample recovery for the RC drilling completed by Monument averages approximately 87%, with approximately 70% of intervals recording a sample recovery of 100% (Figure 11.1). Snowden notes that the sample recovery within the mineralised envelopes is similar to that of the surrounding host material, indicating that the mineralised structures have no material impact on the sample recovery. In Snowden's opinion the sample recovery from the RC drilling completed by Monument is reasonable.

Figure 11.1 Log probability plot of ample recovery for Monument RC drilling



12 Sampling method and approach

12.1 Diamond Drilling

Damar (2002) indicates that diamond drilling at Buffalo Reef was HQ diameter (63.5 mm core diameter) triple tube drilling. The diamond core was placed in wooden core boxes and, after geological logging, the core was cut in half using a diamond saw. One half of the core was then placed in numbered sample bags which were subsequently submitted to the assay laboratory in batches. Sample intervals were based on the lithological contacts with a minimum sample length of 0.8 m and a maximum length of 2.0 m (Damar, 2002).

12.2 RC drilling

RC drilling completed by Damar utilised a 4 ½ inch face sampling drill bit (Damar, 2002). Cuttings were collected from the cyclone at 1 m intervals and passed through a "standard riffle splitter" which collected a sample of approximately 2 kg (Damar, 2002). Damar (2002) note that where wet samples were encountered the sample was left to settle and then split "manually". Snowden notes that the amount of wet samples is not recorded for the Damar drilling.

The RC drilling conducted by Monument between October 2007 and September 2008, was primarily drilled using a Monument owned drill rig using a 4 ½ inch face sampling drill bit (Harun, 2011). The drill rig utilises a 350 psi compressor, with an additional 650 psi booster compressor available. The drillhole was flushed with compressed air at the end of each rod run (i.e. every 6 m). Drill cuttings were collected at 1 m intervals downhole via a cyclone in marked plastic sample bags. Bulk samples were subsequently split using a tiered riffle splitter to obtain a 25% split which was collected in a calico sample bag. The reject was retained in the plastic sample bags and stored at the drill site. For wet or damp samples, the sample was dried in an oven at the Selinsing mine laboratory for approximately 6-10 hours. Once dry, the samples were split using a tiered riffle splitter to obtain a 25% split which was collected in a calico sample bag.

For the Monument RC drilling, within the mineralised zones, approximately 13% of samples were recorded as being damp or wet, with the remaining 87% recorded as dry samples.

13 Sample preparation, analysis and security

13.1 Sample preparation and analysis

RC and trench samples collected by Damar were initially analysed for gold at an onsite laboratory facility which determined the gold concentration by titration, following aqua regia digestion of a 20 g sub-sample ground to 150 µm (100 mesh) (Flindell et al., 2003). Flindell et al (2003) notes that this technique is prone to errors and inaccuracy due to the coarseness of the gold, the association of the gold with sulphides (refractory nature) and encapsulation within quartz grains. These factors typically results in an underestimation of the gold concentration in the sample. Damar subsequently re-assayed some 528 RC samples by fire assay at the MMC laboratory in Kuala Lumpur and Analabs in Kuching. Flindell et al (2003) suggests that any titration assays remaining in the drillhole database are limited to trench samples only.

All samples collected by Avocet were analysed for gold by fire assay at either the Penjom mine site laboratory or at Analabs in Kuching (Flindell et al, 2003). Snowden notes that the laboratory used is not detailed in the drillhole database and therefore a comparison cannot be made between the two laboratories.

Samples collected during the October 2007 to September 2008 Monument drilling campaigns were submitted to the Ultra Trace Pty Ltd ("Ultra Trace") laboratory in Perth, Western Australia, for sample preparation and assaying (Harun, 2011). The samples, which weighed up to 5 kg, were dried and pulverised to a nominal 95% passing 75 µm. Silica sand was used by Ultra Trace between sample batches to clean pulverisers. The samples were fused using fire assaying techniques followed by a four acid digest, consisting of hydrochloric acid, hydrofluoric acid, nitric acid and perchloric acid. The gold concentration was determined by inductively coupled plasma optical emission spectroscopy (ICPOES), while arsenic and antimony were determined by inductively coupled plasma mass spectroscopy (ICPMS).

13.2 Security measures

The author cannot comment on security measures employed with the samples dispatched by Damar, Avocet or Monument due to the historical nature of the sampling and assaying. However, the author has no reason to suspect that industry standard protocols and procedures were not followed.

13.3 Quality control measures

A systematic or independent QAQC programme was not applied during the Damar and Avocet drilling and sampling campaigns.

For the RC drilling after 2007 (all MBRRC series drillholes), Monument included commercial reference materials and field duplicates in the sample batches as part of their QAQC protocols.

13.3.1 Standards

Standards were included in the sample batches by Monument at a rate of approximately 1:10. The standards were sourced from Geostats Pty Ltd ("Geostats") and range in gold content from 0.52 g/t Au up to 21.57 g/t Au. The standards used were G905-5, G300-10, G302-2, G905-10 and G306-4. Control charts for each standard are presented in Figure 13.1 to Figure 13.5. The control charts show that good accuracy was achieved in the laboratory assaying and that no significant analytical bias is present.

Additionally, a blank reference material was used (Geostats standard GL902-1) to monitor contamination during assaying. The blank standard shows that no systematic contamination is occurring in the assaying process (Figure 13.6).

Figure 13.1 Standard control chart – G300-10

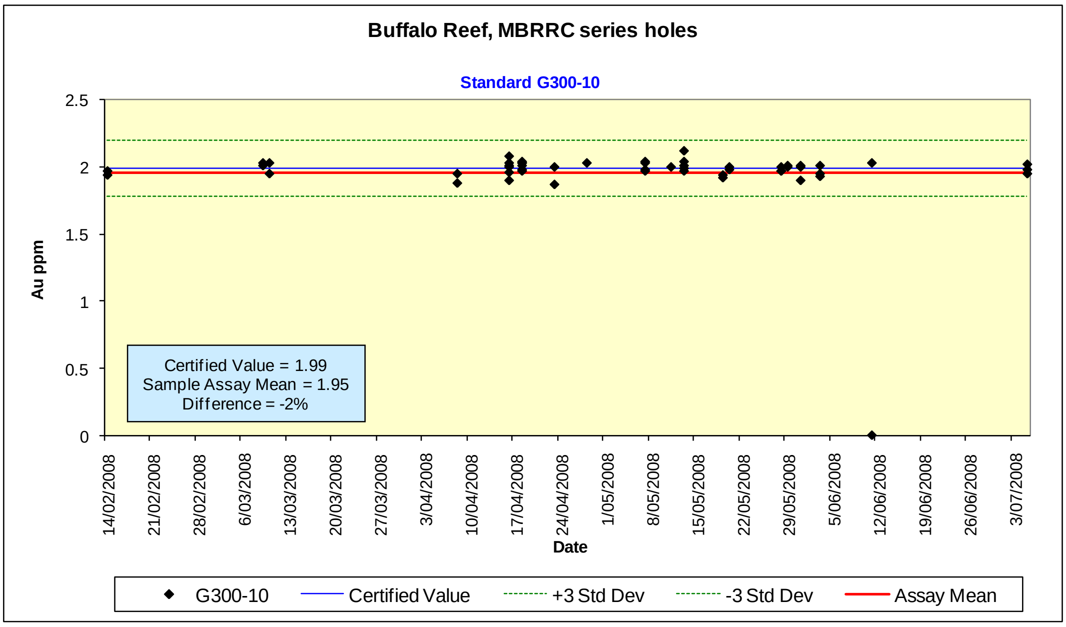


Figure 13.2 Standard control chart – G302-2

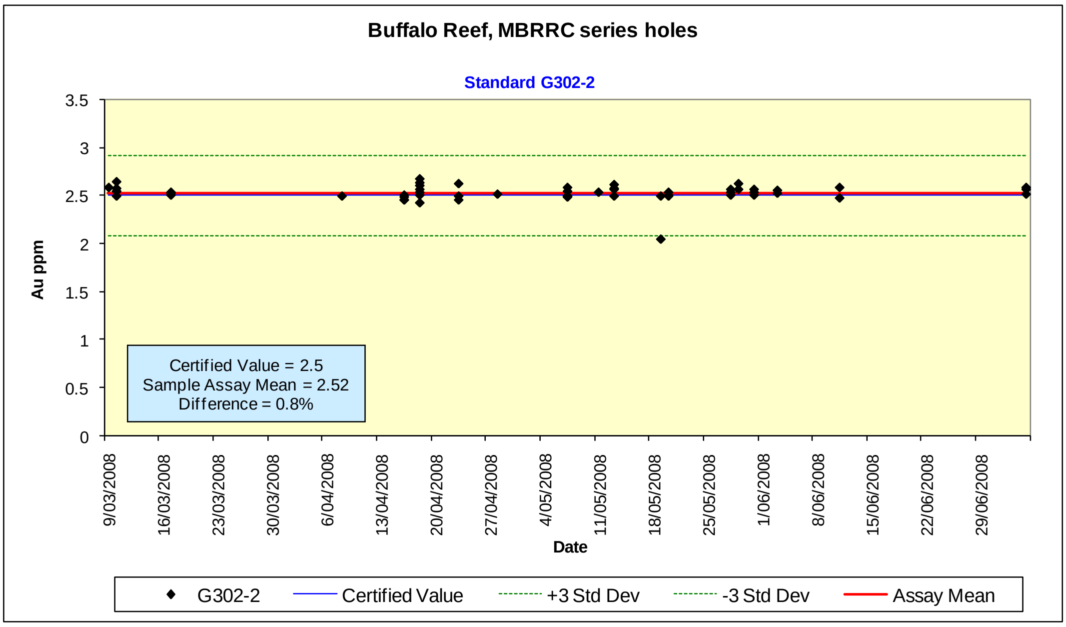


Figure 13.3 Standard control chart – G306-4

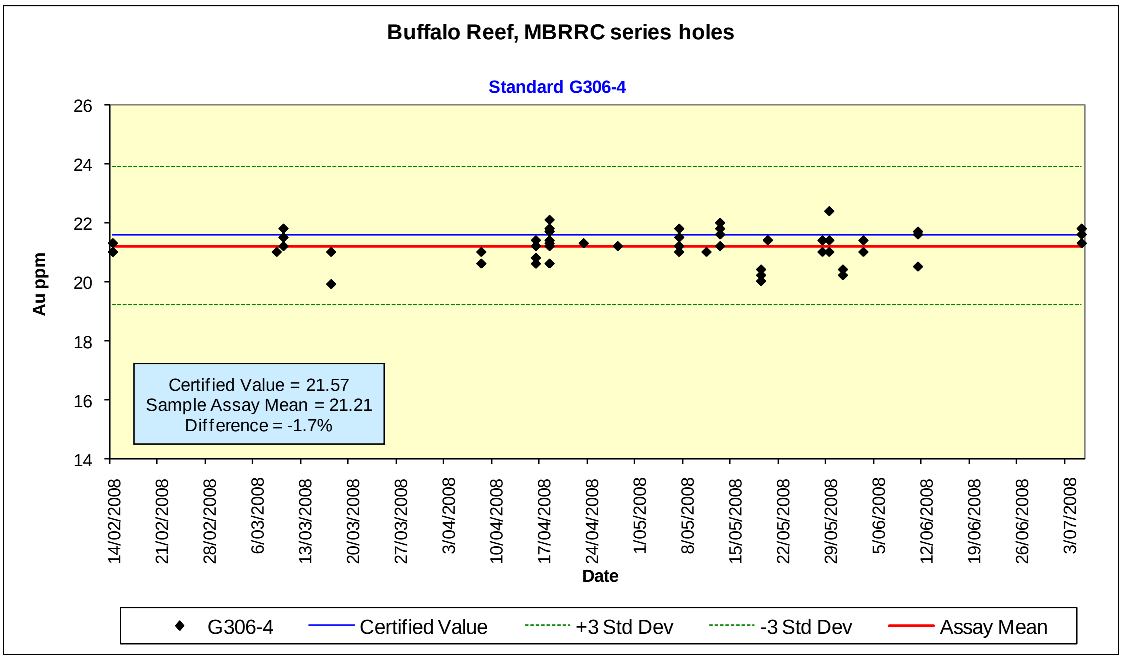


Figure 13.4 Standard control chart – G905-10

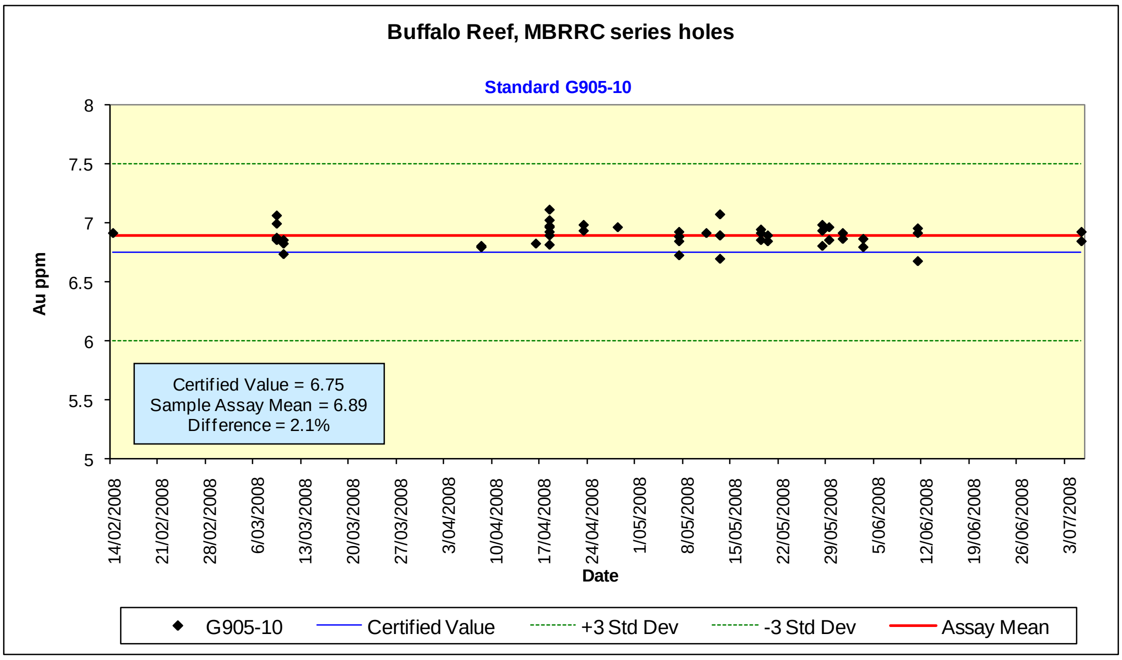


Figure 13.5 Standard control chart – G905-5

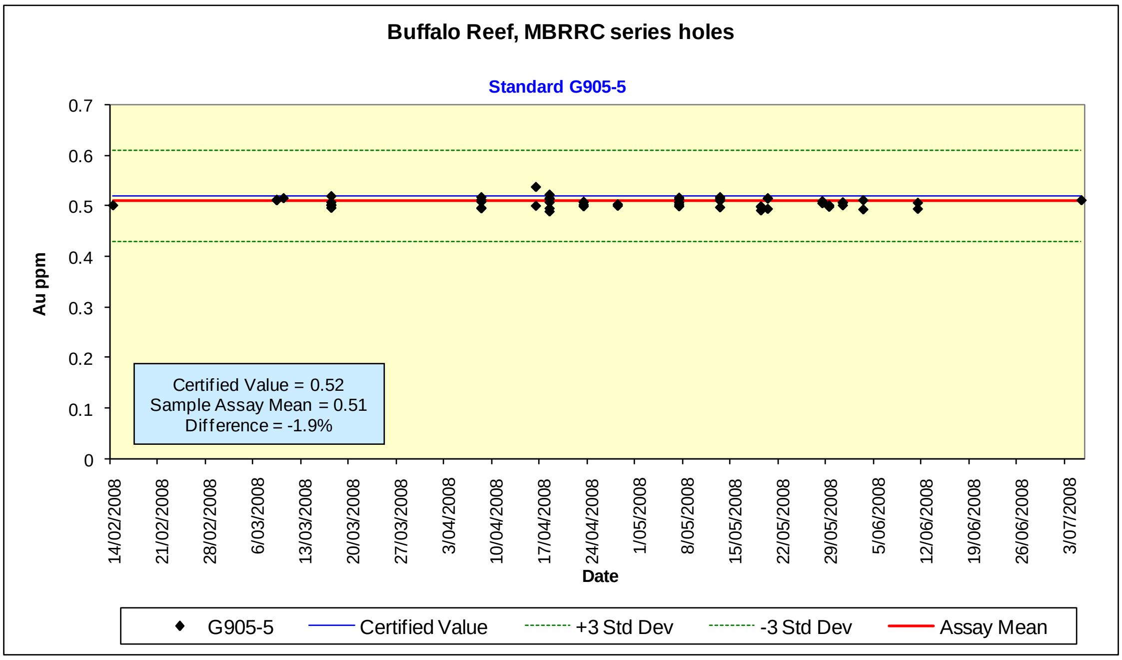
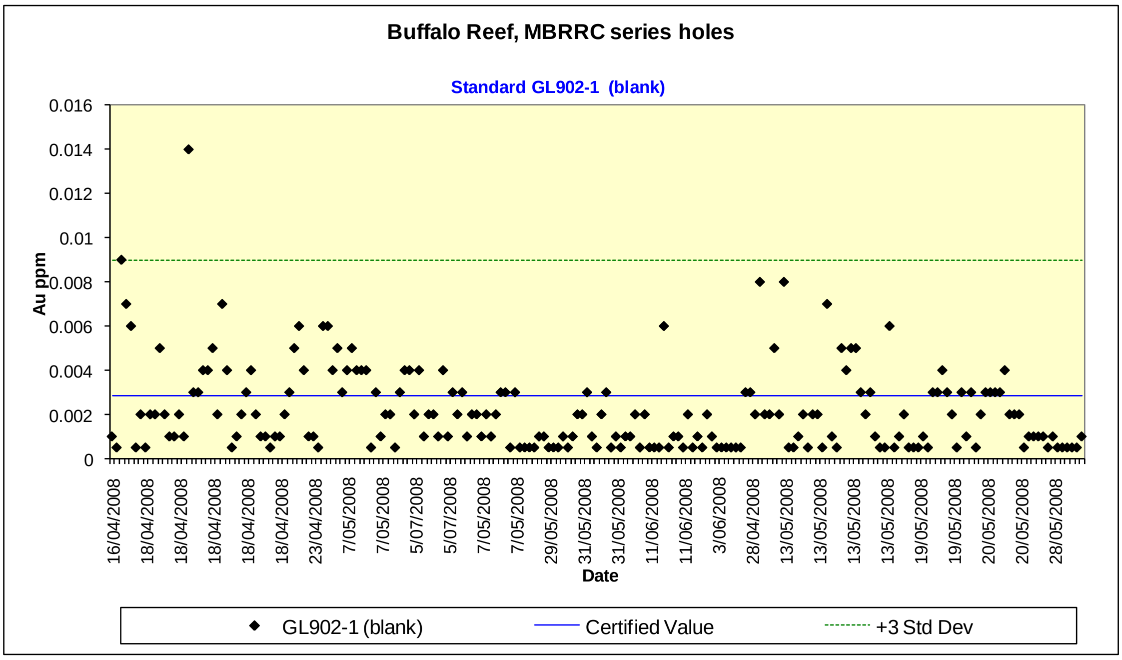


Figure 13.6 Standard control chart – G902-1 (blank)



13.3.2 Field duplicates

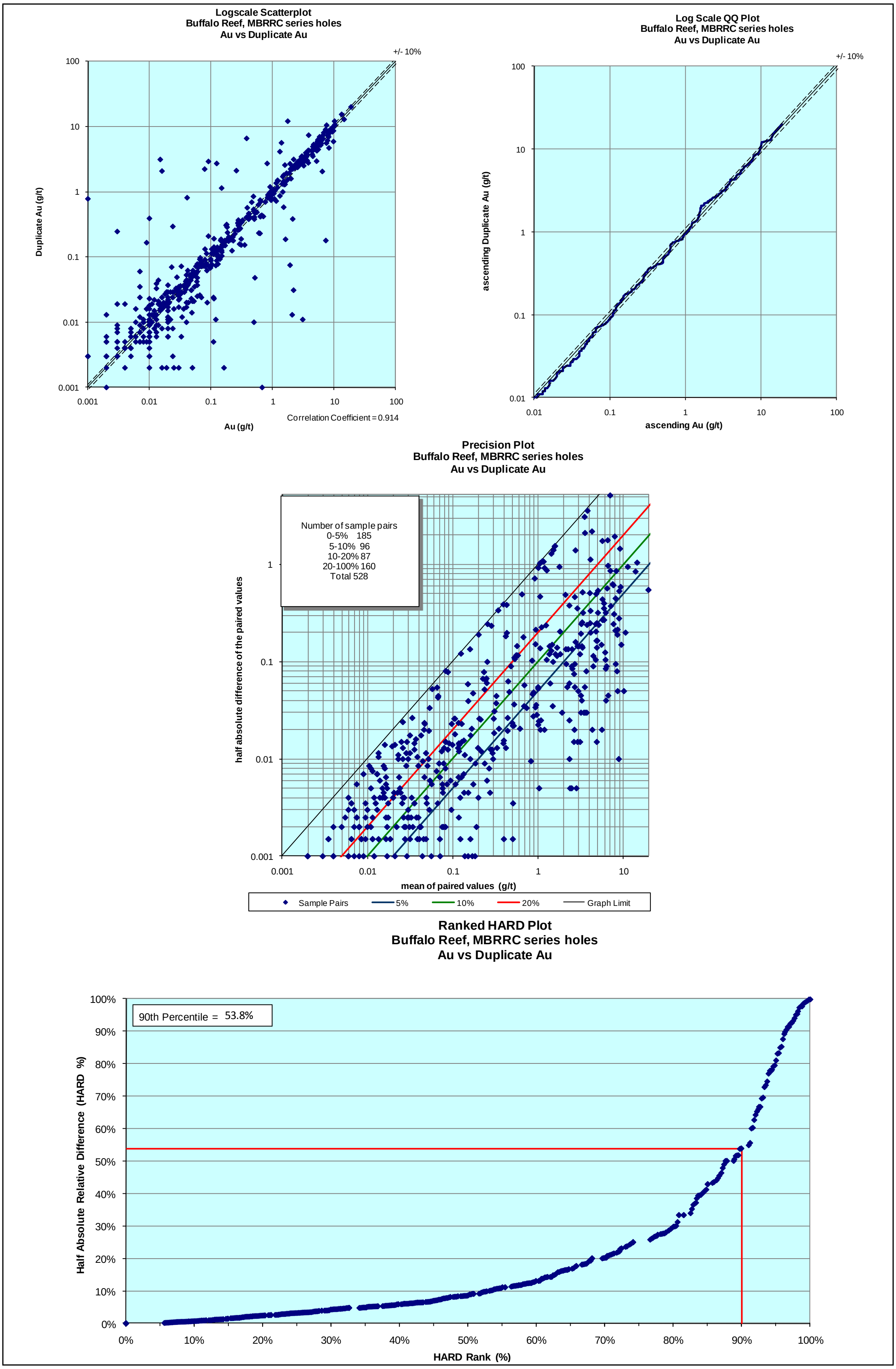
Field duplicate samples were collected by Monument during the RC drilling programmes of 2008, up to drillhole MBRRC0166 as at November 2010. The results are presented in Figure 13.7, which shows a log-scale scatterplot and QQ plot (top) along with a precision pairs plot (middle) and a Ranked HARD[2] plot (bottom).

The scatterplot shows a reasonably tight clustering about the 1:1 line, however there are a significant number of samples which show a large difference between the original result and the duplicate sample. The QQ plot indicates that no systematic bias is present between the original samples and the field duplicates. The precision pairs plot shows that approximately 30% of the sample pairs have a difference greater than 20%. Moreover, the ranked HARD plot indicates that 90% of samples have a HARD of less than approximately 54%. In the author's experience, on the ranked HARD plot, the 90% threshold should lie at a HARD value of between 20% and 30%.

The graphs show that the overall precision of the field duplicates, while not optimal, is reasonable and that no systematic bias is present.

[2] HARD = *half absolute relative difference*

Figure 13.7 Monument drilling field duplicate sample results



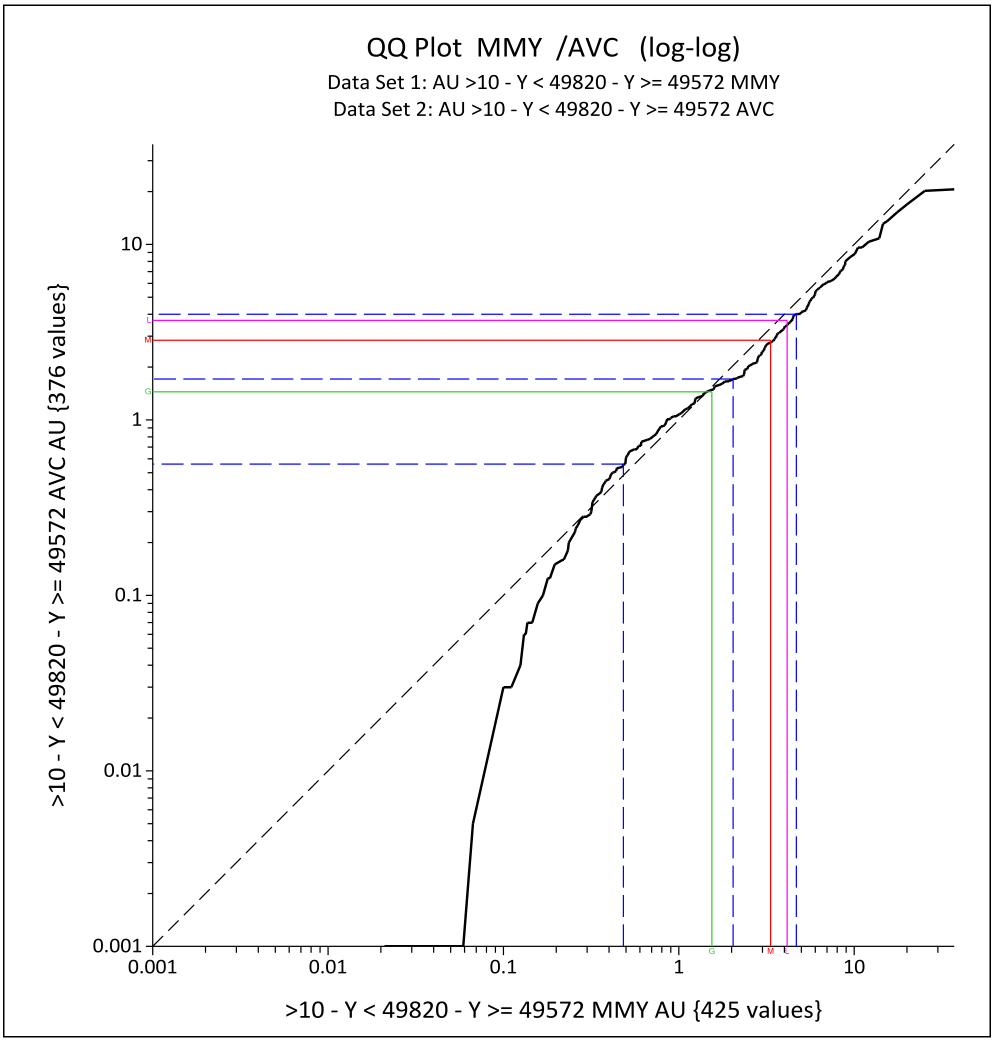
13.4 Comparison of Damar/Avocet data with Monument data

Snowden compared, via QQ plots, the Damar/Avocet drillhole and trench sample data with the Monument RC drilling to assess any bias between the different datasets. To ensure a reasonable comparison, the data was constrained to within the mineralised envelopes and limited to areas where the coverage of both datasets is roughly equal.

13.4.1 Damar/Avocet drilling vs Monument drilling

A QQ plot comparing Damar/Avocet drilling (Y-axis) to Monument drilling (X-axis) shows that no material bias exists between the two datasets. The comparison was limited to the main mineralised veins in the southern portion of the Buffalo Reef deposit between 49,572 mN and 49,820 mN, where coverage of the two datasets is reasonably similar.

Figure 13.8 QQ plot comparing Damar/Avocet drilling to Monument drilling

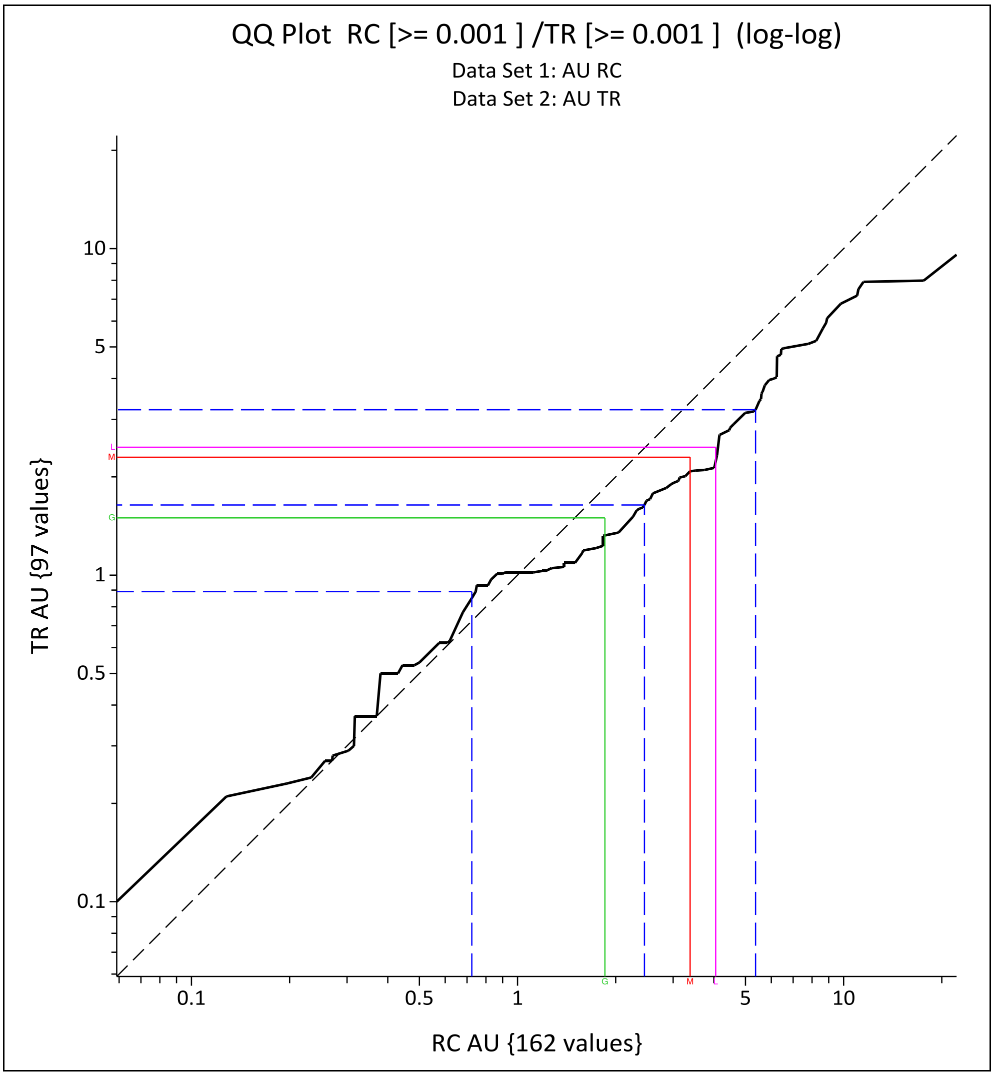


13.4.2 Trench samples

A comparison QQ plot of trench samples compared to RC drilling from the main vein in the southern portion of the Buffalo Reef deposit, between 49,580 mN and 49,900 mN, shows that below approximately 1 g/t Au, the trench samples and RC drilling are approximately comparable grade. However above 1 g/t Au the RC drilling is typically higher grade. Some of this apparent bias is likely due to the assaying of some trench samples by titration methods which may under-report the gold content. Additionally, there may be some depletion of gold grades near the surface and minor enrichment of gold deeper in the weathering profile due to supergene processes.

Given the likely causes of the observed bias above 1 g/t Au, Snowden concludes that the trench samples are reasonable for use in resource estimation.

Figure 13.9 QQ plot comparing trench samples to RC drilling



13.5 Opinion on the adequacy of sampling, sample preparation, security and analytical procedures

The assaying and sampling of the Damar/Avocet drilling and trenches is not optimal. No independent QAQC was included in sample batches to assess the precision and accuracy of the assaying. Additionally, the assaying methodology is a mixture of fire assaying and titration techniques. Given the refractory nature of the gold mineralisation (see section 16 below), the titration assaying has likely resulted in some gold grades being under-reported. However, Snowden notes that the assaying method is not recorded in the database and the number of effected samples is not known. Flindell (2003) indicates that all RC and core samples were re-assayed by Damar using fire assay and only trench samples may still have gold grades determined by titration.

The RC drilling completed by Monument after acquisition of the deposit in 2007, included independent QAQC samples with the sample batches, the results of which show reasonable precision and accuracy have been achieved. Comparisons between the Damar/Avocet and Monument drilling do not show any material differences or bias is present.

In the author's opinion the available drillhole and trench data for the Buffalo Reef deposit is reasonable for use in resource estimation.

14 Data verification

No data verification of the Damar or Avocet sampling is currently possible as the samples were either not retained or have since been discarded. Snowden has not independently verified the assay results for the Monument RC drilling, however QAQC results, including field duplicates and commercial standards, show reasonable precision and accuracy has been achieved. Additionally, statistical comparisons between the Damar/Avocet drilling and Monument drilling indicates that the sample data show similar gold levels.

15 Adjacent properties

15.1 Selinsing Gold Mine

The Selinsing gold mine is located in the Pahang state of central Malaysia, approximately 30 km to the west of the regional centre of Kuala Lipis. The mine is owned and run by Monument and lies less than 5 km to the south of the Buffalo Reef deposit.

Production of gold at Selinsing started in the 1800s with intermittent mining up until June 2007 when Monument acquired the Selinsing project. Mining was restarted in July 2009 with a planned production rate of 40,000 oz Au per year. Since mining was restarted, 22,843 oz Au has been produced as of the end of September 2010.

The Selinsing gold mine hosts an Indicated Resource, as of November 2007, of 4.82 Mt grading at 1.49 g/t Au (231,000 oz Au) above a 0.59 g/t Au cut-off, with an additional Inferred Resource of 10.32 Mt grading at 1.17 g/t Au (388,000 oz Au).

The Selinsing processing plant began full operation in September 2010. The plant consists of two stages of crushing, with a single stage ball mill operating in closed circuit, having a throughput of approximately 1000 t/day. A gravity recovery circuit is used, consisting of a Knelson centrifugal concentrator that operates on a split from the mill cyclone underflow. The Knelson concentrate is subjected to an Acacia high intensity leach with the leached concentrate returned to the ball mill. The mill cyclone overflow discharges to a six stage carbon in leach (CIL) cyanidation circuit, with a targeted grind of 80% passing 75 μm and a 36 hour retention time. Loaded carbon is advanced through the leach circuit, collected, then stripped of precious metals with hot caustic, reactivated and recycled. The pregnant solution from the Acacia reactor and from the stripped carbon is sent to the refinery for electrowinning and subsequent production of Dore. The leached CIL slurry is discharged to the tailing impoundment facility.

15.2 Penjom Gold Mine

The Penjom Gold Mine is located in the State of Pahang in the centre of Peninsular Malaysia and is Malaysia's largest gold producer. Penjom commenced production in December 1996 and is currently producing between 60,000 and 100,000 ounces of gold per year. The 2009 (financial year) production was 68,900 ounces and 83,720 ounces was produced in 2008. The mine was developed and is operated by Avocet Mining PLC.

The Penjom deposit was developed from grass roots exploration by Avocet in the early 1990s. The mine commenced production using conventional gravity and CIL process technology for the gold recovery. However, as the ore mined at Penjom became increasingly carbonaceous with increasing depth, the metal recovery rates for CIL fell below 50%. Penjom successfully solved this problem by developing unique processing systems which include Resin-in-Leach (RIL) technology.

As of December 2009, the estimates of Measured and Indicated Resource at Penjom were reported as 18,326,000 tonnes at an average grade of 1.82 g/t Au (1,072,200 ounces). There is also an Inferred Resource estimate of 4,105,000 tonnes grading 1.58 g/t Au (208,500 ounces). The current mine life is four years.

15.3 Raub Gold Mine

The Raub gold deposit, in the Raub District of the State of Pahang, is Malaysia's most historic gold mining centre and has produced over one million ounces, mostly from underground operations over the period 1889 till 2004. Peninsular Gold Limited (PGL) has gold exploration rights and conducts mining activities at Raub through two wholly-owned Malaysian subsidiary companies Raub Australian Gold Mining Sdn. Bhd (RAGM) and S.E.R.E.M Malaysia Sdn. Bhd (SEREM).

Peninsular has restarted gold production at Raub with a CIL plant completed and commissioned. First gold was poured at the new plant in February 2009. According to Peninsular, Raub currently hosts a Proven Reserve of 202,000 ounces of gold from 8.6 Mt of tailings. Additionally, the area known as East Lode oxide has a combined Measured and Indicated Resource of 136,000 ounces, with an additional 82,000 ounces in the Inferred category.

16 Mineral processing and metallurgical testing

16.1 Historical testwork

Preliminary metallurgical testwork on mineralised samples from Buffalo Reef was completed by Avocet in 2005, primarily at the Penjom mine laboratory.

The following is a brief summary of the historical findings as detailed in Naidu (2005), Avocet (2006) and Cavey and Gunning (2007).

A batch of 160 selected RC samples with gold grades >0.5 g/t Au were subjected to quick leach testing. The samples were selected based on gold content; however the author cannot comment on the representivity of the selected samples. The quick leach test involved pulverising the RC samples to 300 μm before leaching in a cyanide solution of 3000 ppm for one hour (Cavey and Gunning, 2007). The results of the quick leach test show recoveries of gold in the oxide samples in excess of 80%. Fresh un-oxidised samples show much lower gold recoveries which can be an indication of the presence of refractory gold. Gold deportment tests conducted at Amdel Laboratories in Australia in 2006 show that approximately 80% of the gold is in arsenopyrite with the remaining 20% in pyrite and stibnite.

Selected samples from the quick leach testwork programme were divided into four groups (A, B, C and D) based on the quick leach recovery and the sample oxidation state (oxide or fresh). Each group is composed of between 5 and 9 samples. Group A samples are oxide and have the highest recovery, while Group D is fresh and has the lowest recovery (Table 16.1). The bottle roll tests were conducted by the Penjom mine laboratory while multi-element analysis was conducted by Genalysis Laboratory Services in Perth, Western Australia (Naidu, 2005). The results of the bottle roll testing show similar results to the quick leach testwork, with the multi-element analysis showing elevated levels of arsenic (As) and antimony (Sb).

Table 16.1 Results of bottle roll tests for North Zone samples

Group	Sample No.	Zone	Oxidation	Bottle roll test				
				Head g/t Au	Tails g/t Au	As ppm	Sb ppm	Recovery %
A	MT8250-A	North vein 1	Oxide	2.13	0.07	5,369	1,252	96.73
B	MT8251-B	North vein 2	Fresh	10.54	7.86	3,190	16	25.45
C	MT8252-C	North vein 3	Fresh	4.23	4.02	7,039	2,357	4.95
D	MT8253-D	North vein 4	Fresh	3.62	3.52	6,638	4,011	2.87

Further metallurgical testwork was conducted on an additional eight composite samples from selected RC drillholes (Table 16.2). Four samples were generated from the "North Zone" and four samples from the "South Zone", with each sample weighing between 50 kg and 100 kg and sourced from individual veins (Naidu, 2005). The representivity of the additional metallurgical samples is unknown.

Table 16.2 Metallurgical sample grouping

Group	Sample No.	Zone	Oxidation	Quick leach recovery
A	BRN-1	North	Fresh	Low to medium
B	BRN-2	North	Oxide/trans	Medium
C	BRN-3	North	Fresh	Low
D	BRN-4	North	Fresh	Medium
W	BRS-1	South	Fresh	Low to medium
X	BRS-2	South	Fresh	Low
Y	BRS-3	South	Fresh	Low to high
Z	BRS-4	South	Fresh	Very low

The additional metallurgical testwork on these eight samples included resin-in-leach (RIL) testing and intensive leaching using a 40,000 ppm cyanide solution, along with amalgamation (using mercury with the addition of $Pb(NO_3)_2$) and gold particle size analysis (Naidu, 2005).

The results of the additional testwork are summarised in Avocet (2006, specifically Table 10.5) and show that some of the samples are refractory with low recovery of gold in the fresh material. Particle size analysis of the gold particles shows some coarse gold although the majority of the gold is less than 250 µm. Moreover, the testwork suggests that the refractory nature of the mineralisation is due to interlocking sulphides, namely arsenopyrite and stibnite.

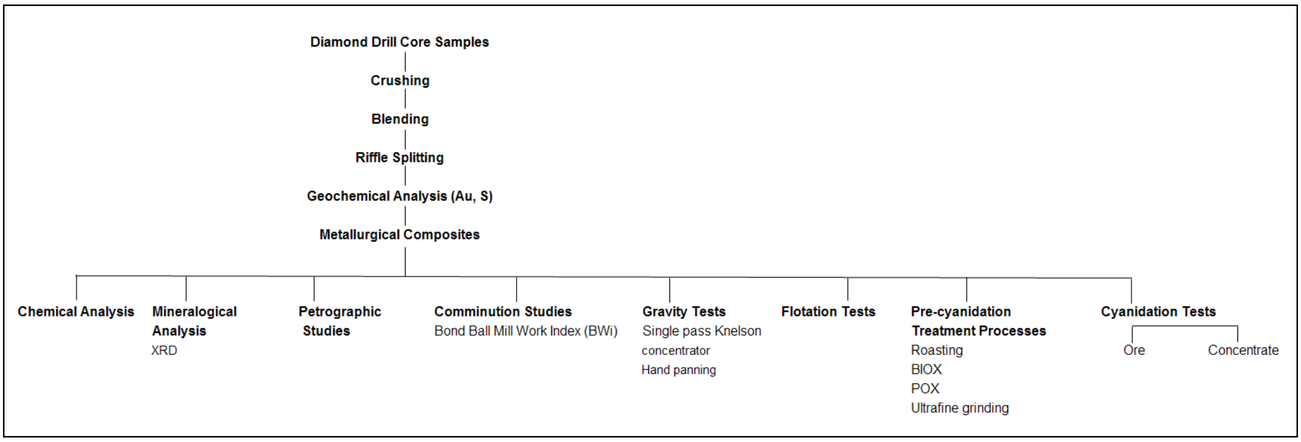
16.2 Current laboratory program

At the time of issuing this report a laboratory test program was in progress to evaluate the process response of sulphide “fresh” mineral samples from Buffalo Reef. This ongoing phase of the laboratory work is being undertaken at Inspectorate Exploration and Mining Services Ltd. (Inspectorate), located in Richmond BC, Canada. The results that are reported in the following section are based on data received up until mid April 2011. Metallurgical studies are scheduled to continue to year end as part of obtaining process design data that can be used in a pre-feasibility study.

The goal of the metallurgical testwork programme will be to develop a viable process to treat the Buffalo Reef sulphide material. The testwork completed by Avocet in 2005 has shown that this material is refractory, with low gold recoveries using conventional whole ore leaching. The current testing begins a preliminary evaluation of metallurgical response. The ultimate objective will be to design and incorporate a treatment procedure either into the existing Selinsing plant or into a new stand alone facility that would be built closer to the Buffalo Reef resource.

The initial phase of the laboratory test programme, which is still in progress, investigates various analytical and test procedures as outlined in Figure 16.1.

Figure 16.1 Initial phase preliminary metallurgical testwork programme



16.2.1 Sample origin and compositing

Two sets of diamond drill core samples were received. The first set of 23 samples arrived at Inspectorate on October 3, 2010 and were reported to originate from contiguous intervals from drillhole MDRDD03 (drillhole 3) located in the North Zone. These samples were labelled consecutively 1001 to 1023, representing depths of 44.3 m to 74.2 m.

On January 24, 2011 a second set of 42 samples of drill core arrived and was described as contiguous drill intervals from MBRDD04 (drillhole 4), located in the South Zone. The samples were labelled consecutively 10024 to 10065, representing depths of 34.7 m to 107 m. As the North Zone samples arrived earlier, process testing has progressed further than with the South Zone samples.

These diamond drillholes were selected as they provided the most recent drill core of Buffalo Reef ore zones (North and South Zone), with the intervals selected for the metallurgical testwork based on the mineralisation interpreted in the current geological model. Core recovery within the ore zones from MBRDD03 and 04 are 93.4% and 98% respectively. A plan view showing the location of the two diamond drillholes used in the metallurgical testwork is provided in Appendix A.

Shortly after receiving each shipment the individual samples were crushed and blended, with a riffle split taken for geochemical analyses. Based on the geochemical analyses (primarily gold and sulphur content) the samples were blended into metallurgical composites. Other elements including carbon, arsenic and antimony were considered when making up the composites. The summary of metallurgical composites labelled as Comp 1 to 6, and the corresponding head analyses is provided in Table 16.3.

Table 16.3 Metallurgical composites

Comp	Zone	Drillhole		Au	S_{Total}	C_{Total}	As	Sb
ID		No.	Interval (m)	g/t	%	%	%	ppm,%
1	North	3	44.3-44.8	0.124	0.42	n/a	0.02	12
2	North	3	44.8-69.4	2.08	0.48	0.88	0.41	34
3	North	3	69.4-74.2	<0.05	~0.4	n/a	<0.01	<35
4	South	4	55.2-69.8	3.14	1.37	0.73	0.51	32
5	South	4	variable*	1.59	0.86	1.03	0.31	37
6	South	4	97.9-100.1	111.0	6.16	0.80	0.99	10.7%

*consists of 81.9-84.3m + 87.8-89.5m + 90.9-92.7m

Drillhole 3 from the North Zone was blended into three composites, numbered Comp 1, 2, and 3. Comp 2 was considered ore grade, while the interval above (Comp 1) and the interval below (Comp 3) are likely well below the gold cut-off grade for mill feed. Consequently, Comp 1 and 3 were not used for metallurgical evaluation, but submitted for some preliminary environmental analyses including acid base accounting (ABA).

Drillhole 4 was from the South Zone and comprised of metallurgical composites labelled as Comp 4, 5, and 6. Intervals with less than 0.2 g/t Au from drillhole 4 were not blended into any of the composites, but archived into freezer storage. The initial metallurgical work from the South Zone has been performed on Comp 4, which represented the longest continuous interval of gold mineralisation in drillhole 4. Based on the chemical analyses Comp 5 appeared similar to Comp 4, but with less continuous mineralisation present. Comp 6 had distinctly higher gold, sulphur and antimony content. Comp 4 is the only material that was tested from drillhole 4 prior to issuing this report, with additional test results from Comps 4, 5, and 6 expected as the laboratory programme continues.

16.2.2 Procedures

The initial laboratory testwork includes feed characterisation such as chemical analyses and petrographic studies. Comminution characterisation in the form of Bond Ball Mill Work Index (BWi) determination was also conducted on this material. The metallurgical process testwork consisted of gravity treatment, flotation and cyanidation using standard procedures first on Comp 2 and then on Comp 4. Various cyanide pre-treatment procedures to evaluate gold recovery to improve the cyanide leach response of the sulphide ("fresh") zones of Buffalo Reef were also evaluated on a scoping basis.

The use of gravity recovery was investigated prior to some flotation and cyanide leaching by incorporating a single pass Knelson centrifugal laboratory concentrator. The resulting Knelson concentrate was hand-panned to simulate a plant gravity upgrading circuit (typically done by tabling).

Baseline cyanidation kinetic testing was performed on ore and flotation concentrate to determine gold dissolution at various grinds and leach retention times. These were typically by standard bottle roll procedures, often using addition of activated carbon to simulate carbon in leach (CIL) procedures.

Flotation studies using conventional sulphide float methods were performed under varying conditions. This included altering the primary grind and using modifications to the flotation retention time and reagent scheme during bulk kinetic testing. This was followed by undertaking open cycle cleaning procedures. Flotation reagents were typically Methyl iso-butyl carbinol (MIBC) as the frother and included the use of potassium amyl xanthate (PAX) and an Aerofroth (A208) as collectors that were used in combination for recovering sulphide minerals and associated metals, specifically targeting gold. The tests were typically done at natural pH. At times, copper sulphate ($CuSO_4$) was used as an activator and sodium sulphide (Na_2S) as a sulfidising agent.

Four pre-treatment procedures were evaluated on reground rougher flotation concentrate prior to cyanidation. The purpose of the pre-treatment testing was to determine the effect on gold recovery during cyanidation verses that of untreated flotation concentrate. The four pre-treatment procedures used consisted of bacterial oxidation (bioleaching), pressure oxidation (POX), roasting and ultrafine grinding. The studies used non-optimised conditions to provide a scoping level evaluation to determine if a further comprehensive study is warranted. All of the procedures are detailed in the individual testwork spreadsheets, which will be included with the metallurgical report to be presented at the conclusion of the laboratory program.

16.2.3 Results

The head assays of the metallurgical composites are summarised in Table 16.4 for precious metals and Table 16.5 for other elements of interest.

Table 16.4 Composite head assays – precious metals

Comp #	Fire assay Au (g/t)	Metallic Au (g/t)	Ag (g/t)
1	0.124	n/a	0.2
2	2.08	n/a	0.3
3	<0.05	n/a	~0.3
4	3.14	3.10	2.3
5	1.59	1.61	<0.1
6	111.0	131.2	9.5

The two principal composites used for metallurgical testing to date are Comp 2 and Comp 4 that respectively graded 2.08 g/t Au and 3.14 g/t Au, with only minor silver. Both Comp 1 and 3 contained less than 0.2 g/t Au, and were not used for metallurgical study, but were submitted for acid base accounting (ABA) used for estimating potential to generate acid if the rock is exposed. The ABA results indicate the intervals tested had a positive net neutralising potential.

The South Zone drillhole showed three separate intervals of mineralisation that were blended separately as Comp 4, 5, and 6. Comp 6 in particular had a significantly higher gold, sulphide and antimony content. A metallic assay of the composites indicated little or no coarse gold in Comp 2, 4, or 5. However, Comp 6 has up to 24% of the gold reporting into 10% of the coarse (+150 Tyler mesh) weight fraction, indicating gravity procedures would likely be beneficial to Comp 6 type feed. Gold particles that were primarily associated with the sulphide minerals were also noted during the petrographic study of Comp 6.

Other elements of interest including sulphur speciation and potentially deleterious elements were also analysed as summarised in Table 16.3.

Table 16.5 Composite head assays – other elements of interest

Comp #	As (%)	Sb (ppm/%)	$\%C_{org}$	$\%C_T$	Hg (ppm)	$\%S^{2-}$	$\%S_T$
1	0.02	12	n/a	0.83	<3	n/a	0.44
2	0.41	34	0.14	0.88	<3	0.48	0.48
3	<0.01	<35	n/a	~1.2	<3	n/a	~0.5
4	0.51	32	0.14	0.73	1.23	1.35	1.37
5	0.31	37	0.19	1.03	0.80	0.84	0.86
6	0.99	10.7%	0.19	0.80	2.23	6.12	6.16

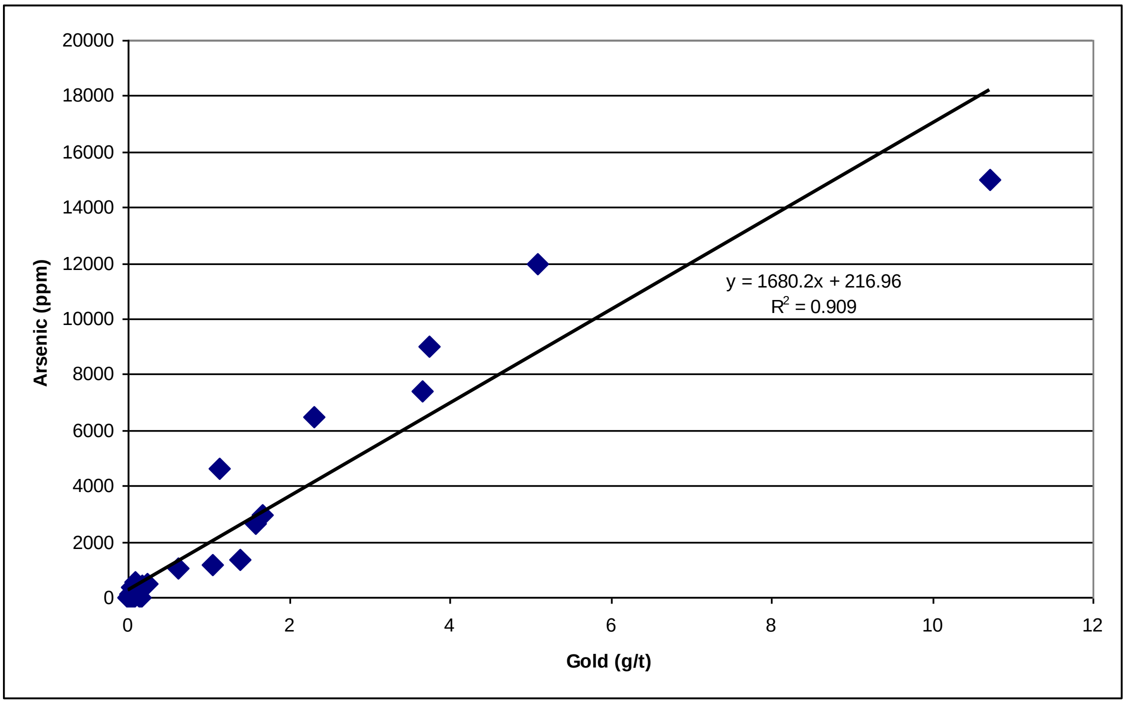
The sulphide sulphur (S^{2-}) content for the composites account for nearly all of the total sulphur content, which would indicate only minor oxidation has occurred. The total carbon content generally ranged from 0.8% to 1%. Native carbon, typically organic or graphitic carbon, can absorb dissolved gold during cyanidation, a condition known as "preg robbing". Only a minor portion of the carbon was reported as organic carbon (C_{org}) at generally less than 0.2%, with even less graphitic carbon at less than 0.05% reported.

Arsenic can be an indicator of cyanide refractory gold and with the exception of Comp 6 the arsenic was present at concentrations from 0.3% to 0.5% in the mineralised intervals. For Comp 6, a high grade composite, the arsenic content increased to 1%. Antimony (Sb) was present at less than 40 ppm for all composites with the exception of Comp 6, where it analysed 10.7% Sb. Comp 6 also had significantly higher sulphides and gold, which suggest alternate processing procedures need to be considered for investigation for this type of mineralogy.

The solids specific gravity (SG) of the composites ranged from 2.73 to 2.79, again with the exception of the high antimony composite (Comp 6) which had an SG of 2.96. Copper and zinc are potential cyanicides, and were present at less than 100 ppm.

The chemical analyses appear to provide no strong correlations between the gold content to that of most elements, with the exception of arsenic and possibly antimony. Comp 6 has elevated antimony and also a very high gold content. However, there were limited interval samples with high antimony in the metallurgical composites, which therefore prevent any meaningful comparisons. For Comp 2, the correlation of the gold to arsenic content in the sub-samples is not strong, but is evident for Comp 4 as plotted in Figure 16.2.

Figure 16.2 Arsenic vs gold on Comp 4 sample intervals



Most of the remaining head characterisation was completed on Comp 2 only, with additional work in progress for Comp 4. The Bond Ball Mill Work Index testing on Comp 2 was performed at a closing screen size of 74 µm (200 Tyler mesh). This resulted in a grinding work index of 14.7 kWh/tonne, indicating a moderately hard rock.

X-ray Diffraction (XRD) analyses of Comp 2 describe a moderate content of quartz and muscovite present, with minor amounts of clinochlore, albite feldspar, dolomite and calcite. A mineralogical petrographic study was performed on Comp 2 feed at a primary grind of P80 (80% passing product particle size) 71 µm and on the resulting concentrate (1st stage kinetic rougher) and bulk flotation tailing. The study states "that the feed material contains "sulphide mineralisation consisting of pyrite and subordinate arsenopyrite in a shaly host rock that carries substantial amounts of a coaly substance and graphite." Interim petrographic information from Comp 6 has the principal antimony mineral as stibnite.

Initial cyanide studies were conducted using aggressive conditions on both ore and concentrate for Comp 2 and Comp 4, respectively. This included the use of high cyanide concentrations and extended leach times. It also made use of blinding agents for the natural occurring carbon and addition of activated carbon for carbon in leach (CIL) procedures. The results confirmed earlier historic work that the sulphide material had poor leach characteristics. The best leach recoveries were with using CIL procedures, which obtained a maximum gold recovery of 22% for Comp 2, originating from the North Zone, and 11% for Comp 4 from the South Zone.

Scoping flotation studies using standard sulphide flotation procedures were performed initially on Comp 2 and then on Comp 4. The float testing was done under varying conditions including altering the primary grind, both with and without gravity pre-treatment, and using modifications to the flotation retention time and reagent scheme.

The bulk flotation used primary grind sizes that ranged in P80 from 43 µm up to 88 µm. A summary of the results is provided in Table 16.4 below.

Table 16.6 Kinetic flotation vs primary grind

Test No.	Comp #	Grind P80 µm	Calc head Au (g/t)	Tail grade Au (g/t)	Tail grade S (%)	Bulk recovery (%) Mass	Bulk recovery (%) Au	Bulk recovery (%) S
F1	2	71	2.14	0.26	0.10	20.5	90.5	94.4
F2	2	88	2.10	0.29	0.13	22.1	89.1	93.1
F3	2	43	2.14	0.26	0.12	23.1	90.8	93.5
F12	4	59	3.11	0.21	0.06	29.4	95.1	96.9
F13	4	79	2.74	0.19	0.07	29.6	95.2	96.4
F14	4	50	3.05	0.11	0.07	35.5	97.8	96.8

Based on the tailing analyses, the bulk float recovery of gold appeared relatively insensitive to the primary grind over the moderate to moderately fine particle size range tested. Finer grinding may marginally reduce gold losses particularly for Comp 4. However, the mass recovered to the bulk concentrate increases with finer grinding likely due to slimes entrainment. A targeted moderate primary grind with a P80 of 60 to 70 µm appears adequate for both composites. Depending on power costs, coarser primary grinding may be appropriate.

The procedure used in Comp 4 kinetic flotation was modified to increase the flotation time and collector dosage as compared to the earlier work for Comp 2. In particular, the use of Na_2S, as a sulphidising agent and additional collector dosage may have benefited the overall gold recovery. These more aggressive conditions along with higher gold head grades offer an explanation for bulk recoveries that ranged approximately 5-7% higher for Comp 4, than that of Comp 2, which had a gold flotation recovery of approximately 90%.

The use of gravity recovery was also investigated prior to flotation and cyanidation, with the results indicating a limited benefit. Generally about 10% of the gold reports to a cleaned low grade gravity concentrate, perhaps higher for Comp 4. If gravity is incorporated the final float tailing Au losses do not appear to decrease significantly. Incorporating gravity recovery in the primary grind circuit may not be necessary for material similar to Comp 2 and 4 if flotation is used. This is supported by the metallics analyses that indicated few coarse gold particles are present, with the exception for Comp 6, which has not yet undergone bench scale testing.

Mineralogical examination of the Comp 2 rougher concentrate indicated there was little visible gold as compared to the assayed content, supporting the premise that gold is finely disseminated or sub-micron in sulphides. The carbonaceous material noted in the head is also confirmed to be concentrated into the sulphide concentrate.

Flotation cleaning was investigated on a preliminary basis. The finding indicated that the best gold grades to a cleaned concentrate for Comp 2 were approximately 70 g/t. This concentrate could also contain from 10 to 15 g/t silver, 12 to 16% organic carbon, 2 to 6% arsenic and up to about 30% sulphur. Critically, it was found that high gold losses were experienced with upgrading. The poor upgrading characteristics were likely a result of a significant presence of organic carbon, which is naturally hydrophobic. Gold also appears to be intimately associated with arsenopyrite, as well as possibly other sulphide minerals. This makes sulphide rejection to improve concentrate grade a challenge.

Mineralogical examination of the Comp 2 float tailing indicated a minor loss of sulphides, which were described to be at particle sizes of generally less than 30 µm that were primarily embedded in the gangue. Finer grinding would be required to liberate these sulphides and may result in sliming of the resulting concentrate. This can be confirmed with bench scale testwork, but the data suggests fine primary grinding is likely not justified economically in hopes of reducing loss of sulphides and associated gold.

Based on the results of the initial cyanidation and flotation studies, the work began to focus on making a low grade flotation concentrate that would be suitable for a variety of pre-treatment procedures prior to CIL cyanidation.

The objective in flotation was to maximise gold recovery by maximising sulphide recovery. Based on the work to date, this can be accomplished by using a moderate grind and extended retention times of up to 35 minutes or more. Non-selective collectors, as well as the use of $CuSO_4$ and Na_2S appear to be of benefit for maximising float recovery. To further reject gangue, the resulting bulk flotation concentrate might be cleaned in one stage. Cleaning would include the same aggressive procedures to maximise recovery as the bulk float. Regrinding does not appear to be necessary and may in fact hinder cleaning due to slimes entrainment and slower kinetics. Gravity treatment appears optional, except for higher grade zones, assuming similar mineralogy is confirmed for the remainder of the resource.

Due to poor response to direct cyanide leaching, four pre-treatment procedures prior to leaching were evaluated on a scoping basis. The four pre-treatment procedures selected for investigation included ultrafine grinding, pressure oxidation (POX), biological oxidation (bioleaching) and roasting. Since all of these pre-treatment methods have benefits on being performed on a material with higher sulphide content, flotation was incorporated prior.

In samples types such as Comp 2 and 4, the refractory gold is most likely associated with arsenopyrite, as well as possibly other sulphides (including antimony sulphides and/or pyrite). Differential flotation of arsenopyrite from many other sulphide minerals including pyrite can be difficult. Therefore the most appropriate means of processing the Buffalo Reef sulphide “fresh” ore was to produce a low grade concentrate for pre-treatment procedures prior to CIL.

Among the most common of the pre-treatment procedures are roasting, pressure oxidation (POX) and bacterial oxidation (bioleaching). While all of these procedures can be performed on whole ore, the use of flotation allows for the sulphide minerals and accompanying carbon to provide most, if not all, of the heat and in the case of pressure and bioleaching leaching, the acid necessary for the process reactions. Roasting and ultrafine grinding are the most likely to be studied for whole ore processing. However, whole ore processing has not been included for this test program, but can be included for future testing, specifically for roasting.

Most types of organic carbon are naturally hydrophobic and it is usually difficult to reject this type of carbon during flotation without losing some gold. A common pre-treatment procedure for preg robbing carbon is often roasting, although depending on the natural activity of the natural carbon, bioleaching may also improve performance.

An initial scoping evaluation was undertaken on reground Comp 2 flotation concentrate using the four pre-treatment procedures (ultrafine grinding, roasting, pressure leaching and bioleaching). The untreated concentrate assayed 15.4 g/t Au, with close to 10% S. The subsequent CIL leach was done under the same conditions for all pre-treatment procedures. A summary of the results are presented in Table 16.5.

Table 16.7 Comp 2 sulfide concentrate – CIL response following various pre-treatment procedures

Test ID	Description	Tail grade g/t Au	Recovery % Au
CIL1	Untreated concentrate	9.01	20
CIL2	Ultrafine grind to P80 <7 µm	8.32	38
CIL3	2 stage roast 550 / 650 ºC	4.66	68
CIL4	Pressure oxidation (POX) 220 ºC	10.5	26
CILB	Bio-oxidation ~43 ºC	1.10	93

Ultrafine grinding and POX did not significantly improve the gold leach response for the flotation concentrate. This was likely due to the presence of the organic carbon, which is not de-activated by either of these procedures. The remaining two pre-treatment procedures (roasting and bioleaching) indicated an encouraging response to improving gold recovery.

A two stage batch roast test was undertaken at 550 ºC for 2 hours, followed by a 650 ºC for 2 hours, incorporating rabbling and maintaining 1 L/min airflow. The resulting calcine had a 9% weight loss and analysed 0.05% sulphide sulphur and 0.09% total carbon, indicating a positive response of the concentrate to the roasting conditions. CIL of the reground calcine achieved 68% gold recovery. With further test work this recovery is expected to improve as batch roasting temperatures and air flow are difficult to control on a laboratory scale, which can result in incomplete exothermic reactions.

Bioleaching was performed on the same concentrate in a batch tank test. The air sparged tank was equipped with an overhead mixer and heated to approximately 43 ºC. The bacterial leach was taken to completion based on monitoring of the oxidation reduction potential (ORP). Optimised retention time requires continuous testing, but is expected to be completed within 4 to 5 days. The batch bioleaching resulted in a 29% weight loss of the solids, with 0.2% sulphide sulphur remaining in the residue. This indicates the majority of the sulphide minerals were dissolved, thereby exposing the associated gold particles. The CIL of the resulting bioleach residue provided a gold recovery of 93%. The significantly improved gold recovery indicates bio-oxidation also reduced the activity of the naturally occurring carbon.

Additional laboratory work has been initiated on evaluating both roasting and bioleaching, including testing on Comp 4 from the South Zone. These results were not available at the time of issuing this report. Further studies are planned or have been recommended using other samples and with more comprehensive testing procedures.

16.3 Conclusions

The current metallurgical laboratory program was still in progress at the time of issuing this report. The preliminary results confirm earlier historical laboratory work that reported the Buffalo Reef sulphide (“fresh”) mineralised zone are refractory to direct cyanidation procedures.

Direct carbon in leach (CIL) cyanidation of the Buffalo Reef sulphides resulted in approximately 22% gold dissolution in a composite sample from the North Zone, and approximately 11% in a composite sample from the South Zone. Mineralogical and chemical analyses of the samples received suggest this is likely due to two reasons. First, the presence of gold either in solid solution or as very finely disseminated particles enclosed within associated sulphides, such as arsenopyrite. Second, the presence of naturally occurring organic carbon in the sulphide zone that results in "preg robbing" of soluble gold from the cyanide pregnant solution.

Due to the poor response of the Buffalo Reef sulphides to direct cyanide leaching, four pre-treatment procedures were performed on a flotation concentrate prior to CIL. Flotation was used to produce a sufficiently high sulphide grade (>8% S) that was desired for the pre-treatment procedures. Depending on the sample and procedure used, flotation achieved gold grades of between 15 to 30 g/t Au, with 90% to 95% recovery into the concentrate. Further upgrading of the flotation concentrate to improve gold grades appears unlikely without unacceptably high gold losses. This is due to the difficulty in obtaining suitable rejection of organic carbon and sulphides from the very finely disseminated gold.

Of the four cyanide pre-treatment methods investigated, two have been recommended for further evaluation. These consist of roasting and separately bioleaching. Roasting is a conventional method for treating ores and concentrates that exhibit either a refractory and/or preg robbing behaviour prior to cyanidation. However, because batch roasting temperatures and air flow are difficult to control on a laboratory scale, preliminary testing can result in less than optimised results. The single batch roast test undertaken achieved 68% gold recovery, but with further test work this is expected to improve. Bioleaching of the same material showed a CIL gold recovery of 93%. The bioleaching dissolved the sulphide minerals, thereby exposing the associated gold particles. It appears bioleaching also resulted in the reduction of the activity for the naturally occurring carbon associated with the Buffalo Reef mineralogy.

Based on the preliminary data (performed on only one composite sample to date that originated from the Buffalo Reef North Zone) a conceptual process flowsheet for the project has been conceived for further evaluation. This would include the use of a moderate primary grind, followed by aggressive flotation procedures to maximise recovery of sulphide minerals and associated gold into a partially cleaned sulphide concentrate. Re-grinding does not appear to be required prior to flotation cleaning, although it would be needed before bioleaching. Pre-treatment by either roasting or bioleaching would be followed by CIL cyanidation. The conceptual flowsheet with incorporation of flotation and a cyanide pre-treatment step could be readily adapted to the existing process circuit at the nearby Selinsing Mine.

Depending on the mill head grade and other mineralogical characteristics of the ore, the use of bulk flotation is expected to achieve a recovery in the low to mid ninety percent range. Cyanidation following optimisation of an oxidation pre-treatment method is also expected to achieve a gold recovery in the low to mid ninety percent range. Therefore, flotation combined with bioleaching (or possibly roasting) prior to cyanidation might be expected to achieve an overall gold recovery in the mid-eighty percent range. This recovery estimate requires further confirmation and variability testing to determine with accuracy. Additional improvements to the overall gold recovery might be available with further process optimisation, as well as by incorporating alternate procedures. Alternate procedures may include whole ore roasting or evaluation of continuous bioleaching and the subsequent neutralisation and partial leaching of flotation tailing using the generated acidic bio-solutions.

In conclusion, both roasting and in particular bioleaching show promising preliminary test results as two possible procedures to significantly improve the cyanide leach response of the Buffalo Reef sulphide "fresh" material.

17 Mineral Resource and Mineral Reserve estimates

17.1 Mineral Resource estimate

The estimation of Buffalo Reef resources was undertaken by Snowden's Independent Qualified Person Mr. Jean-Pierre Graindorge. Mineral Resources were estimated in accordance with CIM Definitions for Standards of Mineral Resources and Reserves (CIM 2004).

Data was supplied to Snowden by Monument geological staff.

Three dimensional (3D) modelling methods and parameters were used in accordance with best Canadian practices. Datamine mining software was used for establishing the 3D block model and subsequent grade estimates. A geological interpretation of the gold mineralisation was derived from the drillhole logs and assays. Statistical and grade continuity analyses were completed in order to characterise the mineralisation, and were subsequently used to develop grade interpolation parameters. The base of oxidation surface was provided by Monument.

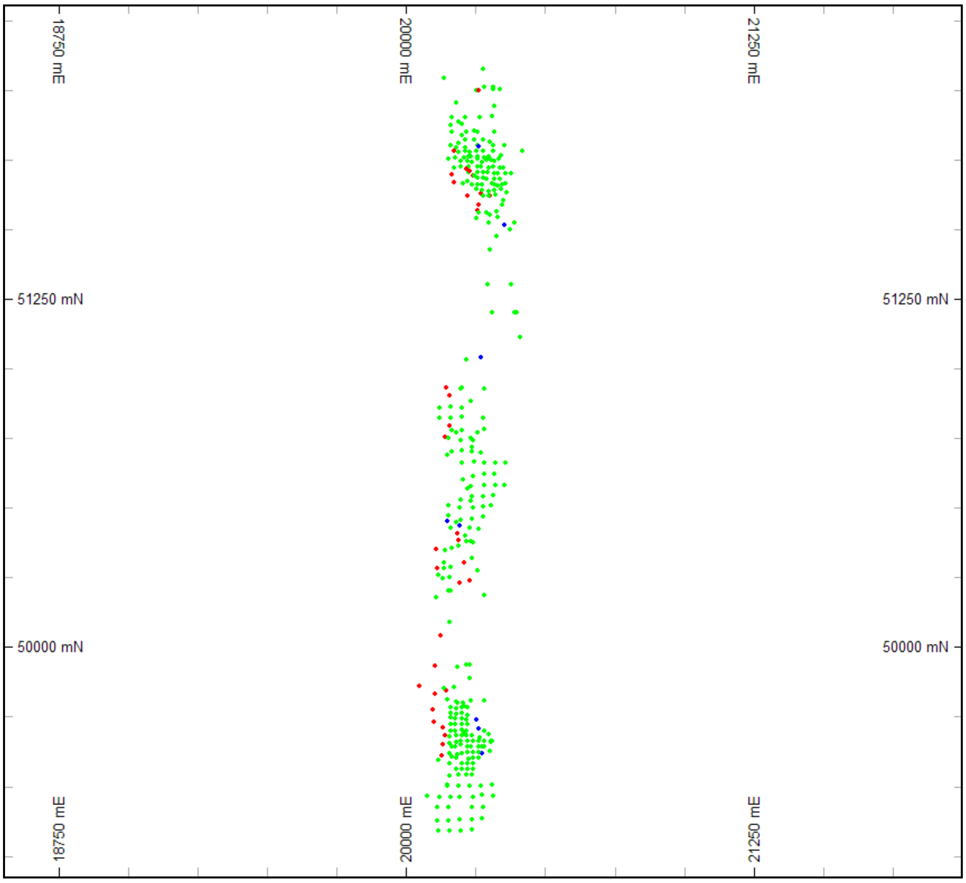
Block gold grades were estimated using ordinary block kriging with dynamic anisotropy. Top-cutting of high grade samples was employed to limit the influence of outliers on the block grades.

A mineral resource classification scheme consistent with the logic of CIM guidelines (2004) was applied. The estimates have been categorised as Indicated and Inferred mineral resources and have been reported above a grade cut-off that is appropriate for the style of mineralisation and is similar to the nearby Selinsing gold mine. The reporting of mineral resources at Buffalo Reef implies a judgment by the author that the deposit has reasonable prospects for economic extraction, insofar as technical and economic assumptions are concerned. The use of the term "Mineral Resource" makes no assumption of legal, environmental, socio-economic and governmental factors.

17.1.1 Database

Monument supplied Snowden with five digital files representing the drillhole database, comprising collar surveys, downhole surveys, assays and lithology records (two files – one for Damar/Avocet data and one for Monument data). The database supplied includes data up to the end of September 2010 (up to Monument drillhole number MBRRC0166) and includes 10 diamond drillholes, 313 RC drillholes and 34 trenches (Figure 17.1).

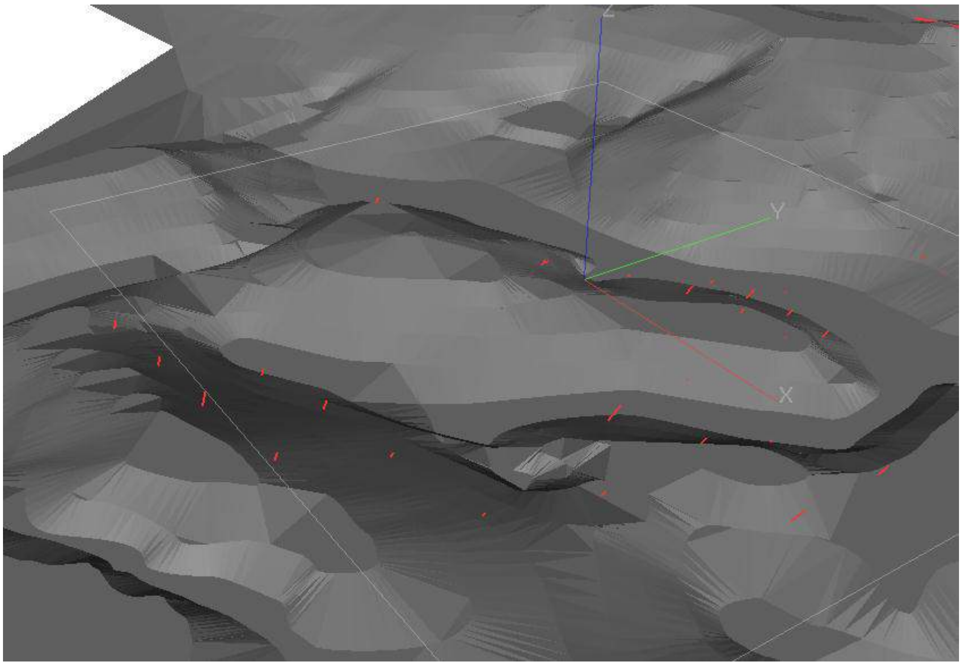
Figure 17.1 Drillhole collar location plan
(red = diamond; green = RC; blue = trench)



Other data provided by Monument included a topographic surface and a base of oxidation surface.

Snowden notes that the current topographic surface does not match the drillhole collars (Figure 17.2), however it is not known whether the drillholes or the topography is incorrect. In some cases the holes are 6-7 m above the topography, although up to 2 m of fill (from the drill pad) has been logged. Whilst not having a material impact on the resource tonnages, a detailed robust topography will be required for any future mining studies. It is recommended that this discrepancy be resolved and appropriate corrections be made to either the drillhole collars (through resurveying) or the topographic surface.

Figure 17.2 Oblique view showing drillhole collars above topographic surface

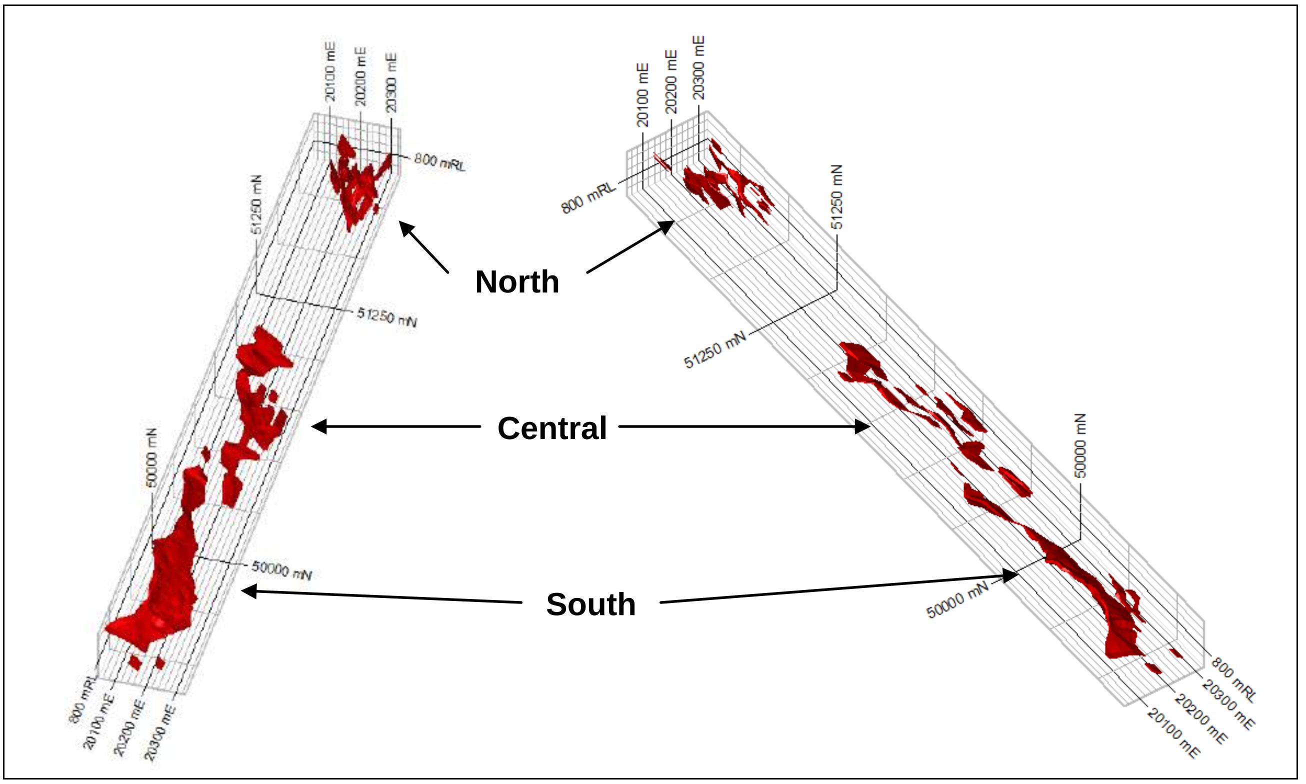


Snowden has assumed that the database as supplied by Monument has good data integrity, and as such has performed only preliminary validation checks to ensure the veracity of the data. These validation checks showed no significant errors were present.

17.1.2 Geological interpretation

The interpretation of the mineralisation at Buffalo Reef was completed by Snowden based on a nominal cut-off grade of 0.2 g/t Au, along with the geological logging. The mineralisation is divided into a southern zone, central zone and a northern zone (Figure 17.3).

Figure 17.3 Oblique views of mineralisation at Buffalo Reef



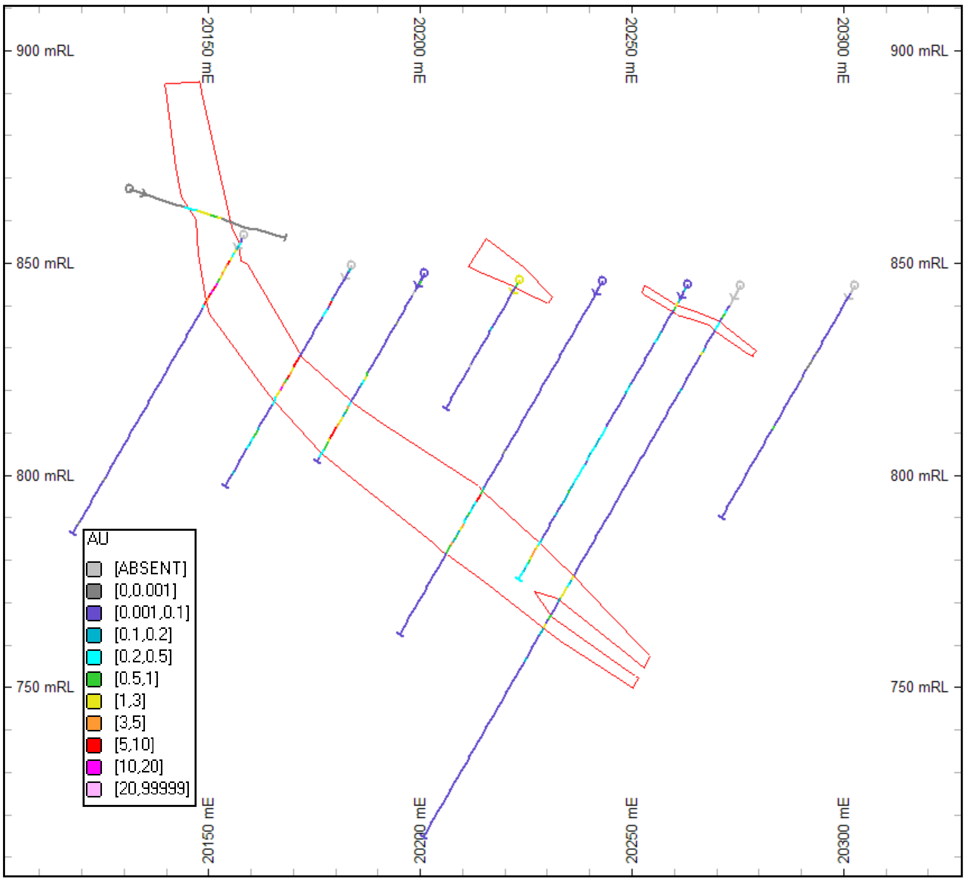
The mineralisation at Buffalo Reef comprises a set of sub-parallel vein sets which strike roughly north-south and dip 40° to 80° towards the east. Snowden notes that the complexity of the vein sets increases to the north, with the northern zone showing significantly less continuity of the mineralised veins.

The southern zone is dominated by a north-south striking vein (850 m strike length) which dips 45° to the east and averages approximately 10 m in thickness. The main vein appears to divide at depth into two parallel veins. Sub-parallel to the main vein are two minor veins which are generally narrower than the main vein with much shorter strike extents. An example cross-section through the southern zone is provided in Figure 17.4.

The veins in the central zone show an en echelon pattern of up to four sub-parallel veins with a strike length ranging from 120 m up to 400 m. A number of minor veins are also present. The dip of the veins is similar to the southern zone.

Between the central zone and the northern zone is a 570 m zone of barren material, with no indication of significant mineralisation in the drilling in this area. The northern zone shows a complex array of up to 10 sub-parallel mineralised veins with numerous other minor veins. Strike lengths in the northern zone range from less than 40 m up to 250 m. The dip in the northern zone is significantly steeper than the southern zone and averages approximately 75° to the east.

Figure 17.4 Example cross-section (49,620 mN)



17.1.3 Data coding and compositing

The drillhole data was coded using the mineralisation wireframes and the base of oxidation surface. Data coding is summarised in Table 17.1.

Table 17.1 Drillhole data coding

Field	Values	Description
MINZONE	0	Not mineralised
	1000	Southern Zone (<50,300 mN)
	2000	Central Zone (50,300 mN to 51,250 mN)
	3000	Northern Zone (>51,250 mN)
OXIDE	10	Oxide
	20	Sulphide
WFSURF	1 to 34	Wireframe surface number

The coded dataset was composited to 1 m intervals downhole, the dominant sample length, using the mineralised wireframes and the base of oxidation surface as hard boundaries to control the compositing. The composite lengths were adjusted to include all intervals and avoid the loss of residual samples (MODE=1 option in Datamine).

17.1.4 Statistical analysis

Snowden reviewed the statistics of the composites based on both the mineralised zone (north, central or south) and the oxidation state. Given the transitional nature of the oxide boundary and the similarity between the statistics, Snowden decided to ignore the oxidation boundary for the statistical analysis.

Summary statistics for the three domains are presented in Table 17.2 and Table 17.3, for gold and antimony respectively. Note that antimony was only assayed for in the Monument RC drilling. Histograms and log-probability plots for gold and antimony are provided in Figure 17.5 and Figure 17.6 respectively.

Top cuts were applied to limit the influence of outliers on the estimate. The top cuts were determined by looking at the coefficient of variation (CV) and the point of disintegration of the grade population on the histograms and log probability plots. The top cuts applied, together with the top cut statistics, are shown at the bottom of the respective statistics tables. For the south zone, the antimony grades are highly skewed with a distinct high grade population. A top cut for antimony of 10,000 ppm Sb was selected as a compromise between reducing the influence of the high grades and ensuring that the metal content was maintained. Snowden notes that at this stage there is not enough antimony assays to adequately domain the high antimony values.

Table 17.2 Gold summary statistics (g/t Au)

Statistic	South	Central	North
Samples	1,303	378	833
Minimum	0.00	0.00	0.00
Maximum	37.20	36.18	53.90
Mean	**2.59**	**1.16**	**1.67**
Std deviation	3.30	2.41	3.05
CV	1.27	2.08	1.83
Variance	10.86	5.82	9.31
Skewness	3.24	9.02	8.55
10%	0.20	0.01	0.09
20%	0.38	0.16	0.21
30%	0.59	0.26	0.32
40%	0.97	0.34	0.52
50%	1.41	0.50	0.79
60%	2.03	0.66	1.20
70%	3.02	0.94	1.80
80%	4.24	1.48	2.50
90%	6.23	3.03	3.69
95%	8.49	4.38	5.62
97.50%	11.15	5.68	7.93
99%	16.11	8.95	10.99
Top cut	-	10	20
Number of samples cut	-	3	5
Top cut mean	**-**	**1.09**	**1.61**
Top cut CV	-	1.50	1.48

Table 17.3 Antimony summary statistics (ppm Sb)

Statistic	South	Central	North
Samples	342	213	330
Minimum	0.01	12	0.02
Maximum	35,500	20,500	1,350
Mean	**1,426**	**170**	**102**
Std deviation	4,223	1,407	189
CV	2.96	8.29	1.85
Variance	17,830,000	1,979,850	35,639
Skewness	4.59	14.37	4.24
10%	27	19	4
20%	36	27	27
30%	46	31	35
40%	54	37	40
50%	69	41	46
60%	96	46	53
70%	192	53	70
80%	585	60	97
90%	4,270	86	220
95%	6,590	210	413
97.50%	16,200	756	775
99%	24,200	945	1,170
Top cut	10,000	1,000	1,000
Number of samples cut	14	2	4
Top cut mean	**1,046**	**78**	**99**
Top cut CV	2.31	2.00	1.73

Figure 17.5 Histogram and log-probability plots for gold for south (top), central (middle) and north (bottom) zone

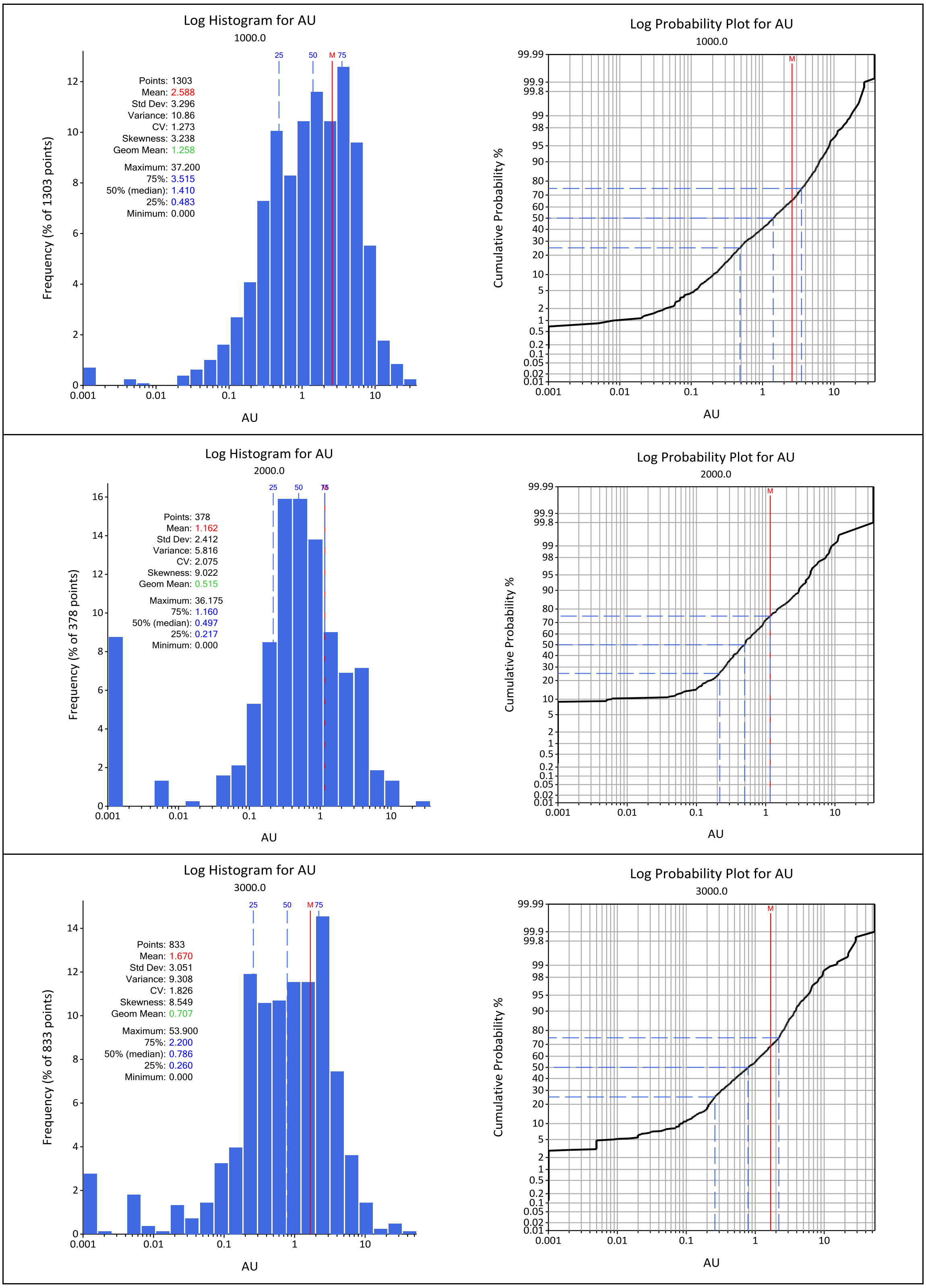
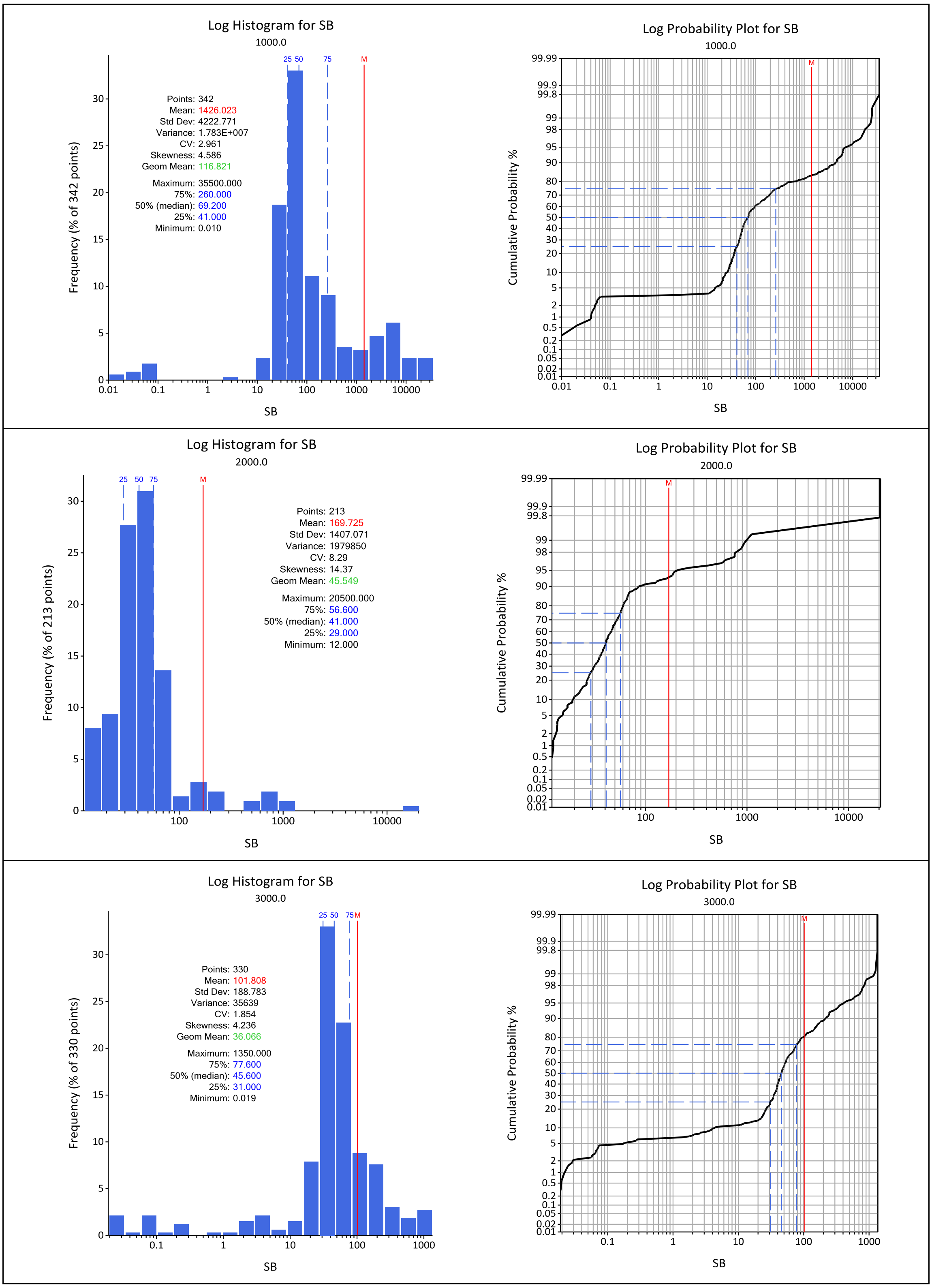


Figure 17.6 Histogram and log-probability plots for antimony for south (top), central (middle) and north (bottom) zone



17.1.5 Continuity analysis

Variography was carried out on each of the mineralised domains to assess the grade continuity and as an input to ordinary kriging. Normal scores variograms were modelled within the mineralised domains for gold and antimony. Downhole variograms were calculated and modelled to determine the nugget variance. Subsequently directional variograms were calculated and modelled using a nugget and up to two spherical structures. Where no clear direction of continuity exists, or if there were too few composite samples, an omnidirectional variogram was modelled. It should be noted that an omnidirectional variogram is not optimal (directional variography is preferred) as the range of continuity is effectively an average of the three directions. Consequently the range of an omnidirectional variogram is shorter than reality in the direction of maximum continuity and larger than reality in the direction of minimum continuity.

The nugget effect ranges from 25% up to 35% of the total variance for gold and from 15% to 38% of the total variance for antimony. Generally, the south zone shows a lower nugget value compared to the central and north zones. The range of the variograms in the direction of maximum continuity for gold was up to 130 m in the central zone and up to 160 m for antimony, also within the central zone.

The normal scores variogram models were back-transformed prior to grade estimation. The back-transformed variogram model parameters are provided in Table 17.4. The normal scores variogram models for Au are presented in Figure 17.7, Figure 17.8 and Figure 17.9 for the south, central and north zones respectively.

Table 17.4 Buffalo Reef back-transformed variogram parameters

Domain	Element	Orientation	Nugget	Structure 1		Structure 2	
				Sill	Range	Sill	Range
1000 (south)	Au	-27→031	0.25	0.75	45	-	-
		-33→140	0.25	0.75	25	-	-
		-45→270	0.25	0.75	3	-	-
	Sb	00→000	0.18	0.82	100	-	-
		-45→090	0.18	0.82	100	-	-
		-45→270	0.18	0.82	17	-	-
2000 (central)	Au	-13→016	0.35	0.65	130	-	-
		-37→115	0.35	0.65	25	-	-
		-50→270	0.35	0.65	5	-	-
	Sb	00→000	0.38	0.50	45	0.12	160
		-40→090	0.38	0.50	20	0.12	50
		-50→270	0.38	0.50	15	0.12	20
3000 (north)	Au	Omnidirectional	0.33	0.52	6	0.15	35
	Sb	00→330	0.15	0.32	40	0.53	150
		-75→060	0.15	0.32	20	0.53	45
		-15→240	0.15	0.32	20	0.53	45

Figure 17.7 South zone – normal scores variograms for Au

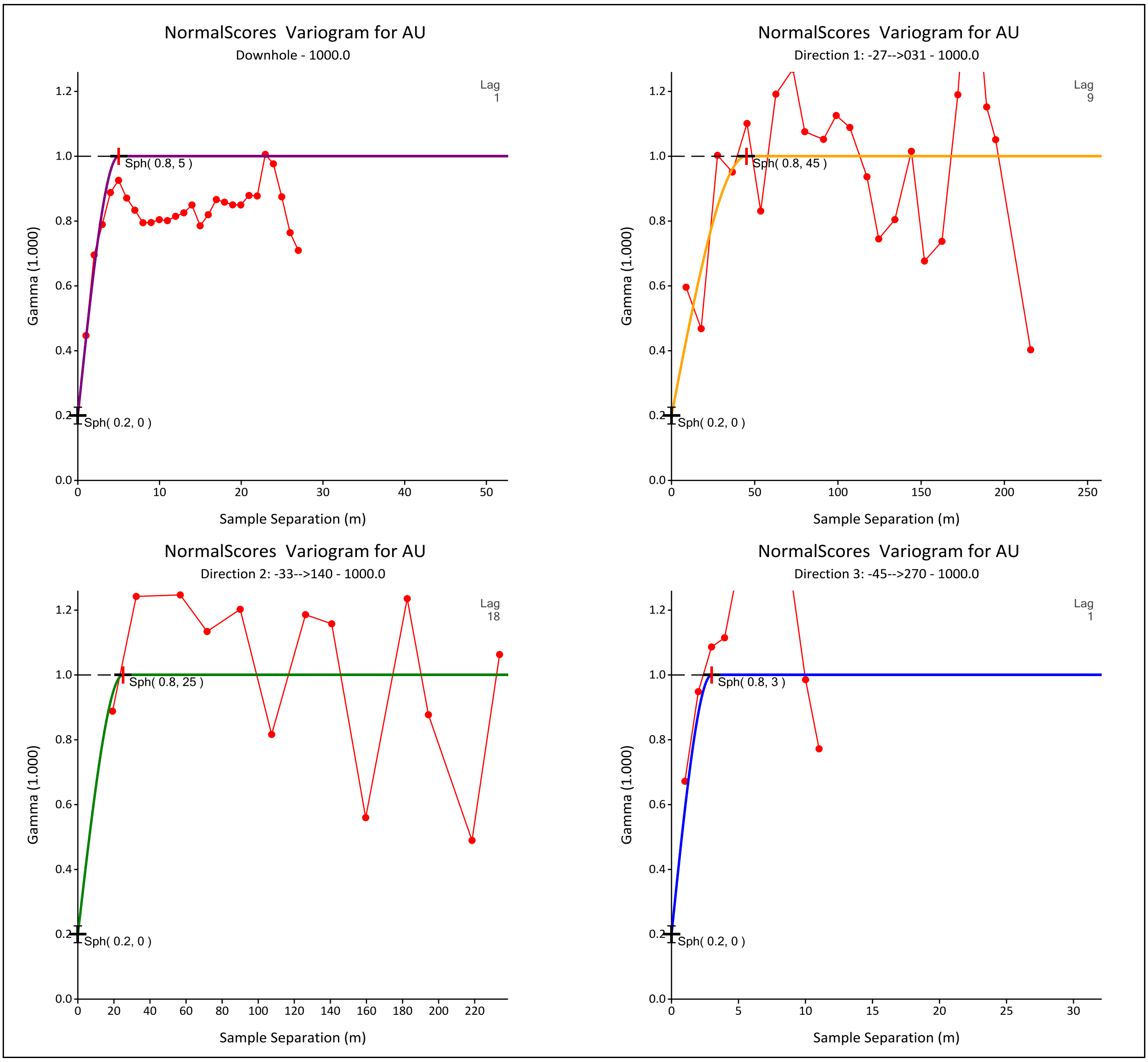


Figure 17.8 Central zone – normal scores variograms for Au

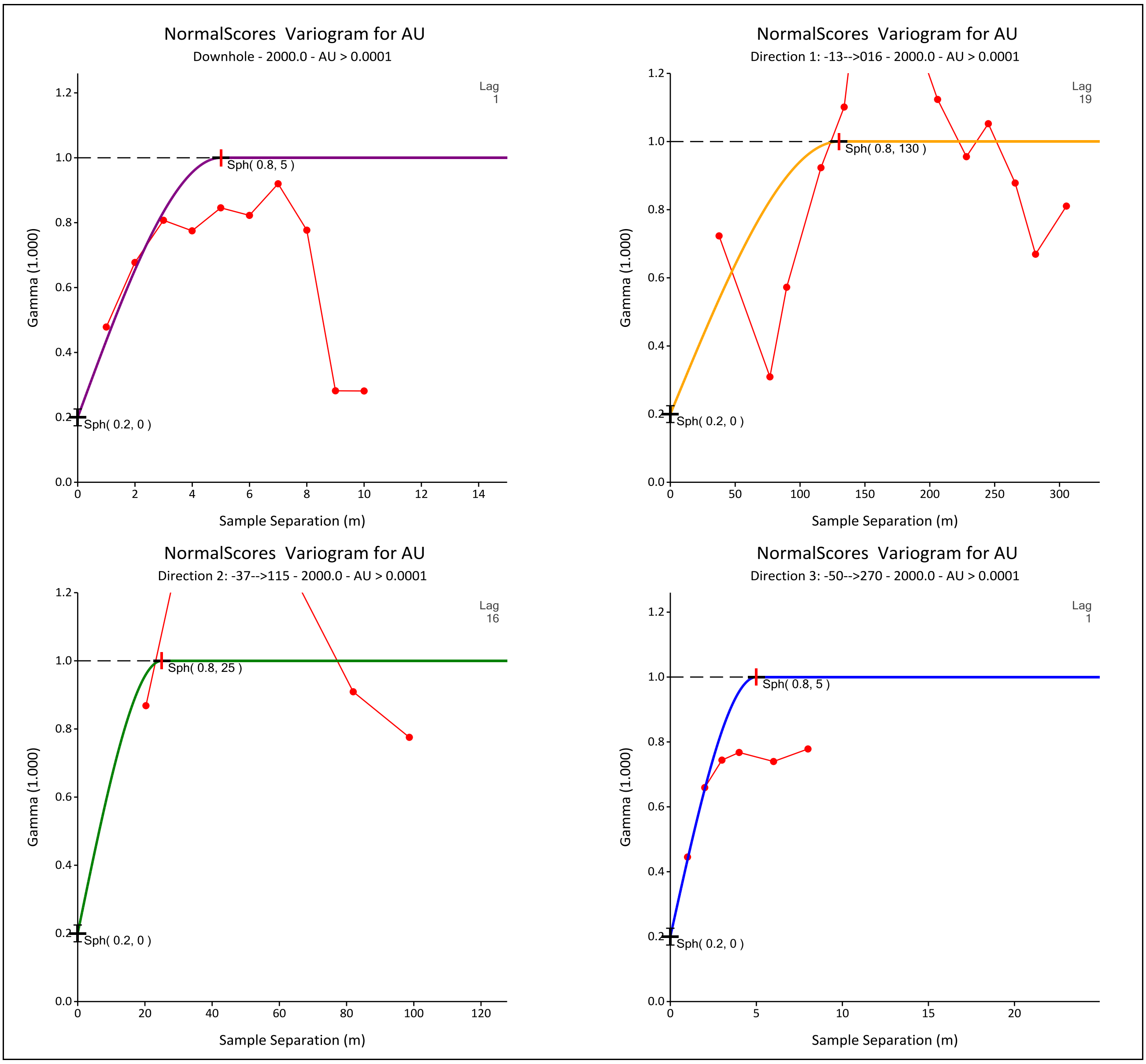
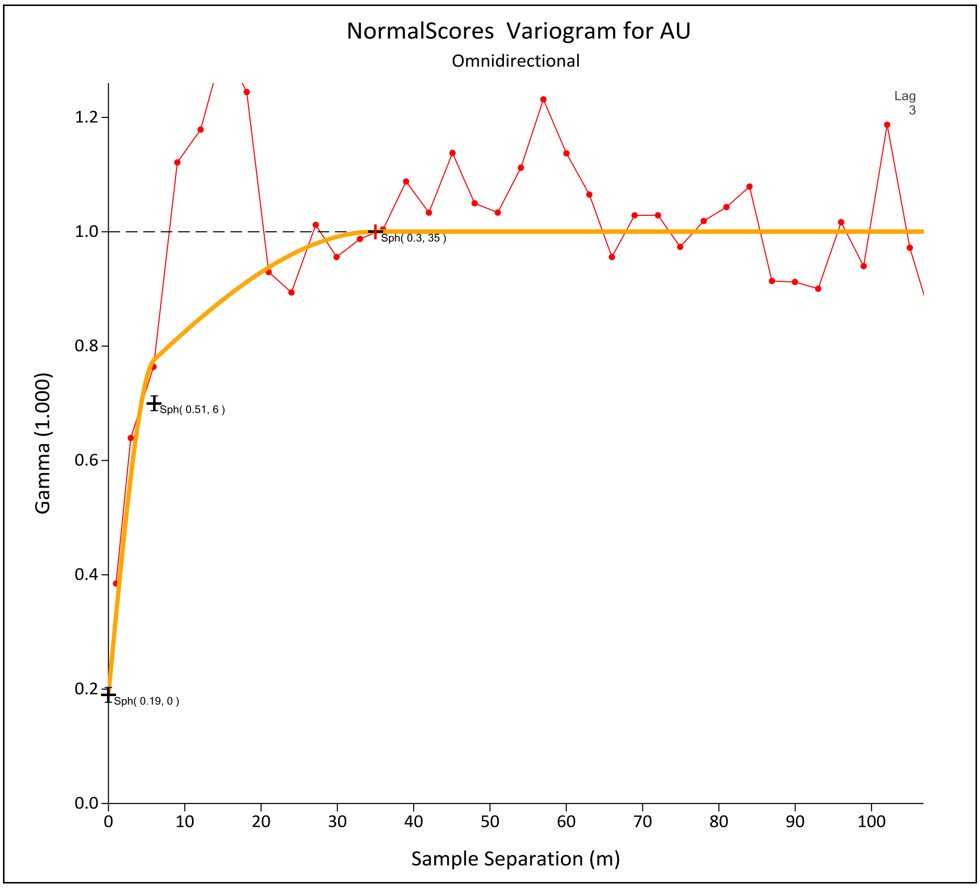


Figure 17.9 North zone – normal scores variogram for Au (omnidirectional)



17.1.6 Block model

The block model prototype parameters used for the Buffalo Reef resource model are provided in Table 17.5. The parent cell size was selected based on the geometry of the mineralisation along with the drillhole spacing. Sub-celling was used to more accurately define the volumes within the orebody interpretations.

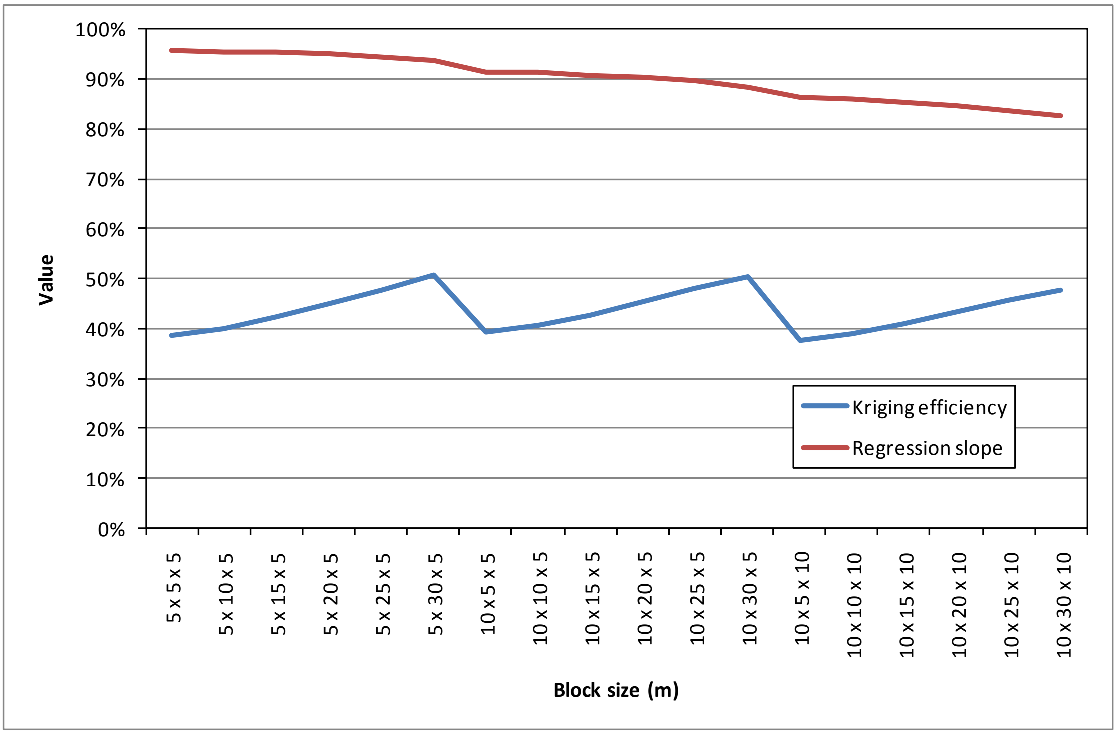
Table 17.5 Block model parameters

	Easting (X)	Northing (Y)	Elevation (Z)
Origin	20,000	49,300	700
Limit	20,400	52,000	930
Parent block size (m)	5	20	5
Number of blocks	80	135	46
Minimum sub-cell size (m)	1.25	5	1.25

The block model was coded for weathering (OXIDE) and mineralisation (MINZONE) domains, along with the wireframe number (WFSURF). Blocks were limited by the topographic surface supplied by Monument.

A kriging neighbourhood analysis (KNA) was conducted to validate the selected block size. The KNA was carried out on gold data from the south zone. The results of the KNA show that the selected block size is appropriate for the Buffalo Reef deposit (Figure 17.10).

Figure 17.10 Kriging neighbourhood analysis for block size (south zone; Au)



17.1.7 Grade estimation

Gold and antimony grades were estimated into parent cells using the WFSURF field to constrain the estimation to the individual veins. Estimation of gold and antimony was by ordinary block kriging for all mineralised domains. Block discretisation was set at 3 east by 8 north by 3 elevation (total of 72 points).

Dynamic anisotropy in Datamine was used to locally adjust the variogram and search orientations for both gold and antimony. The mineralisation wireframes were used to create a point file where each point relates to a triangle centroid and contains the true dip and true dip direction of the wireframe triangle. All points related to the edges of the wireframes were manually removed to avoid anomalies in these areas. This point file was then used to estimate true dip and true dip direction into the block model. The estimates of true dip and true dip direction were subsequently used to locally adjust the variogram and search orientations during estimation.

The range of the initial search pass was based on the ranges of continuity seen in the variograms along with consideration of the drillhole sample spacing. Blocks were estimated using a minimum of 10 and a maximum of 40 samples. If the initial search failed to find the minimum number of samples required, then a second search was conducted using double the search radii. For the third search pass, the search radii were maintained at double the initial search, however the minimum number of samples was reduced to 2. To ensure that a reasonable number of drillholes were utilised, a maximum of 6 samples per drillhole was allowed. Blocks which remained unestimated after the third search pass were assigned a default gold grade and the search pass field set to a value of -99. For antimony, due to the low number of assays, blocks which were unestimated after the third search pass were left as absent.

Snowden notes that the antimony grades estimated into the block model are indicative only and should be treated with caution. Antimony grades do not form part of the Buffalo Reef Mineral Resource.

17.1.8 Bulk density

Default bulk density values were assigned to model based on the oxidation state. A bulk density value of 1.8 t/m^3 was assigned to oxide portions of the mineralisation and a value of 2.6 t/m^3 was assigned to sulphide portions of the deposit.

Snowden notes that no bulk density testwork has been conducted at Buffalo Reef. The assigned values are based on the resource estimate completed by Potter (2006) and are in Snowden's opinion reasonable for this style of mineralisation. Moreover the sulphide bulk density value is similar to that of the nearby Selinsing deposit.

Snowden recommends that Monument carry out bulk density testwork on material from the Buffalo Reef deposit.

17.1.9 Model validation

The estimate shows a good visual validation with the input drillhole composite data. The gold and antimony estimates, although smoothed, follow the trend of the input data reasonably well. An example east-west cross-section through the south zone is illustrated in Figure 17.11.

Figure 17.11 Example east-west cross-section (49,700 mN) showing block grade estimates

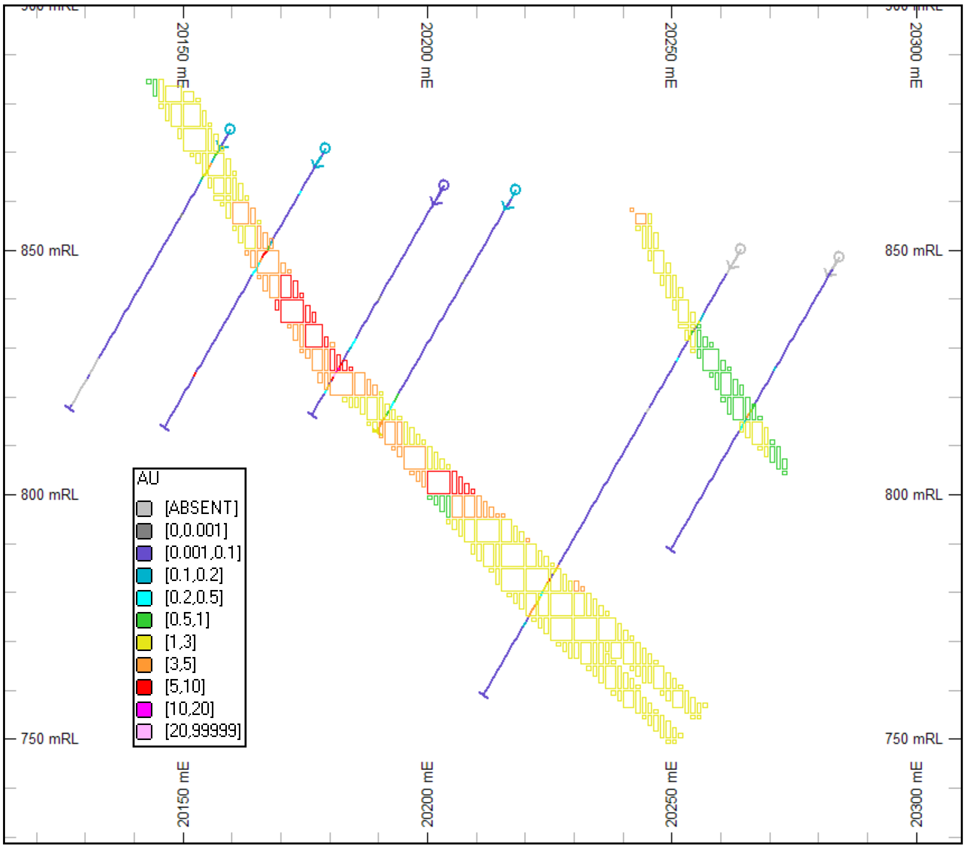


Table 17.6 provides a global comparison of the estimated block grades compared to the input composite grades, both naïve and declustered (cell weighted declustering with a 50 mE by 50 mN grid).

This statistical comparison shows that, globally, the estimate validates well within the well informed domains, with block grades typically within 15% of the input composite grades.

Table 17.6 Global comparison of input composite data and block grade estimates for gold for each domain

Domain	Drillhole composites			Block model mean	% difference	
	Naïve mean	Declustered mean	Number of samples		Block vs naive	Block vs declustered
South	2.55	1.82	1,259	2.23	-13%	23%
Central	1.09	1.10	378	0.98	-10%	-11%
North	1.59	1.54	818	1.51	-5%	-2%

Sectional validation graphs were created to assess the reproduction of local means and to validate the grade trends in the model. These graphs compare the mean of the estimated gold grades to the mean of the input composite data (top cut) within easting, northing and elevation slices (bins). The graphs also show the number of input samples on the secondary Y-axis to give an indication of the support for each bin. The graphs were generated using the MINZONE field (i.e. south, central and north zones) and are presented in Figure 17.12 to Figure 17.14.

These graphs indicate that there is good local reproduction of the input gold grades in all directions.

Figure 17.12 Moving window average validation plot for south zone (Au)

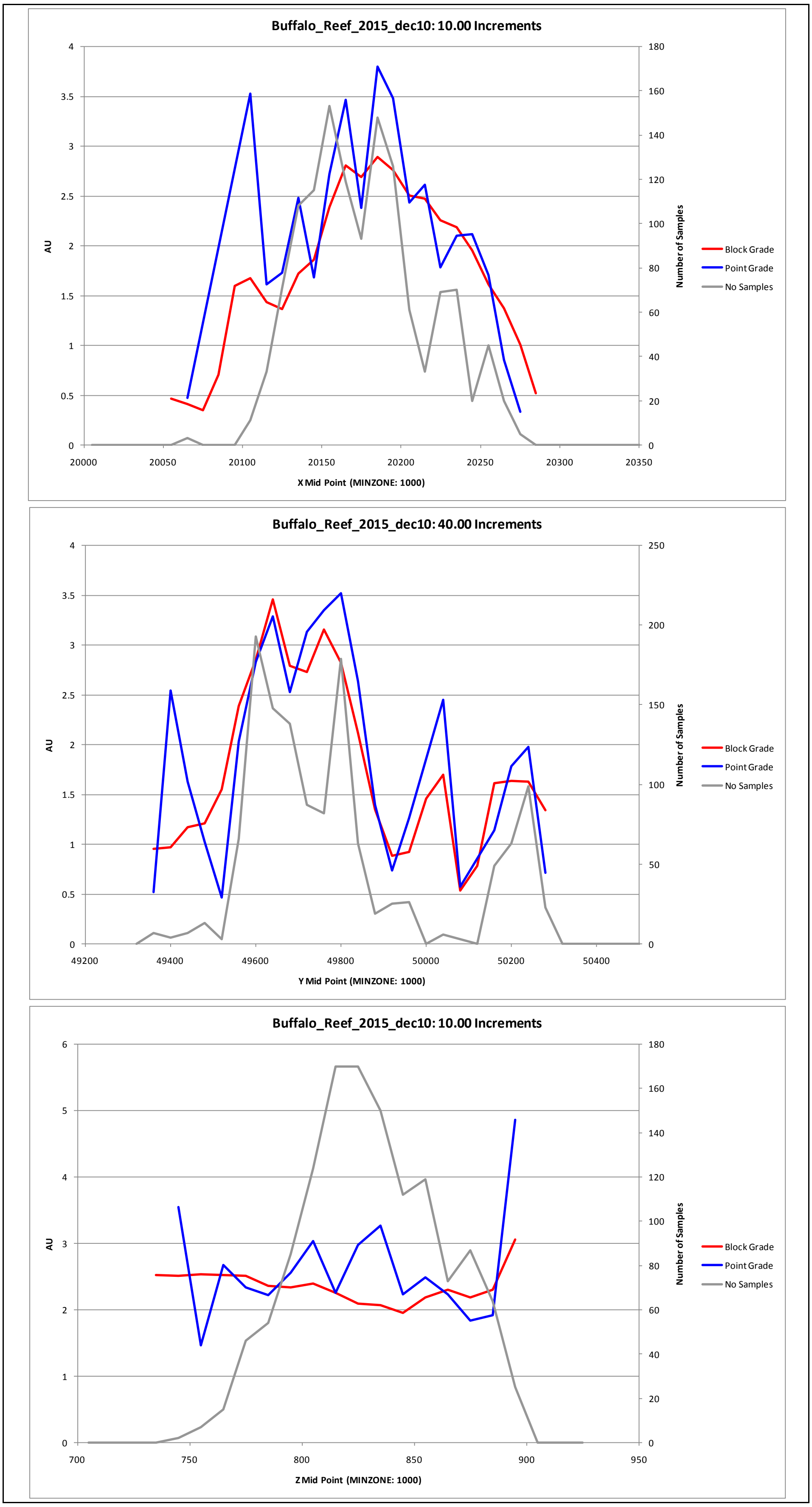


Figure 17.13 Moving window average validation plot for central zone (Au)

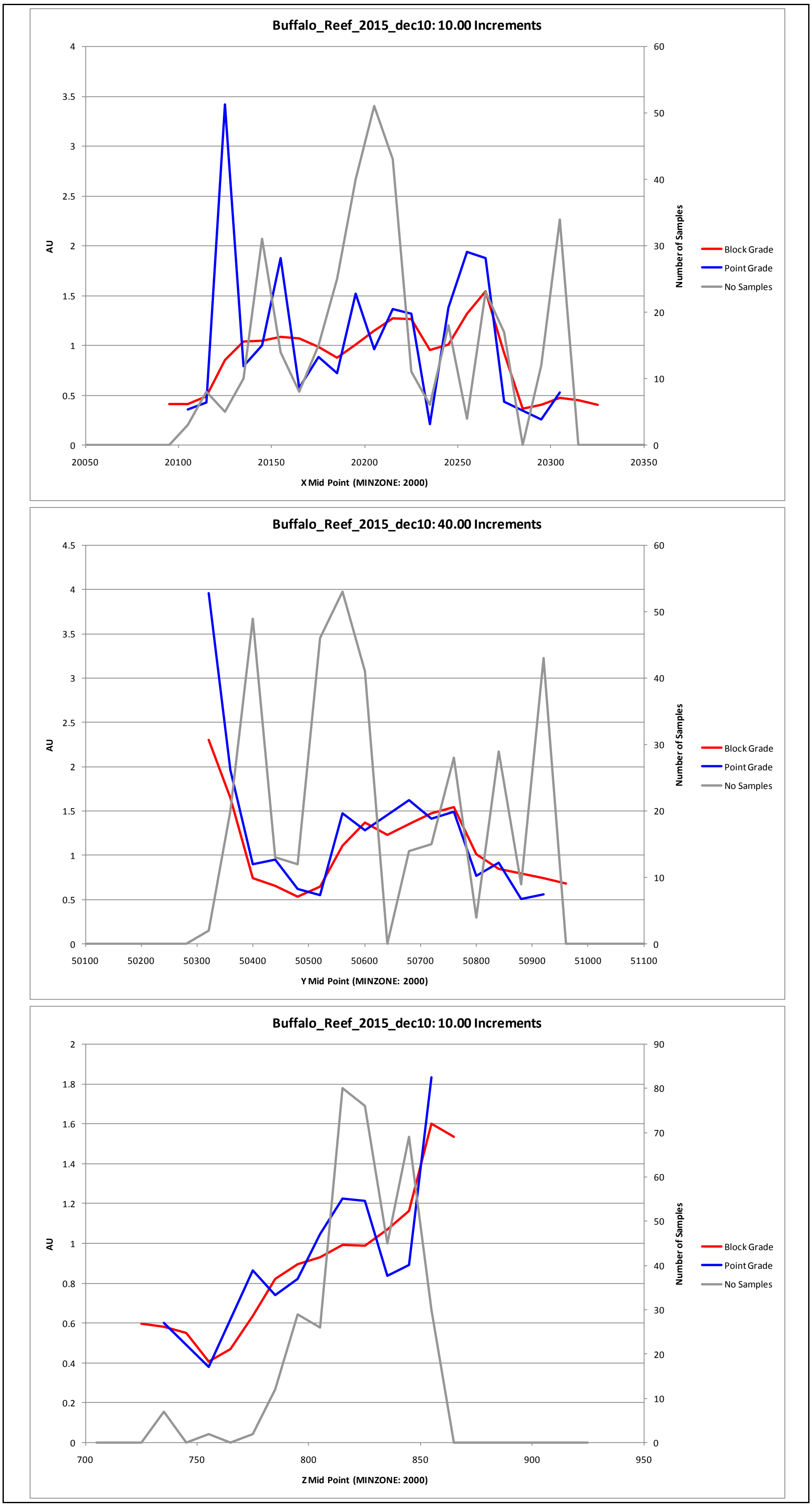
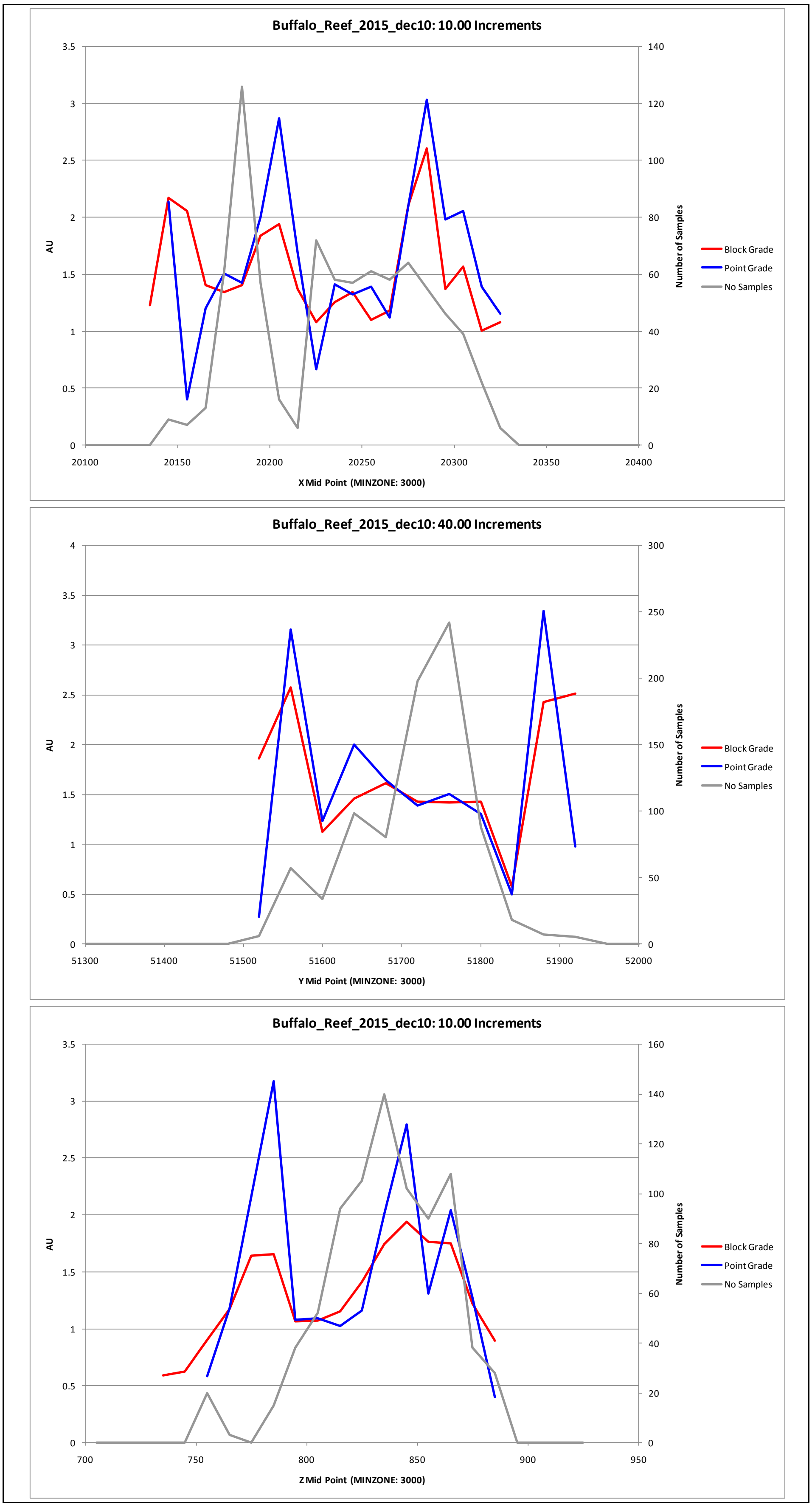


Figure 17.14 Moving window average validation plot for north zone (Au)



17.1.10 Resource classification

The Buffalo Reef resource estimate has been classified as a combination of Indicated and Inferred Resources in accordance with CIM guidelines.

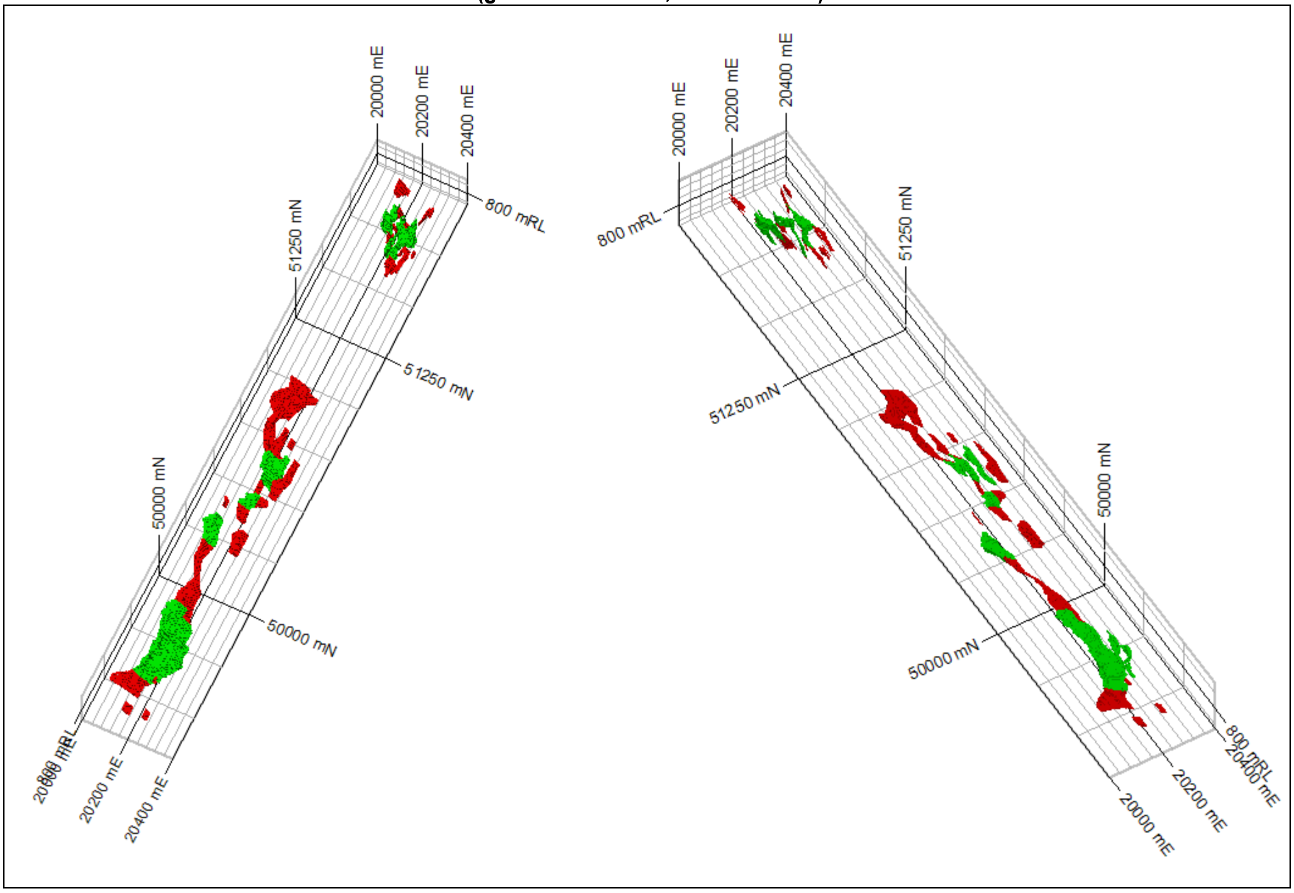
Snowden has based the resource classification upon a number of criteria, including the geological confidence, the integrity of the data, the spatial continuity of the mineralisation as demonstrated by variography, and the quality of the estimation.

The following describes the classification scheme:

- Indicated – 20 mE by 20 mN drilling (or better) and reasonable downdip and along strike continuity.
- Inferred – greater than 20 mE by 20 mN drilling and limited downdip or along strike continuity.

Oblique views of the classified resource blocks are provided in Figure 17.15.

Figure 17.15 Oblique views showing classified resource blocks (green = Indicated; red = Inferred)



Note that while antimony estimates are provided in the block model, these are conceptual in nature and are not considered part of the classified Mineral Resource.

17.1.11 Mineral Resource report

The Mineral Resource for the Buffalo Reef deposit is summarised in Table 17.7 and is estimated to be a total of 3,661 kt at 1.89 g/t Au, reported above a 0.5 g/t Au cut-off grade. The cut-off grade for reporting the Mineral Resource is, in Snowden's opinion, reasonable for this style of gold mineralisation and is similar to the cut-off grade used to report the nearby Selinsing gold deposit.

Snowden notes that no allowance has been included in the Mineral Resource for historical mining at the Buffalo Reef deposit; however Snowden does not believe that this will have a material impact on the resource tonnage or grade.

Table 17.7 Buffalo Reef Mineral Resource report, as at December 2010, reported above a 0.5 g/t Au cut-off grade

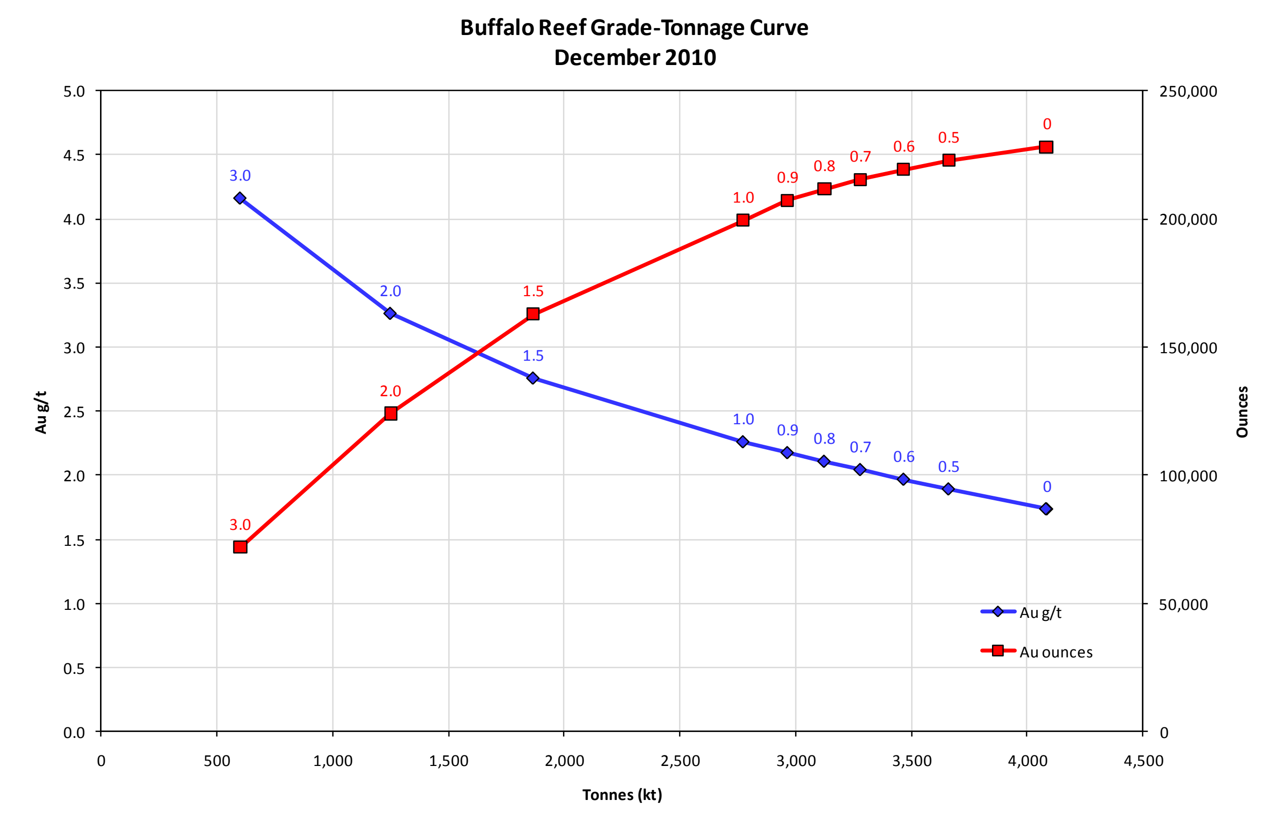
Classification	Oxidation state	Zone	Tonnes kt	Au g/t	Au Oz
Indicated	Oxide	South	272	2.35	20,500
		Central	32	1.62	1,700
		North	159	1.57	8,000
	Sulphide	South	1,298	2.66	111,300
		Central	246	1.36	10,700
		North	291	1.42	13,300
	Total (Indicated)		**2,298**	**2.24**	**165,500**
Inferred	Oxide	South	125	1.23	4,900
		Central	52	1.44	2,400
		North	26	2.79	2,400
	Sulphide	South	411	1.36	17,900
		Central	548	1.07	18,800
		North	201	1.69	10,900
	Total (Inferred)		**1,363**	**1.31**	**57,300**
Grand Total (Indicated + Inferred)			**3,661**	**1.89**	**222,800**

Global grade-tonnage reporting at different cut-off grades is provided in Table 17.8 and a grade-tonnage curve is presented in Figure 17.16.

Table 17.8 Buffalo Reef global grade-tonnage reporting at different cut-off grades, as at December 2010

Cut-off grade	Tonnes kt	Au g/t	Contained Au oz
0.0	4,085	1.74	228,000
0.2	4,082	1.74	228,000
0.5	3,661	1.89	223,000
0.6	3,467	1.97	219,000
0.7	3,280	2.04	215,000
0.8	3,124	2.11	212,000
0.9	2,965	2.18	207,000
1.0	2,773	2.26	199,000
1.5	1,867	2.76	163,000
2.0	1,250	3.26	124,000
3.0	601	4.16	72,000

Figure 17.16 Grade-tonnage curve, as at December 2010



17.2 Mineral Reserve estimate

No Mineral Reserves have been defined for the Buffalo Reef gold deposit.

18 Other relevant data

No other relevant data pertains to the Buffalo Reef area.

19 Interpretations and conclusions

The Buffalo Reef deposit lies within a 200 m wide shear zone which is sub-parallel to the regional scale Raub-Bentong Suture lying a few kilometres to the west. The deposit consists of a number of sub-parallel veins within this shear zone with an overall strike length of some 2.6 km. Individual veins average 10 m in thickness, striking north-south and dipping between 45° to 80° to the east.

The area has been explored over a number of years with predominately RC drilling and some limited diamond drilling and trench sampling conducted across the mineralised veins. The author is satisfied that the drill sample database and geological interpretations are sufficient to enable the estimation of Mineral Resources. Accepted estimation methods have been used to generate a 3D block model of gold values.

The estimate has been classified with respect to CIM guidelines with the resources classified at an Indicated and Inferred status, according to the geological confidence and sample spacings that currently define the deposit.

Snowden believes that Monument should be able to increase the confidence and size of the Buffalo Reef resource through additional drilling. Obtaining access to the Felda settler land situated between the two Mining Certificates currently owned by Monument will allow addition infill drilling in the central zone, which is currently predominately classified as an Inferred Resource due to the sparse data spacing.

20 Recommendations

20.1 Geological recommendations

The author offers the following recommendations with regard to resource definition of the Buffalo Reef gold deposit:

- It is recommended that downhole surveys are conducted at regular depths, say every 30 m, to ascertain any deviation of future RC and diamond core drilling. Additionally, it is recommended that downhole survey techniques which are not affected by magnetics (e.g. gyroscopic or optical techniques) be used to assess the influence of magnetic interference from the surrounding rocks on the downhole surveys.
- The current topographic surface does not match the drillhole collars, however it is not known if the drillholes or the topography is correct. Whilst not having a material impact on the resource tonnages, a detailed robust topography will be required for any future mining studies. It is recommended that this discrepancy be resolved and appropriate corrections be made to either the drillhole collars (through resurveying) or the topographic surface.
- Currently only limited diamond drill core has been drilled and no bulk density measurements were taken from the historical drilling. It is recommended that diamond drilling is conducted across the site to allow detailed logging and assaying, along with providing material for bulk density sampling and geotechnical sampling.
- The refractory nature of the mineralisation will require detailed and robust metallurgical studies to ascertain the cause of the poor metallurgical recovery. Mineralogical studies should also be incorporated into the metallurgical testwork.
- In order to verify the existing trench sample data, Snowden recommends that additional trenches be excavated to twin the Damar/Avocet trenches. These twinned trenches should include appropriate QAQC to verify the assay results. This would also provide an opportunity to collect bulk density samples from the oxide material.

20.2 Metallurgical recommendations

Preliminary metallurgical studies have indicated a possible conceptual flowsheet to treat mineralisation from the Buffalo Reef sulphide "fresh" zones. This very preliminary flowsheet consists of producing a sulphide flotation concentrate and pre-treating by either roasting or bacterial leaching prior to neutralisation and gold recovery by cyanidation using carbon in leach (CIL) procedures.

The following outlines further recommendations that are proposed for advancing this concept to the next phase of the study.

- Establish, in conjunction with the resource gold model, a suitable geochemical and mineralogical database to identify the refractory ore zones and variations in mineralogy at Buffalo Reef. This should include some cyanidable gold analyses, sulphur speciation, carbon speciation, arsenic, antimony and potentially other parameters.

- Variations in geological/mineralogical units should be indentified with respect to potential issues in the process response. Samples that were received for preliminary laboratory evaluation show relatively consistent sulphide, arsenic, carbon and antimony content with one exception; an elevated antimony content that was >1000 times the Sb content of other intervals tested. Significance of variations (including this type of mineralisation) to the resource need to be quantified and ultimately identified in the mine schedule.
- As the project advances, undertake further process optimisation and variability studies for flotation, pre-treatment of sulphide concentrate and CIL. Ensure the laboratory testing programs account for all significant zones of lithology and mineralogy expected for the resource, covering suitable spatial and depth profiles.
- Depending on the results obtained from the gold deportment testwork, the following tests will be conducted if initial indications of high gold deportment in sulphide minerals is confirmed:
  - Advance the roasting option for pre-treatment of the flotation concentrate with optimisation testwork. Include the investigation of a whole ore roast on a preliminary basis. If the selected roast procedure shows encouraging gold recovery in CIL it should be followed up by continuous testing. Sufficient data should be generated to undertake a future engineering and economic trade-off study at a prefeasibility level to compare against bio-oxidation.
  - Advance the bio-oxidation option of a representative flotation concentrate that includes continuous bench scale testwork to establish preliminary operating conditions for estimating retention times and reagent requirements. Include the option of treating flotation tailing with acidic bio-solutions to assist with neutralisation requirements that potentially improve overall plant gold recovery. Sufficient data should be generated to undertake a future engineering trade-off study at a prefeasibility level to compare against roasting of concentrate.
  - Trucking of Buffalo Reef material for treatment at the existing Selinsing operation is under consideration as a process option and that may involve significant transport distances. The use of ore sorting techniques and heavy media separation should be evaluated as a means of upgrading this material prior to transport.

21 References

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22 Dates and signatures

Name of Report:

Buffalo Reef Gold Deposit, Malaysia, NI43-101 Technical Report, Mineral Resource Estimate

May 2011

Issued by:

Monument Mining Limited

Jean-Pierre Graindorge

Date: 16 May 2011

Frank Wright

Date: 16 May 2011

23 Certificate of author

Jean-Pierre Graindorge, BSc
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West Perth 6000
WA, Australia
Email: jgraindorge@snowdengroup.com

I, Jean-Pierre Graindorge, BSc, am a Professional Geoscientist employed as a Senior Consultant – Resource Evaluation by Snowden Mining Industry Consultants, 87 Colin Street, West Perth WA Australia.

I graduated with a Bachelor of Science degree with Second Class Honours in Geology from The University of Western Australia, Perth, Australia. I completed a Postgraduate Certificate in Geostatistics from Edith Cowan University in 2007. I am a member of the Australasian Institute of Mining and Metallurgy (MAusIMM) and a Chartered Professional geologist. I have worked as a geologist for a total of 10 years since graduating with my bachelor's degree.

I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements of a "qualified person" for the purposes of NI 43-101.

I am responsible for the preparation of the Technical Report entitled "Buffalo Reef Gold Deposit, Malaysia, NI43-101 Technical Report, Mineral Resource Estimate". I have visited the site between the 4th and 6th of August 2010.

As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

I am independent of the issuer applying all of the tests in Section 1.4 of NI 43-101.

I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in accordance with that instrument and form.

Dated the 16th day of May 2011

Jean-Pierre Graindorge, BSc

Frank Wright, P.Eng.

427 Fairway Dr

North Vancouver

BC Canada

Email: fwright@telus.net

I, Frank Wright, P.Eng. as participating author of this report entitled "Monument Mining Ltd., Buffalo Reef Gold Deposit, Malaysia" and dated 2 May 2011, do hereby certify that::

I am Principal of F. Wright Consulting Inc. My office address is 427 Fairway Dr, North Vancouver BC, Canada.

I am a graduate of the University of Alberta in 1979, Edmonton Canada with a Bachelor of Science in Metallurgical Engineering; and a graduate of Simon Fraser University in 1983, Burnaby Canada, with a Bachelor of Business Administration.

I am registered as a Professional Engineer in British Columbia (Lic.# 15747), Canada. I have worked in my profession as a metallurgical process engineer for a total of 27 years since my graduation.

I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI43 101.

I have visited the Buffalo Reef project and nearby Selinsing mill and leach plant October 18 to 20, 2010.

I am responsible for Sections 16.2, 16.3 and 20.2 of the Technical Report, which relate to the preliminary metallurgical study.

I am independent of the Issuer applying the test set out in Section 1.4 of National Instrument 43-101.

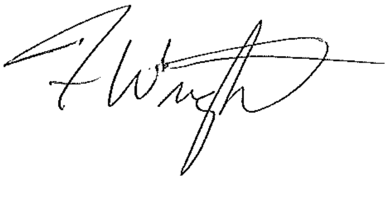
I have had no prior involvement with the property that is the subject of the Technical Report.

I have read National Instrument 43-101F1, and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.

To the best of my knowledge, information, and belief, as of the date of the report, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading with respect to the sections for which I am responsible.

I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated the 16th day of May 2011



Frank Wright, P.Eng.

24 Consent of Qualified Persons

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WA, Australia

Email: jgraindorge@snowdengroup.com

TO: The securities regulatory authorities of each of the provinces and territories of Canada

I, Jean-Pierre Graindorge, BSc, do hereby consent to the filing of the report titled "Buffalo Reef Gold Deposit, Malaysia, NI43-101 Technical Report, Mineral Resource Estimate", prepared for Monument Mining Limited and dated May 2011.

Dated the 16th day of May 2011

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Frank Wright, P.Eng.

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TO: The securities regulatory authorities of each of the provinces and territories of Canada

I, Frank Wright, P.Eng., do hereby consent to the filing of the report titled "Buffalo Reef Gold Deposit, Malaysia, NI43-101 Technical Report, Mineral Resource Estimate", prepared for Monument Mining Limited and dated May 2011.

Dated the 16th day of May 2011

Frank Wright, P.Eng.

Appendix A Buffalo Reef collar location plan

BUFFALO REEF DIAMOND DRILL