BUCIUM PROJECT

Revised Resource Estimate for Rodu and Frasin Prospects

Prepared by RSG Global on behalf of:

Rosia Montana Gold Corporation S.A.

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EXECUTIVE SUMMARY

The Bucium deposit in Romania comprised the Rodu and Frasin deposits, that occur within a maar-diatreme complex of Neogene age, emplaced into cretaceous sediments. A breccia pipe has been interpreted at Frasin.

The location of the diatreme complex is interpreted to be controlled by structural dilation as a result of steeply dipping northeast trending faults that crosscut the regional north-northwest structural trend.

Gold and silver mineralisation is interpreted to be the result of a shallow level, low sulphidation epithermal system.

RSG Global has completed a resource estimation following additional drilling: 48 drillholes, 7276.67m RC and 2827.83m DDH, 1579m channels, structural geological mapping and 3-D modeling at Bucium during 2004. The model includes deterministically defined zones for mineralized material at Frasin and a high grade breccia pipe (5.91g/t), also at Frasin. Rodu was estimated as a single zone. Estimation was carried out using ordinary kriging. Wherever possible, continuity was maintained with previous estimation methods, particularly the use of variograms normalized to a sill variance of 1. This has allowed the use of the same variance limits for classification as in February 2004.

Total indicated resources define 490,563 oz of gold at a cut off of 0.6g/t Gold. The resource is summarised in the table below.

	Cutoff	Volume	Tonnage	Contained Au (g)	Contained Au (oz)	Grade Au (g/t)	Contained Ag (g)	Contained Ag (oz)	Grade Ag (g/t)
Total Indicated	0.4	3,996,385	9,207,057	15,921,933	511,902	1.73	46,330,884	1,489,572	5.03
	0.6	3,445,373	7,945,240	15,258,208	490,563	1.92	43,073,260	1,384,837	5.42
	0.8	2,794,600	6,454,968	14,217,741	457,111	2.20	38,739,069	1,245,490	6.00
	1.0	2,332,126	5,386,680	13,277,136	426,870	2.46	35,758,969	1,149,677	6.64
Total Inferred	0.4	27,720,622	66,729,126	56,439,131	1,814,560	0.85	149,731,323	4,813,973	2.24
	0.6	14,771,763	35,364,526	41,066,378	1,320,315	1.16	101,731,428	3,270,741	2.88
	0.8	7,816,657	18,596,376	29,488,832	948,088	1.59	71,063,449	2,284,743	3.82
	1.0	4,791,145	11,322,216	23,080,278	742,048	2.04	55,611,990	1,787,967	4.91

The resource model is suitable for planning bulk mining operations, but as yet no mine planning has been carried out. Consequently, there is uncertainty regarding the mineability of some of these ounces.

The model was produced in Datamine and then exported to Vulcan. Minor differences between the Datamine and Vulcan models are expected as a result of data transformations. Resource reporting has been done on the Datamine version.

1 INTRODUCTION

1.1 Terms Of Reference

Following additional drilling (48 drillholes, 7276.67m RC and 2827.83m DDH, 1579m channels) during 2004 at the Rodu and Frasin prospects of the Bucium gold-silver project located in the north of the city of Deva in Romania, and 5km from the Rosia Montana mine; RSG Global provided a proposal for the update of the resource estimate. An initial estimate had been completed by RSG Global following drilling in 2003; this estimate was the subject of a report titled Resource Estimate for Rodu and Frasin Prospects, dated February 2004.

The proposal for this update, titled Proposal for Rodu and Frasin Resource Estimates Update, was dated October 2004.

1.2 Participants

The resource estimation was carried out by Dr J A Verbeek of RSG Global, based in Perth, Australia, in conjunction with Mr K Howie of RSG Global, based in Romania. Nick Hewson and other Rosia Montana geologists contributed structural ad geological mapping data. Dr Verbeek did not visit the Rodu and Frasin deposits.

1.3 Principal Sources of Information

Drillhole data, in the form of comma separated text files as exports from an acQuire database was provided by Mr Howie, along with a series of Vulcan wireframes defining major lithological units.

Significant reference was made to the report from 2003 mentioned above, and telephonic discussions were held between Dr Verbeek and Mr Howie regarding mineralisation and estimation strategy.

2 GEOLOGICAL SETTING

2.1 Regional Geology

Romania includes four major Mesozoic and older terrains, namely the Southern Carpathians, the Eastern Carpathians, the Apuseni Mountains and Dobrogea. Late Tertiary sediments were deposited in the intervening Pannonian and Transylvanian Basins, and on the Scythian and Moesian Platforms. Three principal areas of Tertiary volcanic rocks, of predominantly calc alkaline affinity, intrude and overlie these sequences in the Baia Mare area, in the north of Romania, the Muntii Calimani-Harghita area in the east, and the Apuseni Mountains in central-west Romania.

The famous mining districts of the Apuseni and Metaliferi Mountains of Transylvania comprise a 500km^2 region of the Apuseni Mountains, immediately to the north of the city of Deva, commonly referred to as the Golden Quadrilateral. The Golden Quadrilateral has remained Europe's most important centre of gold production for more than 2000 years since Geto-Dacian (pre-Roman) times, with the Roman conquest of Dacia in 105AD-106AD predicated on gaining control over this important goldfield. The district reached peak production during the period of the Austro-Hungarian Empire at the end of the 17th Century to 1918.

The Golden Quadrilateral lies within the Apuseni Mountains, which consist of Mesozoic, shallow marine and non-marine sedimentary rocks overlying Palaeozoic and Precambrian sedimentary and metamorphic basement. North-directed thrust faulting during the late Cretaceous resulted in a series of nappes that are unconformably overlain, and intruded, by Tertiary volcanics associated with high-level gold-silver mineralisation and porphyry copper deposits of the Golden Quadrilateral.

Tertiary volcanism has been subdivided into three cycles. The earliest cycle is interpreted as middle Tortonian age and comprises andesitic volcanics and rhyolitic ignimbrite overlain by andesitic and rhyodacitic volcanics. Volcanogenic sediments occur throughout this cycle and widespread hydrothermal alteration overprints all rock types.

Rocks of the second cycle outcrop extensively and are characterised by andesite and dacite overlain by a very thick sequence of andesite that is, in turn, overlain by pyroxene andesite. The sequence is interpreted to be late Tortonian and early Pannonian age. The middle and upper sequence of this cycle represents the principal host to gold-silver mineralisation currently being mined in Romania, as well as significant occurrences of copper, lead, zinc and mercury.

The third and final cycle of volcanism continued into the Quaternary era and is characterised by pyroxene andesite, basaltic andesite and potassic basalt.

Three major northwest-trending belts of volcanism and associated mineralisation are identified within the Golden Quadrilateral, with the Rosia Montana-Bucium Complex representing part of the northern-most belt.

2.2 Project Geology

The Bucium deposit is interpreted as a dacitic maar-diatreme complex of Neogene age emplaced into a sequence Cretaceous sediments.

2.2.1 Cretaceous Sediments

The host lithology of the diatreme-intrusive complex is a flysch sequence comprised of shale, sandstone, conglomerate and limestone beds. The grains or clasts of the sediments are made up of quartz, micas and feldspar grains and lithic clasts cemented in a calcite or clay/calcite matrix. The sediments have undergone low-grade metamorphism (lower greenschist facies). The shale units behave in a ductile fashion and are sometimes folded and sheared. The sandstone and conglomerate units usually behave in a more competent fashion.

2.2.2 Frasin Dacite

The Frasin area is dominated by a shallow dacitic intrusive of Neogene age. In areas of weak hydrothermal alteration the dacite contains phenocrysts of quartz, feldspar, biotite and hornblende with accessory apatite and zircon in a very fine groundmass. The dacite has intruded sub-vertically through the Cretaceous, with drill holes along the northwest edge and also at depth on the eastern margin passing directly from dacite into cretaceous sediments. At the south end of Frasin the dacite-Cretaceous contact is significantly more brecciated with zones of dacite clasts in a pulverised shale matrix. To the east the Frasin dacite is partially overlain by unmineralised post-dacite vent breccia.

The dacite body is oval in shape, with the long axis orientated north-south. The dacite is approximately 700m long by 500m wide. The shape and strong flow banding observed in outcrop and drill holes at the north and south ends, away from the more intense hydrothermal alteration, indicates that the dacite flowed sub-vertically up a north-south orientated fault within the Cretaceous sediments. Drilling at the north end of Frasin indicates that as the dacite came close to the current surface the dacite flowed more laterally to the west, forming an overhanging shape.

A number of small breccia bodies cut across the dacite, these are sub-vertical in orientation and usually trend north-south. These breccia dykes are composed of clasts of dacite and Cretaceous sediments within a soft clay matrix of pulverised Cretaceous shale.

2.2.3 'Vent' Breccia

Flanking the dacite intrusive to the west and east is an apron of massive, unsorted, matrix-supported polymictic breccia of phreato-magmatic origin, which is locally referred to as 'vent' breccia.

The breccia has been further subdivided into 2 separate bodies, the Rodu vent breccia on the western side of the Frasin Dacite, and the Sesii vent breccia on the eastern flank. While both are dominated by clasts of Cretaceous sediment, which include shale, sandstone, conglomerate and limestone, and both contain dacite clasts, the Sesii vent breccia also includes clasts of andesite and altered diorite porphyry. Petrology has also identified a clast of endoskarn in the Sesii vent breccia and in both areas limestone fragments classified as exoskarn have been identified.

The Rodu vent breccia is mineralised and hydrothermally altered whereas no gold-silver mineralisation had been observed within the Sesii vent breccia. The Sesei vent breccia partially overlies the mineralised Frasin dacite and contains clasts of angular hydrothermally altered and mineralised dacite close to the contact. Within the Rodu vent breccia variations have been noted between Cretaceous clast and dacite clast dominated variants, as well as dark grey and pale grey matrices. Further work is required to clearly define the boundaries of these different vent breccia types in the Rodu area.

Some evidence of sedimentary reworking is evident in the Rodu vent breccia body, in the valley between Rodu East and Frasin. Here, in a fairly limited area, outcrops of bedded and reworked vent breccia have been mapped. No clasts of the underlying metamorphic basement have been identified in the area to date.

Another small body of vent breccia has been identified in the Magulicea area, approximately 900 metres to the northwest of Rodu. This body of vent breccia is fairly small, about 100m by 100m, and all evidence to date suggests it is a shallow outlier of the Rodu vent breccia that has become isolated by erosion.

2.2.4 Andesites

A small area dominated by blocks of andesitic lava has been mapped on the western edge of Rodu, towards Magulicea. Only is interpreted to be a remnant of a relatively young andesitic lava that has flowed from the Rosia Poieni or Tarnita areas.

2.3 Structure

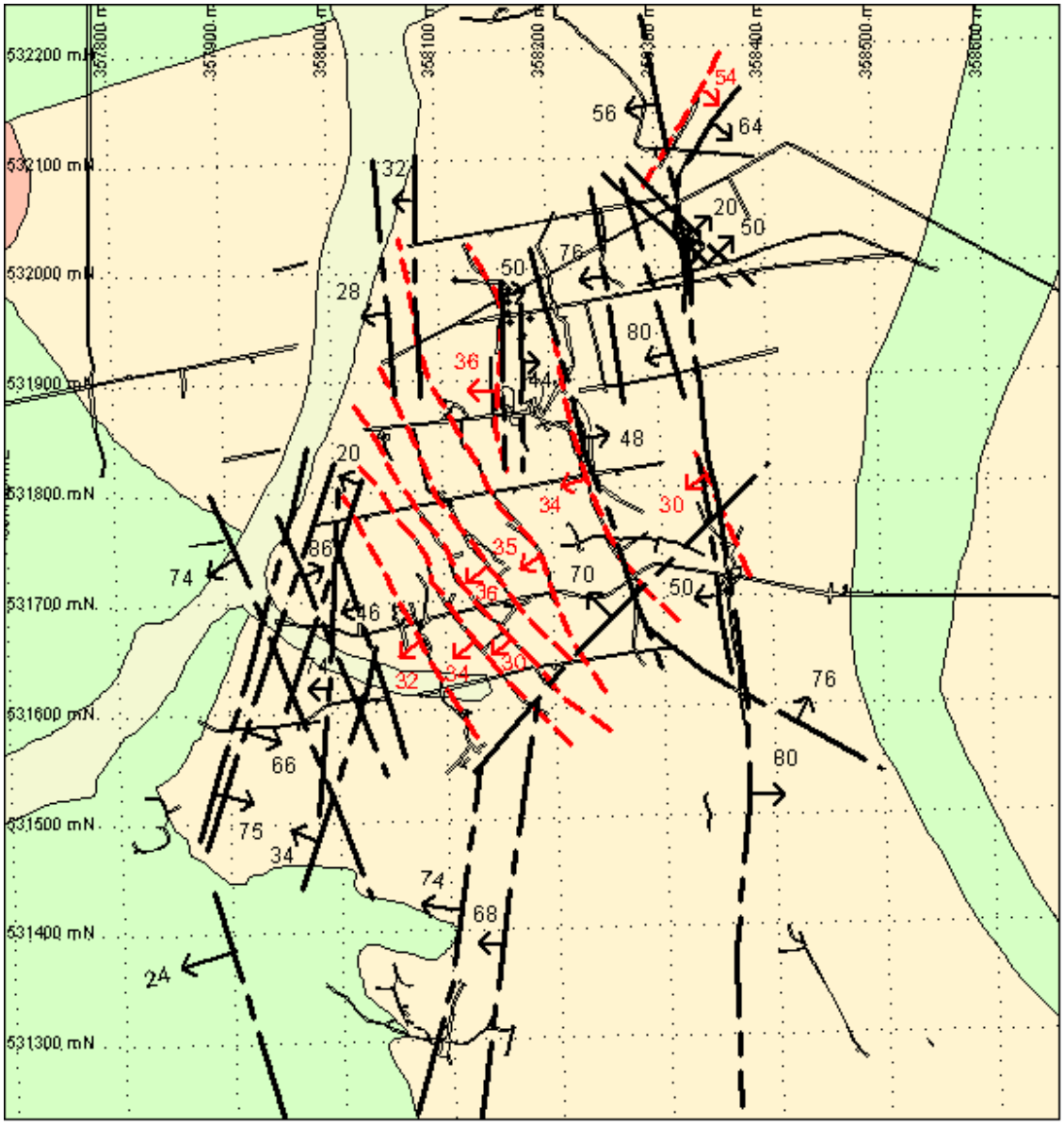
The Rodu-Frasin diatreme complex lies on the regional north-northwest structural trend that has been identified from north of Rosia Montana to the south end of the Bucium exploration licence. The location of the diatreme complex along this structure is interpreted as being controlled by dilation caused by a major cross cutting structure, interpreted as steeply dipping northeast trending faults. These structures have been identified locally by geophysics and more regionally throughout the Rosia Montana and Bucium area by geologic mapping.

The main north-northwest structure is interpreted as a deep-seated basement structure and is interpreted to have produced the broad zone of fracturing and veining that is seen in the Frasin dacite, the Rodu vent breccia and in the surrounding Cretaceous sediments. These generally strike north-northwest or north-south and dip sub-vertically or steeply to the west.

The shape of the dacite, the flow banding within the dacite and the location and shape of the mineralised zone and the orientation of the veining, indicates that the structural controls on the emplacement of the diatreme complex and mineralisation were the same. Zones of better grade at Frasin occur at the intersection of north-northwest and cross cutting northeast trending structures that are also interpreted to control the location of the diatreme complex.

A program of structural mapping was completed in 2004 in the extensive underground workings at Rodu, and this work identified a late normal reactivation of the steeply dipping regional faults that has resulted in several moderately to shallow dipping mineralised carbonate veins and faults, dipping moderately towards both the east and the west (Hewson and Feier, 2004). A major steeply dipping fault has been mapped on the eastern side of Rodu, which is believed to be the 'Sperla' Fault as referred to by Ghitulescu (1941). This fault is mineralised and has been exploited in the past along the intersection zones with subsidiary veins and fractures. These high grade zones generally plunge towards the south at angles of 10º or less.

Figure 2.3_1
Summary Structural Interpretation for the Rodu Prospect (projected on to the 700 RL)

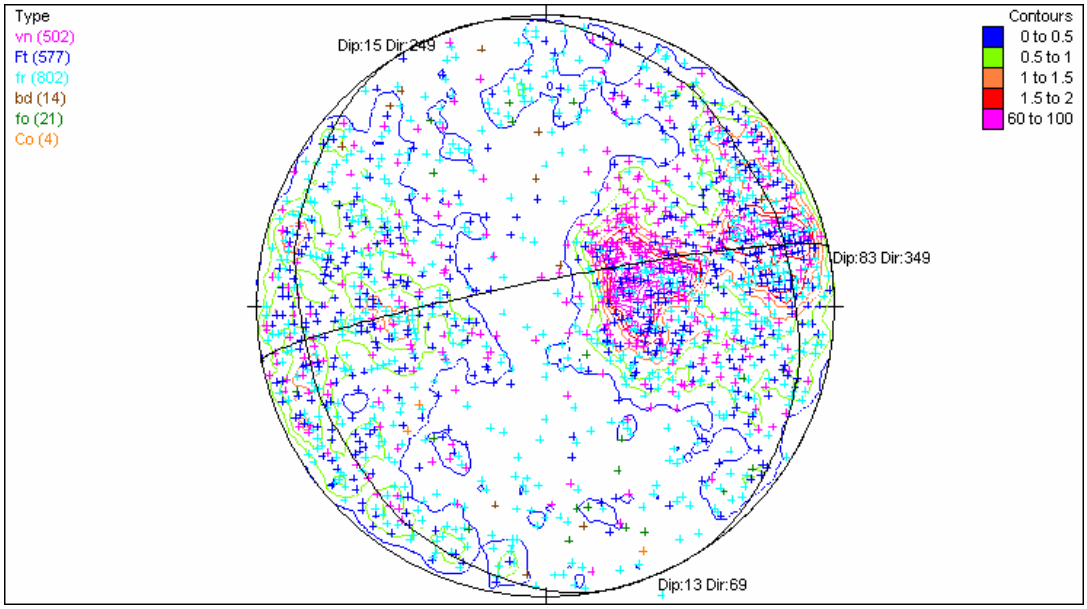


NB Faults are in black and veins are in red (100m grid squares).

On the western side of Rodu, a zone of intense faulting and deformation has been identified, close to the western contact between the vent breccia and the Cretaceous sediments. This appears to have focused mineralisation along the contact, particularly where the contact is intersected by major fault structures, due to the permeability and rheology contrast between the vent breccia and the Cretaceous sediments.

The influence of low angle faults and veins on the distribution of mineralisation appears to be stronger at Rodu than at Frasin, although a stope has been developed at the south end of Frasin on the intersection between a series of high angle and low angle faults. It is possible that late stage relaxation across the maar-diatreme complex has caused normal faulting in the vent breccia on the margins of the complex.

Figure 2.3_2
Stereo Plot for all Structural Data collected from Rodu Underground (Poles to Planes)



2.4 Mineralisation

The gold-silver mineralisation outlined at Bucium is interpreted to represent a shallow level, low sulphidation epithermal system. Mineralisation is dominantly disseminated, with associated stockwork and breccia hosted gold-silver mineralisation.

Gold-silver mineralisation at Bucium is hosted in both the Frasin dacite and Rodu vent breccia. Some mineralisation has also been intersected within Cretaceous sediments close to the northwest edge of the Frasin dacite and also 500m north of Rodu-Frasin in the Haracai area.

2.4.1 Dacite-Hosted Mineralisation

There are 2 principal styles of mineralisation within the Frasin dacite: mineralisation hosted within broad zones of intense alteration; and high grade hydrothermal breccia style mineralisation featuring carbonate veining. The hydrothermal breccia appears to be a subsidiary zone within the larger body of intense alteration, and appears to be structurally controlled. The principal mineralised zone has a sub-vertical, north-northwest to north trending orientation and is interpreted to be most intense where it intersects northeast trending structures.

The main body of mineralisation within the Frasin dacite is characterised by intense and pevasive adularia - clay (illite-smectite) - carbonate ± silica alteration and associated quartz-carbonate-sulphide veining. Narrow, widely spaced sheeted veining and mineralised breccia zones occur within the main body of alteration style mineralisation and are usually associated with the higher-grade mineralization. The veins are generally northwest to north striking, with a sub-vertical or steep westerly dip, discontinuous and less than 1m wide.

The mineralisation appears to have a vertical zonation, with the best grade generally occurring below the 800 RL. Above this level the dacite is altered but the mineralisation is generally patchy and lower grade, except for a few small and isolated, structurally controlled breccia zones that make it through to the surface. This vertical zonation is interpreted as being caused by a distinct boiling zone that has produced a strongly mineralised horizon, with predominantly steam heated alteration at higher levels. Lateral flow of the mineralising fluids to hot springs on the edge of the dacite dome may have also have produced the vertical zonation.

A high grade hydrothermal breccia pipe occurs at the south end of Frasin, at the interpreted intersection of the main north-south trend and a northeast trending structure. The contact of the breccia pipe with the non-brecciated dacite is sharp, and the alteration around the pipe quickly becomes propylitic. This is one of the few locations where the majority of mineralisation is hosted by open space infill (breccia matrix) style mineralisation rather than by altered dacite. The breccia is characterised by large sub-angular clasts of dacite within a strongly mineralised, vuggy quartz-carbonate-sulphide matrix dominated by carbonate (calcite, rhodochrosite and siderite). The mineralisation in the pipe is not exposed at surface, with the best mineralisation occurring below about 780mRL. This pipe is relatively small, with a diameter of about 50 metres but extends for at least 150 metres vertically, and is still open at depth although it appears to become smaller in diameter with depth.

2.4.2 Rodu Vent Breccia Hosted Mineralisation

Significant gold-silver mineralisation is hosted within the Rodu vent breccia to the west of the Frasin dacite. Most of the Rodu vent breccia is dominated by pervasive argilic alteration with the zones of better mineralisation characterised by silicic, carbonate, and adularia alteration with finely disseminated pyrite and infrequent veining.

The mineralisation at Rodu is predominantly structurally controlled, and the zones of highest grade mineralisation that have been exploited in the past are associated with intersection zones on reactivated steeply dipping fault zones, and also on shallow to moderately west and east dipping faults and polymetallic carbonate veins (Hewson and Feier, 2004). These carbonate veins are generally narrow (up to 20cm) strike north-northwest for up to 300m and have a dip of between 20º and 40º towards the west. Although these zones can be very high grade (up to 182g/t Au) they tend to be of limited tonnage potential. However, the potential for a larger mineralised zone exists in the vent breccia above the contact with the Cretaceous sediments, especially where the contact has been intersected by major faults. The Cretaceous contact appears to act as a permeability barrier, concentrating the mineralising fluids in the vent breccia above this contact. This style of mineralisation is dominated by pervasive silicic and carbonate alteration with numerous fractures and faults, but relatively few veins. The average grade of this material is relatively low, between 1 and 2g/t Au, but the mineralised widths can be up to 50 or 60 metres.

2.4.3 Cretaceous Sediment Hosted Mineralisation

This mineralisation has been identified near the northwest edge of Frasin. Cretaceous shales and sandstones host the mineralisation, which occurs in a narrow sub-vertical north-south trending zone. The mineralisation has been intersected in only two RC drill holes and appears as a zone of quartz carbonate-sulphide veining and brecciation with only a narrow selvage of alteration associated with the veining. It is interpreted to be the continuation of one of the Frasin north-south trending structures that control mineralisation within the dacite, but due to the change of host lithology, is much more limited in extent.

Further north at Haracai, weak gold-silver mineralisation occurs as vertical north-northwest trending vuggy quartz veins, and silicified sandstone and conglomerate beds within the Cretaceous sediments.

Gold has been identified by petrography in numerous samples as electrum. It has been observed inter-grown along sulphide (pyrite) grain boundaries, or in carbonate, adularia or quartz. The electrum had a fineness ranging from 695 to 740 and averaging 722. Tetrahedrite has also been identified and contained about 2.5% silver.

Multiple occurrences of visible gold were observed in the hydrothermal breccia pipe at the south end of Frasin, this generally occurs within siderite or rhodochrosite and also as gold leaf within vughs.

Petrology indicates that the mineralising hydrothermal fluids were near neutral pH with the gold transported as a bisulphide complex and deposited at temperatures between 150 to 220ºC. The dominant mechanism of precipitation is interpreted to be the boiling of the hydrothermal fluid.

2.5 Alteration

An extensive zone of strong hydrothermal alteration hosts the Rodu-Frasin deposits. The alteration surrounding the more intensely mineralised structures at Rodu and Frasin displays zoning, which varies depending on the host lithology.

The Frasin dacite shows strong potassic and carbonate alteration (±silicic alteration) within the well mineralised zones, with sometimes a narrow zone of phyllic alteration proximal to the mineralisation, grading out through a generally weak, often narrow, zone of argilic alteration into propylitic alteration more distal to the mineralisation. Fresh dacite has not been intersected at Frasin.

At Rodu the mineralised vent breccia displays the same silicic/potassic/carbonate alteration as the Frasin dacite, but is generally more silicic. Only rare, localised phyllic alteration has been observed, with far more extensive argilic alteration pervasive throughout the vent breccia. Rare propylitic alteration occurs around the distal margins of the vent breccia.

Within the mineralised zones petrology has identified two types/phases of alteration:-

- Adularia - clay (illite-smectite) – carbonate (Mg-calcite ± kutnahorite ± rhodochrosite) ± silica alteration, which usually represents the main gold-silver mineralising event at Rodu-Frasin. This has occurred at temperatures between 150 and 230ºC, by near-neutral pH hydrothermal fluids.
- Later carbonate (dolomite ± siderite) – kaolinite alteration, produced by low salinity bicarbonate fluid at a slightly lower temperature (less than 200ºC).

Skarn and potassic altered clasts of limestone and diorite have also been identified in the Sesii vent breccia. This alteration/mineralisation is interpreted to occur at depth below the vent breccia body.

Oxidation occurs only as a very thin veneer at Rodu and Frasin, only progressing to depth along joint surfaces or fault structures.

3 RESOURCE ESTIMATION

3.1 Software

The model was produced in Datamine and then exported to Vulcan. Minor differences between the Datamine and Vulcan models are expected as a result of data transformations. Resource reporting has been done on the Datamine version.

All statistics and experimental variograms were calculated and modeled using GSLib software.

Data validation and estimation check plots were carried out in Microsoft Excel.

3.2 Data Validation

Electronic database files were validated on site by project personnel and electronically when imported into the acQuire Database. Files were further validated by Ms Jodi Morgan on receipt by RSG Perth and again on import into Datamine using standard validation routines. No errors were identified in the structure of the data, i.e. no overlapping sample or similar errors.

The correctness of the data, and correlation with original logs and assay certificates was, however, not checked as part of this evaluation.

The use of an industry standard database is to be commended and the resulting high standard of data integrity impacts positively on confidence in the estimate.

The following activities were undertaken by on site personnel during database validation:-

- Checking of underground and surface channel sampling traces against the locations of the surveyed underground workings. Surface channels that were noted to deviate substantially from the surveyed topography have been adjusted to the topography where appropriate.
- Ensuring compatibility of total hole depth data in the collar, survey, assay and geology database files.
- Checking of drill hole survey data for unusual or suspect down hole deviations.
- Ensuring sequential down hole depth and interval data in the survey, assay and geology files.
- Replacing of assays with results below the detection limit ,character entries, and blanks for un-sampled intervals with nominal low-grade values.
- Checking of lithology and alteration codes.
- Removal of non-essential information from validated database files.

QA/QC data was provided by Bucium project staff. Standards, blanks and duplicates were inserted into the sample stream in proportions of 1 per 20. Duplicates 1 per 20.: Blanks inserted at random intervals proximal to mineralisation the quality control graphs are presented in Appendix 1, from which it appears that the standard of the data meets industry standard practice.

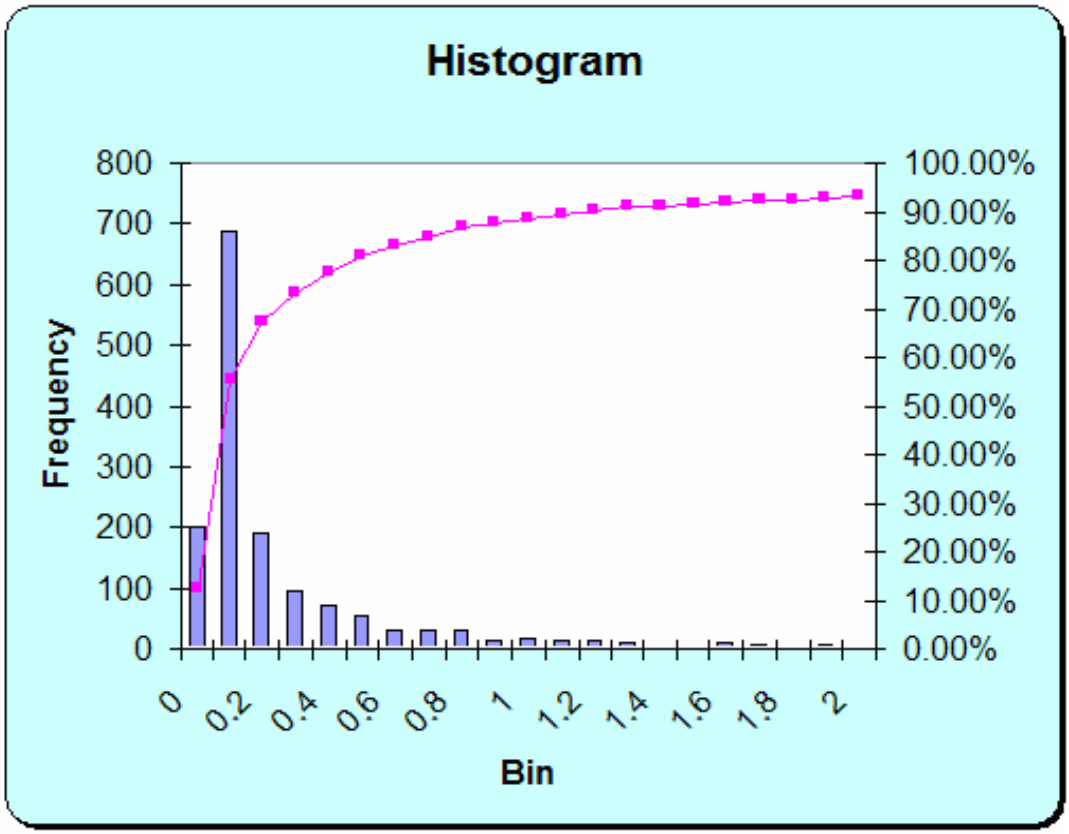
3.3 Wireframes

Wireframes of the major lithological units being the vent breccias, dacite and breccia pipe at Frasin, were provided by the Bucium exploration office. Planar wireframe projections of mapped structures at Rodu were also provided.

A broad mineralisation envelope for the Rodu deposit was also provided by Bucium staff, but no such envelope was provided for Frasin. There are clearly domains containing high grade in the Frasin dacite and vent breccias. In the 2003 evaluation, deterministic wireframes were developed, allowing the domaining of samples within the dacite. The 2003 domains defined the breccia pipe, and main, hangingwall and northern zones

With reference to the clustered, uncomposited histogram of gold values Figure 3.3_1, there is no clear distinction of a break point in the population to define the cutoff between mineralised and unmineralised material. In this evaluation (2004), indicator kriging utilising an indicator cutoff of 0.3g/t Au was used, together with an indicator probability of greater than 50% was used to assist in the definition of mineralised zones at Frasin. These parameters appear to define the mineralisation zones, both at Rodu and at Frasin, from visual inspection.

Figure 3.3_1
Clustered, uncomposited (unregularised) Au histogram of the entire sample set (Rodu+Frasin, including both mineralised and unmineralised material)



Indicator variography and estimation was carried out independently from the 2003 deterministic model but nevertheless reflects the steep easterly dipping structural trend of the Frasin orebody defined in the 2003 evaluation.

The indicator and deterministic methodologies employed in subsequent evaluations produced very similar results, but the indicator method also produced some aberrations due to the paucity of data in some of the marginal areas. As such, it was not suitable on its own for the definition of mineralised zones.

Ultimately, a hybrid method was employed to define the mineralised zones at Frasin. Deterministic wireframes were constructed around the probability model, but geological logic was also used to define the shapes and more importantly the extent of the modelled mineralisation. Zones identified by the probabilistic model that appeared poorly constrained by drilling information or to be spreading the kriged probability of mineralisation into poorly informed areas were either restricted or removed during the deterministic wireframe modelling.

Very similar zones were defined to those in 2003, but additional marginal zones were also defined, and the use of a hybrid methodology better reflects the 3-D nature of the orebody.

The concept of defining the mineralised zones within the Rodu and Frasin prospects was to separate medium to 'high' grade mineralisation, probably related to structural controls, from low grade 'background' mineralisation for which continuity could not be defined.

As such, although an attempt was made to draw the wireframes to grade cutoffs within the boreholes, it was also considered important to produce relatively smooth wireframes reflecting the likely shape of mineralisation halos around structural fluid pathways. Consequently, the wireframe boundaries do not always honour the grade contacts exactly.

As the mineralisation at Frasin is erratic, the occasional incorporation of lower grade intervals within the wireframes and exclusion of some higher grade mineralisation along the edges of the wireframes is inevitable.

The med-high grade wireframe produced for Rodu was particularly complex and it was decided that using this wireframe would introduce bias not supported by the data density and geological understanding. A broadly defined mineralisation wireframe was also provided by the site based staff.

On examination of statistics within the mineralised zone at Rodu (defined by project staff) and in the background vent breccia, it became apparent that there was no sound reason to separate these zones. A first pass model was prepared using the mineralisation wireframes as 'hard boundaries' but this resulted in artificial grade breaks that did not appear geologically sound. Subsequent modelling did not break Rodu into separate high and low grade zones.

No wireframes defining the structures and domains such as the Contact Zone, Sperla Fault and carbonate veins were provided. If these were available, they could be evaluated separately. Currently, however, the data density and spatial statistics, do not support this. Geological personnel on site provided a number of planar projections of mapped structures for Rodu. Although there is little doubt that these structures control the orientation of mineralisation, there is no evidence in the variograms that this is indeed a preferred direction (probably due to data density). Until data density is sufficient to allow the construction of deterministic wireframes defining mineralised volumes, it is not sound estimation practice to provide increased resolution in the Rodu Model

Constraints of time and space prevented close interaction with geological field staff, but it is considered that perhaps the biggest opportunity for improvement in the evaluation is for field and modelling staff to interact closely to better understand and define mineralised zones, particularly at Rodu.

When attempting to link mineralised areas with due attention to both the probabilistic model and the intersections themselves, it becomes clear that there is potential to intersect more medium grade (1-2g/t) mineralisation with further drilling. Wireframes for medium and high grade mineralisation in this estimation, however, have been clipped to the boreholes and not projected into unconstrained areas of the indicator model, even though they could potentially contain grade.

Further, it is considered that a significant portion of the Dacite, not yet drill tested, has potential to host mineralisation.

It is considered likely, however, that additional mineralisation that maybe identified will be of similar low tenor to the mineralisation already defined. Notwithstanding this, potential exists for some further high grade mineralisation, for example in the region of borehole RFSD-87, where the zone between boreholes 19 and 87 is still open., The roof zone of the Frasin Breccia Pipe also has potential to provide additional higher grade resource. The zone between holes 19 and 87 is open.

3.4 Statistics and Estimation

3.4.1 Estimation Strategy

For the purpose of the definition of wireframes, mineralised material and generation of mineralisation strategy, gold was considered as the primary economic mineral. The contribution of silver to the economic potential of the Rodu-Frasin mineralisation is considered small, and the fluids are considered from the same source.

As far as possible, this estimation has been carried out to retain continuity with the previous (2003) estimation.

Three Major Departures were made from the previous estimation.

Samples from within the Frasin Mineralised zone, Frasin Breccia Pipe and Frasin Background zone were separated by a combination of probabilistic and deterministic wireframes and have been analysed, modelled, and estimated separately.

Samples within the Rodu Vent Breccia have been modelled in an unconstrained fashion.

No cutting has been applied to the sample sets during interpolation. The existence of high-grade samples is considered to be real, and the high grade tail of the mineralisation is considered to be continuous. RSG Global is aware of the existence of clustered high grade samples, some of which have been taken along the strike of veins. While it is understood that these samples will affect the global descriptive statistics, it is considered that they provide valuable information for variogram calculation and that the inherent declustering effect in kriging, and the suitable kriging plan applied, will adequately minimise potential over-estimation issues related to these data.

Nevertheless, the kriging plan was devised in order to limit the effect of any one borehole or sample channel by requiring at least 3 octants to be filled with a minimum of 4 samples each, and limiting the maximum number of samples from each borehole to be 20.

Due to the domaining of samples in this estimation, the variograms used are significantly different to those used in previous estimations. Particularly, the ranges of the variograms are shorter in all cases, and the nugget variance applied for the Frasin mineralised zone is high. The nugget effect is consistent with the mix of high and low grade samples and high variability within the zone. Kriging search neighbourhoods have been appropriately shortened to correspond to about 90-95% of the total (sill) variance, and smoothing has consequently been reduced from 2003 to 2004.

3.4.2 Domaining and Compositing

Samples within the Frasin and Rodu vent breccias, Frasin dacite, probabilistic/deterministic medium-high grade zones at Frasin and the Frasin Breccia Pipe were separated into 4 main zones- Frasin background (Zone 2), Frasin Mineralised (or simply Frasin, Zone 3), and Frasin Breccia pipe (Zone 4). Rodu Mineralisation and Rodu background were initially separated but ultimately treated as a single zone (Zone 1). Samples within these zones were then composited to 2m lengths and subjected to classical descriptive statistical analysis with and without spatial declustering. The descriptive statistics are presented below.

Voids (underground workings) were assigned Zone 7, but have no grade or tonnage associated.

3.4.3 Declustering

Declustered histograms presented for the domains have been produced using cell declustering based on 20m cell sizes. Tests on all domains indicated that this cell size produced a minimum in the declustered means.

3.4.4 Missing Values and Detection Limits

Samples below detection limits for Au and Ag were assigned values of half the detection limit, being 0.5g/t for Ag and 0,005g/t for Au. Missing values were treated as not sampled, and were not assigned detection limit values.

3.4.5 Experimental Variogram Calculation

Experimental variograms for each zone were calculated and examined for anisotropy. Variograms were calculated as correlograms in GSLib and then inverted and used as variograms. As such variogram and correlogram are used interchangeably in this report. Initially, traditional semi-variograms were calculated, but these were noisy and poorly defined. Consequently, the inverted correlograms were calculated and these better define the spatial variability.

In correlogram calculation, the semi-variogram is normalised to the local variance or variance of the data for a given lag. Because of this, the correlogram better captures the structure of variance in zones with outliers and strong data clustering in the sample population.

Although the descriptive statistics for all zones suggest a highly skewed distribution with a robust tail, and although no high grade cut off was applied for estimation purposes. An upper cut of 50g/t was applied for the calculation of experimental variograms in order to further filter out variogram noise resulting from the adjacency of high and medium to low grade samples.

All variograms presented and modelled in this evaluation were normalised to a sill variance of 1. This provides continuity with the 2003 estimation especially allowing the same kriging.

3.4.6 Estimation Blocks

Estimation block sizes were maintained at 40x40x10m parent cells primarily in order to provide continuity between the 2003 and 2004 estimations. These blocks were sub-blocked to provide resolution at lithological boundaries and for mined out zones. The Estimation block sizes are, nevertheless, consistent with the data density.

3.4.7 Kriging Plan

Search parameters and minimum maximum sample requirements are provided in Table 3.4.7_1. This kriging plan was devised to limit the effect on any one borehole, and to ensure adequate smoothing to offset the shorter search ranges applied in the 2004 estimation.

A two-stage search was used, searching first to approximately 90-95% of the sill variance, and subsequently to twice the first search. Although the model also allows for an extended 3rd search, designed to correlate approximately with the maximum search from the previous estimation (2003), blocks estimated using this third search have not been included in the resource statement. These blocks should be viewed in a qualitative way to help with planning of future boreholes.

3.4.8 Resource Reporting Cutoffs

No mine planning has yet been carried out on the Bucium deposit model, however the general low tenor of the mineralisation militates against development of an underground mine, except possibly for the Frasin Breccia Pipe and surrounding medium to high grade zones. The most likely method of extraction will be bulk or selective open pit mining, and cutoffs quoted between 0.4 and 1.0g/t Au are considered appropriate for the 40 x 40 x 10m blocks estimated.

If selective methods were applied, using smaller blocks, the change in selectivity would result in decreased tonnages and increased grades. Additional information (grade control) at the time of mining would allow separation of ore and waste and better local estimation of grades.

Although uniform conditioning, multiple indicator kriging or other non-linear geostatistical methods could be used (eg UC in the 2003 model) to estimate recoverable resources at higher selectivity, it is considered that uncertainty in the variogram and domaining of samples does not warrant application of advanced methodology at this stage. Once initial mine planning can provide information such as depth of open cut and likely selectivity, further estimation of recoverably resources may be justified, and reporting of resources below pit bottom can be done at cut offs appropriate for underground methods.

Table 3.4.7_1

Search Parameters for the 2004 Evaluation

	SDIST1	SDIST2	SDIST3	SANGLE1	SANGLE2	SANGLE3	SAXIS1	SAXIS2	SAXIS3
Frasin	40	50	50	90	-60	0	3	1	3
Frasin Breccia Pipe	30	30	30	0	0	0	3	1	3
Frasin Background	35	35	35	0	0	0	3	2	1
Rodu	35	35	35	0	0	0	1	2	3

	MINOCT	MINPEROC	MAXPEROC	MINNUM1	MAXNUM1	SVOLFAC2	MINNUM2	MAXNUM2	SVOLFAC3	MINNUM3	MAXNUM3	MAXKEY
Frasin	3	4	20	12	160	2	12	160	6	12	160	20
Frasin Breccia Pipe	3	4	20	12	160	2	12	160	8	12	160	20
Frasin Background	3	4	20	12	160	2	12	160	8	12	160	20
Rodu	3	4	20	12	160	2	12	160	8	12	160	20

Estimation of recoverable reserves for underground mining is best done in conjunction with robust geological interpretations, as application of UC or MIK assumes perfect access and application of selectivity, clearly not attainable in a narrow stoping environment or in a non-selective, caving environment.

3.4.9 Classification

Classification of the resources at Bucium has been carried out in 3 ways.

1) Only resources defined by deterministic wireframes have been classified as indicated resources based on the requirement of geological continuity.

2) Resources that are defined by deterministic wireframes are further restricted by applying a cutoff to the Au kriged variance of 0.16, below which an indicated classification is applied, and above which the resources are classified as inferred. This threshold was carried over from the 2003 estimation in order to maintain continuity.

3) All resources estimated using the second search radius are considered inferred.

All metal estimated within the Frasin Background zone has been classified as inferred, even though the kriged variance in some cases reaches the threshold for indicated resource. Should these blocks be re-interpreted based on deterministic geological interpretations and continuity of mineralisation, possibly with additional drilling, mapping or projection, there is potential to upgrade portions to indicated resource.

Although drill spacing in the Frasin Breccia approaches that required for a measured resource in places, there is only one section that is well drilled out, sections on either side of this are sparsely drilled, with a max of 2 boreholes that are within the spacing required for measured.

3.5 Statistics and Variography, Gold

Examination of histograms and statistics at Frasin reveals a highly skewed distribution of gold grades and declustering at 20m cell centres results in a considerable (13%) reduction in the arithmetic mean at sample support, with associated variance reduction. Maximum composite value is 71g/t but the upper quartile range is only 0.91g/t. There is no obvious break in either the clustered or declustered populations, and it was decided not to apply an upper cut to the grade distribution for estimation purposes.

3.5.1 Frasin Background Zone

Statistics from the Frasin background zone show a low mean of 0.21g/t, despite a maximum of 96.42g/t. This confirms that the mineralisation wireframes have separated out almost all of the high grade material. Residual high grades in this zone are isolated, and lack of continuity will almost certainly prevent their extraction. Their existence, however, should be noted during grade control or stope delineation drilling should the mine be brought into production as the potential exists for further high grade tonnage here.

Figure 3.5.1_1
Histogram (clustered data) for Frasin background zone

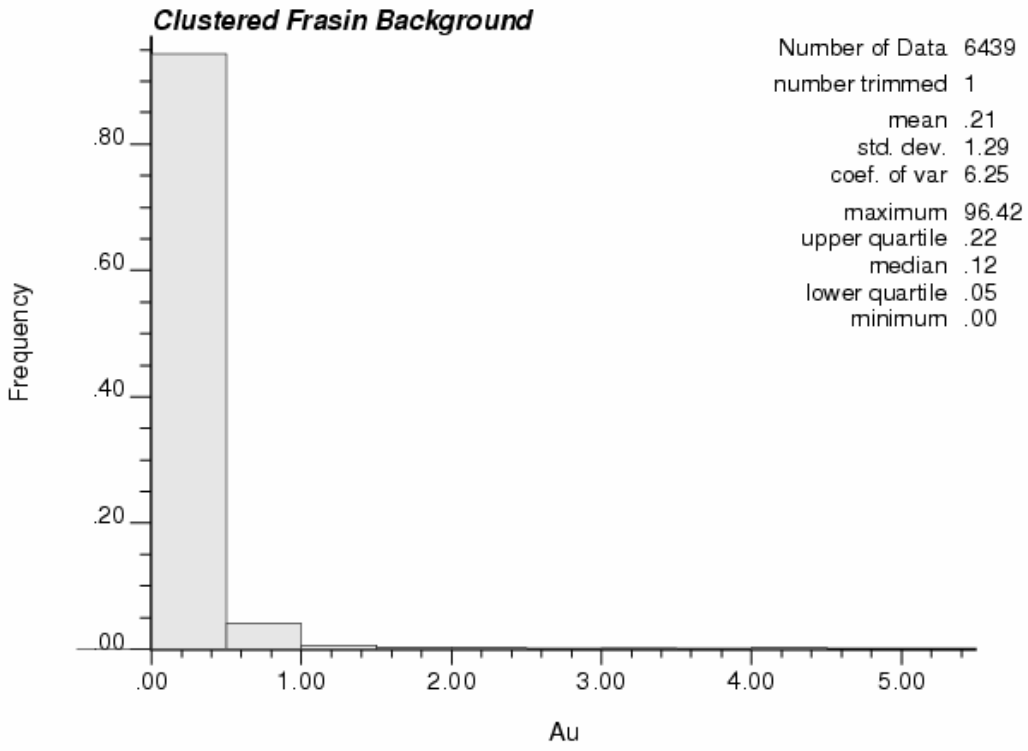


Figure 3.5.1_2
Cumulative histogram (clustered data) for Frasin background zone

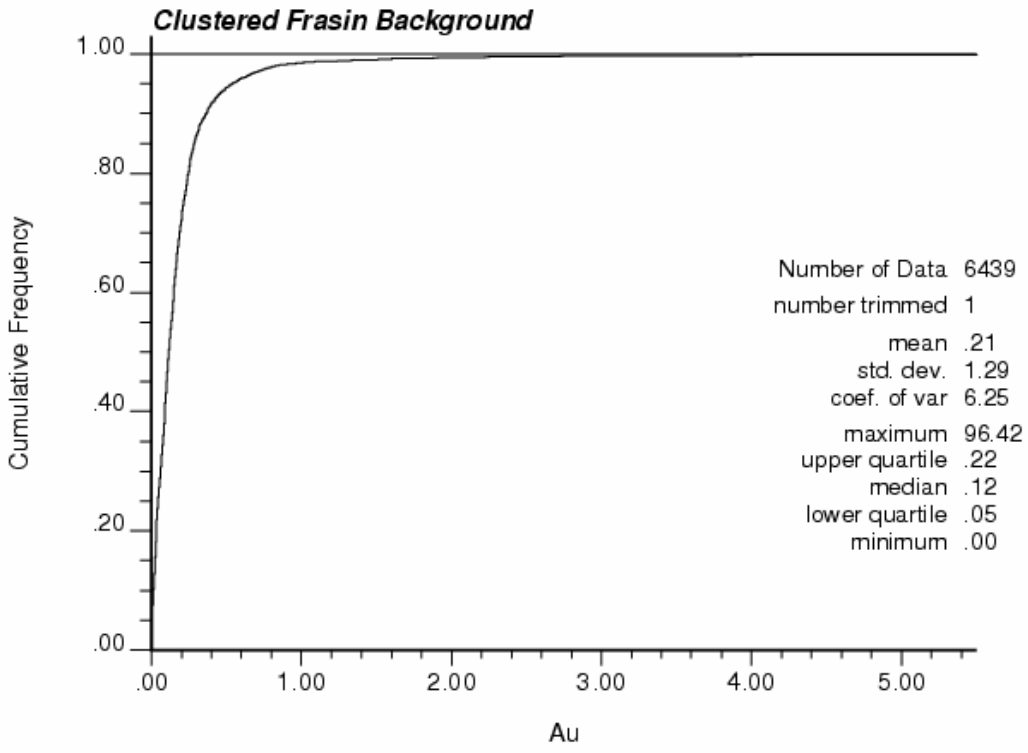


Figure 3.5.1_3
Histogram (declustered data) for Frasin background zone

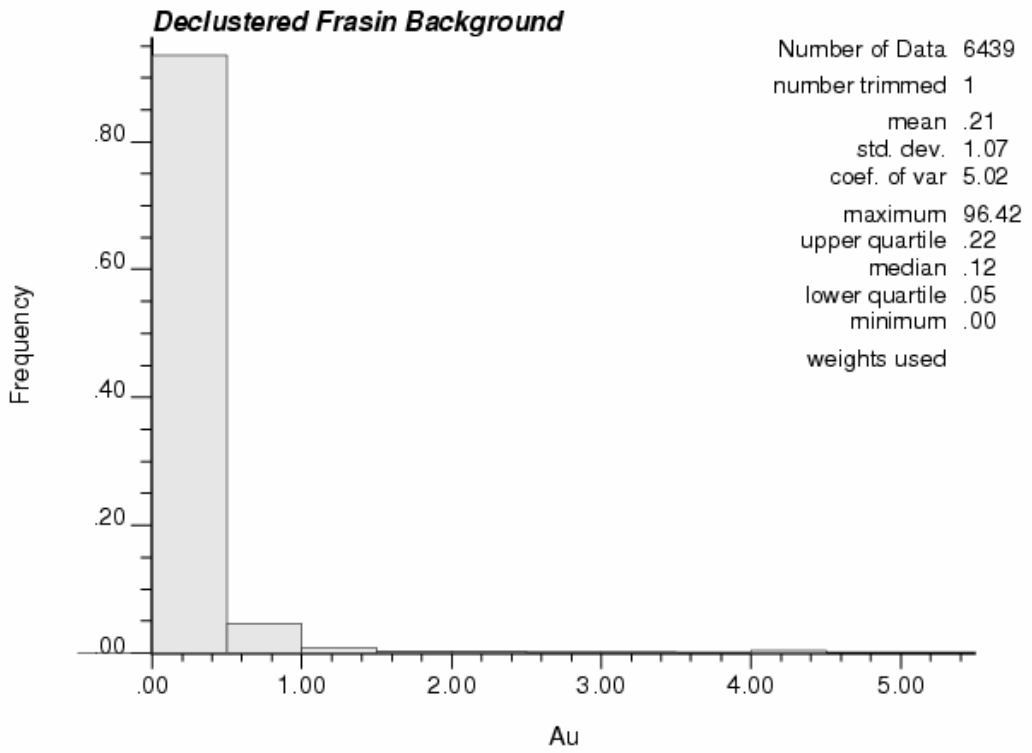


Figure 3.5.1_4
Cumulative histogram (declustered data) for Frasin background zone

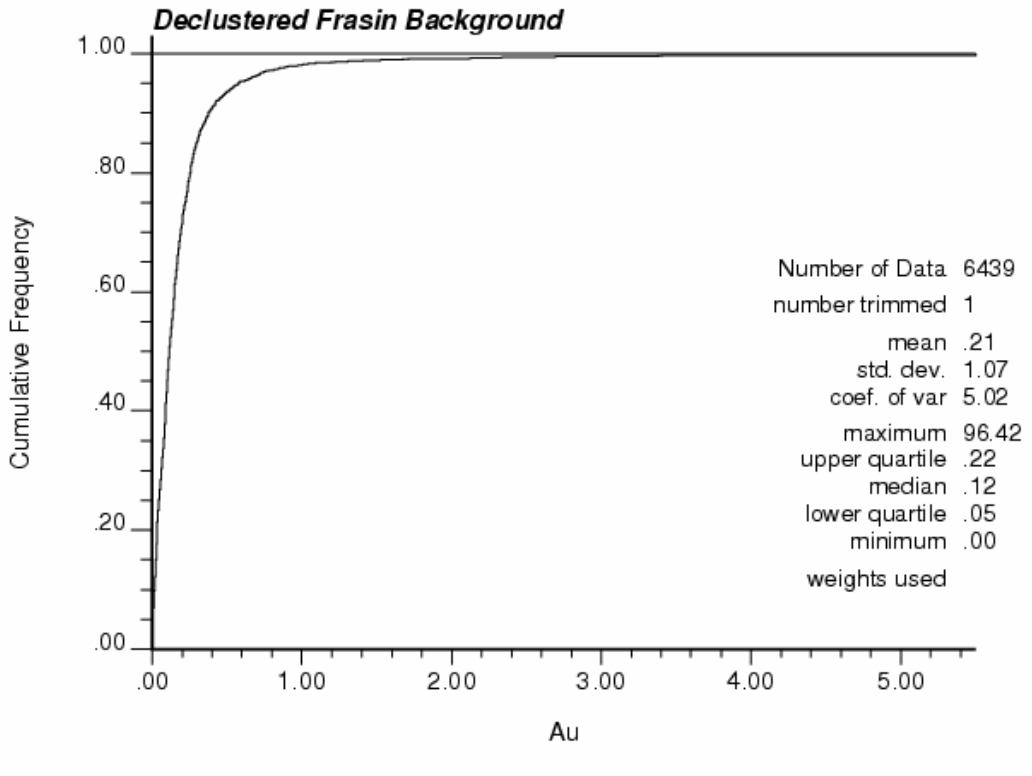
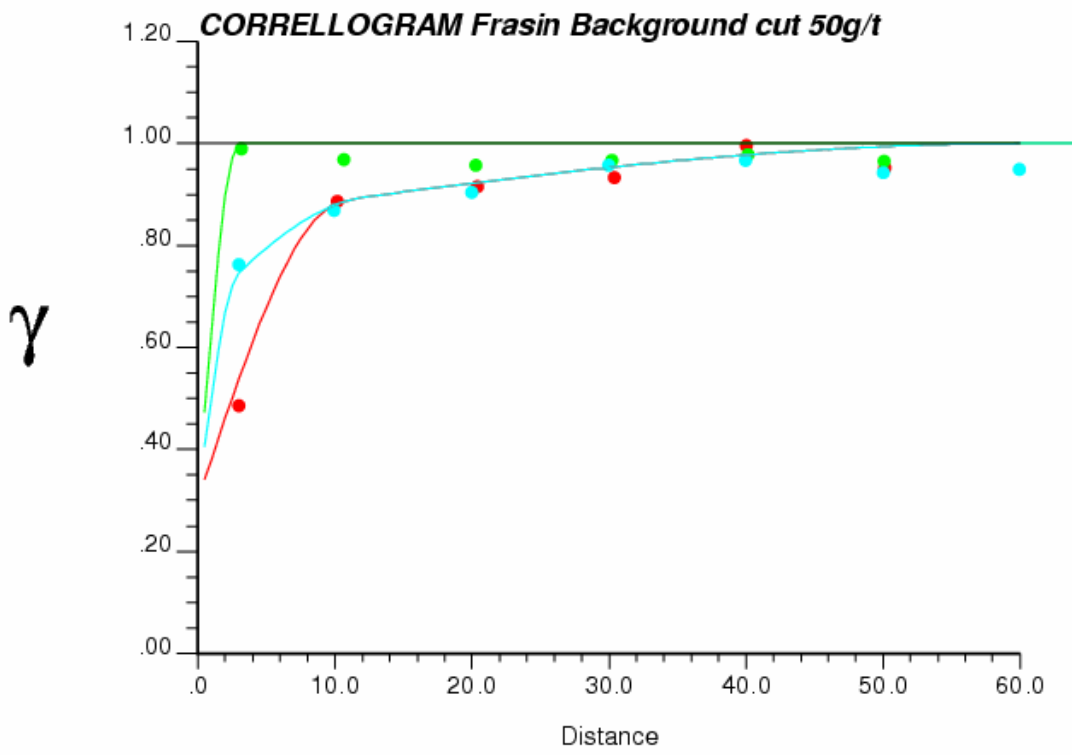


Figure 3.5.1_5
Variogram (inverted correlogram) for Frasin background material



red=90/-60 (Down dip, major axis) Blue = 0/0, (Along Strike, minor axis), Green = 270/-60 (vertical)

Table 3.5.1_1

Frasin Background - Gold Variogram Models
(GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.30						
1	1 (sph)	0.37	90	-60	0	3	10	3
2	1 (sph)	0.18	90	-60	0	3	12	12
3	1 (sph)	0.15	90	-60	0	3	60	60

Variogram parameters are reported in GSLIB format (Table 3.5.1_1 and 3.5.1_2)). CC represents the variance contribution or 'sill' of that structure, sills and nugget variances are additive to give total sill. Angles 1, 2 and 3 represent the rotation of the major axis of the ellipse around the Z axis, X axis and plunge (strike rotation, dip rotation, plunge). a_hmax, min, vert are ranges in x, y, z relative to the rotations. Variogram structures, it, are 1 in all cases, ie spherical model.

3.5.2 Frasin Mineralised Zone

Figure 3.5.2_1
Histogram (clustered data) for Frasin Mineralised Zone

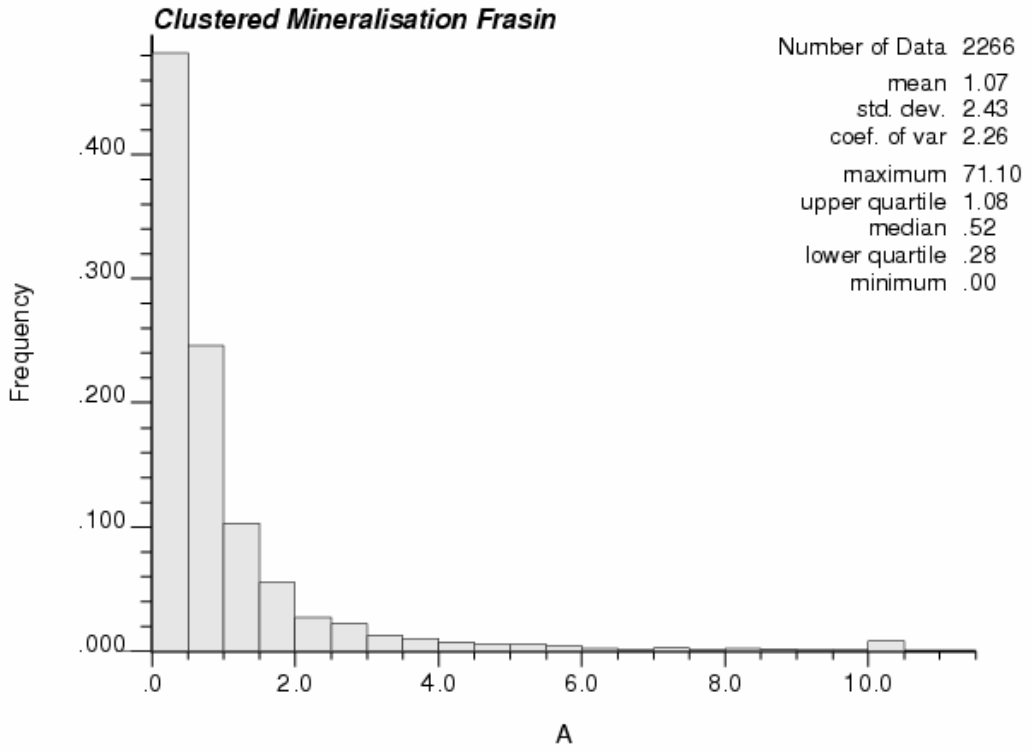


Figure 3.5.2_2
Cumulative histogram (clustered data) for Frasin Mineralised Zone

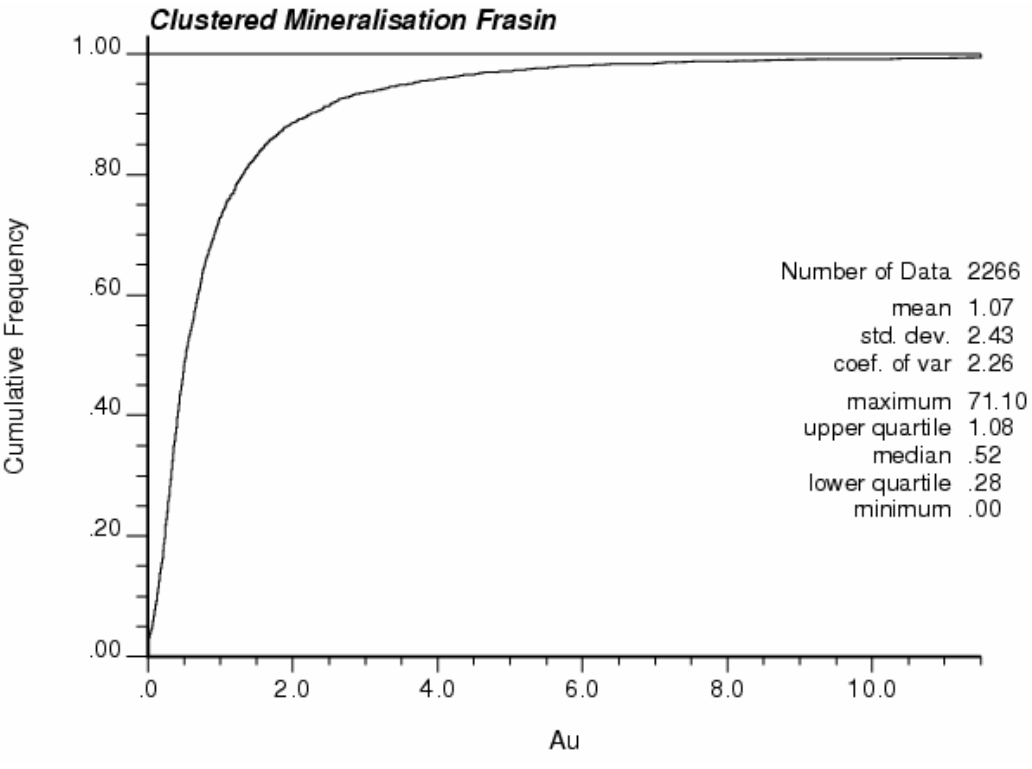


Figure 3.5.2_3
Histogram (declustered data) for Frasin Mineralised Zone

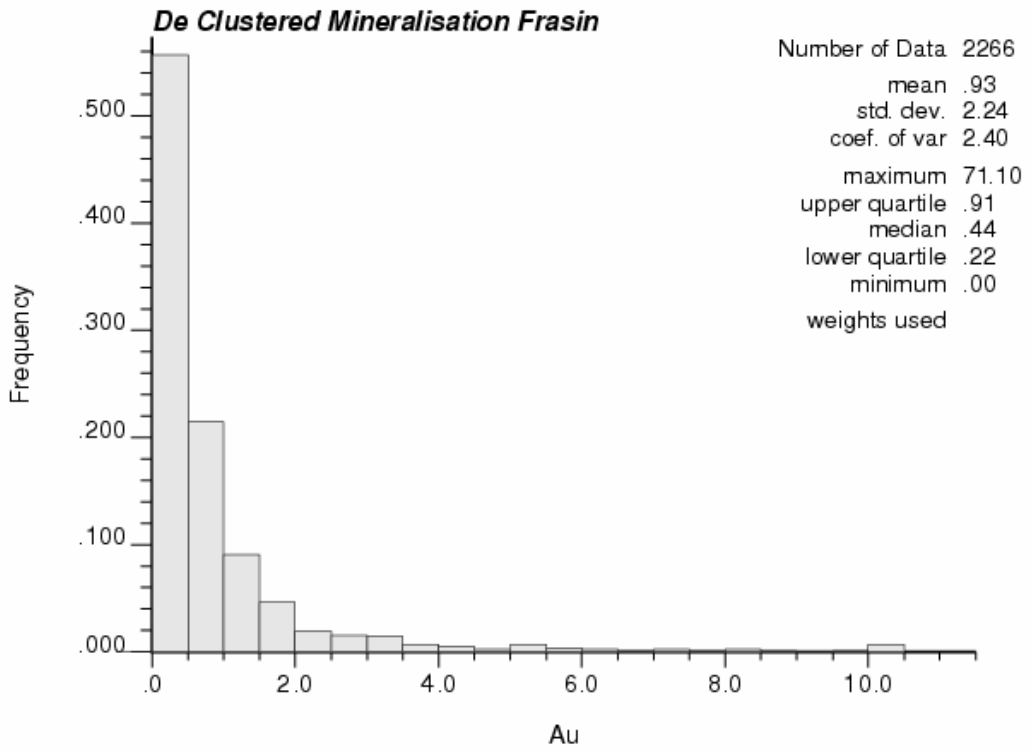


Figure 3.5.2_4
Cumulative histogram (declustered data) for Frasin Mineralised Zone

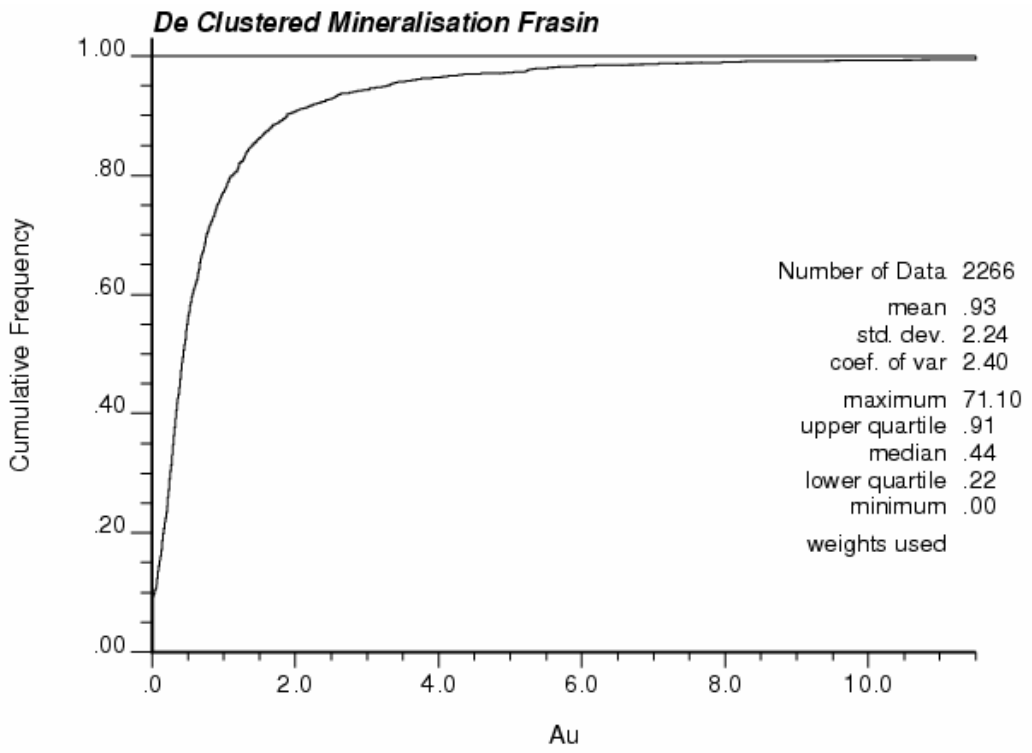
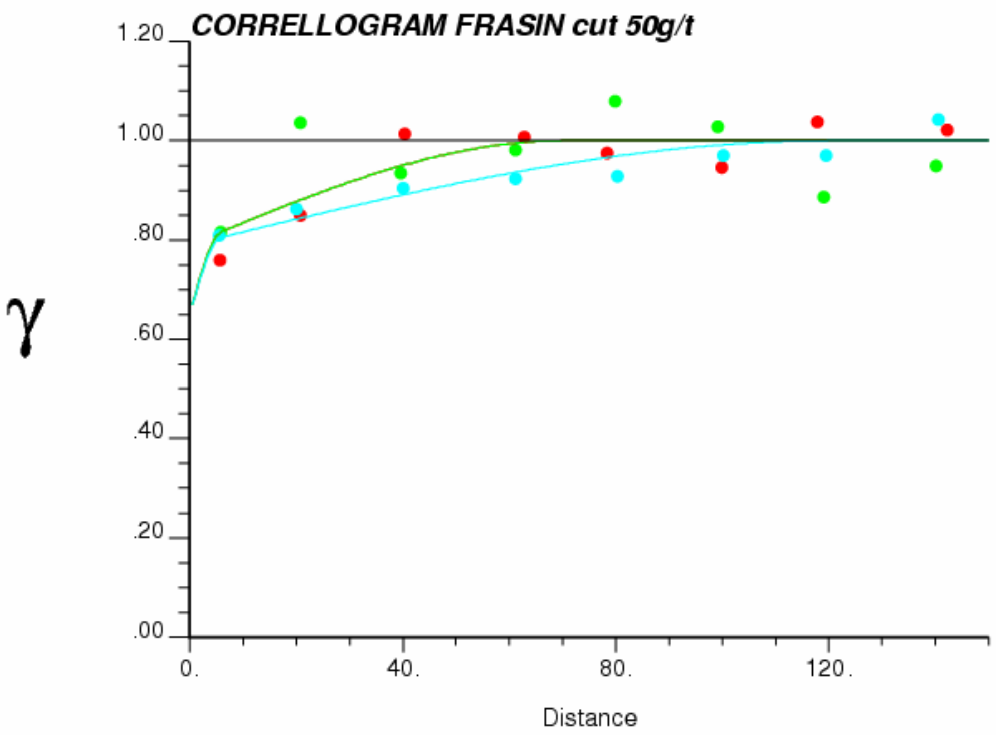


Figure 3.5.2_5
Correlogram for Frasin Mineralised Zone



Red=0 (strike), Green= 270/-30 (cross strike) Blue=90/-60 (down dip)

Table 3.5.2_1

Frasin Mineralised Zone - Gold Variogram Models
(GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.65						
1	1 (sph)	0.14	90	-60	0	6	6	6
2	1 (sph)	0.21	90	-60	0	120	70	70

3.5.3 Frasin Breccia Pipe

Figure 3.5.3_1
Histogram (clustered data) for Frasin Breccia Pipe

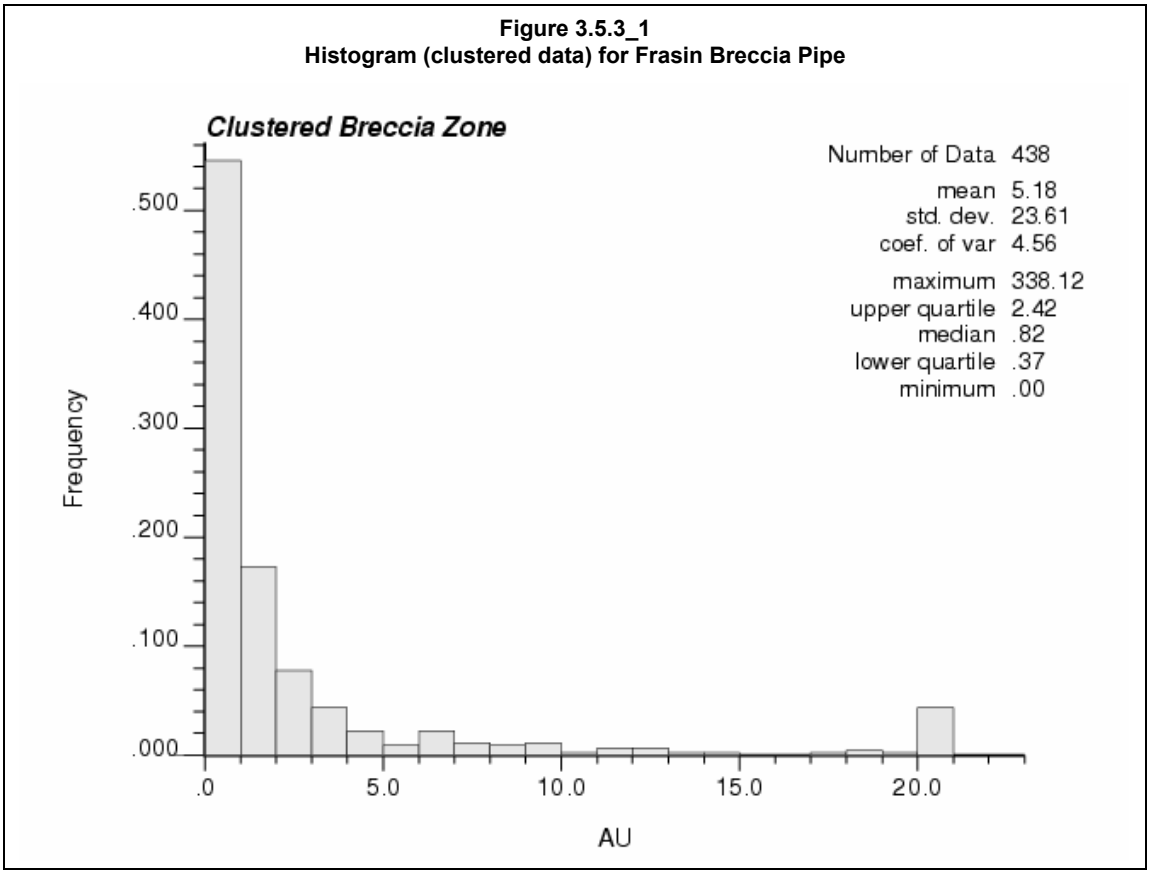


Figure 3.5.3_2
Cumulative histogram (clustered data) for Frasin Breccia Pipe

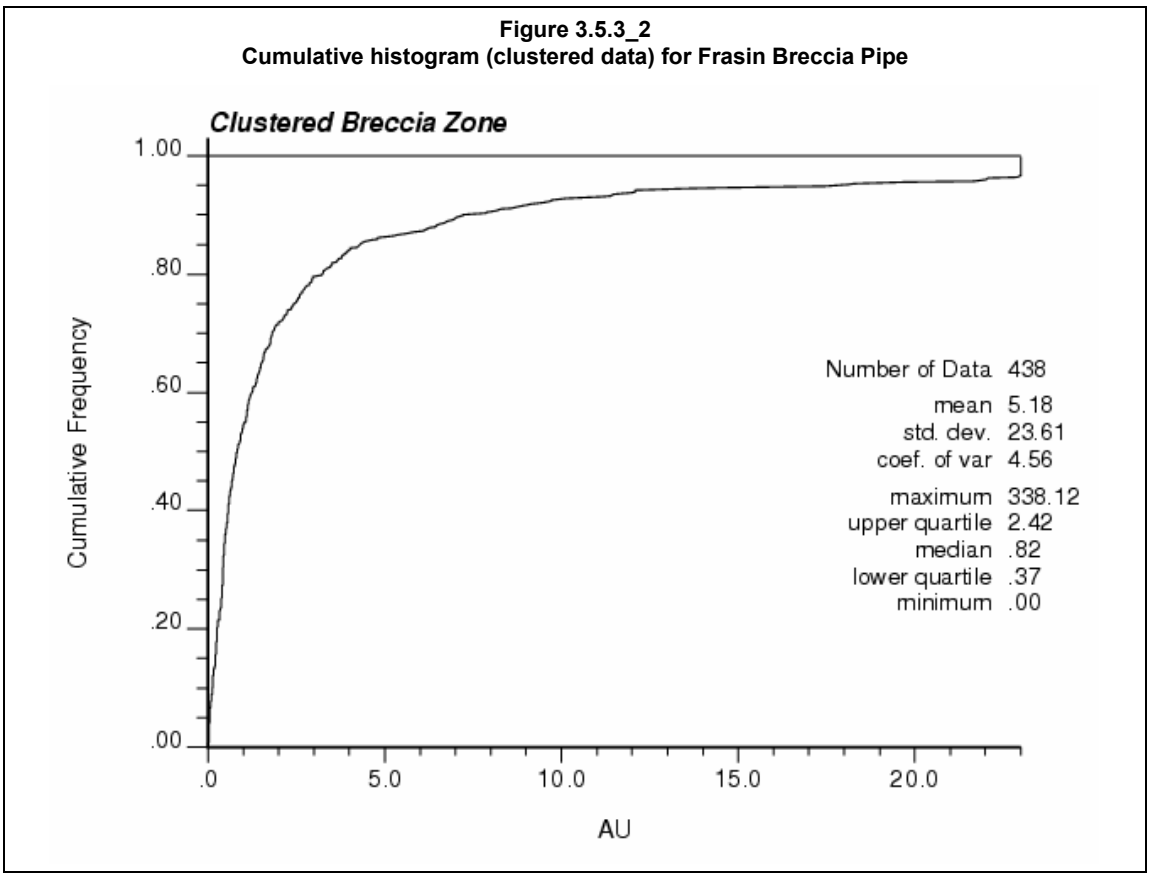


Figure 3.5.3_3
Histogram (declustered data) for Frasin Breccia Pipe

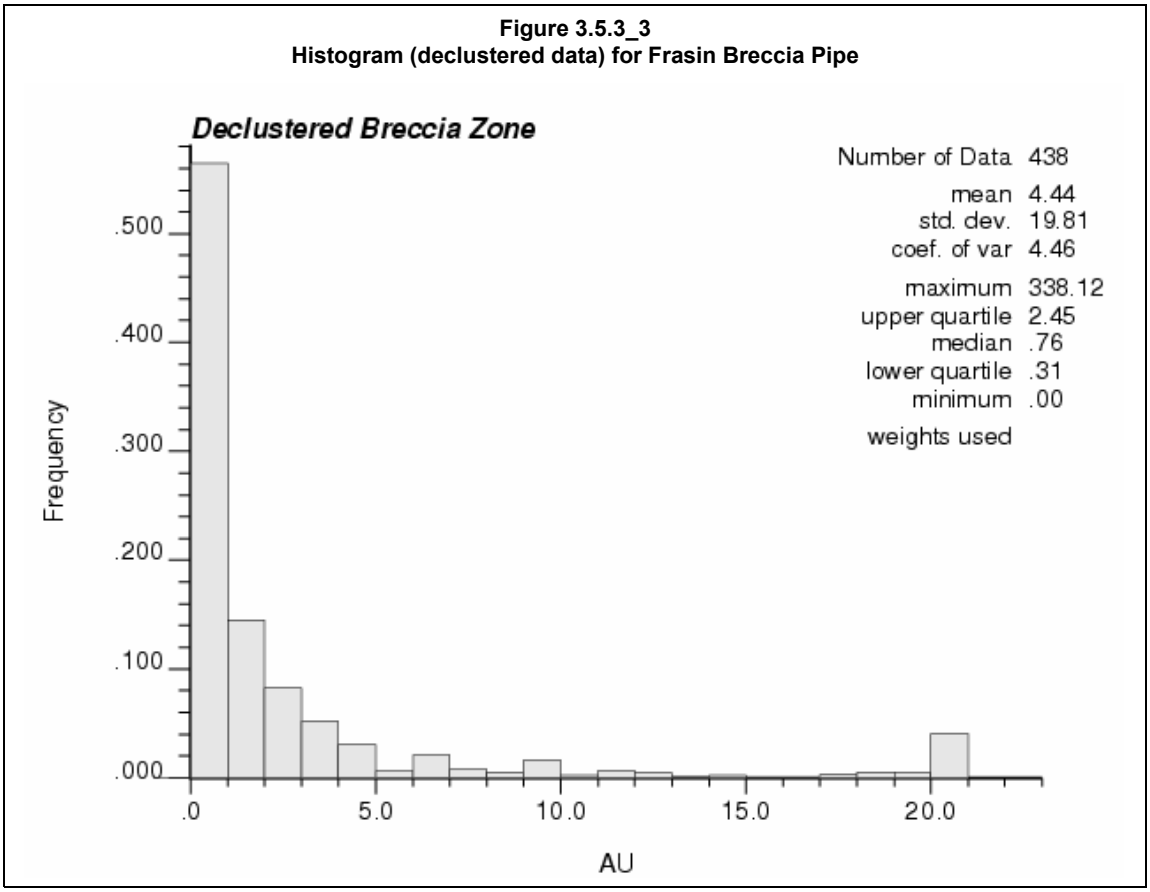
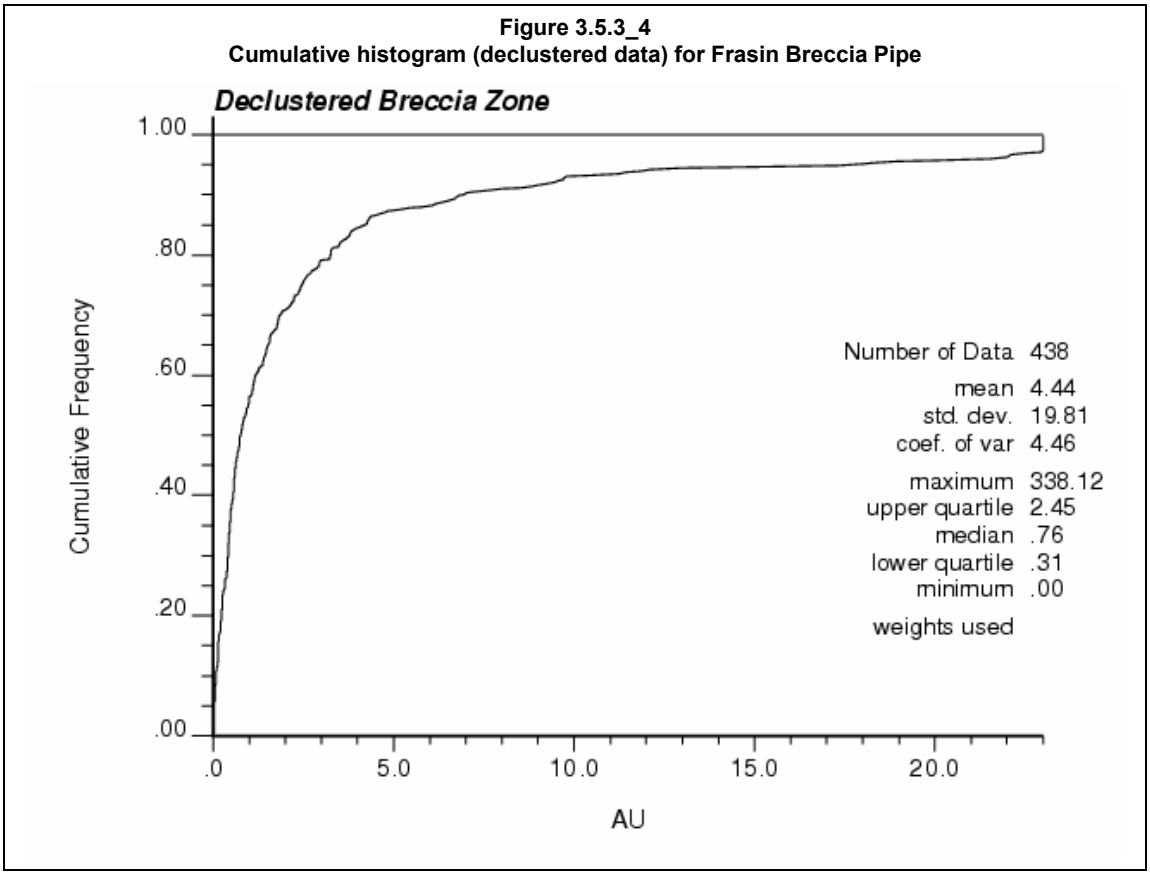
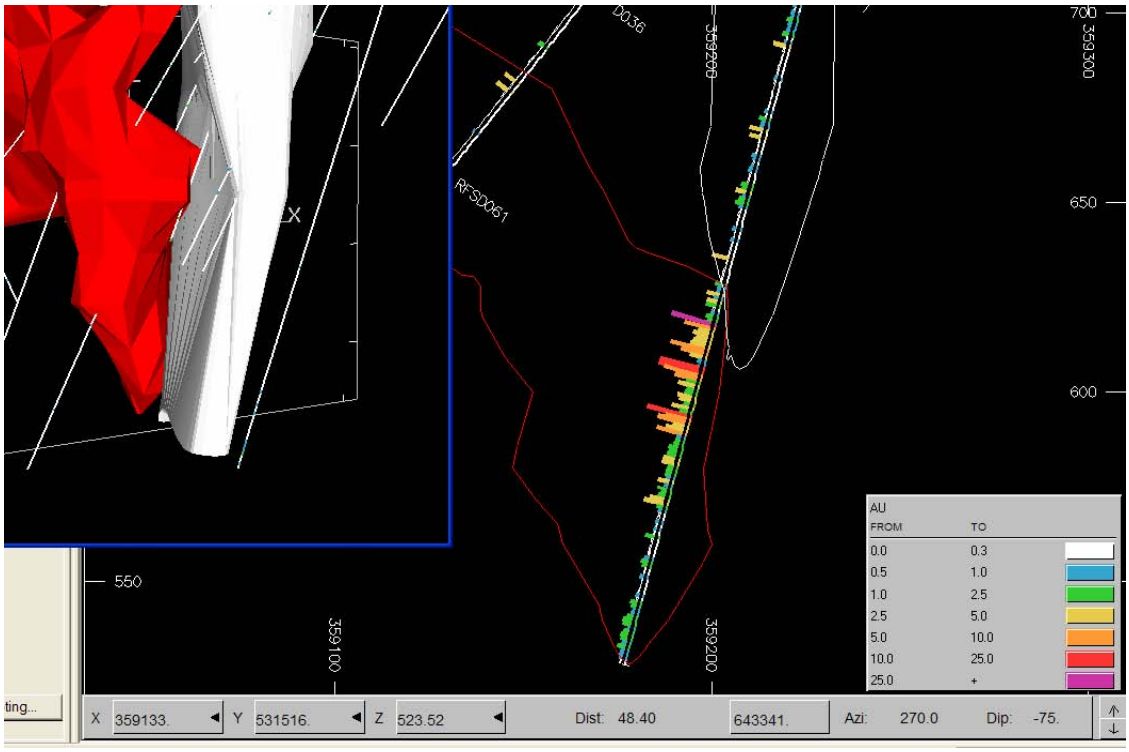


Figure 3.5.3_4
Cumulative histogram (declustered data) for Frasin Breccia Pipe



The Frasin Breccia Pipe is well defined in terms of lithology, and generally also in terms of significantly enriched grade (declustered mean 4.46g/t). There are zones however, especially towards the bottom of the pipe as defined by drillhole RFDS 87, where although there is a clear lithological boundary between dacite and the breccia pipe, the grade boundary is not clearly defined, and significant mineralisation occurs in the Dacite, immediately adjacent to the Breccia. These two mineralisation styles have been interpreted as having occurred during separate events, and have thus been modelled separately.

Figure 3.5.3_5
Showing occurrence of Dacite mineralisation (red) adjacent to breccia mineralisation (grey)



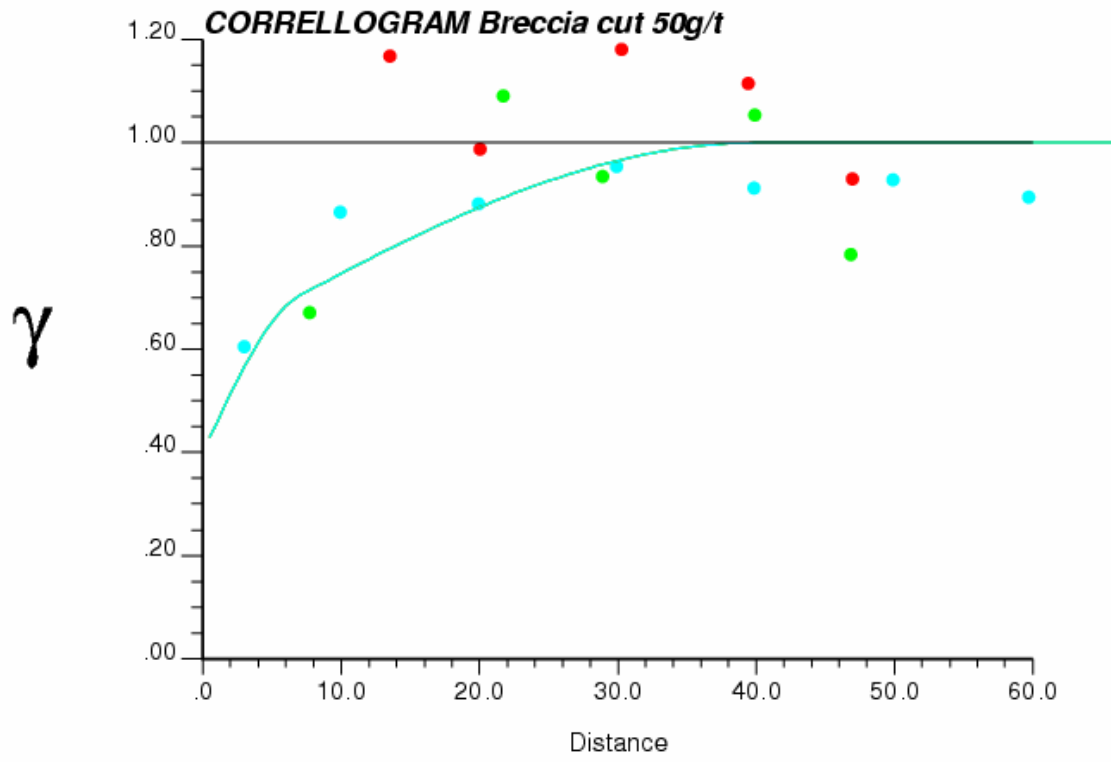
Borehole shown in section is RFDS 87, peak sample (purple) is 28.94g/t from 228 to 229m

Declustering reduces the average grade at sample support, but the average grade remains high. The maximum sample grade of 338.12g/t and the upper quartile range starting at 2.45g/t further reinforces the grade potential of this zone.

3.5.4 Variography Frasin Breccia Pipe

Variography of the Breccia pipe zone is poorly structured, notwithstanding the higher data density. Specifically anisotropy cannot be modelled with Figure 3.5.4_1 and Table 3.5.4_1. Consequently an isotropic variogram model was used.

Figure 3.5.4_1
Variogram for Frasin Breccia Pipe experimental variograms



Calculated N-S (red) and 90/-30 (green), 270/-60 (Blue)

Variogram for Frasin Breccia Pipe experimental variograms calculated N-S (red) and 90/-30 (green), 270/-60 (Blue).

Table 3.5.4_1

Frasin Breccia Pipe - Gold Variogram Models
(GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.40						
1	1 (sph)	0.20	0	0	0	7	7	7
2	1 (sph)	0.40	0	0	0	40	40	40

3.5.5 Rodu Background

Figure 3.5.5_1
Histogram (clustered data) for Rodu Background Zone

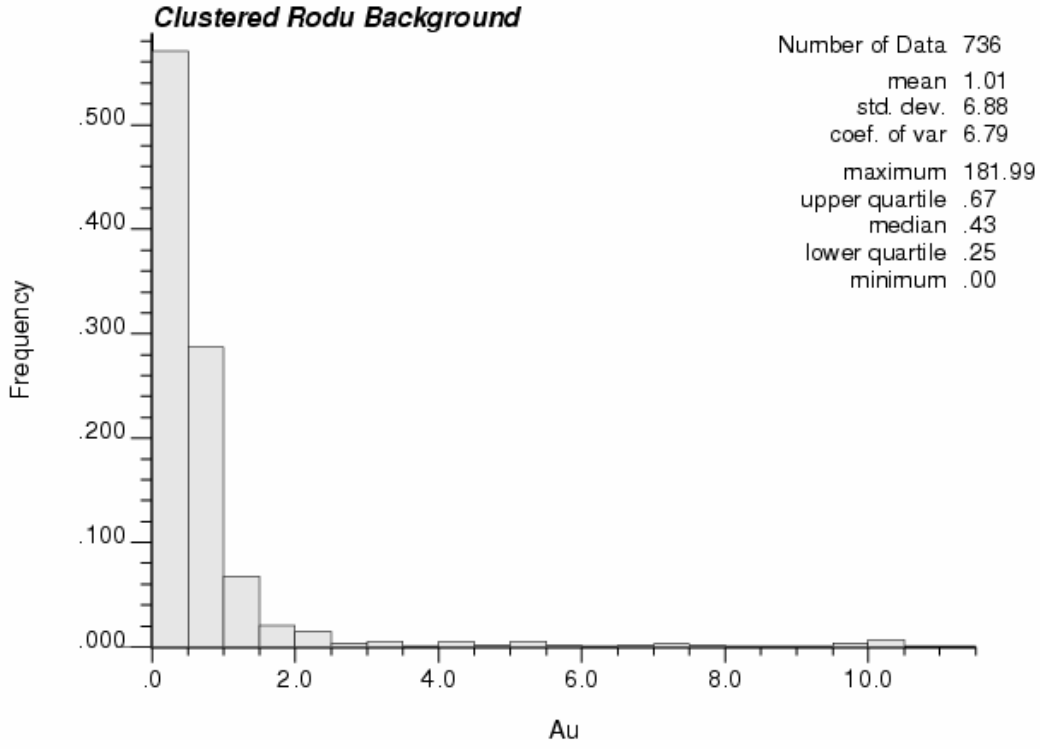


Figure 3.5.5_2
Cumulative histogram (clustered data) for Rodu Background Zone

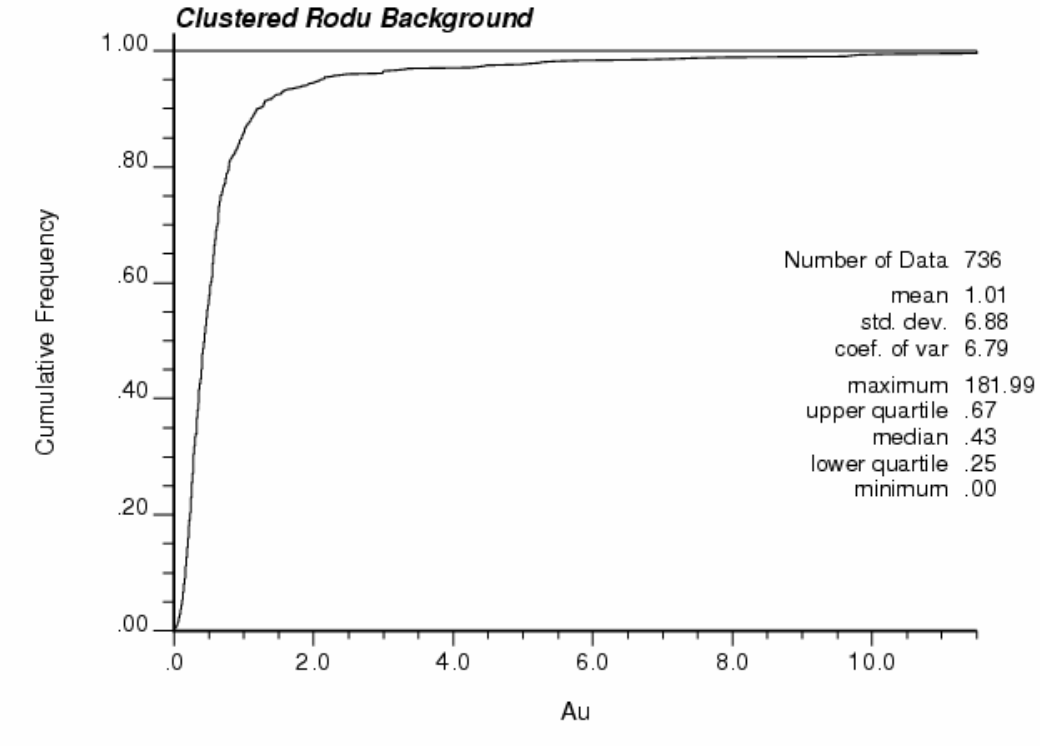


Figure 3.5.5_3
Histogram (declustered data) for Rodu Background Zone

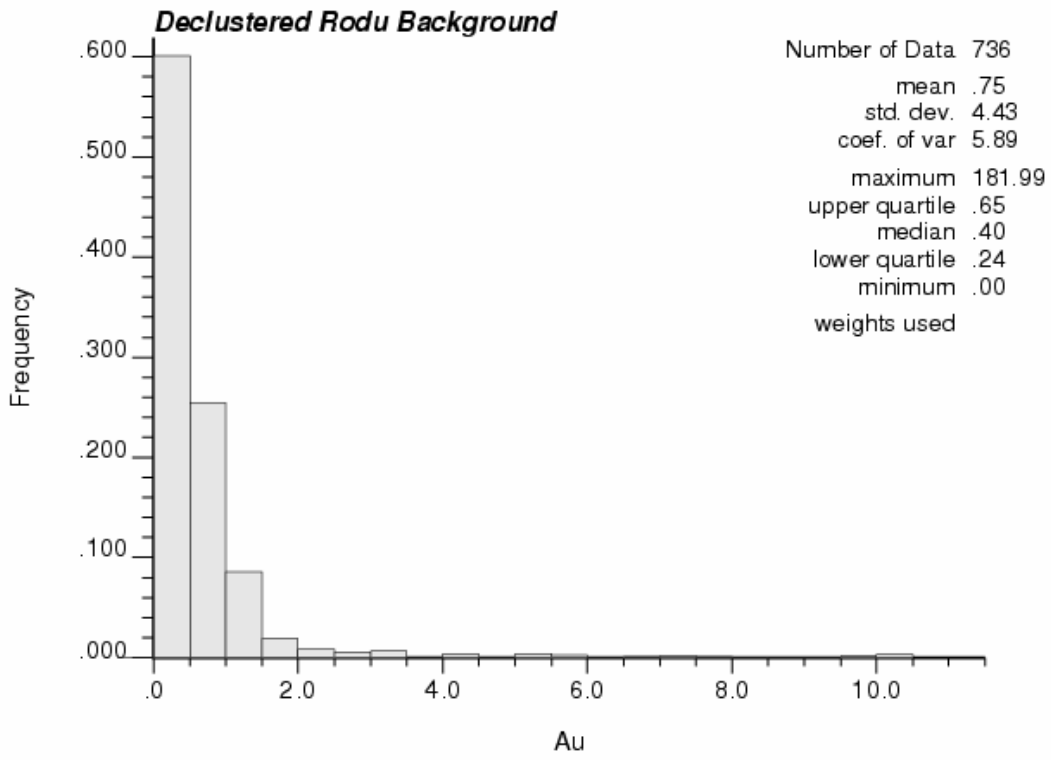
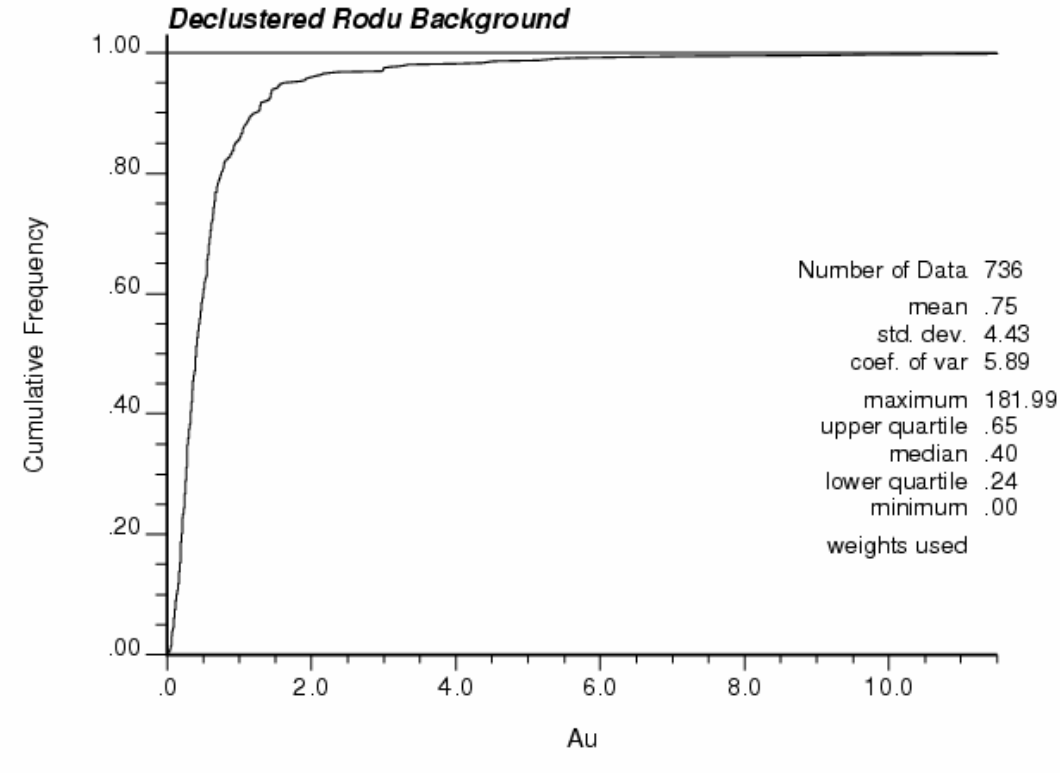
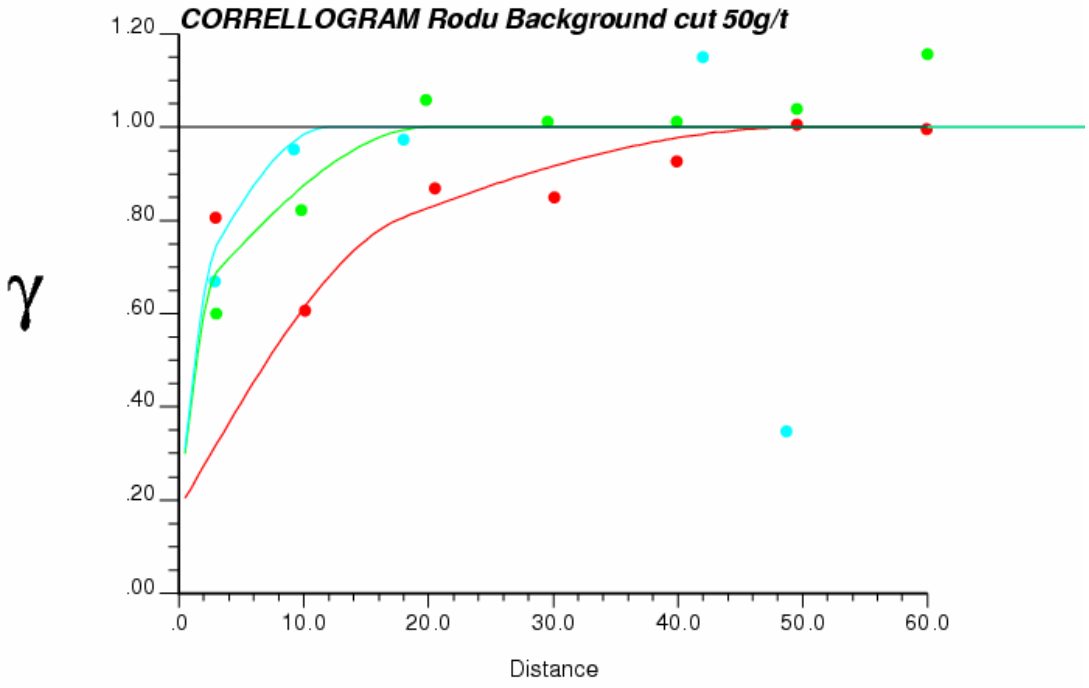


Figure 3.5.5_4
Cumulative histogram (declustered data) for Rodu Background Zone



3.5.6 Variography Background Samples

Figure 3.5.6_1
Variogram of background samples within the Rodu vent breccia



red = 0/0 (strike, major axis) Green=90/0 (dip, minor axis) Blue=0/-90 (vertical) Red experimental point at 2.917m average distance has only 195 points compared to 514 at 10.082m and is consequently preferred

Table 3.5.6_1

Rodu Vent Breccia (Background Data)- Gold Variogram Models (GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.18						
1	1 (sph)	0.42	0	0	0	18	3	3
2	1 (sph)	0.40	0	0	0	50	20	12

3.5.7 Rodu Mineralised

Statistical summaries for Rodu indicate a low mean of 0.53g/t Au. This is because the mineralised zones are thin and poorly defined. Furthermore, mean grade is significantly reduced by associated waste material. Kriging will, however provide a reasonably good local block estimate in this scenario, defining higher and lower grade zones within Rodu. Essentially, it is not possible to separate the high and low grade populations and to apply hard boundaries as was done at Frasin. If this project progresses to a more advanced stage, the focus should be on defining wireframed structures for the high grade zones within Rodu.

Figure 3.5.7_1
Histogram (clustered data) for Rodu Mineralised Zone

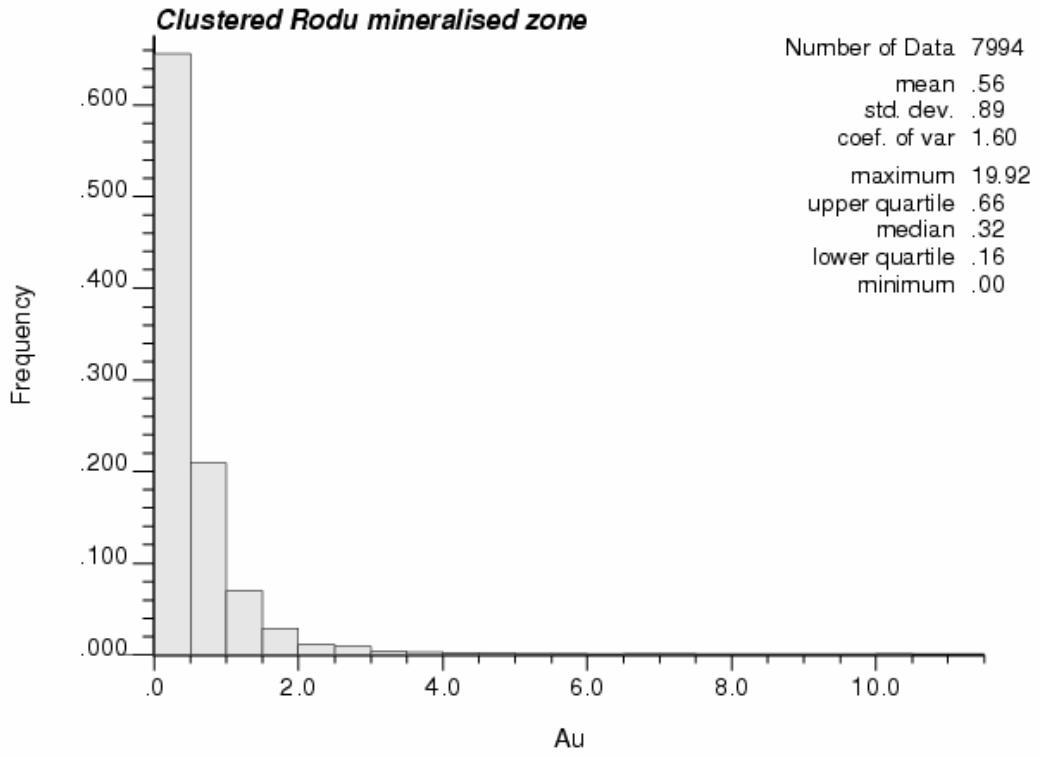


Figure 3.5.7_2
Cumulative histogram (clustered data) for Rodu Mineralised Zone

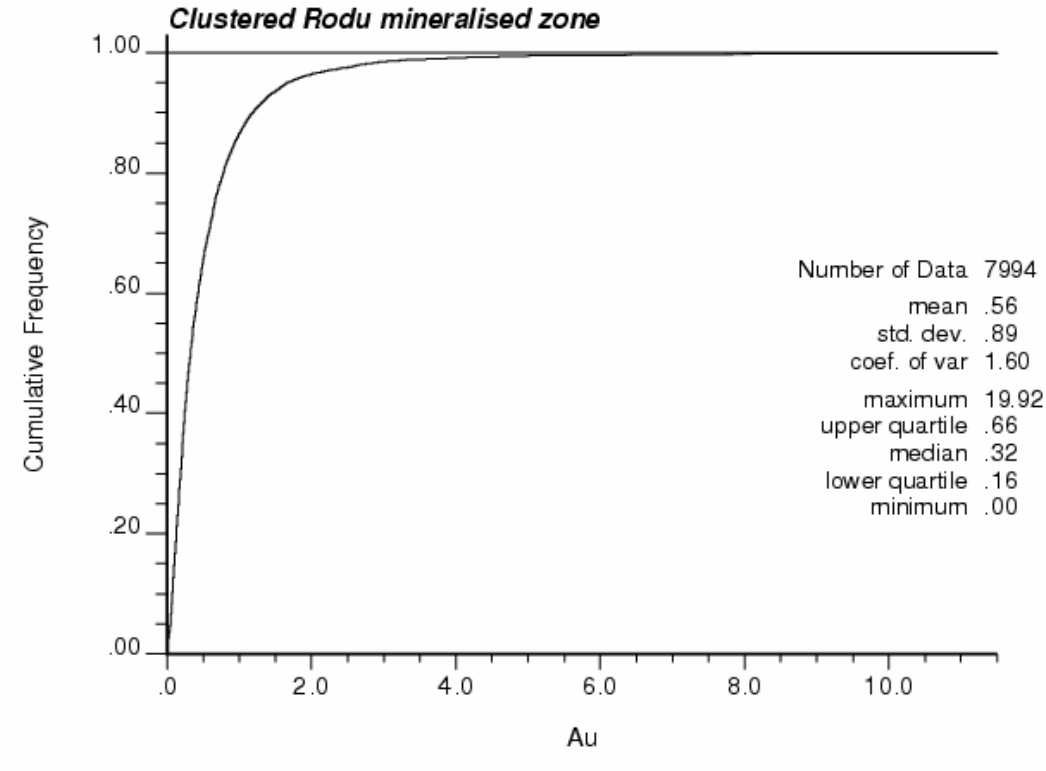


Figure 3.5.4_3
Histogram (declustered data) for Rodu Mineralised Zone

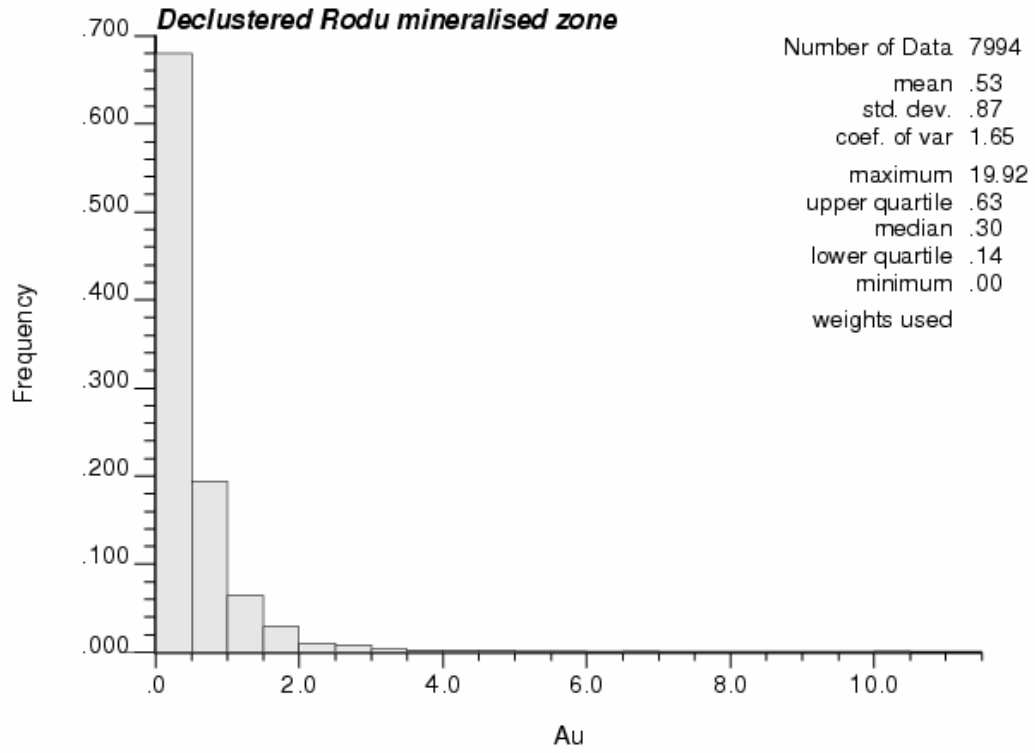
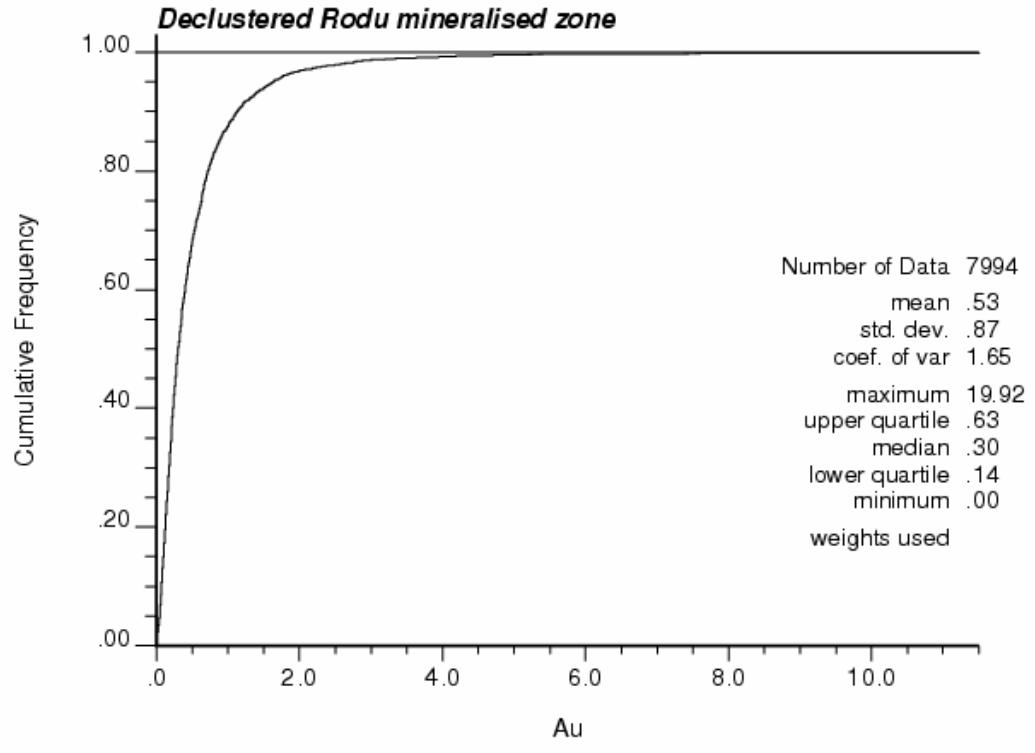


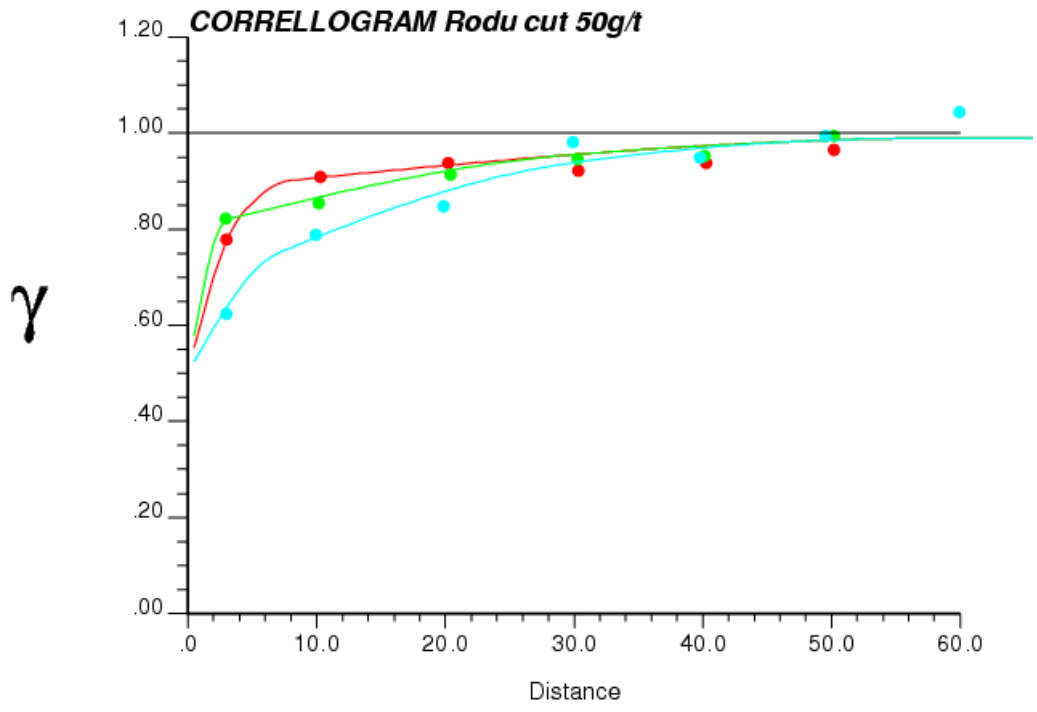
Figure 3.5.7_4
Cumulative histogram (declustered data) for Rodu Mineralised Zone



Uniform conditioning may provide an alternative method for estimating recoverable reserves, but it is felt that the low confidence placed on the Rodu resource does not support the use of this technique at this stage. Obtaining a satisfactory result from uniform conditioning is dependant on good knowledge of the variogram, domains within the area and so on. While ordinary kriging can provide a reasonable answer even with these constraints, albeit through smoothing extreme grades, it is considered that uniform conditioning in this case would not.

3.5.8 Variography Rodu

Figure 3.5.8_1
Variography for Rodu mineralised area



Red = N-S, Green = E-W, Blue=Vertical

Table 3.5.8_1

Rodu Mineralised Zone - Gold Variogram Models
(GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.50						
1	1 (sph)	0.17	0	0	0	4	3	7
2	1 (sph)	0.13	0	0	0	8	3	30
3	1 (sph)	0.08	0	0	0	8	30	50
4	1 (sph)	0.11	0	0	0	60	60	60

3.5.9 Rodu Treated as a Single Zone

After consideration of the statistics of the two different Rodu Zones, it was decided that there was no sound reason to separate these zones. The Rodu 'background zone' in fact has a higher average grade at sample support than the Rodu 'mineralised' zone. This discrepancy in the mean grades results largely from the occurrence of a high grade vein exposed in development that has a maximum composite grade of 182g/t Au, comprising a 2m long composite with grade either side of it, 9.8g/t to south, 0.8g/t to north, and other high grade composites as well. This vein, however, is typical of the erratic mineralisation at Rodu and consequently the Rodu vent breccia was analysed and estimated as a single zone.

Figure 3.5.9_1
Histogram (clustered data) for Rodu, zones combined

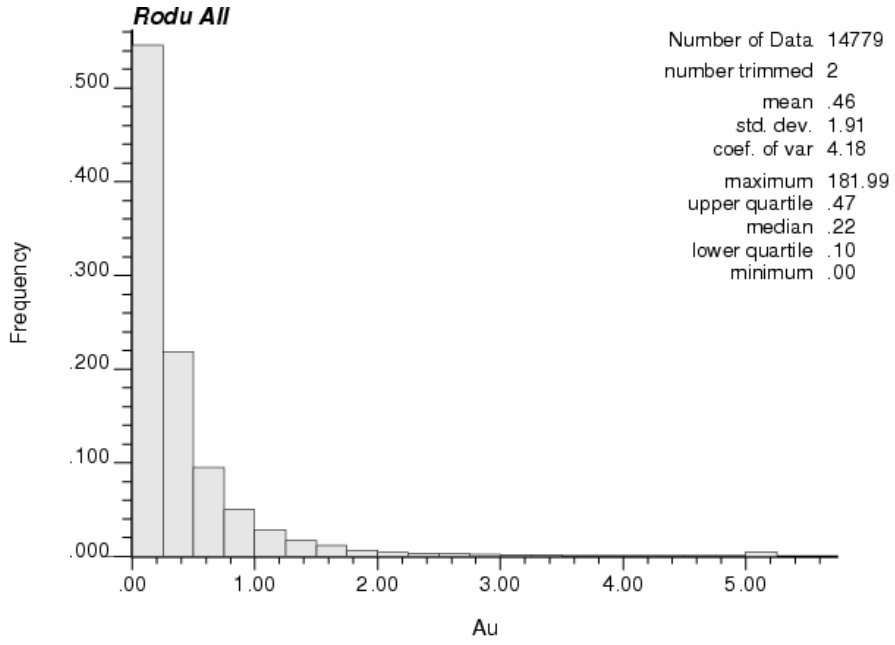


Figure 3.5.9_2
Cumulative histogram (clustered data) for Rodu, zones combined

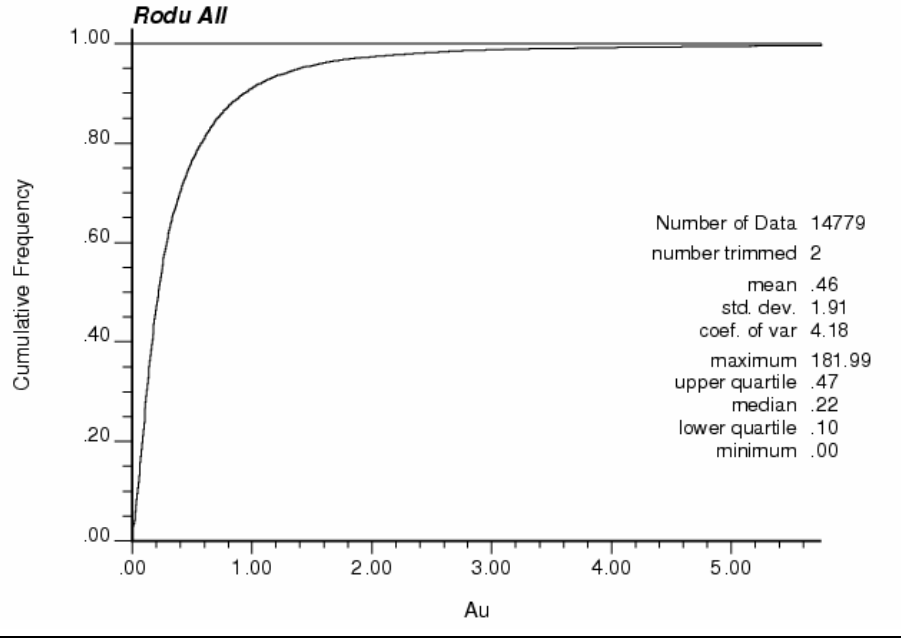


Figure 3.5.9_3
Histogram (declustered data) for Rodu, zones combined

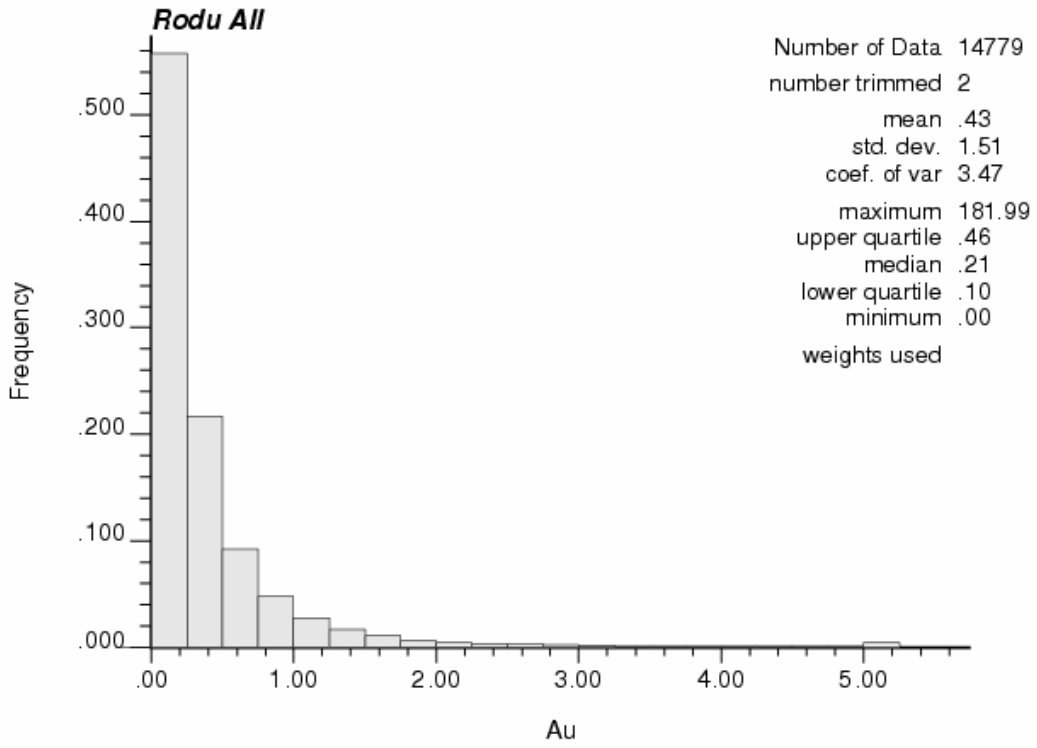
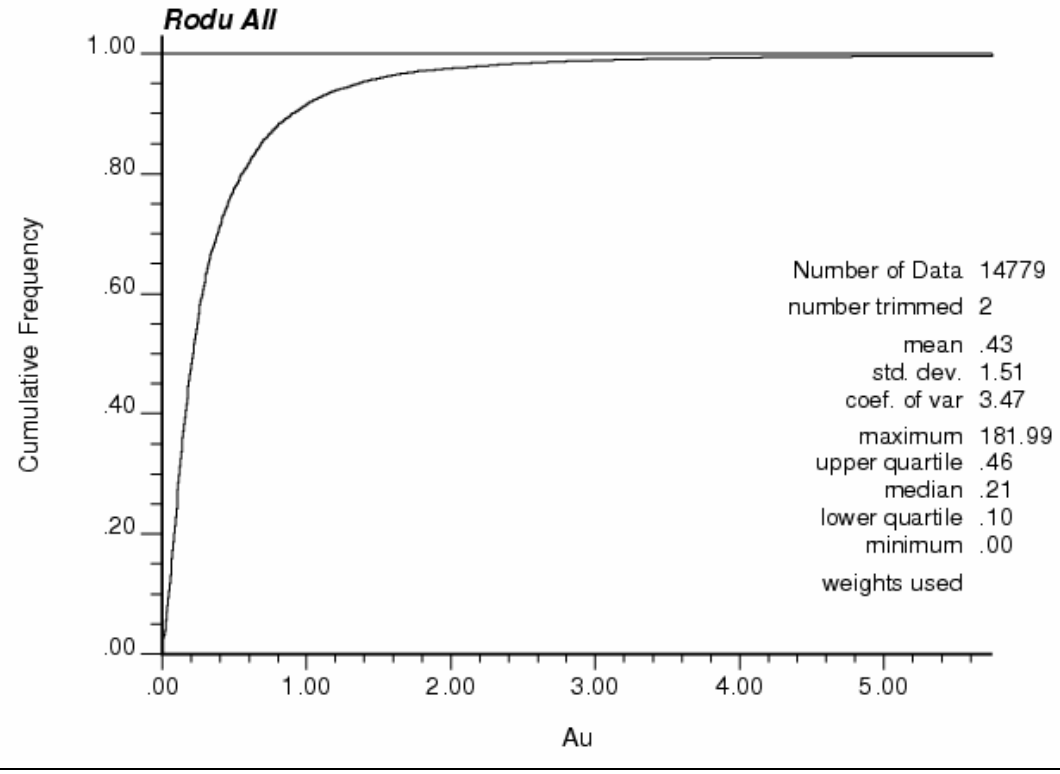
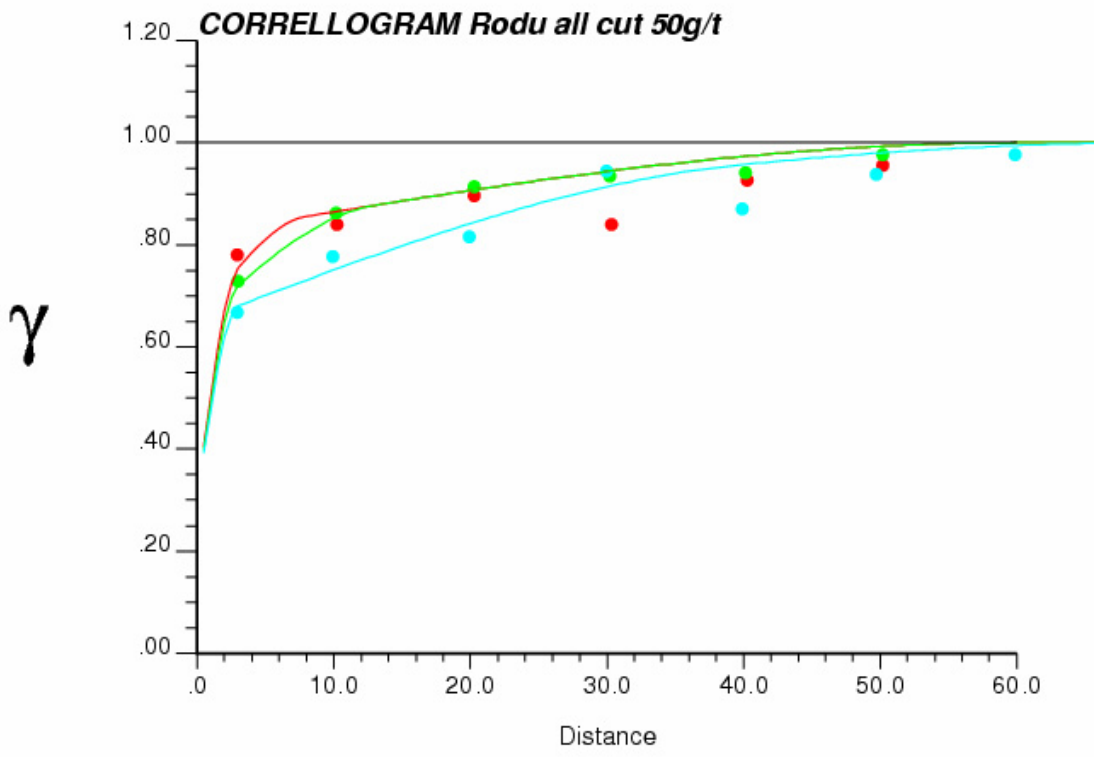


Figure 3.5.9_4
Cumulative histogram (declustered data) for Rodu, zones combined



3.5.10 Variography, Rodin, Zones combined

Figure 3.5.10_1
Variography for Rodu mineralised area



Red = N-S, Green = E-W, Blue=Vertical

Table 3.5.10_1

Rodu Mineralised Zone (Combined) - Gold Variogram Models (GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.30						
1	1 (sph)	0.35	0	0	0	3	3	3
2	1 (sph)	0.17	0	0	0	8	13	40
3	1 (sph)	0.18	0	0	0	60	60	70

3.6 Statistics and Variography, Silver

3.6.1 Frasin Background Zone

Figure 3.6.1_1
Histogram (clustered data) for Frasin Background Zone

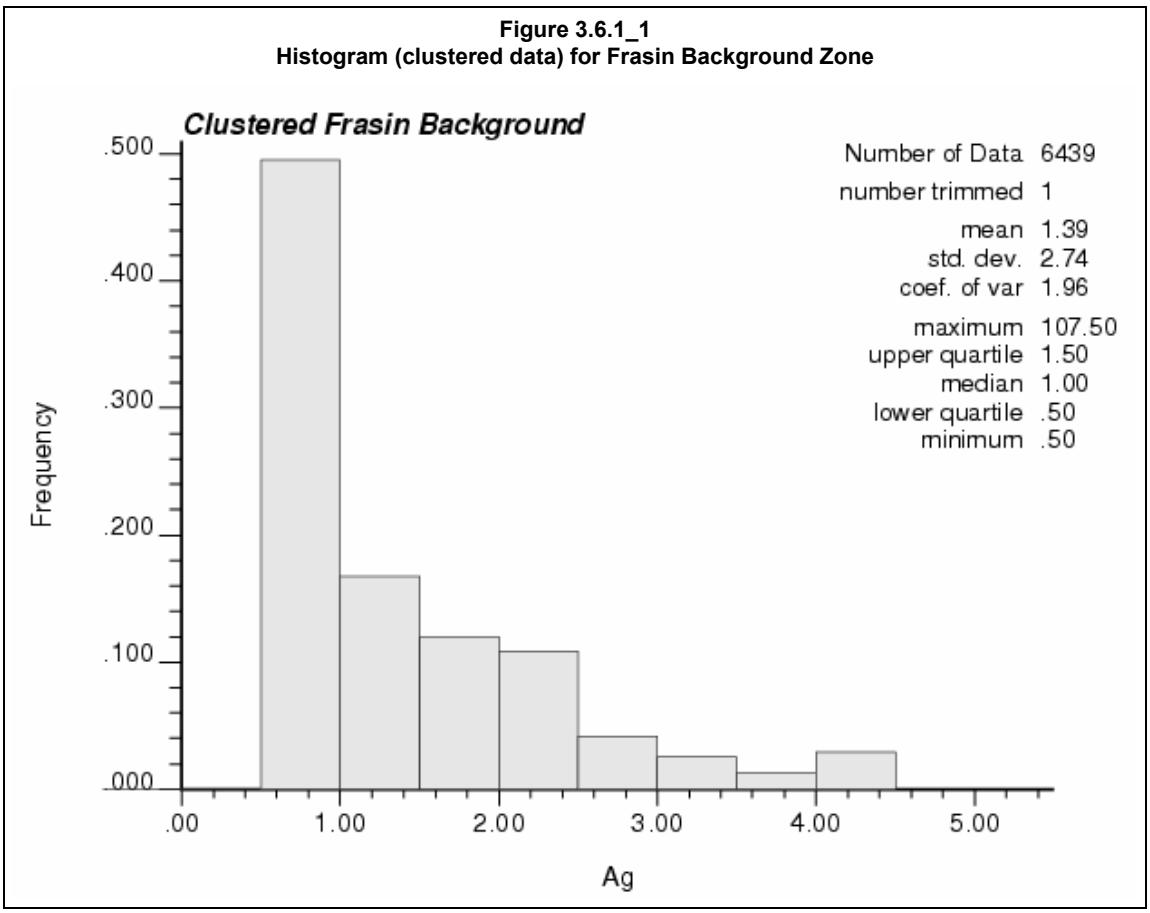


Figure 3.6.1_2
Cumulative histogram (clustered data) for Frasin Background Zone

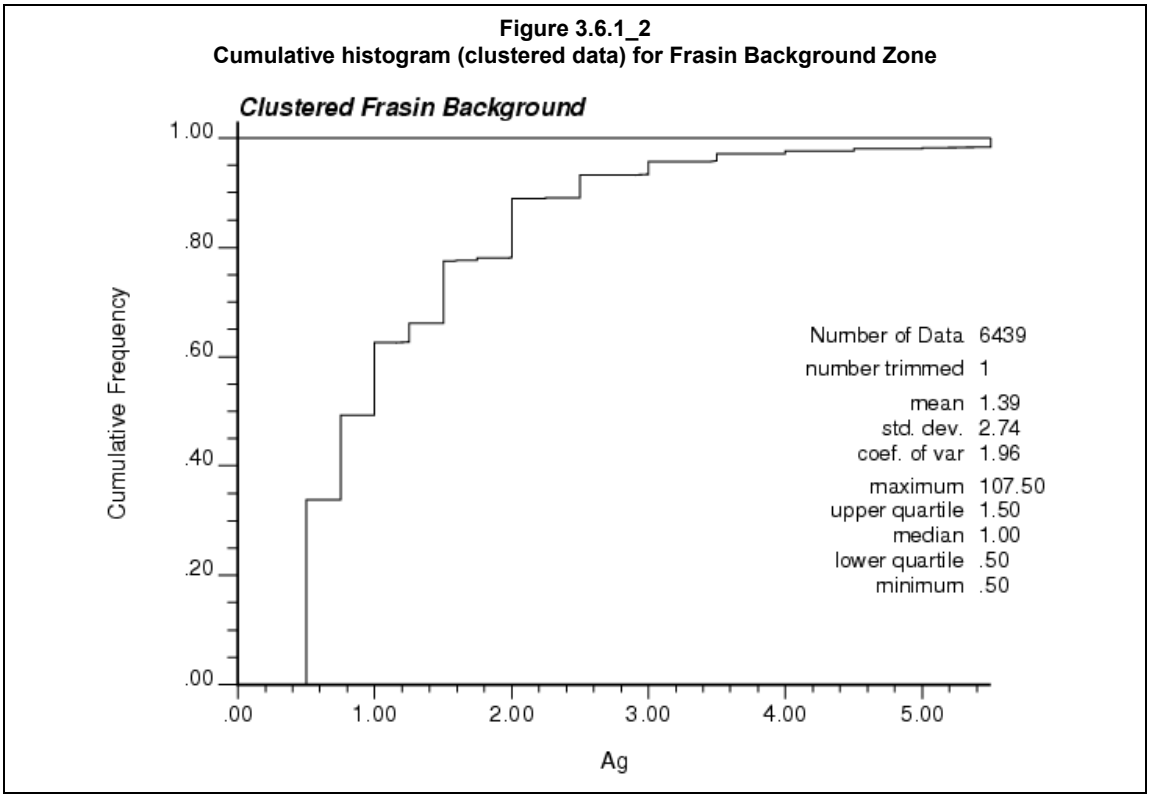


Figure 3.6.1_3
Histogram (declustered data) for Frasin Background Zone

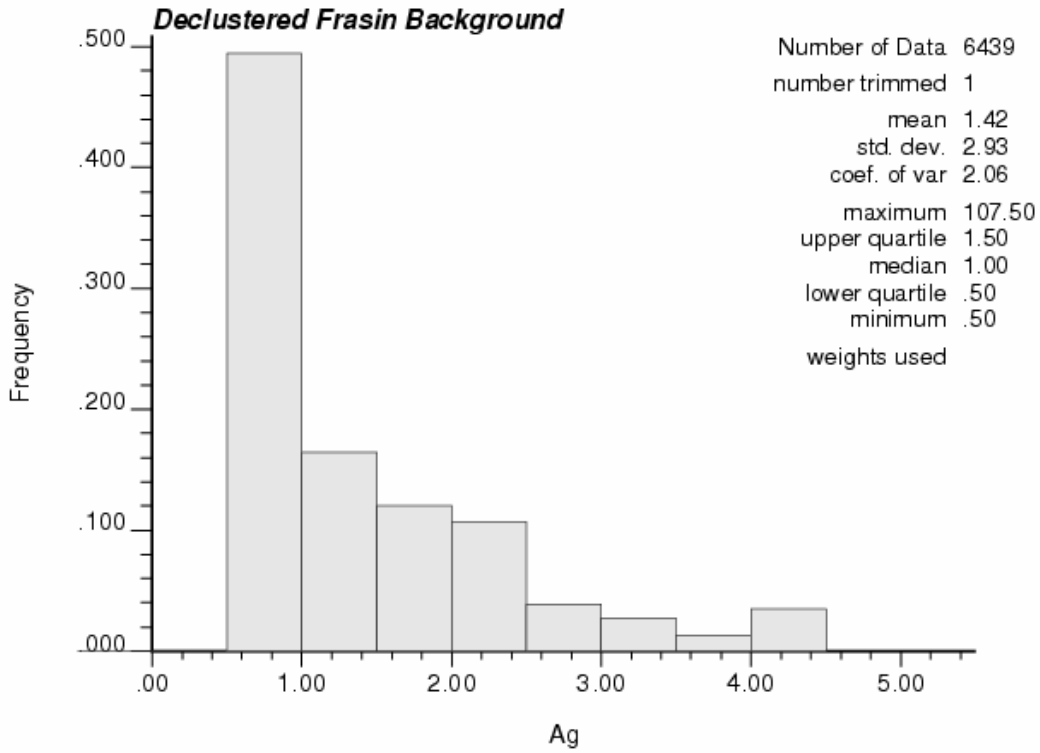
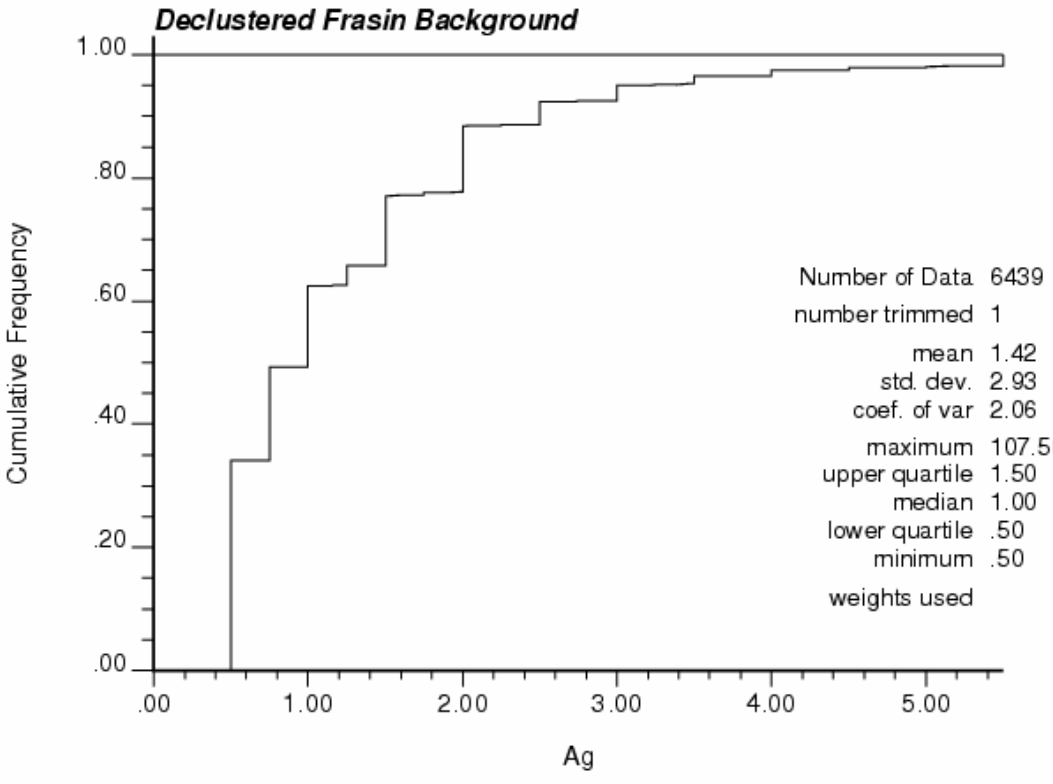
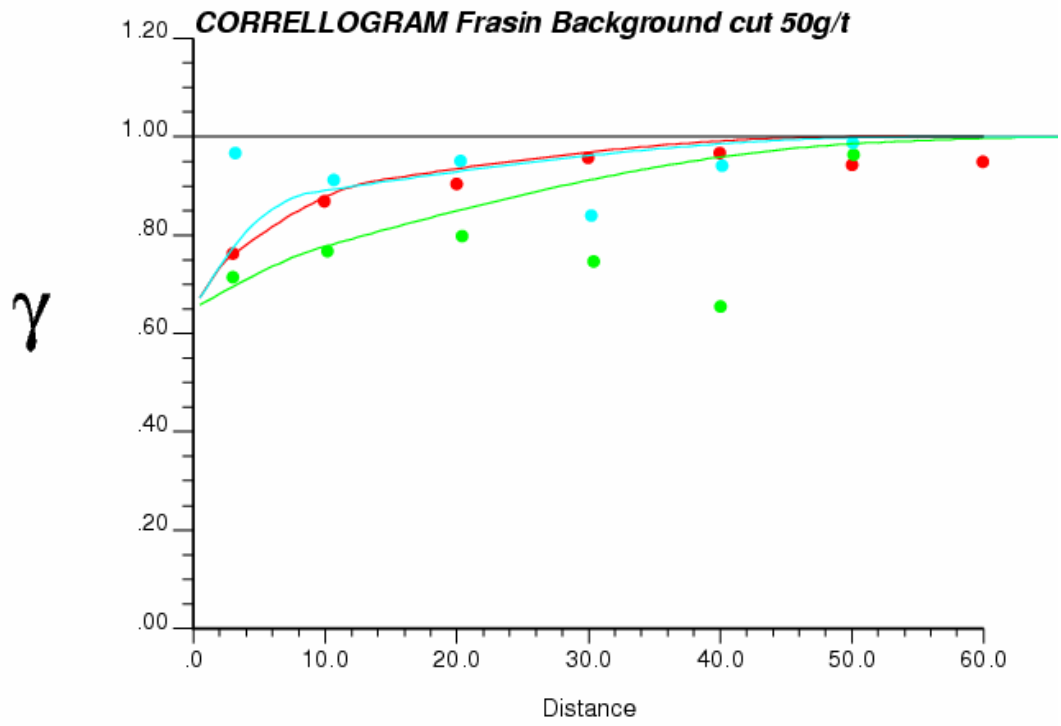


Figure 3.6.1_4
Cumulative histogram (declustered data) for Frasin Background Zone



3.6.2 Variography, Silver, Frasin Background

Figure 3.6.2_1
Variography for silver in the Frasin background zone



red=90/-60 (major axis, down dip) green=0/0 (minor axis, strike) and blue = 270/-30 (vertical)

Table 3.6.2_1

Frasin Background - Silver Variogram Models
(GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.65						
1	1 (sph)	0.05	90	-60	0	10	3	5
2	1 (sph)	0.15	90	-60	0	50	14	9
3	1 (sph)	0.15	90	-60	0	50	50	80

3.6.3 Frasin Mineralised Zone

Figure 3.6.3_1
Histogram (clustered data) for Frasin Mineralised Zone

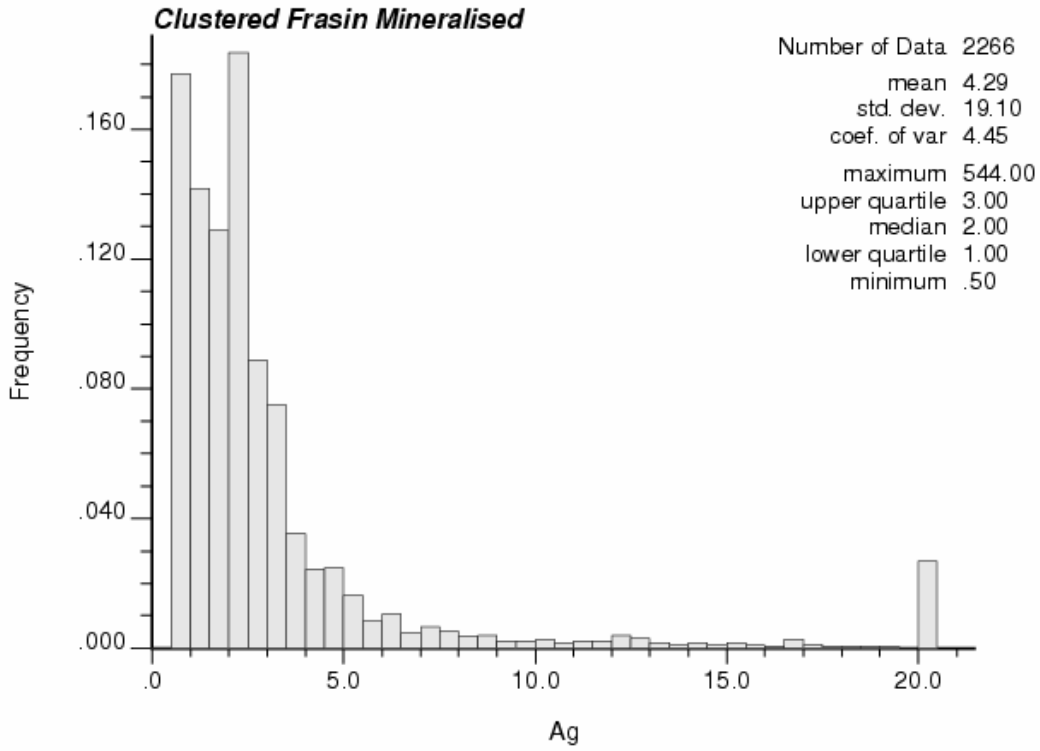


Figure 3.6.3_2
Cumulative histogram (clustered data) for Frasin Mineralised Zone

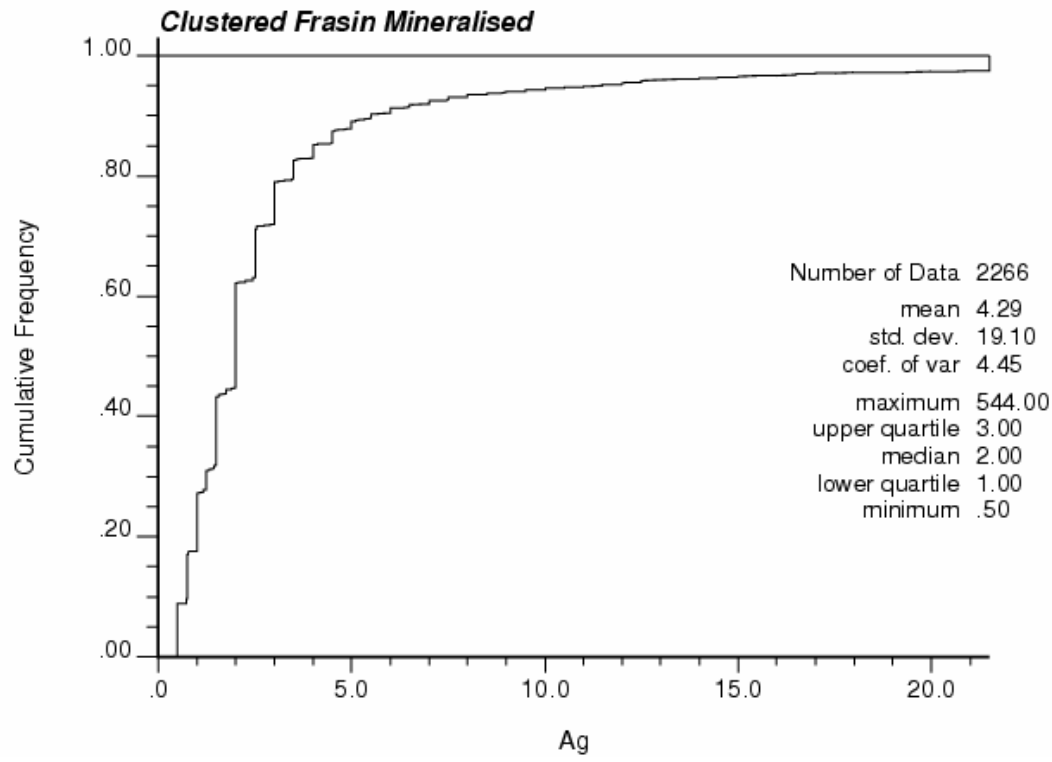


Figure 3.6.3_3
Histogram (declustered data) for Frasin Mineralised Zone

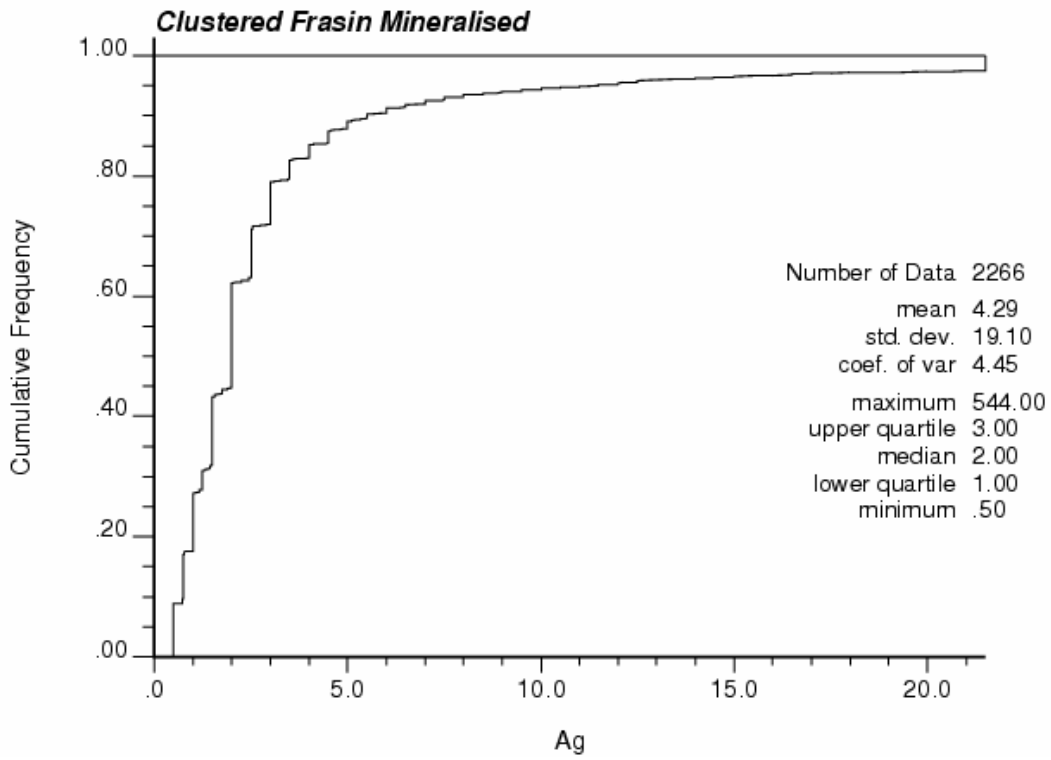
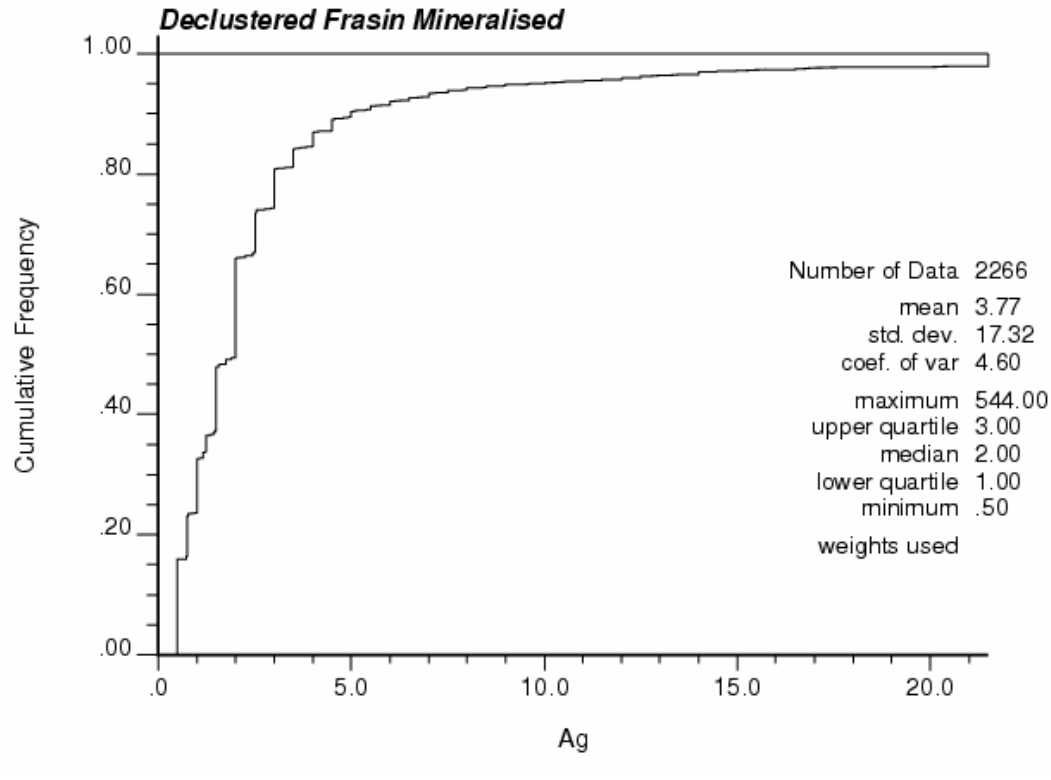
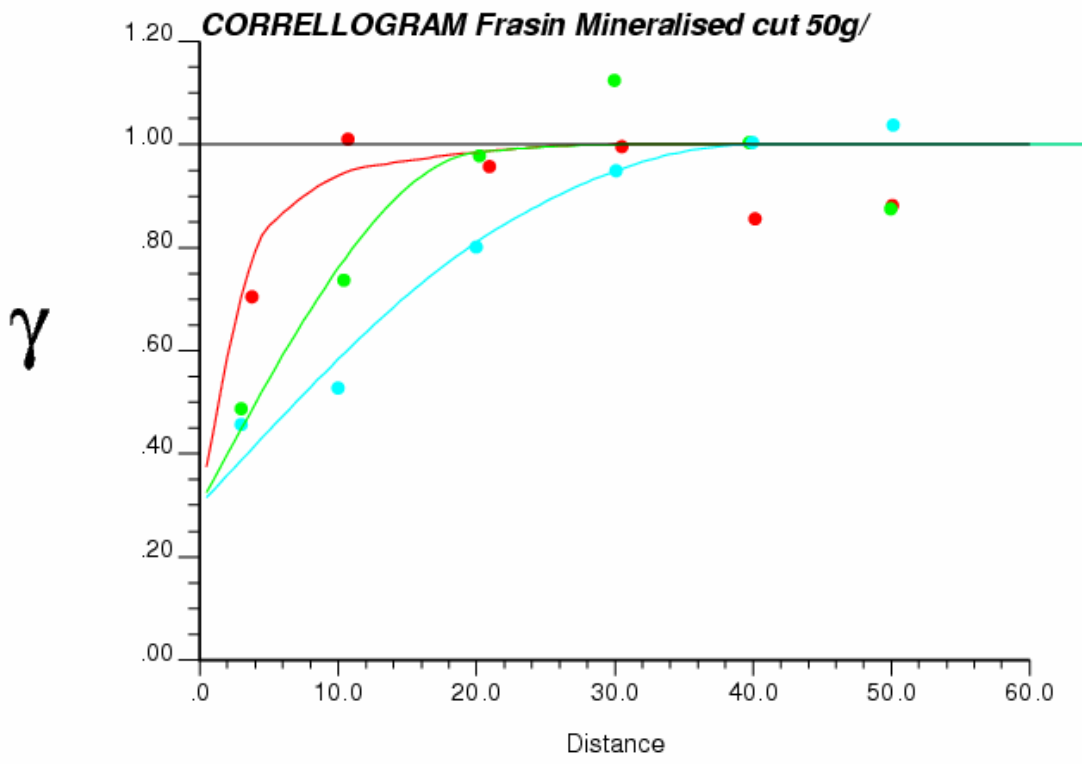


Figure 3.6.3_4
Cumulative histogram (declustered data) for Frasin Mineralised Zone



3.6.4 Variography Silver, Frasin Mineralised Zone

Figure 3.6.4_1
Variography for Frasin Mineralised Ag



Red=0,0 (minor axis, along strike) green=90,-60 (Major axis down dip) blue = 270, -30 (vertical)

Table 3.6.4_1

Frasin Mineralised Zones - Silver Variogram Models
(GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.30						
1	1 (sph)	0.40	90	-60	0	20	5	40
2	1 (sph)	0.20	90	-60	0	20	12	40
3	1 (sph)	0.10	90	-60	0	20	30	40

3.6.5 Frasin Breccia Pipe

Figure 3.6.5_1
Histogram (clustered data) for Frasin Breccia Pipe

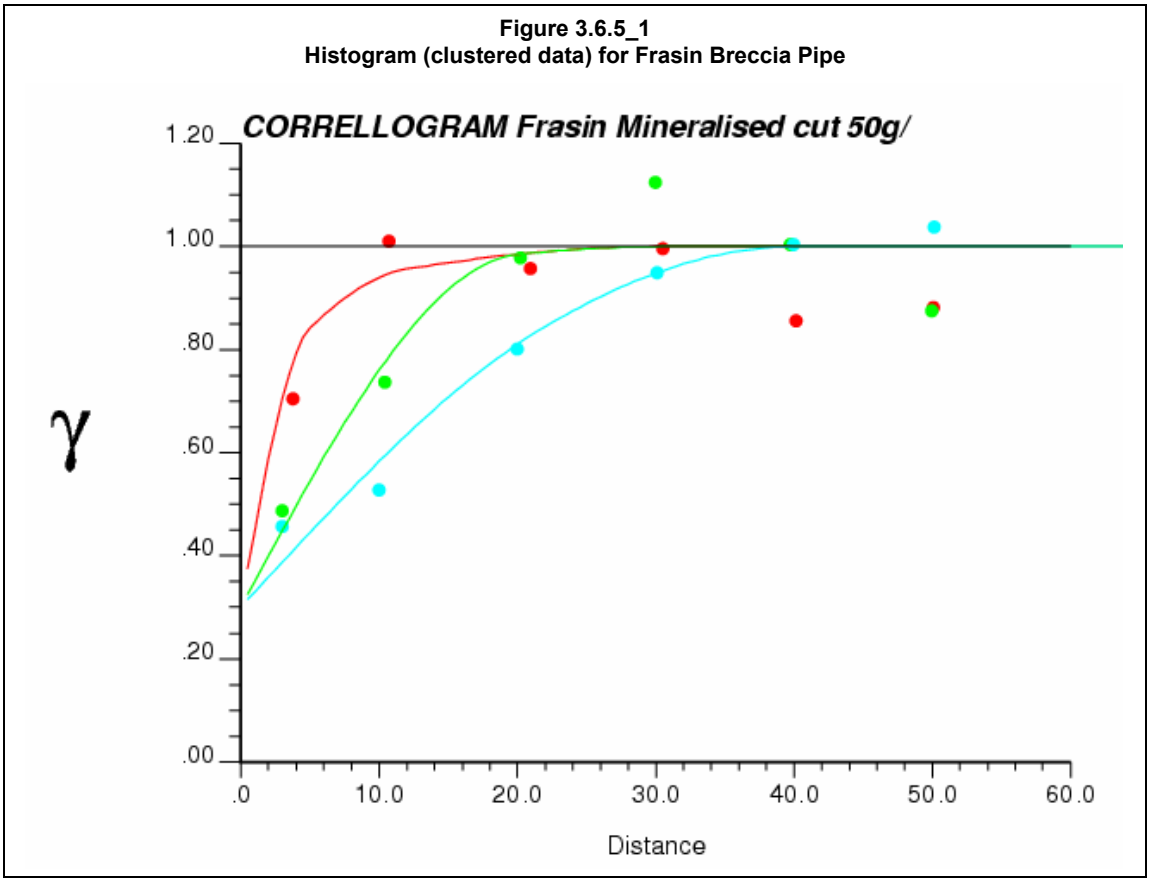


Figure 3.6.5_2
Cumulative histogram (clustered data) for Frasin Breccia Pipe

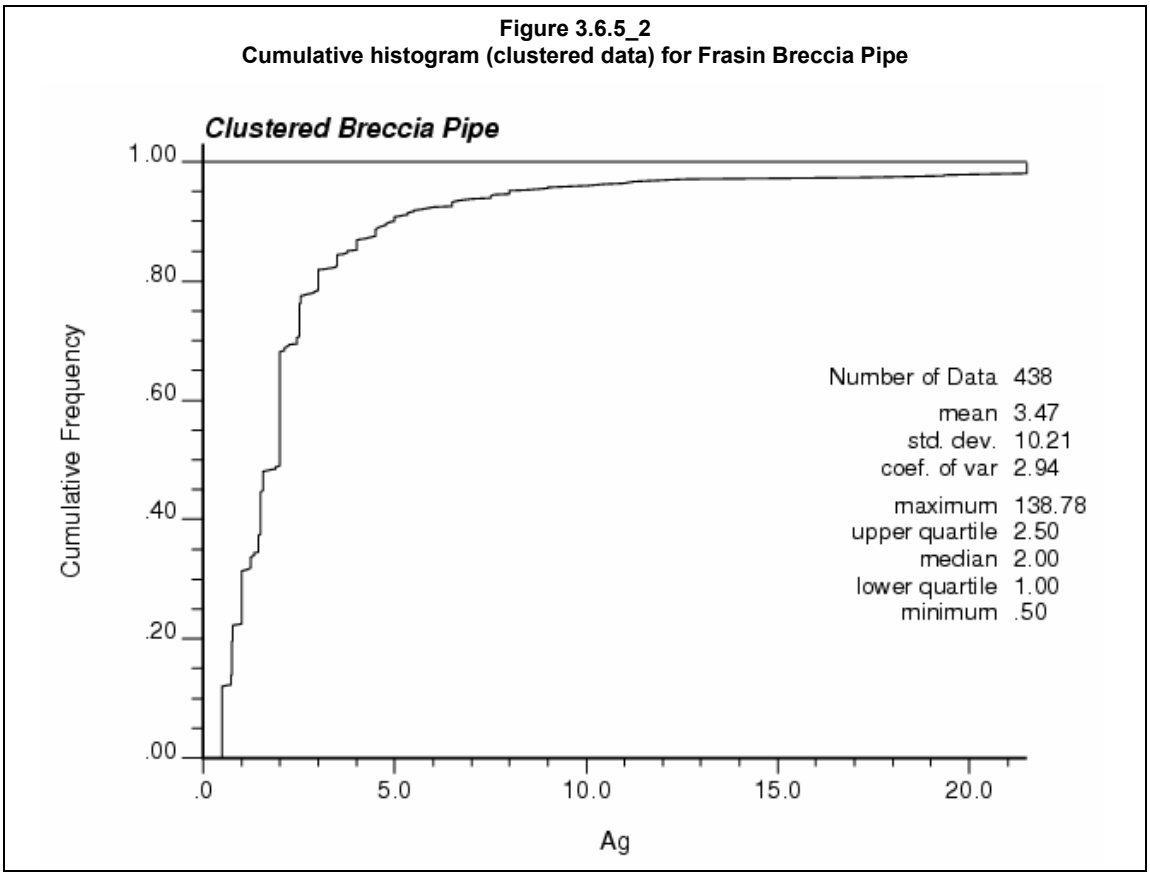


Figure 3.6.5_3
Histogram (declustered data) for Frasin Breccia Pipe

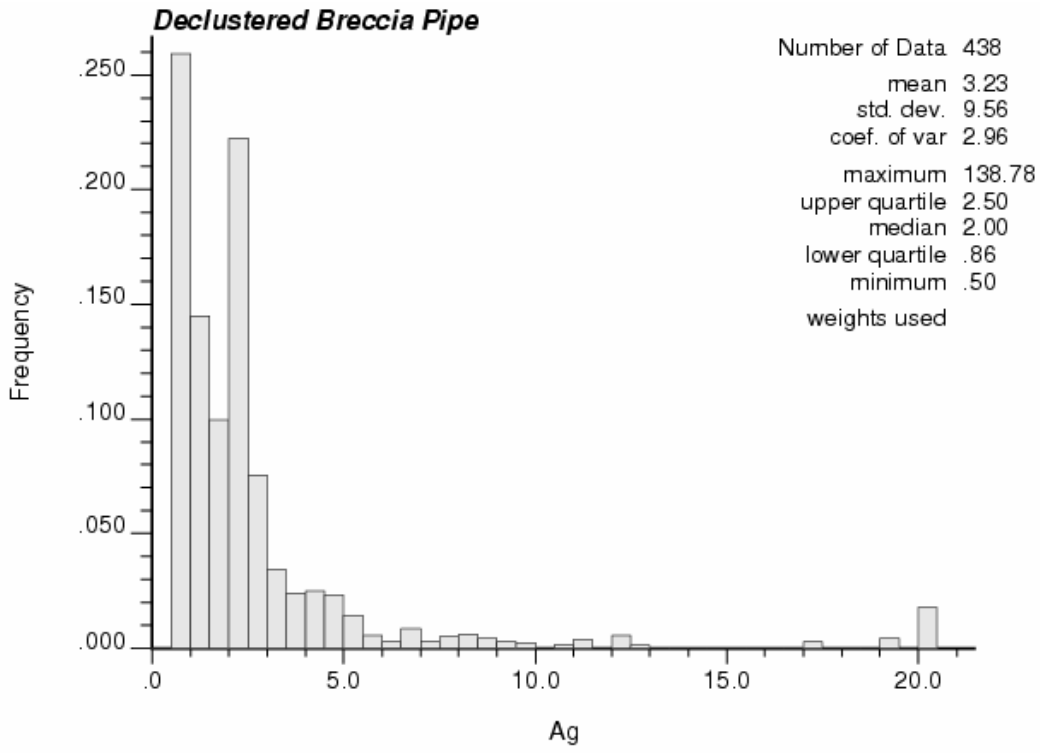
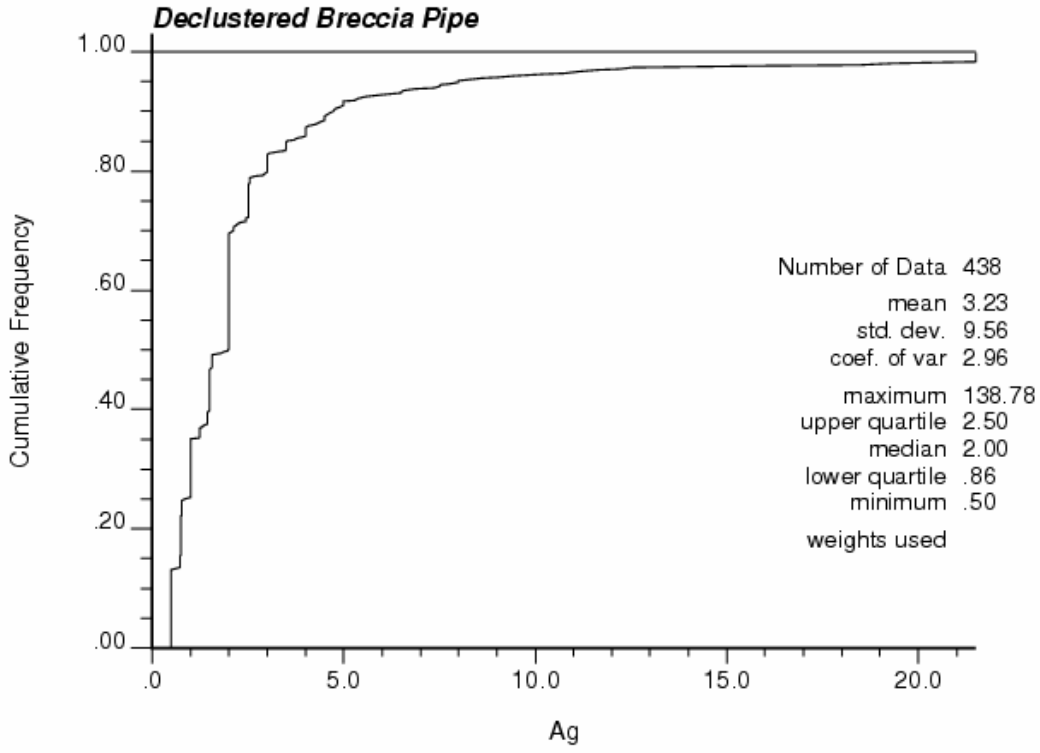
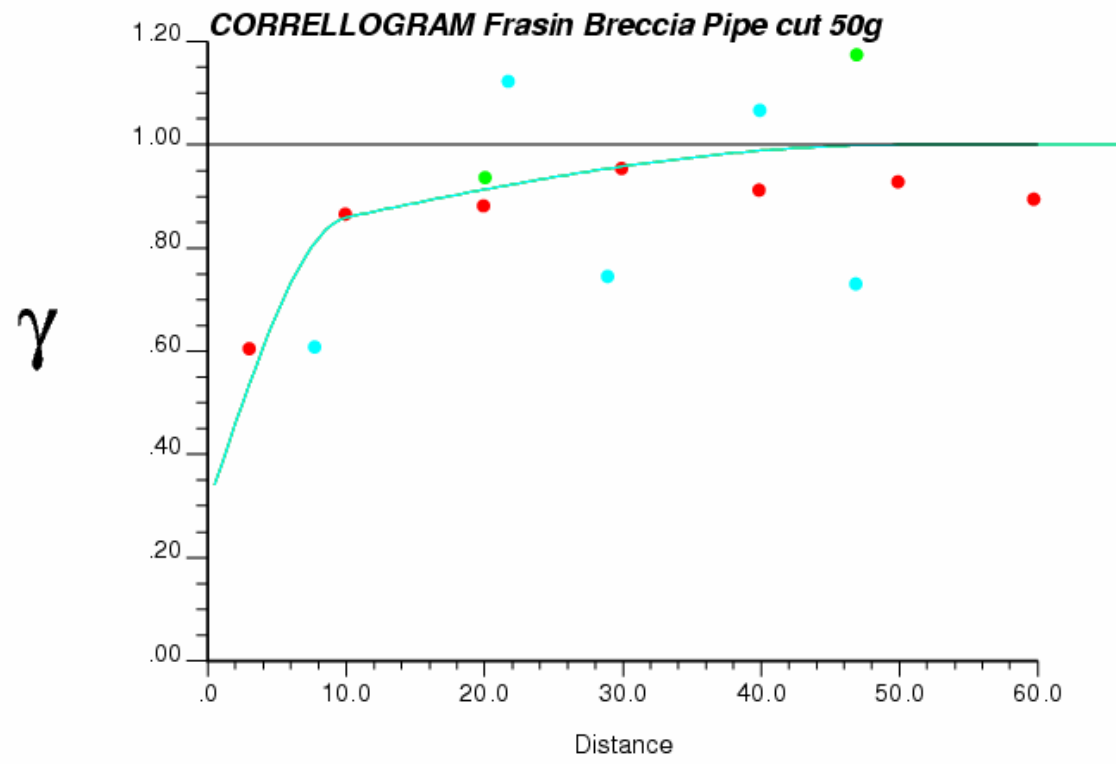


Figure 3.6.5_4
Cumulative histogram (declustered data) for Frasin Breccia Pipe



3.6.6 Variography Frasin Breccia Pipe Ag

Figure 3.6.6_1
Poorly structured variogram in Frasin Breccia Pipe for Ag, modelled using an isotropic variogram



Red dots are N/S 0,0 Minor axis, green dots are 270,-60 (down dip, major axis) blue dots are 90, -30 (vertical)

Table 3.6.6_1

Frasin Breccia Pipe - Silver Variogram Models
(GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.30						
1	1 (sph)	0.50	0	0	0	10	10	10
2	1 (sph)	0.20	0	0	0	50	50	50

3.6.7 Rodu Background

Figure 3.6.7_1
Histogram (clustered data) for Rodu Background Zone

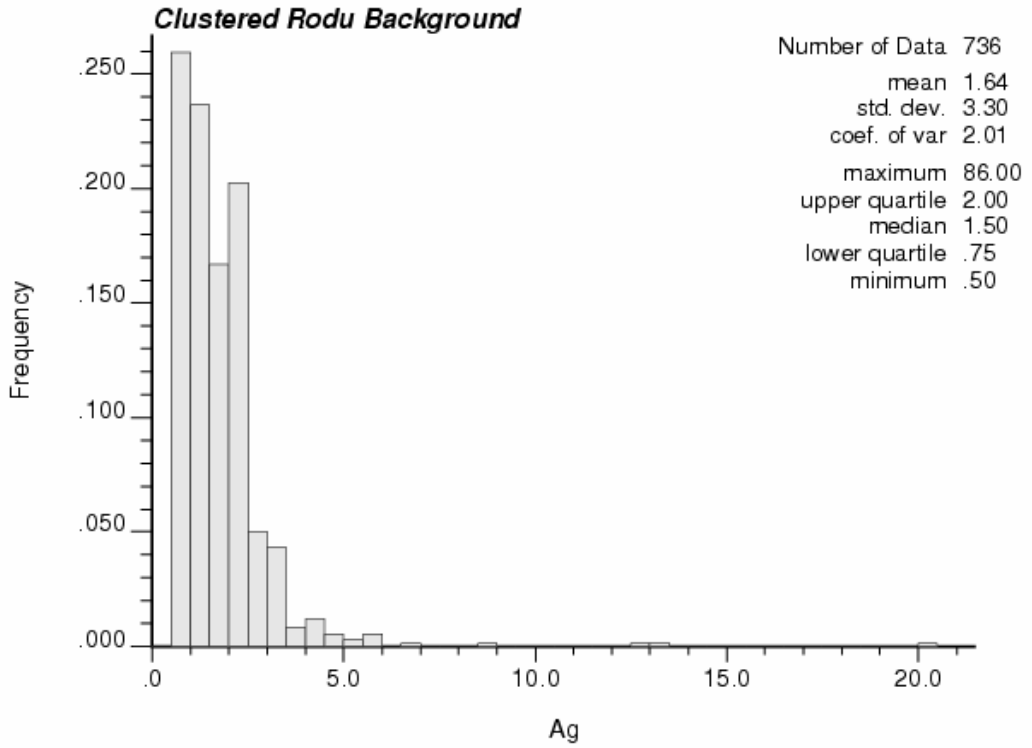


Figure 3.6.7_2
Cumulative histogram (clustered data) for Rodu Background Zone

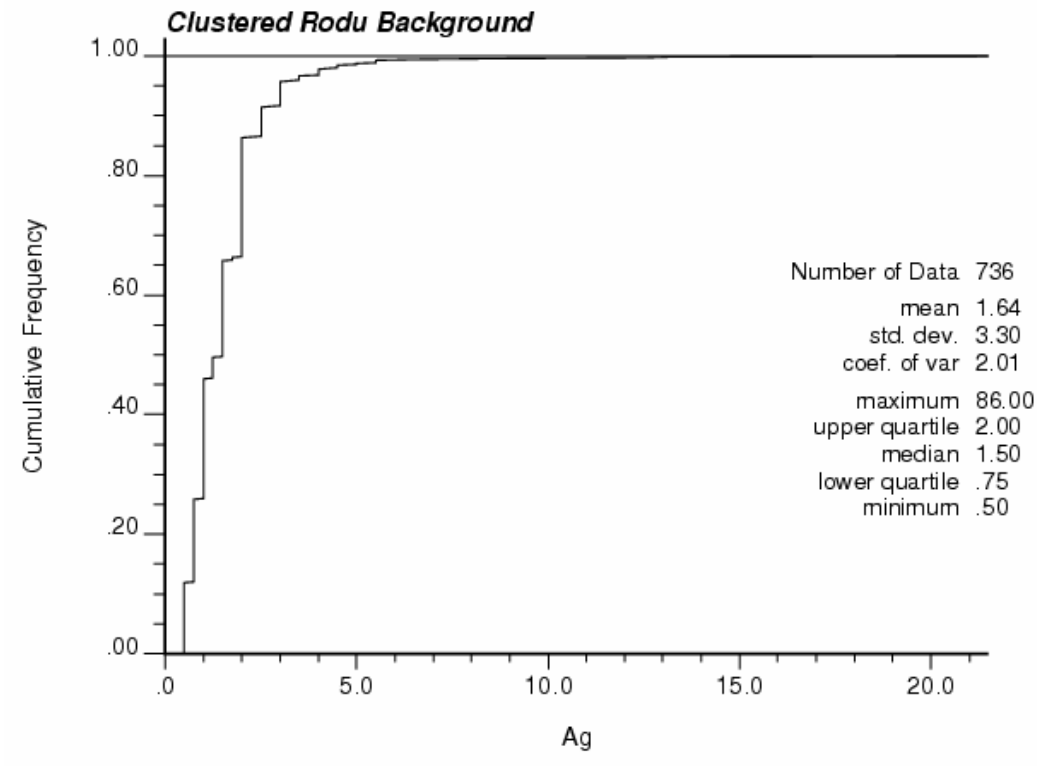


Figure 3.6.7_3
Histogram (declustered data) for Rodu Background Zone

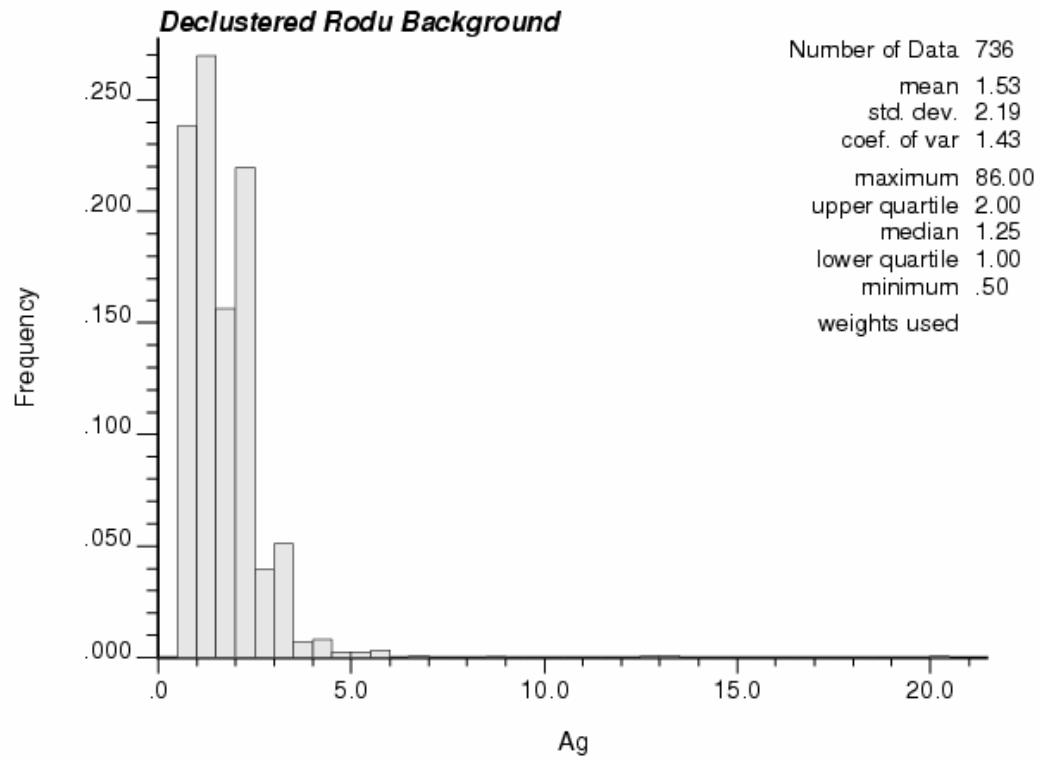
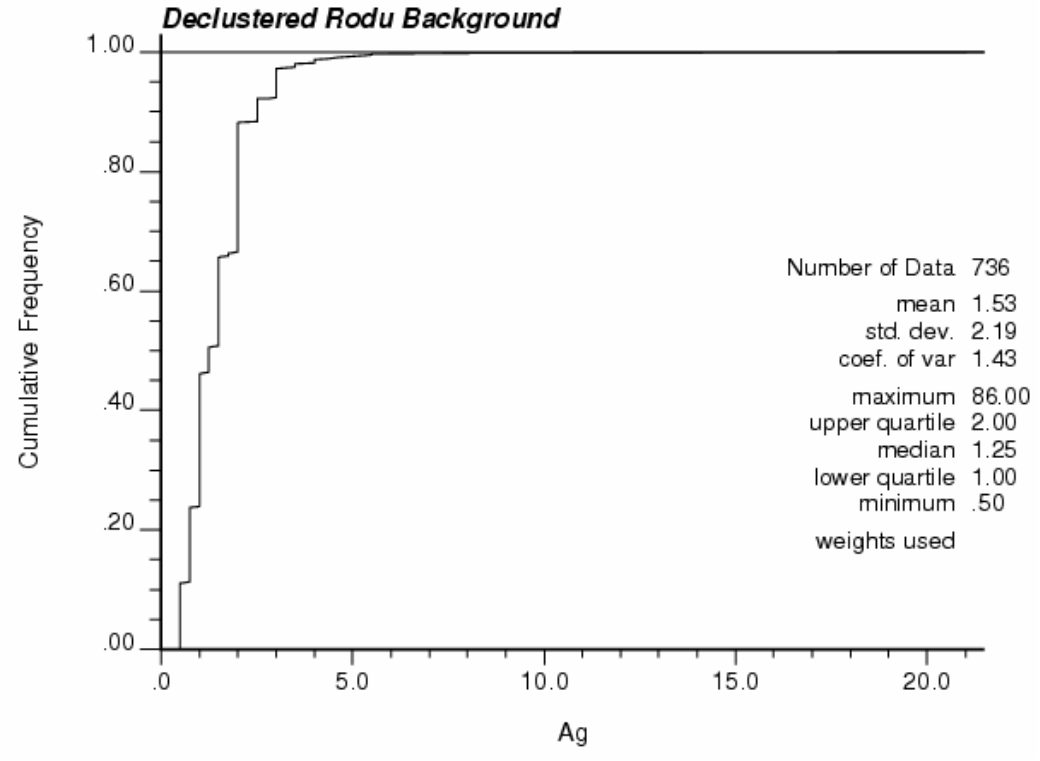
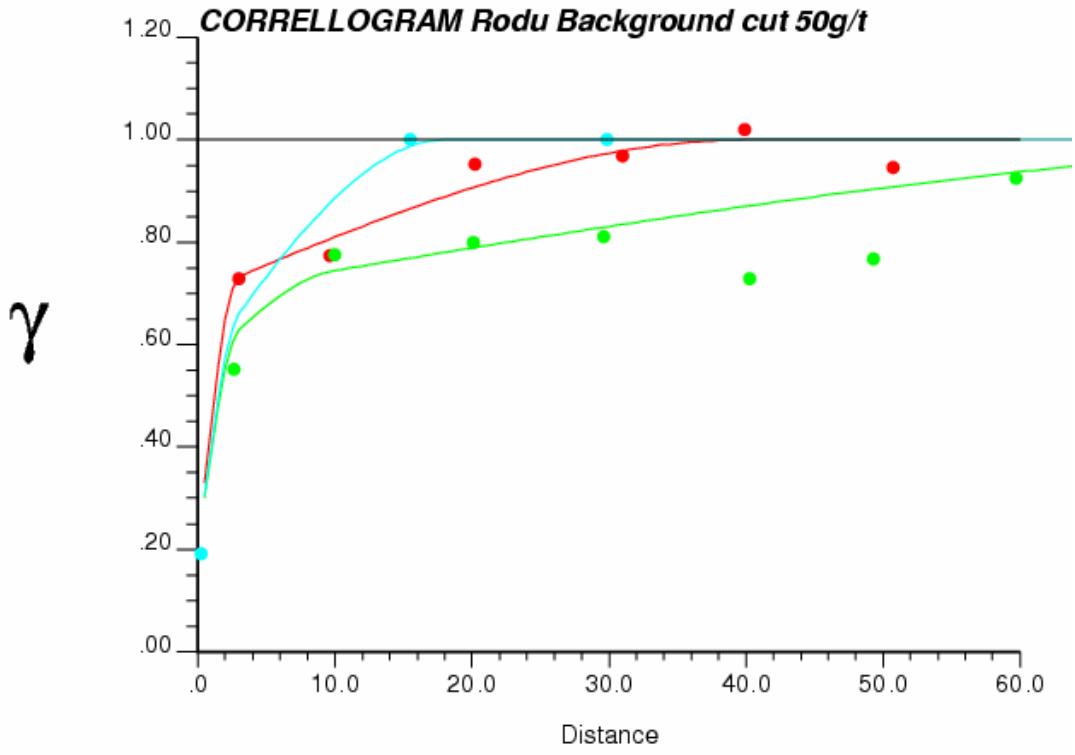


Figure 3.6.7_4
Cumulative histogram (declustered data) for Rodu Background Zone



3.6.8 Variography Rodu Background

Figure 3.6.8_1
Rodu background mineralisation



Red=0,0 (major axis) green =90,0 (minor axis) Blue= 0,-90 (vertical)

Table 3.6.8_1

Rodu Background Mineralisation - Silver Variogram Models (GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.20						
1	1 (sph)	0.35	0	0	0	3	3	3
2	1 (sph)	0.15	0	0	0	3	10	18
3	1 (sph)	0.30	0	0	0	40	100	18

3.6.9 Rodu Mineralised Zone

Figure 3.6.9_1
Histogram (clustered data) for Rodu Mineralised Zone

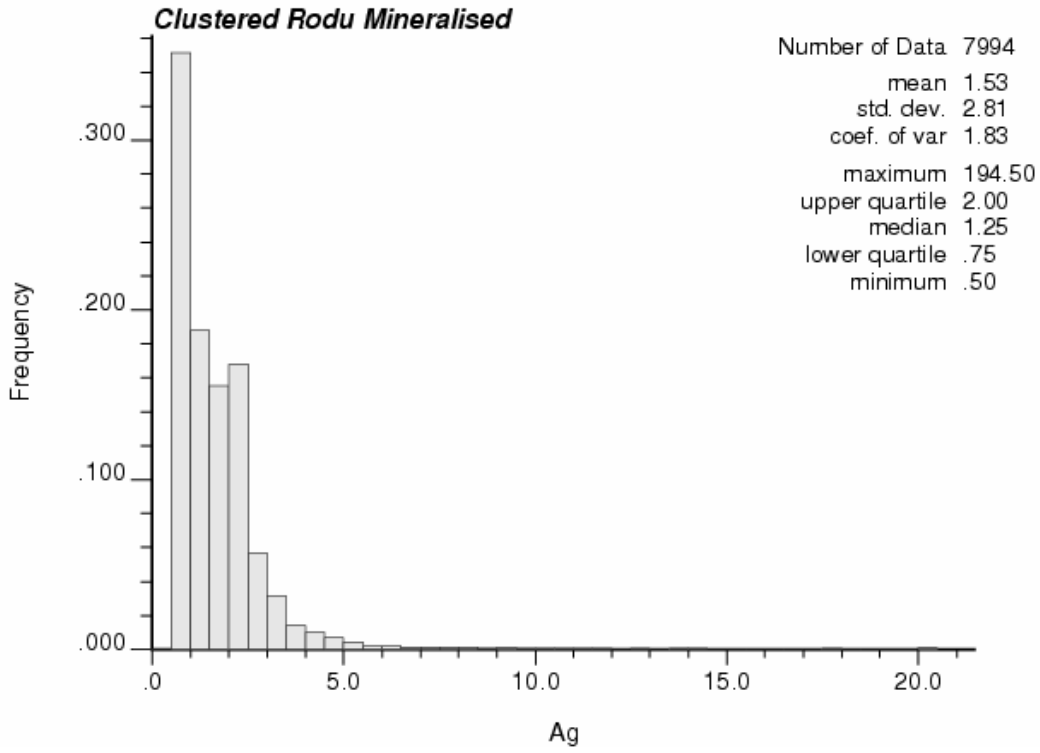


Figure 3.6.9_2
Cumulative histogram (clustered data) for Rodu Mineralised Zone

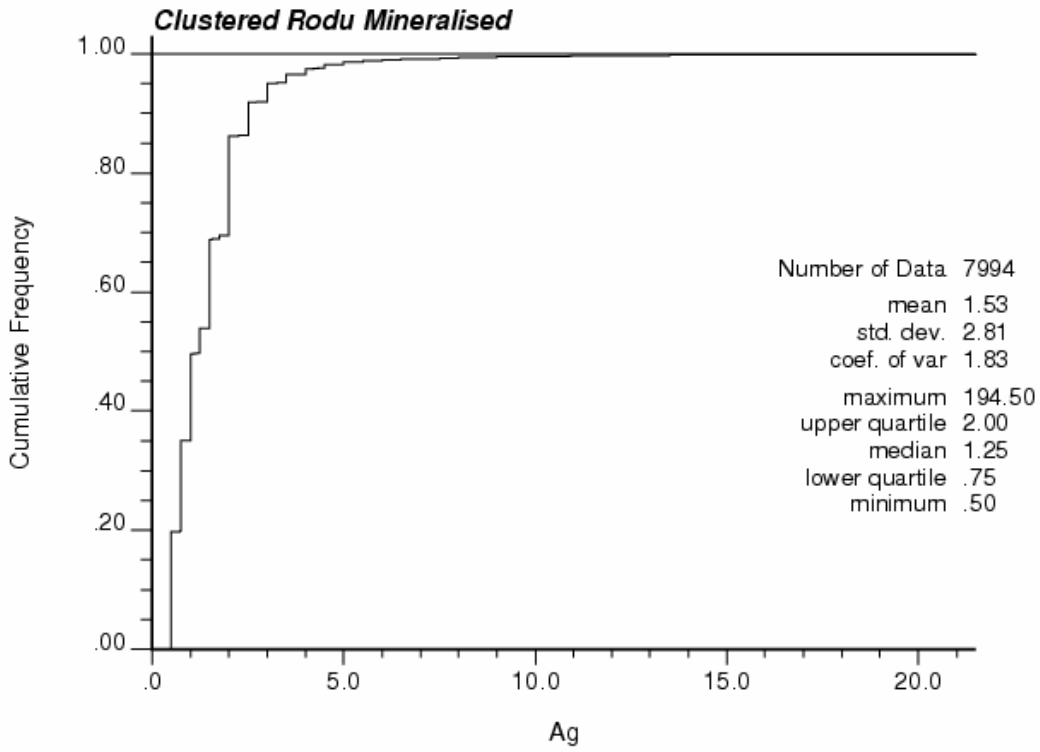


Figure 3.6.9_3
Histogram (declustered data) for Rodu Mineralised Zone

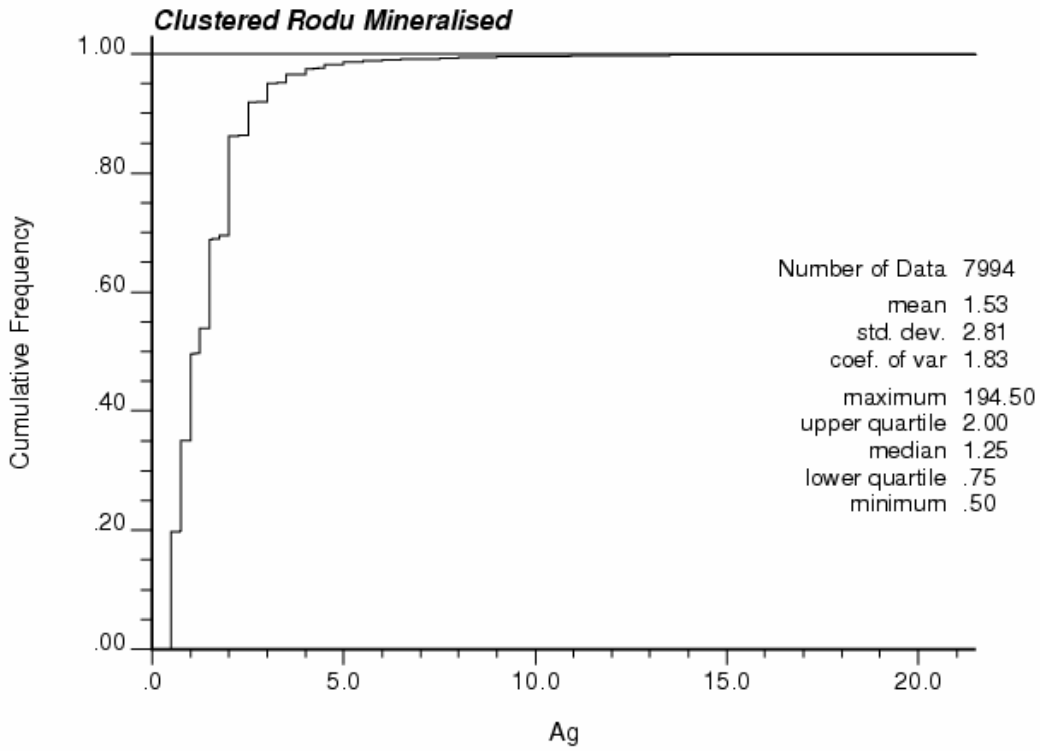
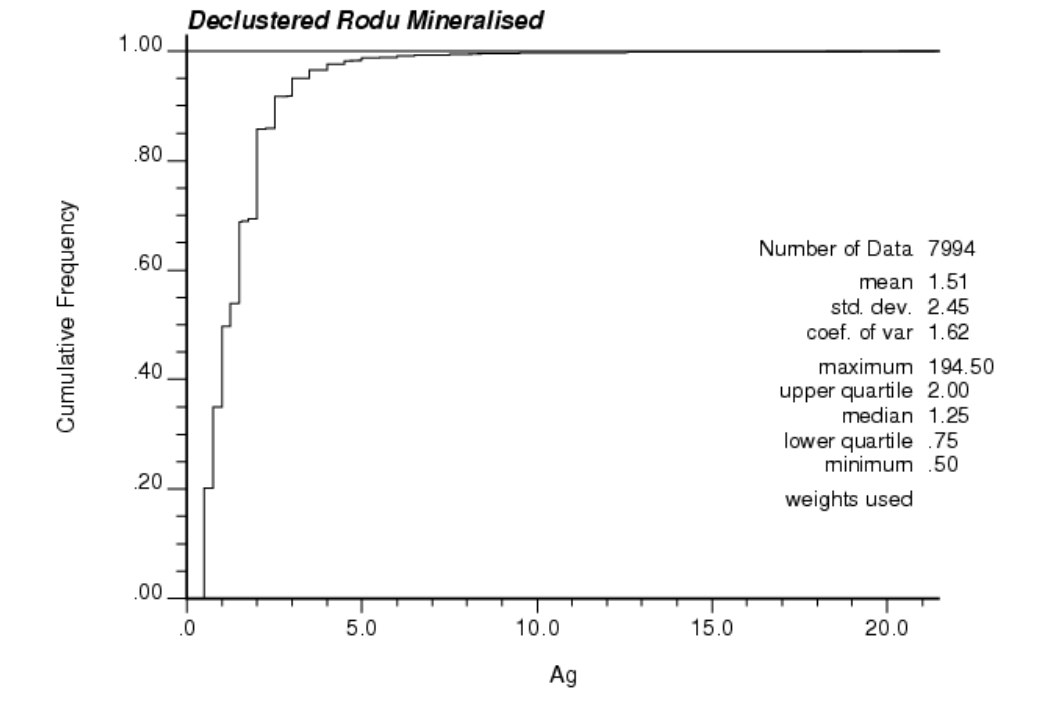
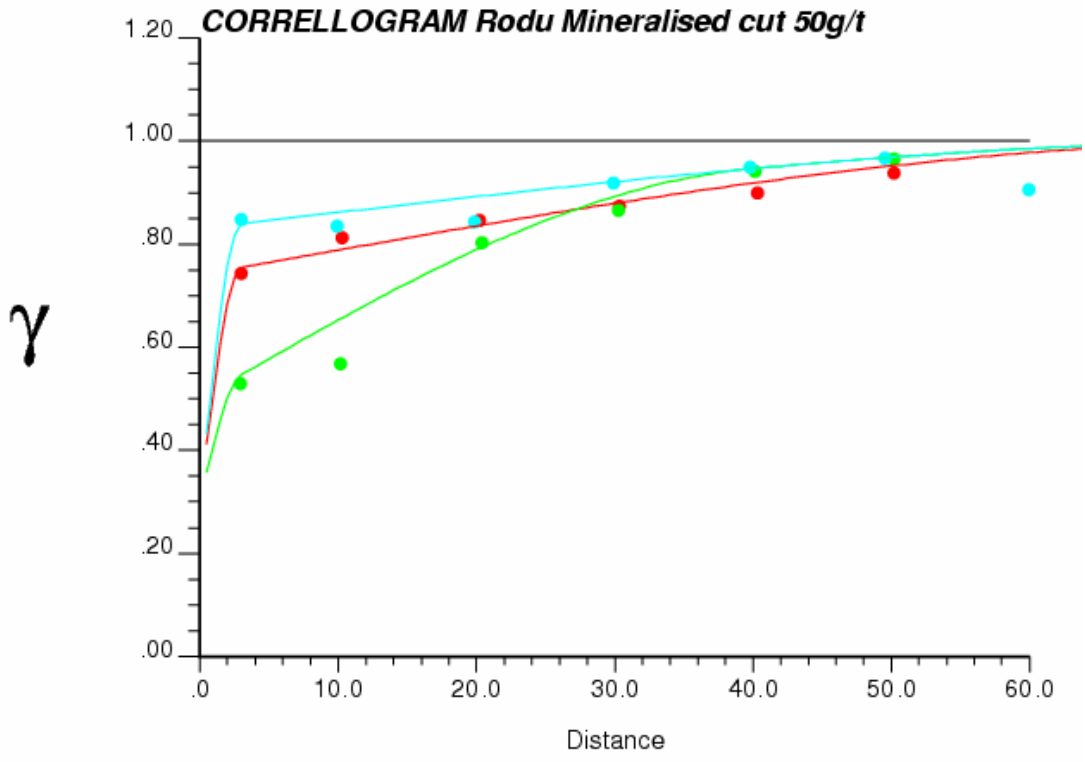


Figure 3.6.9_4
Cumulative histogram (declustered data) for Rodu Mineralised Zone



3.6.10 Variography Rodu Mineralised Ag

Figure 3.6.10_1
Silver variography for Rodu mineralised zone



Red=0,0 (major axis) green =90,0 (minor axis) Blue= 0,-90 (vertical)

Table 3.6.10_1

Rodu Mineralisation - Silver Variogram Models
(GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.30						
1	1 (sph)	0.20	0	0	0	3	3	3
2	1 (sph)	0.24	0	0	0	3	40	3
3	1 (sph)	0.09	0	0	0	80	40	3
4	1 (sph)	0.17	0	0	0	80	80	80

3.6.11 Rodu Treated as One Zone

Figure 3.6.11_1
Histogram (clustered data) for Rodu as one zone

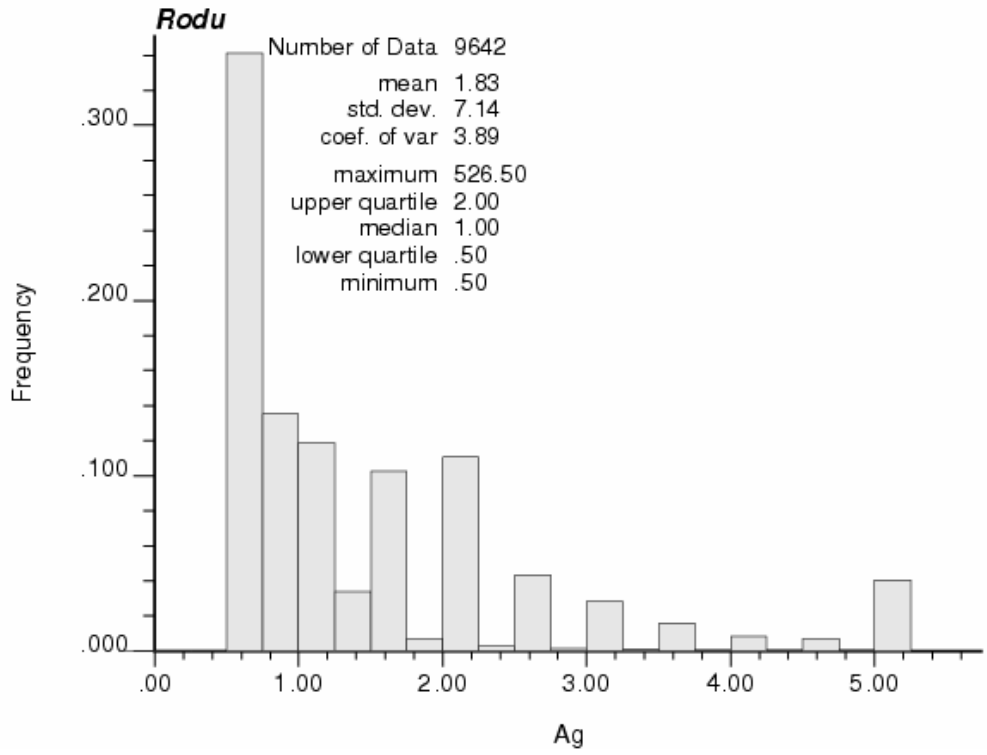


Figure 3.6.11_2
Cumulative histogram (clustered data) for Rodu as one zone

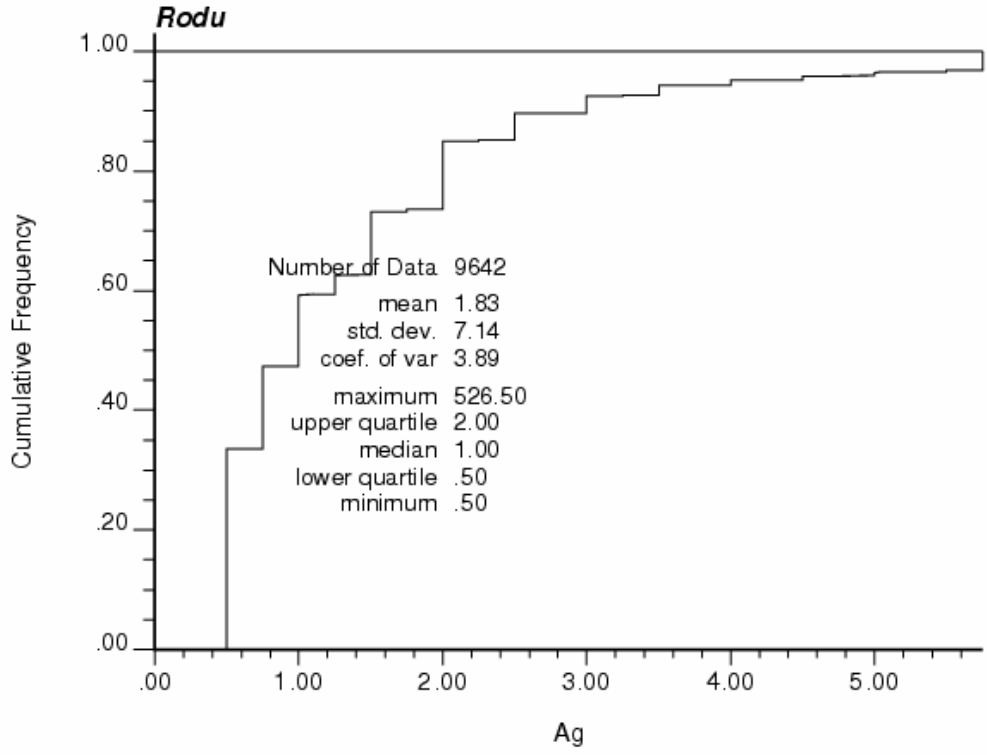


Figure 3.6.11_3
Histogram (declustered data) for Rodu as one zone

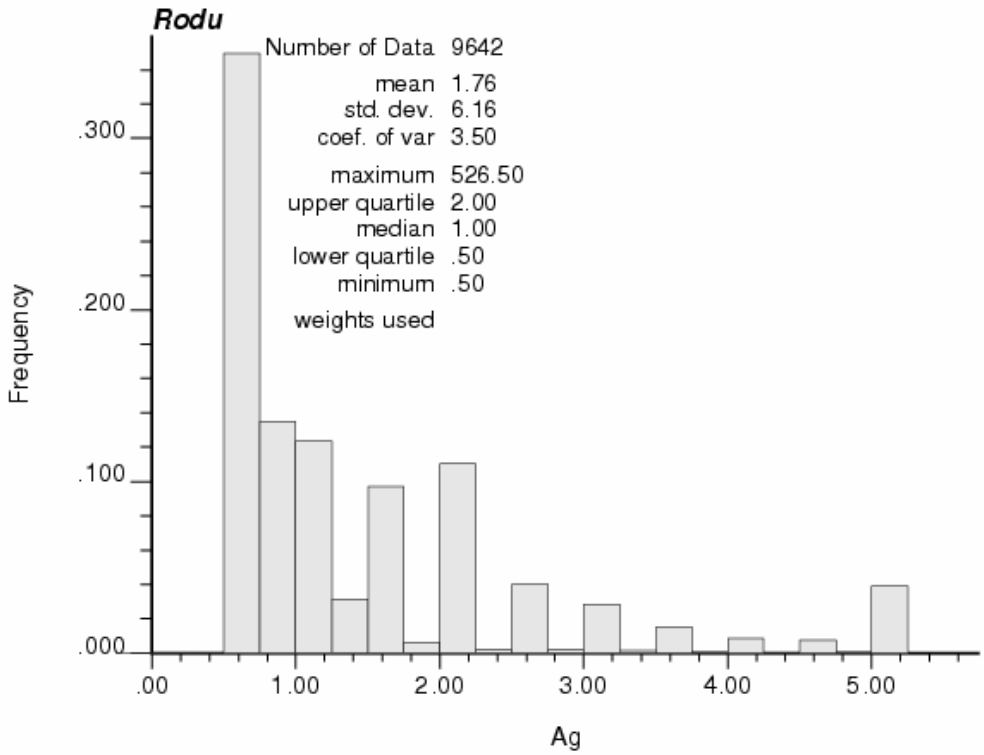


Figure 3.6.11_4
Cumulative histogram (declustered data) for Rodu as one zone

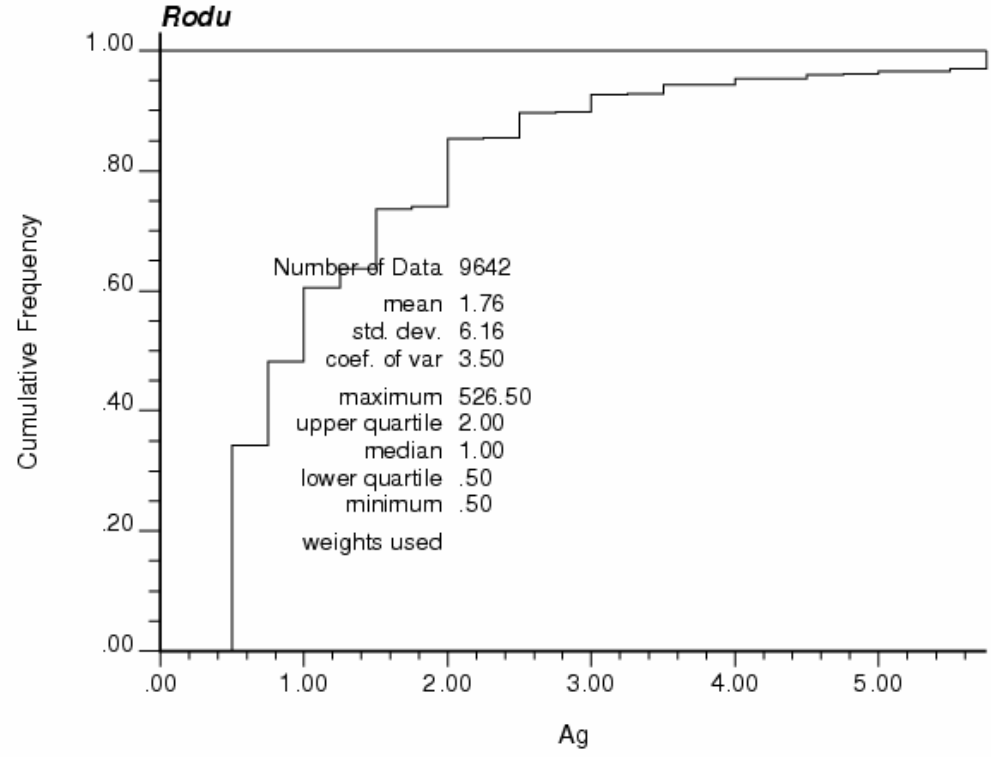
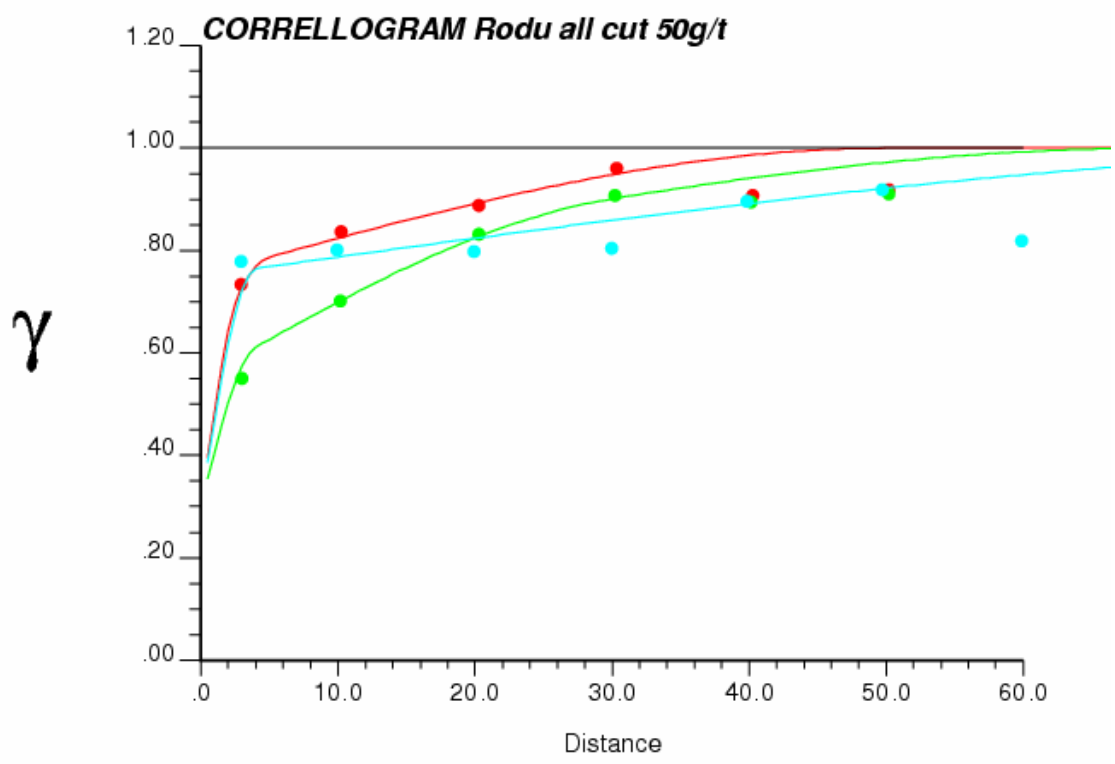


Figure 3.6.11_5
Ag variography for Rodu mineralisation treated as one zone



Red=0,0 (major axis) green =90,0 (minor axis) Blue= 0,-90 (vertical)

Table 3.6.11_1

Rodu Mineralisation (Combined) - Silver Variogram Models (GSLIB rotations)

Structure	Type	cc	ang1	ang2	ang3	a_hmax	a_hmin	a_vert
	nugget	0.30						
1	1 (sph)	0.25	0	0	0	3	4	4
2	1 (sph)	0.20	0	0	0	5	30	4
3	1 (sph)	0.25	0	0	0	50	70	100

3.7 Density

Figure 3.7_1
Histogram of bulk densities for background mineralisation at Frasin

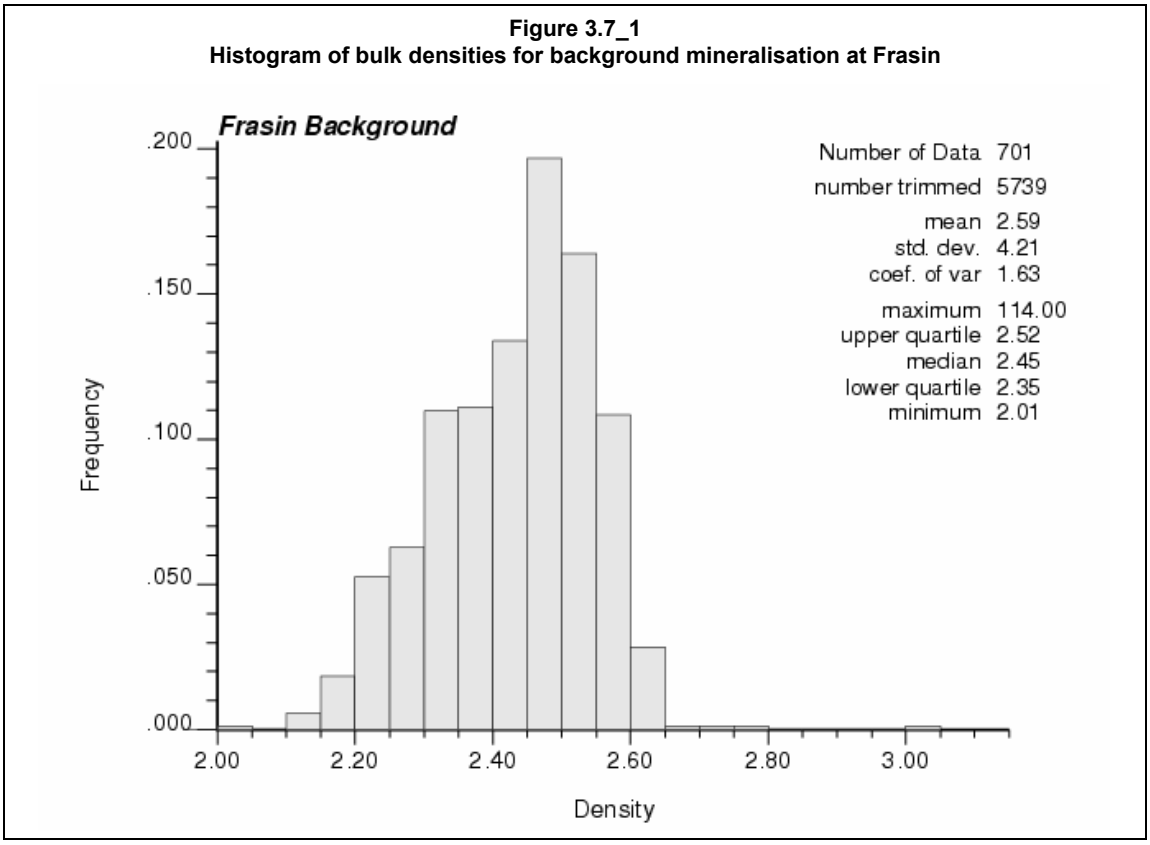


Figure 3.7_2
Histogram of bulk densities for mineralisation at Frasin

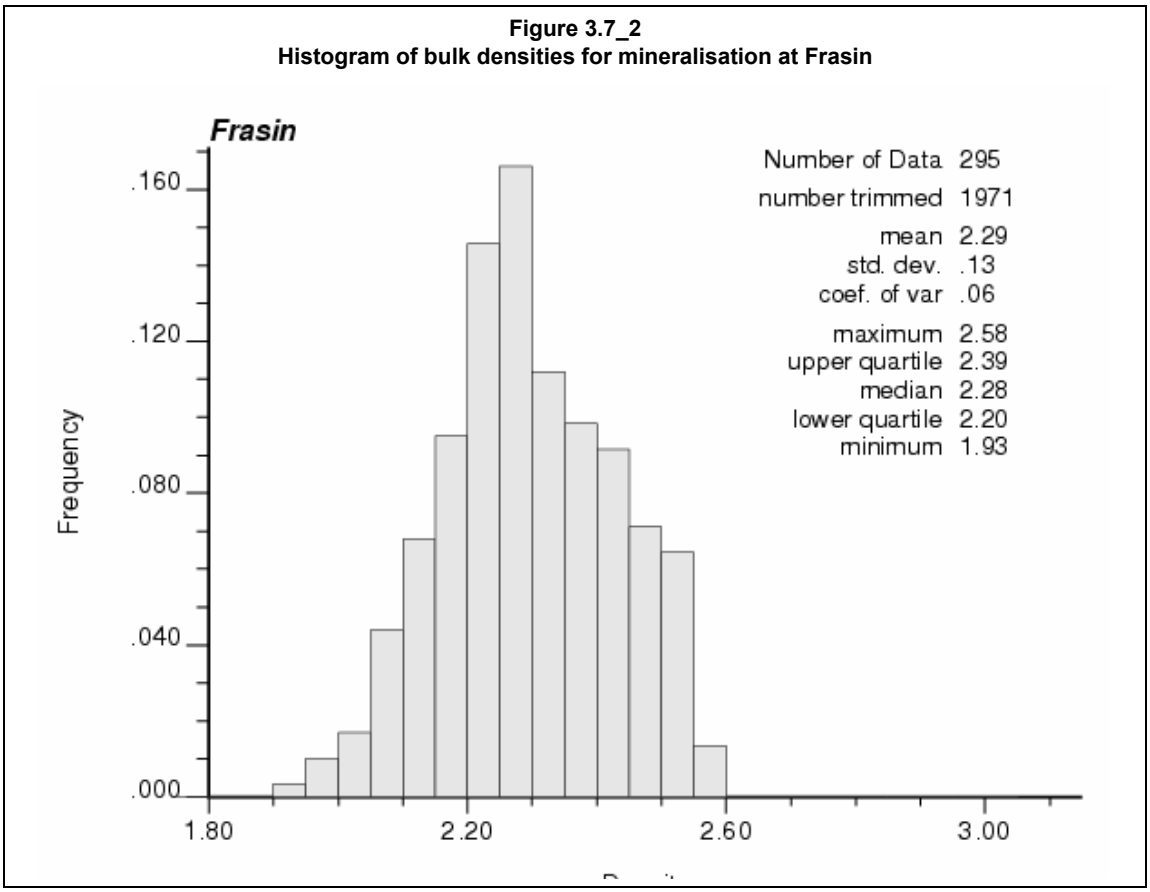


Figure 3.7_3
Histogram of bulk densities for mineralisation in the Frasin Breccia Pipe

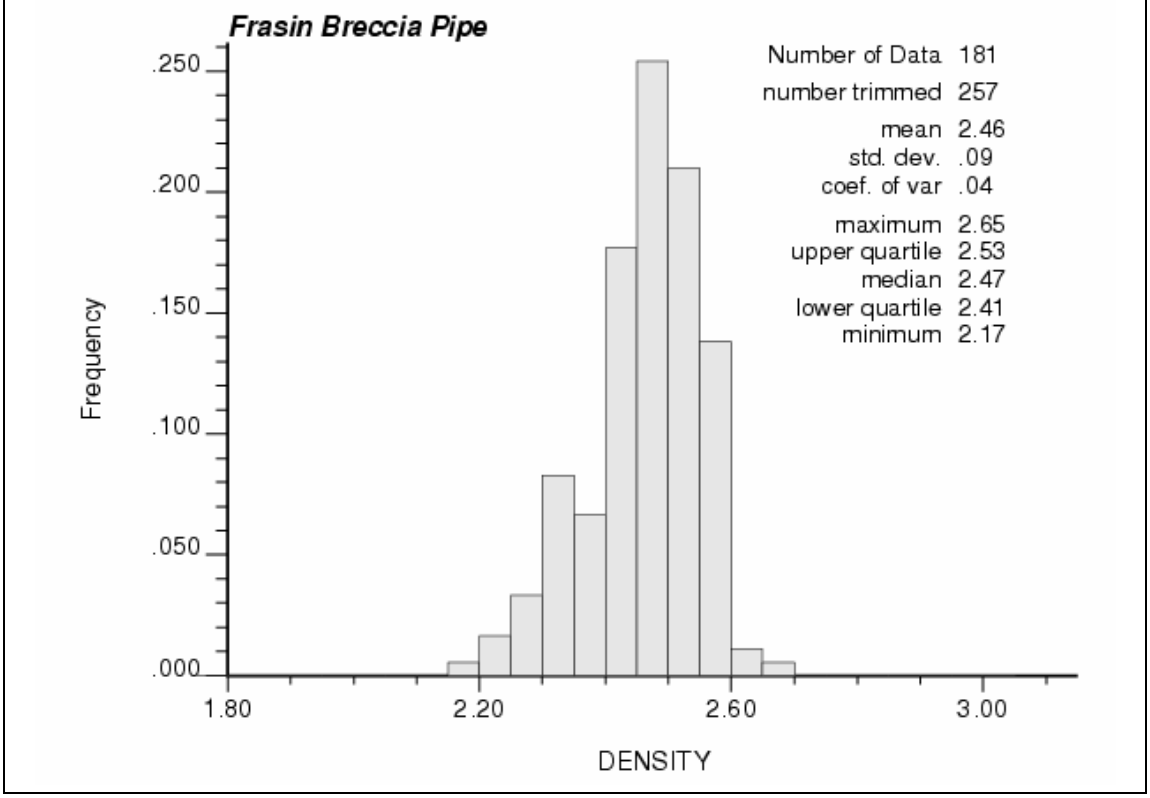


Figure 3.7_4
Histogram of bulk densities for background mineralisation at Rodu

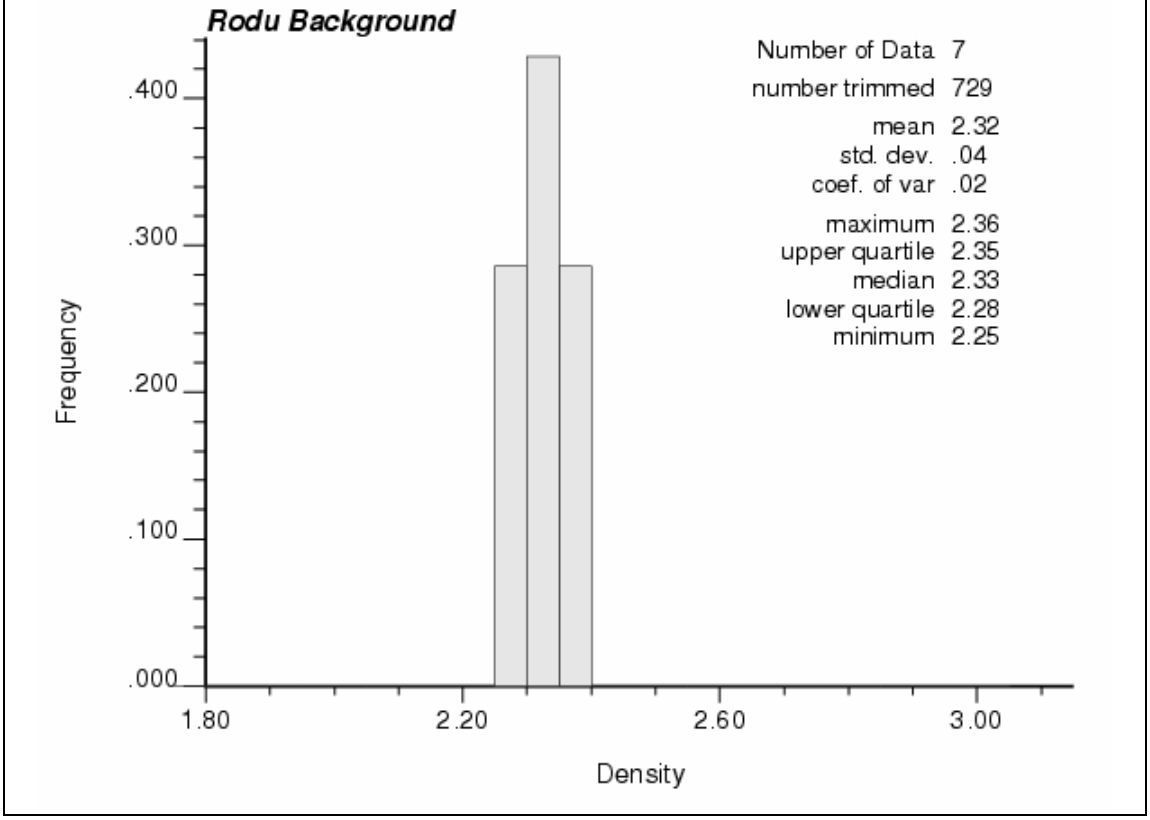


Figure 3.7_5
Histogram of bulk densities for the mineralised zone at Rodu

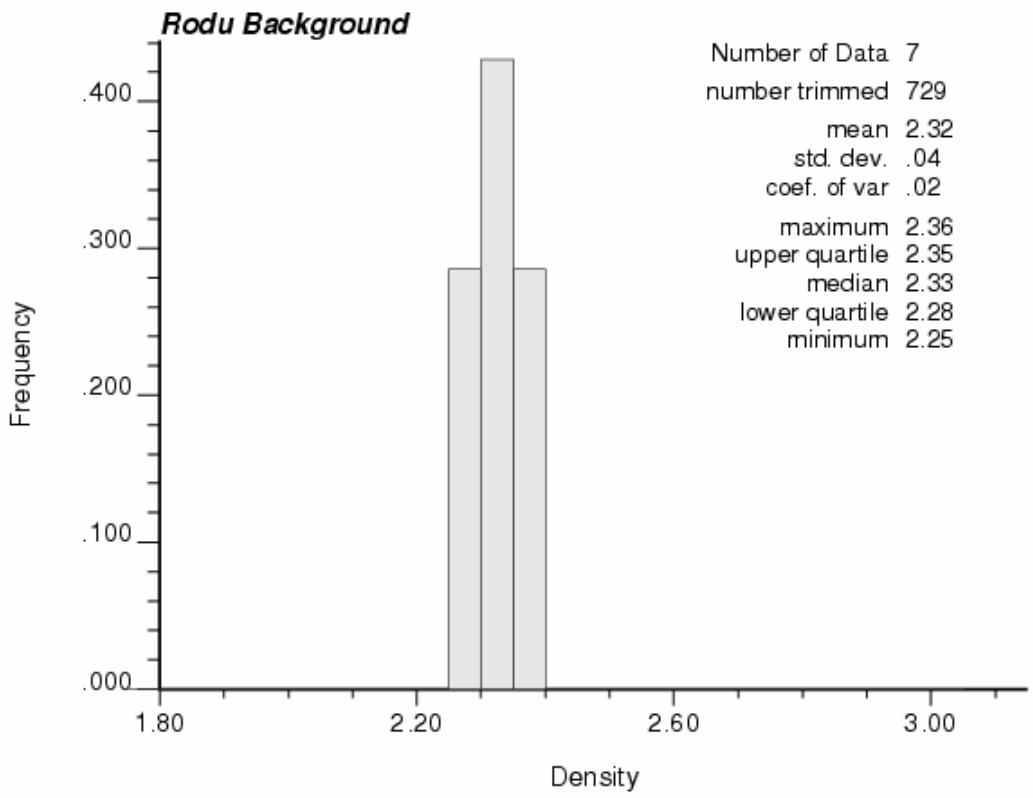
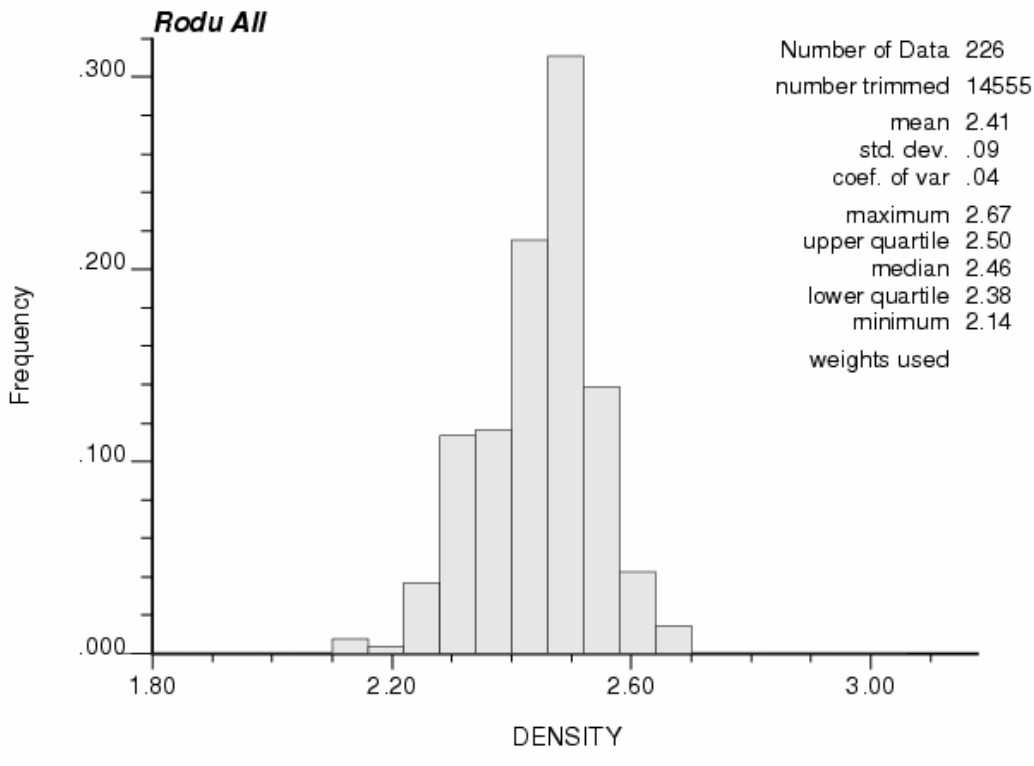


Figure 3.7_6
Histogram of bulk densities for mineralisation at Rodu treated as a single zone



Density data is sparse, taken from some of the more recent boreholes at 20cm lengths. It is not possible to calculate a variogram for density, and a linear average has been used. Populations are approximately symmetrical to negatively skewed.

Some 1324 density samples have been collected during the various diamond drilling programmes at Rodu-Frasin and have been measured using the international standard water immersion method, after sealing with wax, at the Cepromin laboratory in Deva, Romania. Senior RSG staff have observed and documented the measurement process at Cepromin. Samples were collected at 3m intervals along core and consisted of 15cm billets of half core. Check density samples have been measured by alternative methods including the calliper and Marcy methods for a total of 353 samples.

Relative Bulk Densities used (g/cm^3) were:-

- Frasin Background 2.59
- Frasin 2.29
- Frasin Breccia Pipe 2.46
- Rodu 2.41

4 CHECKS

4.1 Swath Checks

In order to check the final model for bias, swath checks were carried out where the orebody model and sample composites were regularised into 100m wide east-west swathes and the means of samples and blocks were compared.

For Rodu, the correlation is biased by one swath, but when that point is removed, a reasonable regression slope of 0.93 is achieved and a correlation of 0.96 is obtained. This is to be expected as the zone is well informed, deterministically modelled and has a high proportion of indicated resources.

Similarly, Frasin Background is dominated by one poorly correlated swath. If this point is ignored, the correlation and slope are as expected for inferred resource.

The limited size of the Breccia Pipe militate against this kind of check, nevertheless the swath checks produced are acceptable.

Figure 4.1_1
100m Swath Check Au, for Frasin Background

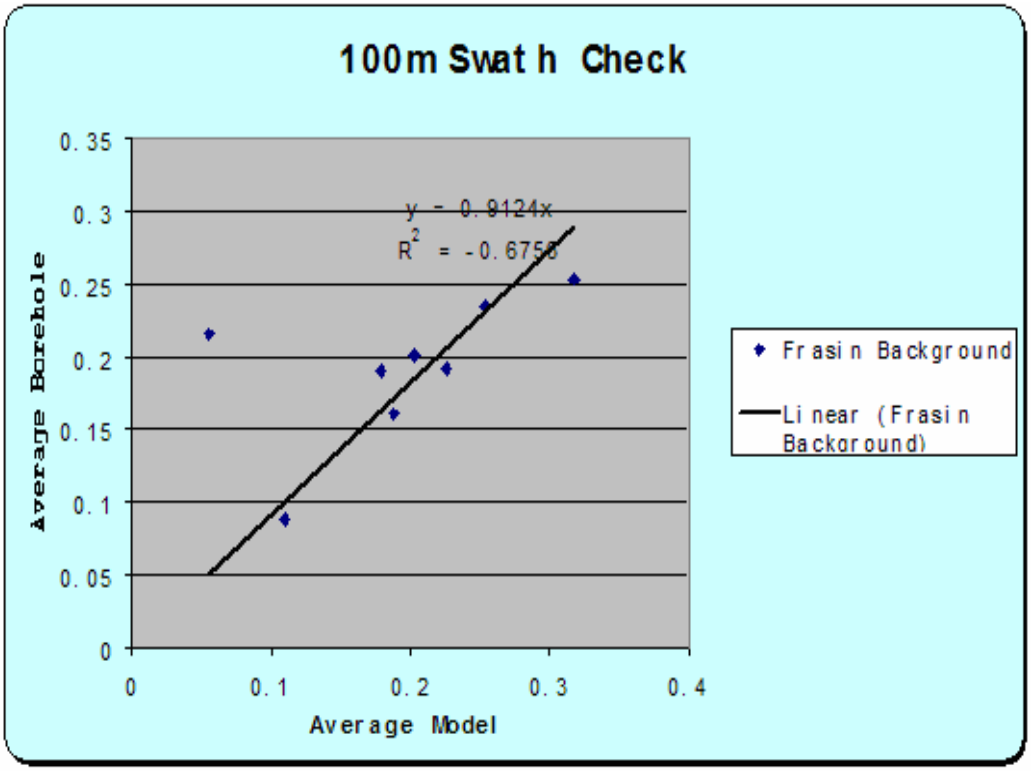


Figure 4.1_2
100m swath check (Au) for Frasin Background with outlier removed

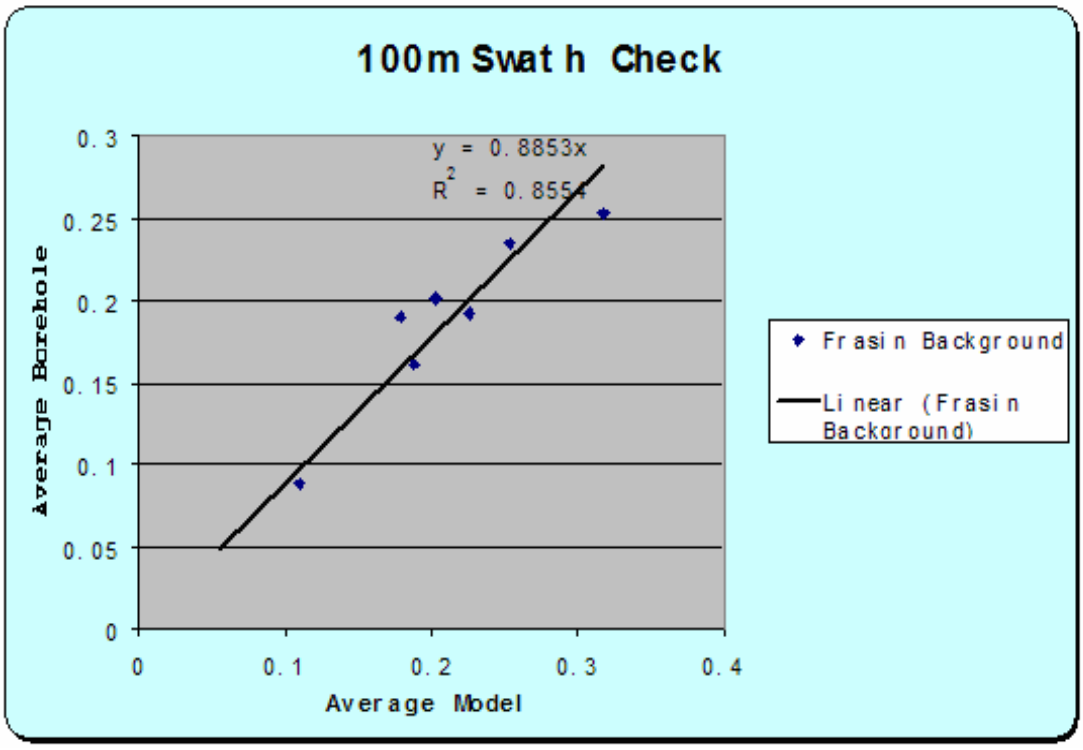


Figure 4.1_3
100m Swath Check for Au, Frasin

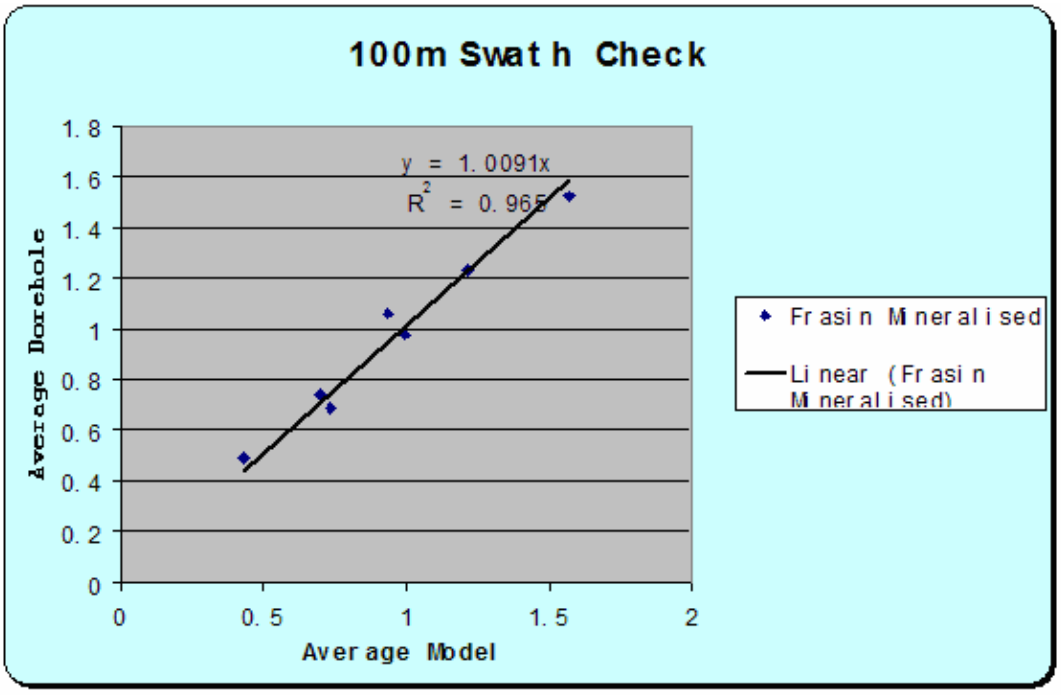


Figure 4.1_4
100m swath check for Au, Frasin Breccia Pipe

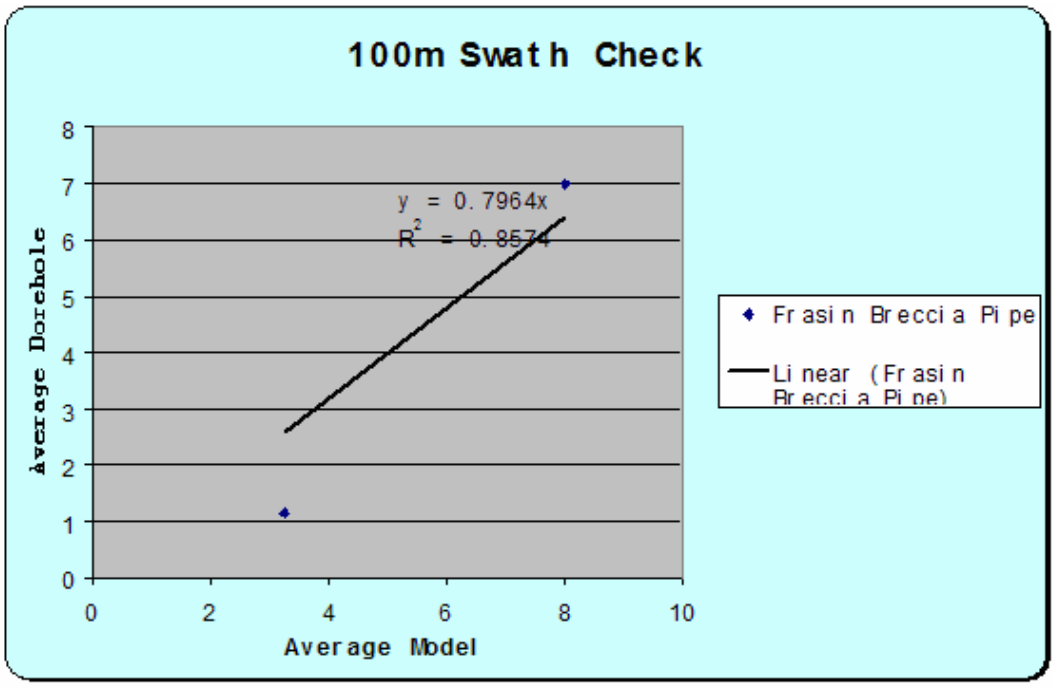


Figure 4.1_5
100m swath checks Au, for Rodu

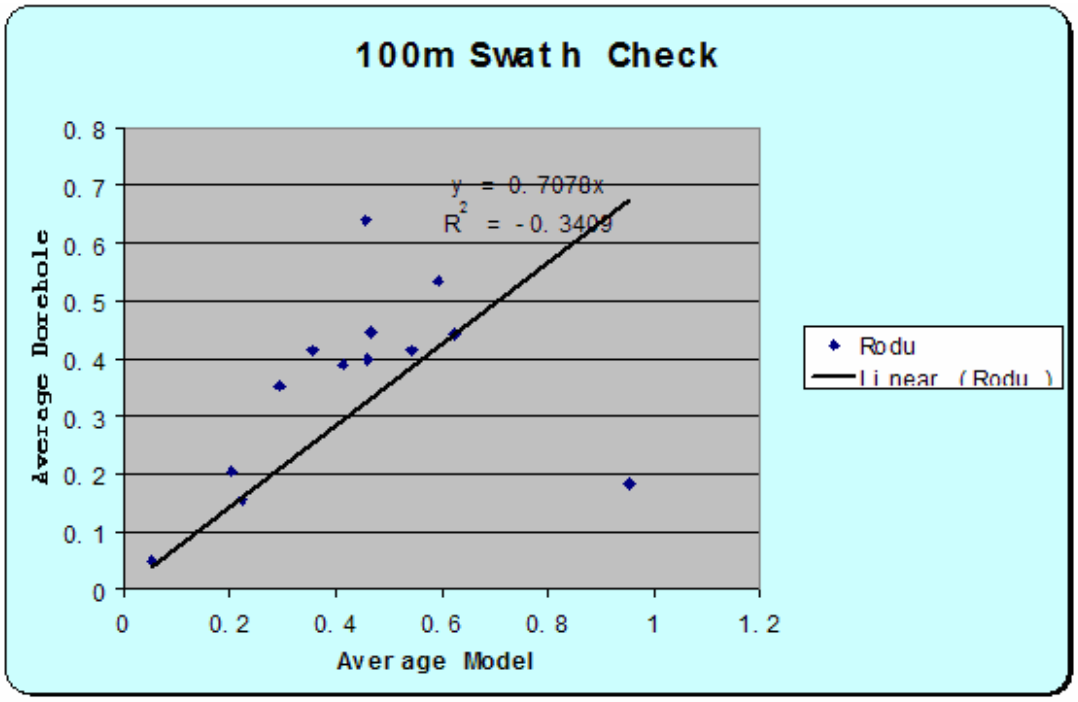
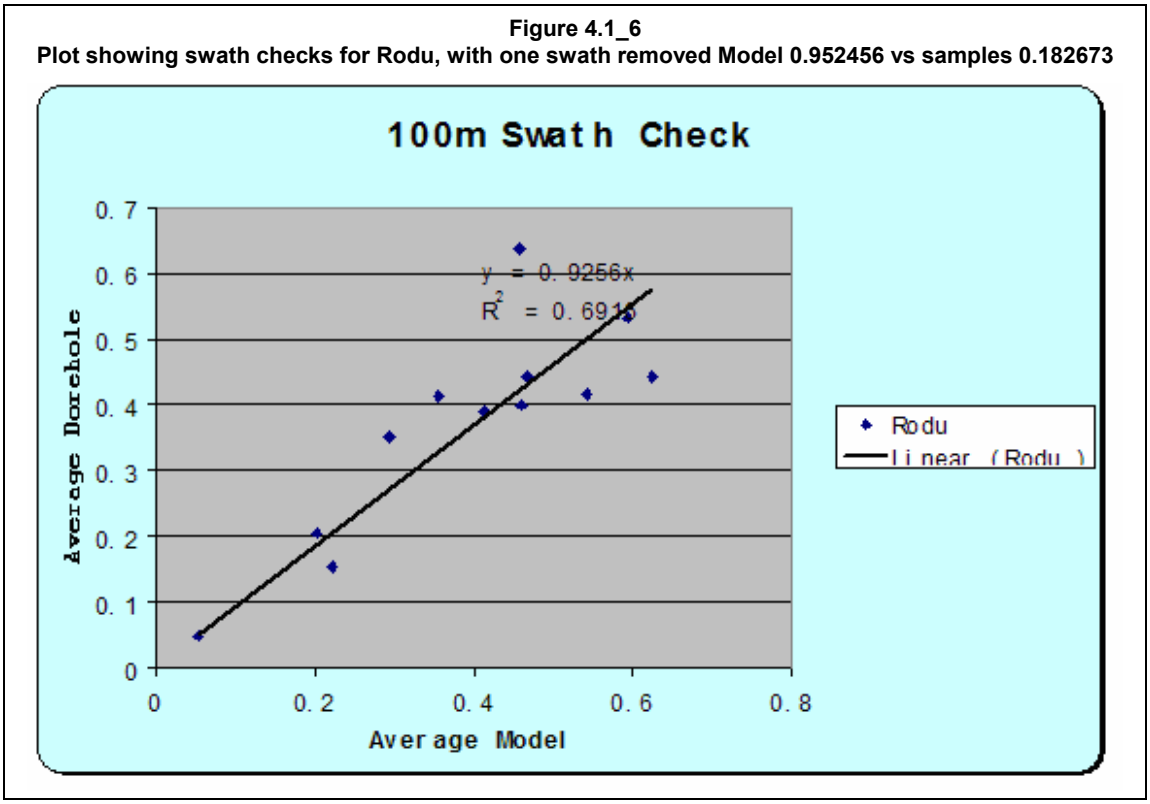


Figure 4.1_6
Plot showing swath checks for Rodu, with one swath removed Model 0.952456 vs samples 0.182673



4.2 Old vs New Parameters

Throughout the estimation of the Bucium model, both Au and Ag were estimated using both 2003 and 2004 parameters, but with 2004 samples and domains.

Plots showing the new and old block values are presented below. As can be seen from these plots, although there is considerable spread, which is to be expected as a result of changed variogram parameters, there is very little overall bias. Maximum block estimate for the old parameters is 21.42g/t Au, while maximum for the new parameters is 21.92g/t Au.

Frasin Background is an exception, where the new parameters generally result in a lower estimate compared with the old parameters. This is considered to be the result of the reduced search radii and limited or local effect of isolated high grades within a generally low grade background.

The ultimate effect of changing the parameters for the 2004 evaluation has been to reduce the tonnage above cutoff for Frasin and the Frasin Breccia Pipe, but to increase their associated grade and contained ounces of gold. A similar effect is observed at Rodu. In addition, significant increases in inferred resources have been made, particularly in the Frasin Background zone. Once more, this is considered to be largely due to domaining and changes in the search ranges.

Figure 4.2_1
Plot showing block grades estimated using old and new parameters, subdivided by search volumes for mineralisation at Rodu

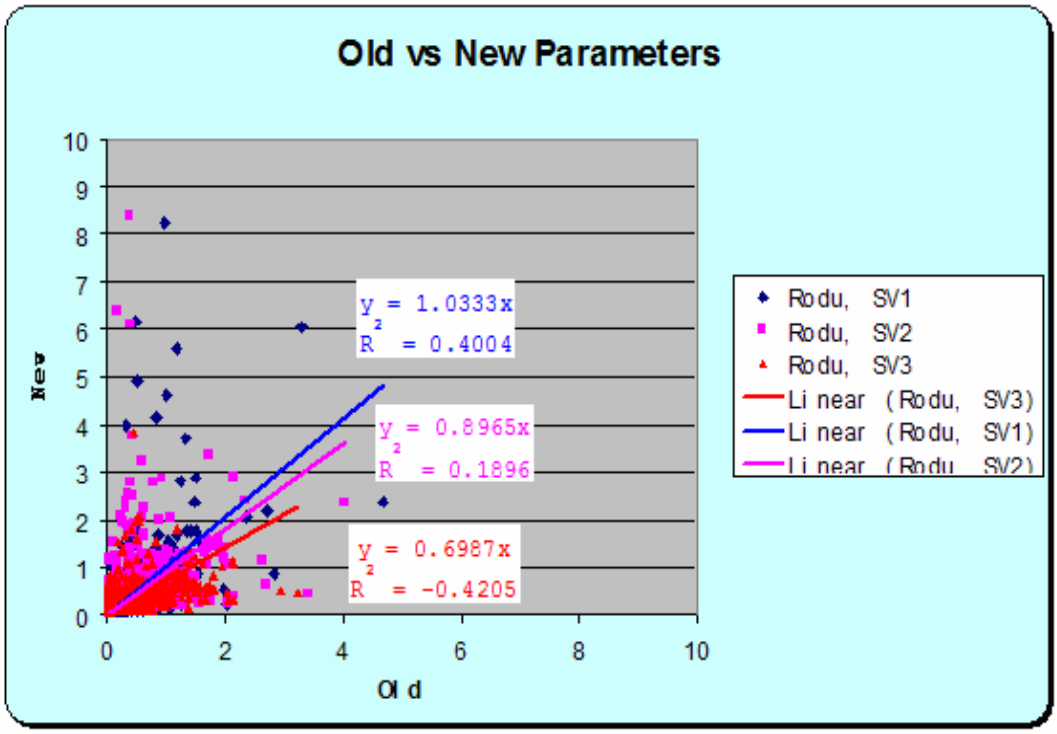


Figure 4.2_2
Plot showing block grades estimated using old and new parameters, subdivided by search volumes for mineralisation at Frasin

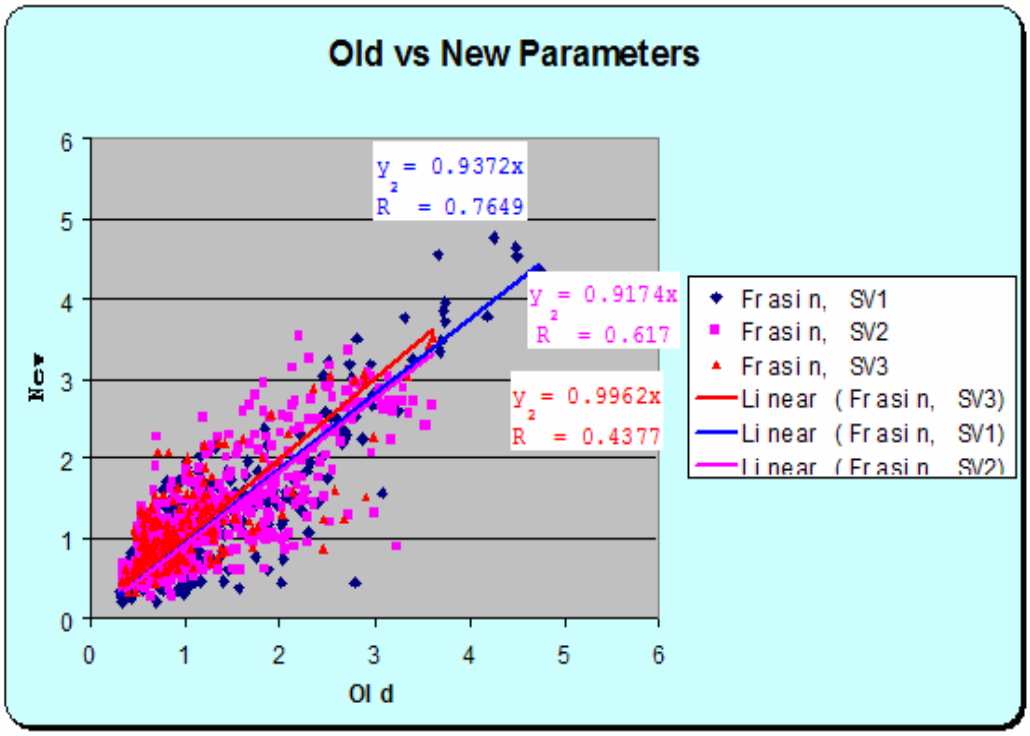


Figure 4.2_3
Plot showing block grades estimated using old and new parameters, subdivided by search volumes for mineralisation for Frasin Background

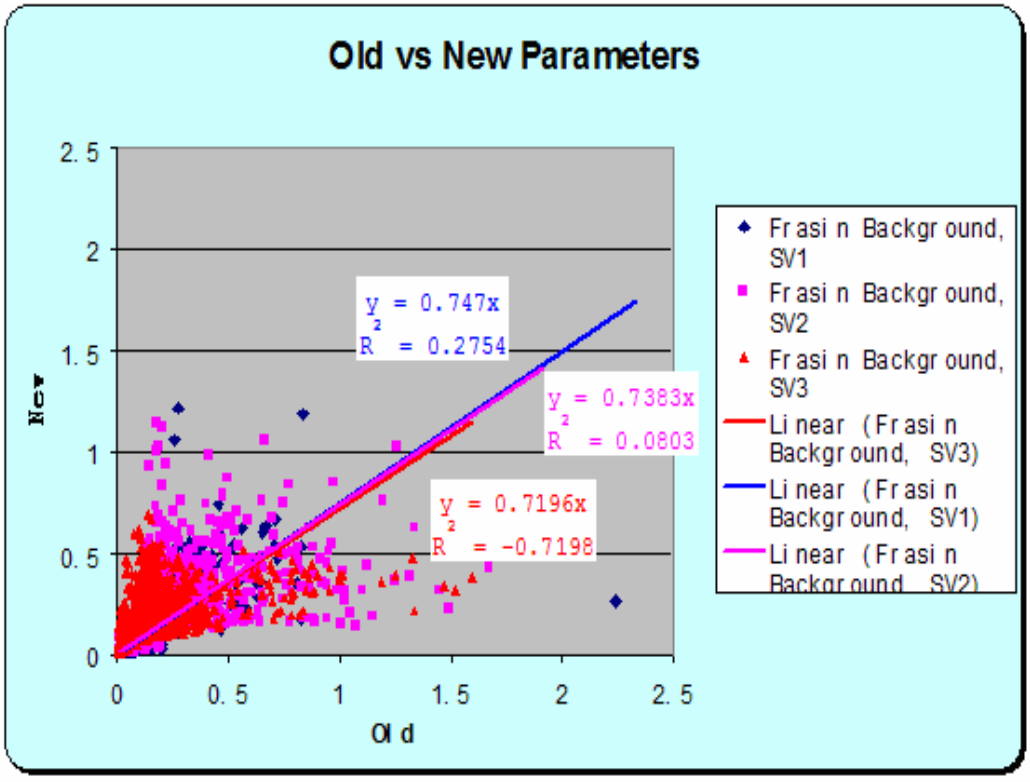
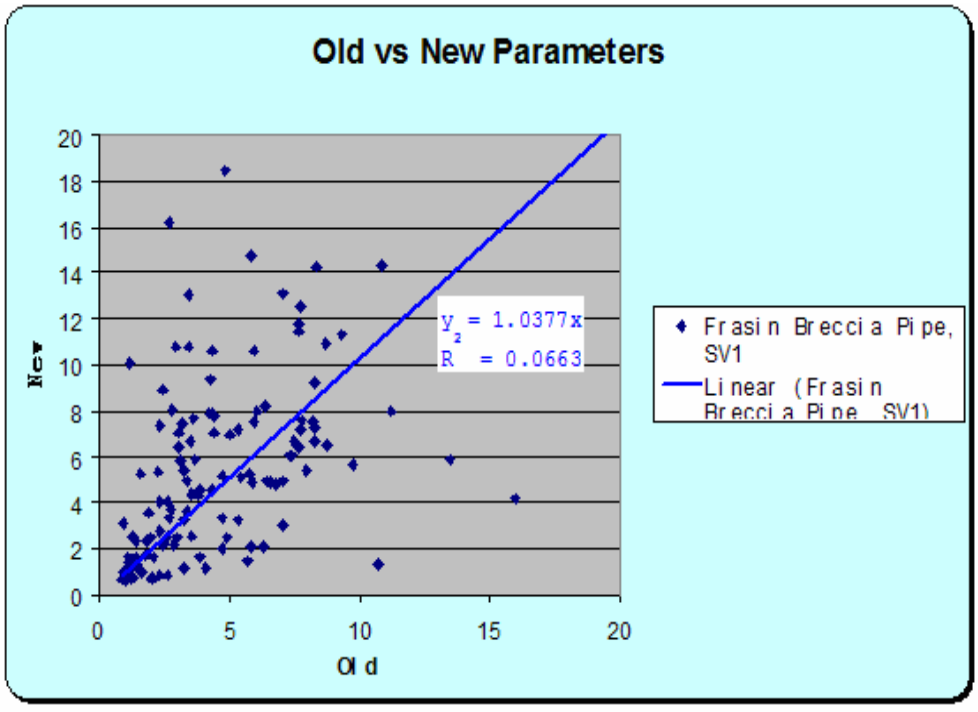


Figure 4.2_4
Plot showing block grades estimated using old and new parameters, subdivided by search volumes for mineralisation for Frasin Breccia Pipe



4.3 Resource Reporting

Table 4.3_1

Resources for Bucium deposit at 0.4g/t Au cutoff
Old values are estimated with new data, new domains and old search and variogram parameters

ZONE	Category	Volume	Tonnes old	Au (g) old	Au (g/t) old	Ag (g) old	Ag (g/t) old	Tonnes new	Au (g) new	Au (g/t) new	Ag (g) new	Ag (g/t) new
Rodu	Inferred	21,894,861	53,642,410	32,270,920	0.60	88,697,144	1.65	52,766,616	38,346,699	0.73	92,565,658	1.75
Frasin Background	Inferred	1,910,652	4,585,565	2,235,998	0.49	8,153,254	1.78	4,948,589	2,860,033	0.58	9,010,992	1.82
Frasin	Indicated	3,670,885	8,222,783	11,155,927	1.36	38,085,806	4.63	8,406,327	11,186,218	1.33	43,510,314	5.18
Frasin	Inferred	3,630,859	8,133,124	10,621,006	1.31	35,355,330	4.35	8,314,667	10,870,436	1.31	45,235,819	5.44
Frasin Breccia Pipe	Indicated	325,500	817,005	3,641,266	4.46	2,867,547	3.51	800,730	4,735,716	5.91	2,820,570	3.52
Frasin Breccia Pipe	Inferred	284,250	713,468	2,608,642	3.66	2,655,664	3.72	699,255	4,361,964	6.24	2,918,855	4.17
Total Indicated		3,996,385	9,039,788	14,797,193	1.64	40,953,352	4.53	9,207,057	15,921,933	1.73	46,330,884	5.03
Total Inferred		27,720,622	67,074,566	47,736,566	0.71	134,861,393	2.01	66,729,126	56,439,131	0.85	149,731,323	2.24

Table 4.3_2

Resources for Bucium Reported at Kriged Block Cutoffs

	Category	Cutoff	Volume	Tonnage	Contained Au (g)	Contained Au (oz)	Grade Au (g/t)	Contained Ag (g)	Contained Ag (oz)	Grade Ag (g/t)
Rodu	Inferred	0.4	21,894,861	52,766,616	38,346,699	1,232,875	0.73	92,565,658	2,976,055	1.75
	Inferred	0.6	10,821,208	26,079,110	25,272,498	812,530	0.97	52,774,924	1,696,753	2.02
	Inferred	0.8	4,898,719	11,805,914	15,374,707	494,308	1.30	27,827,375	894,671	2.36
	Inferred	1.0	2,300,289	5,543,697	9,891,150	318,008	1.78	16,898,898	543,312	3.05
Frasin Background	Inferred	0.4	1,910,652	4,948,589	2,860,033	91,952	0.58	9,010,992	289,710	1.82
	Inferred	0.6	634,402	1,643,101	1,274,267	40,969	0.78	3,248,963	104,457	1.98
	Inferred	0.8	211,402	547,531	548,704	17,641	1.00	1,065,882	34,269	1.95
	Inferred	1.0	98,312	254,628	283,407	9,112	1.11	492,091	15,821	1.93
Frasin	Indicated	0.4	3,670,885	8,406,327	11,186,218	359,645	1.33	43,510,314	1,398,889	5.18
	Indicated	0.6	3,119,873	7,144,510	10,522,493	338,306	1.47	40,252,690	1,294,154	5.63
	Indicated	0.8	2,469,100	5,654,238	9,482,026	304,854	1.68	35,918,499	1,154,806	6.35
	Indicated	1.0	2,060,876	4,719,405	8,653,163	278,206	1.83	33,242,430	1,068,769	7.04
Frasin	Inferred	0.4	3,630,859	8,314,667	10,870,436	349,493	1.31	45,235,819	1,454,365	5.44
	Inferred	0.6	3,031,904	6,943,060	10,157,649	326,576	1.46	42,788,685	1,375,688	6.16
	Inferred	0.8	2,442,036	5,592,261	9,237,506	296,993	1.65	39,353,405	1,265,241	7.04
	Inferred	1.0	2,128,044	4,873,221	8,577,805	275,783	1.76	35,404,214	1,138,272	7.27
Frasin Breccia Pipe	Indicated	0.4	325,500	800,730	4,735,716	152,257	5.91	2,820,570	90,683	3.52
	Indicated	0.6	325,500	800,730	4,735,716	152,257	5.91	2,820,570	90,683	3.52
	Indicated	0.8	325,500	800,730	4,735,716	152,257	5.91	2,820,570	90,683	3.52
	Indicated	1.0	271,250	667,275	4,623,973	148,664	6.93	2,516,539	80,909	3.77
Frasin Breccia Pipe	Inferred	0.4	284,250	699,255	4,361,964	140,240	6.24	2,918,855	93,843	4.17
	Inferred	0.6	284,250	699,255	4,361,964	140,240	6.24	2,918,855	93,843	4.17
	Inferred	0.8	264,500	650,670	4,327,915	139,146	6.65	2,816,787	90,562	4.33
	Inferred	1.0	264,500	650,670	4,327,915	139,146	6.65	2,816,787	90,562	4.33

Table 4.3_3

Summary of Indicated and Inferred Resources

	Cutoff	Volume	Tonnage	Contained Au (g)	Contained Au (oz)	Grade Au (g/t)	Contained Ag (g)	Contained Ag (oz)	Grade Ag (g/t)
Total Indicated	0.4	3,996,385	9,207,057	15,921,933	511,902	1.73	46,330,884	1,489,572	5.03
	0.6	3,445,373	7,945,240	15,258,208	490,563	1.92	43,073,260	1,384,837	5.42
	0.8	2,794,600	6,454,968	14,217,741	457,111	2.20	38,739,069	1,245,490	6.00
	1.0	2,332,126	5,386,680	13,277,136	426,870	2.46	35,758,969	1,149,677	6.64
Total Inferred	0.4	27,720,622	66,729,126	56,439,131	1,814,560	0.85	149,731,323	4,813,973	2.24
	0.6	14,771,763	35,364,526	41,066,378	1,320,315	1.16	101,731,428	3,270,741	2.88
	0.8	7,816,657	18,596,376	29,488,832	948,088	1.59	71,063,449	2,284,743	3.82
	1.0	4,791,145	11,322,216	23,080,278	742,048	2.04	55,611,990	1,787,967	4.91

5 CERTIFICATES

RSG Global Pty. Ltd.

Certificate of Qualified Person

As an author of the report entitled "Bucium Project, Revised Resource Estimate for Rodu and Frasin Prospects" dated 11 March, 2005, on the Bucium property of Rosia Montana Gold Corp (the "Study"), I hereby state:-

1. My name is Brett Lawrence Gossage and I am a Partner and Manager - Resources with the firm of RSG Global Pty. Ltd. of 1162 Hay Street, West Perth, WA, 6005, Australia. My residential address is 144 Daglish Street, Wembley, WA, 6014, Australia.

2. I am a practising geologist registered with the Australasian Institute of Mining and Metallurgy. I am a member of the AusIMM (108490).

3. I am a graduate of Curtin University of Technology and hold a Bachelor of Applied Science in Geology (1988) and a Post Graduate Certificate in Geostatistics (Edith Cowan University - 1999).

4. I have practiced my profession continuously since 1989.

5. I am a "qualified person" as that term is defined in National Instrument 43-101 (Standards of Disclosure for Mineral Projects) (the "Instrument").

6. I personally visited the Bucium property on two occasions during 2002, and reviewed files and data supplied by Rosia Montana Gold Corporation S.A.

7. I reviewed the entire report of the Study.

8. I am not aware of any material fact or material change with respect to the subject matter of the Study which is not reflected in the Study, the omission of which would make the Study misleading.

9. I am independent of Rosia Montana Gold Corporation S.A. pursuant to section 1.5 of the Instrument.

10. I have read the National Instrument and Form 43-101F1 (the "Form") and the Study has been prepared in compliance with the Instrument and the Form.

11. I do not have nor do I expect to receive a direct or indirect interest in the Rosia Montana property of Rosia Montana Gold Corporation S.A., and I do not beneficially own, directly or indirectly, any securities of Rosia Montana Gold Corporation S.A. or any associate or affiliate of such company.

Dated at Perth, Western Australia, on 6th March, 2004.

Brett Gossage
Partner and Senior Consulting Geologist

BAppSc (Geology)
Post Grad Cert Geostatistics

RSG Global Pty. Ltd.

Certificate of Qualified Person

As an author of the report entitled "Bucium Project, Revised Resource Estimate for Rodu and Frasin Prospects" dated 11 March, 2005, on the Bucium property of Rosia Montana Gold Corp (the "Study"), I hereby state:-

1. My name is Julian Verbeek and I am a Principal Consultant Resources with the firm of RSG Global Pty. Ltd. of 1162 Hay Street, West Perth, 6005. My residential address is 5/7 Delhi Street, West Perth, 6005, Western Australia.

2. I am a practising Geologist and Geostatistician registered with the AUSIMM and SACNASP.

3. I am a graduate of Natal University and hold a PhD degree (1991).

4. I have practiced my profession continuously since 1988.

5. I am a "qualified person" as that term is defined in National Instrument 43-101 (Standards of Disclosure for Mineral Projects) (the "Instrument").

6. While I have not personally visited the Bucium Property, one other member of the RSG Global Feasibility Study team have visited the property. I have performed consulting services during and reviewed files and data supplied by Rosia Montana Gold Corp between November 2004 and February 2005.

7. I prepared the entire report on the Study.

8. I am not aware of any material fact or material change with respect to the subject matter of the Study, which is not reflected in the Study, the omission of which would make the Study misleading.

9. I am independent of Rosia Montana Gold Corp pursuant to section 1.5 of the Instrument.

10. I have read the National Instrument and Form 43-101F1 (the "Form") and the Study has been prepared in compliance with the Instrument and the Form.

11. I do not have nor do I expect to receive a direct or indirect interest in the Bucium property of Rosia Montana Gold Corp, and I do not beneficially own, directly or indirectly, any securities of Rosia Montana Gold Corp or any associate or affiliate of such company.

Dated at Perth, Western Australia, on 11 March, 2005.

Julian Verbeek B.Sc.(Honours), Geology, PhD
Principal Consultant Resources

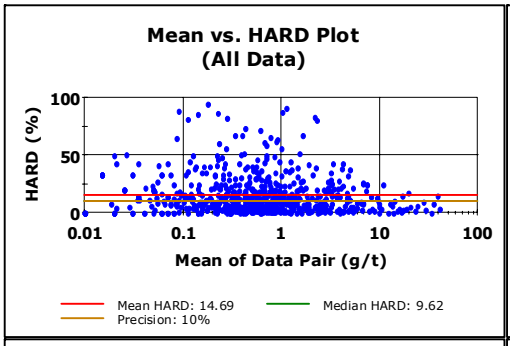
APPENDIX 1:

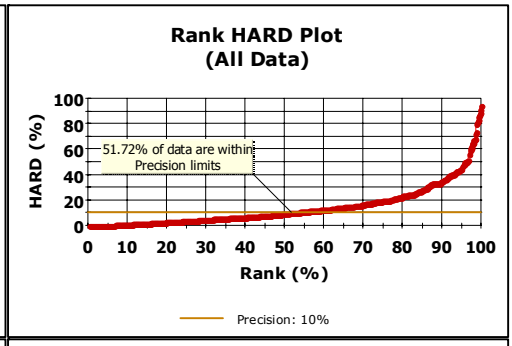
QA/QC plots

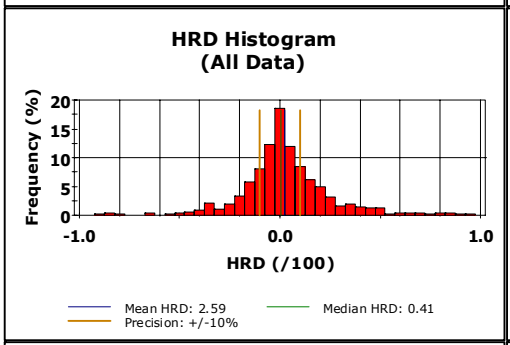
Validation plots for repeat gold samples sent to ALS-Chemex laboratory, Vancouver

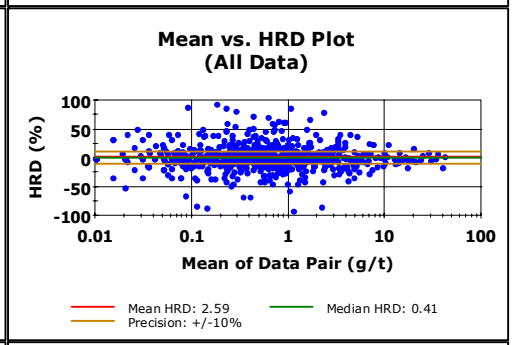
Summary ((All Data))

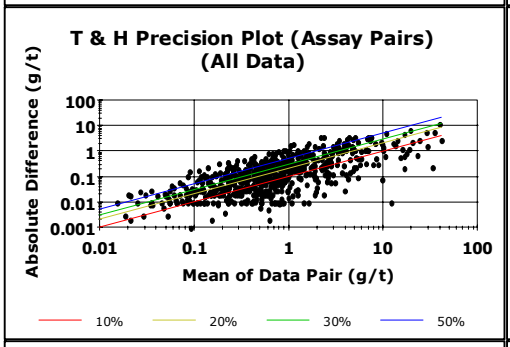
	Primary_Element	Secondary	Units			Result
No. Pairs:	725	725			Pearson CC:	0.98
Minimum:	0.01	0.01	g/t		Spearman CC:	0.94
Maximum:	42.35	45.30	g/t		Mean HARD:	14.69
Mean:	1.74	1.71	g/t		Median HARD:	9.62
Median	0.55	0.51	g/t			
Std. Deviation:	4.21	4.20	g/t		Mean HRD:	2.59
Coefficient of Variation:	2.41	2.46			Median HRD	0.41

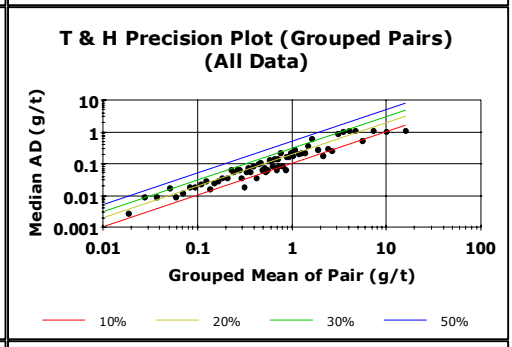


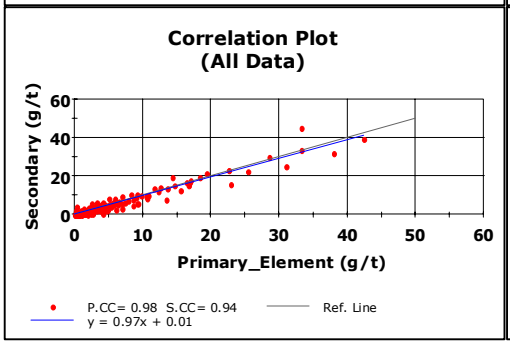


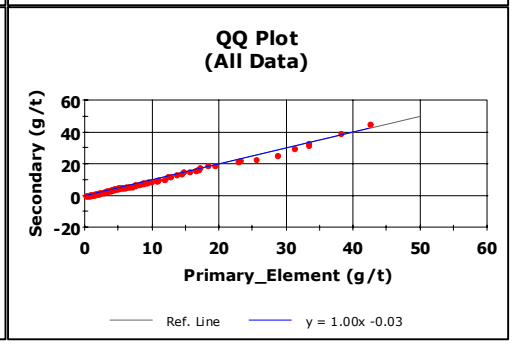












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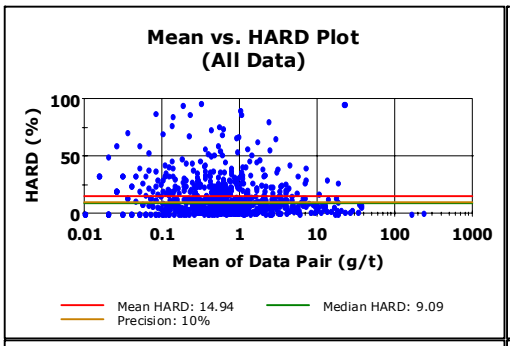
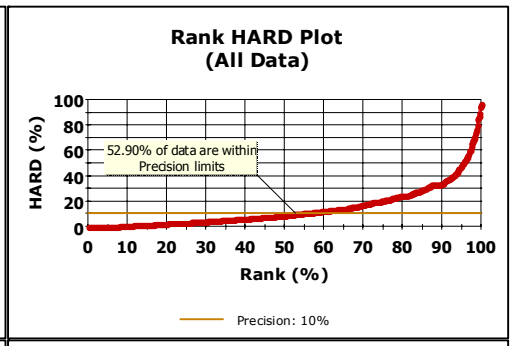
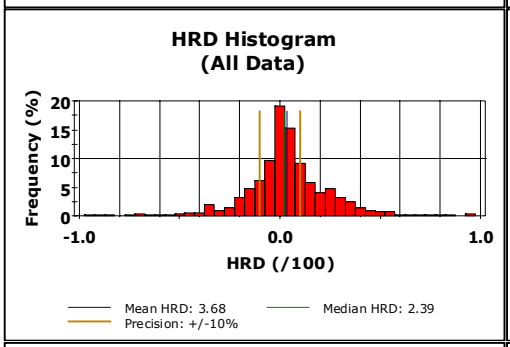
Validation plot for repeat gold samples sent to SGS laboratory (Perth Australia)

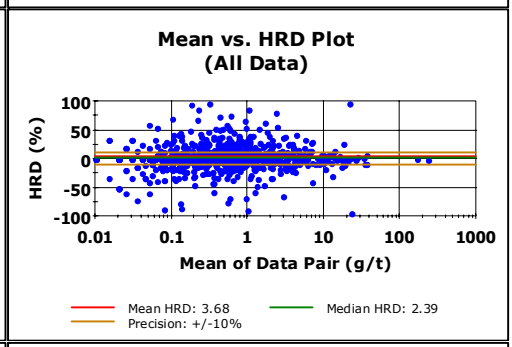
Summary ((All Data))

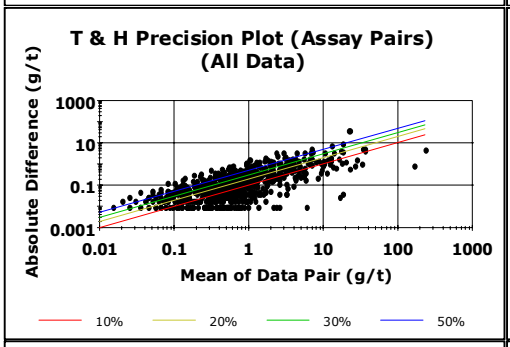
	Primary_Element	Secondary	Units			Result
No. Pairs:	794	794			Pearson CC:	0.98
Minimum:	0.01	0.01	g/t		Spearman CC:	0.94
Maximum:	225.86	231.00	g/t		Mean HARD:	14.94
Mean:	2.20	2.14	g/t		Median HARD:	9.09
Median	0.56	0.50	g/t			
Std. Deviation:	10.60	10.79	g/t		Mean HRD:	3.68
Coefficient of Variation:	4.81	5.03			Median HRD	2.39

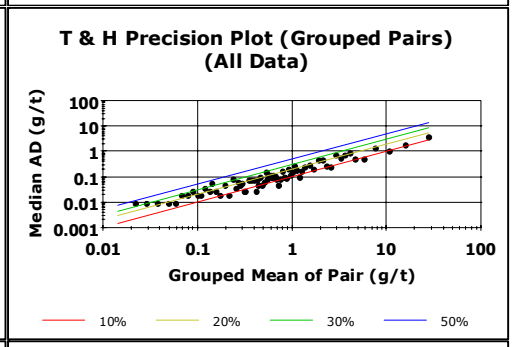


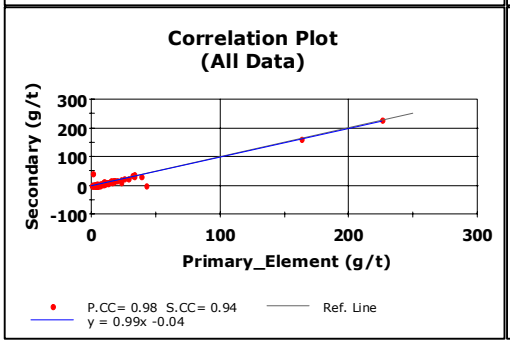


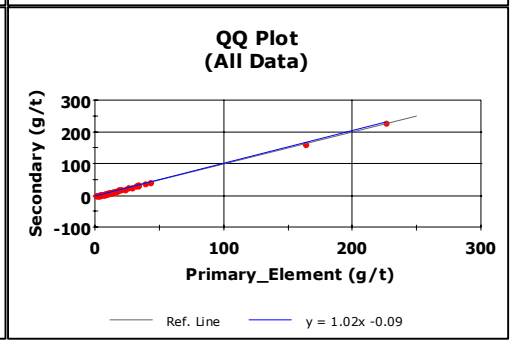












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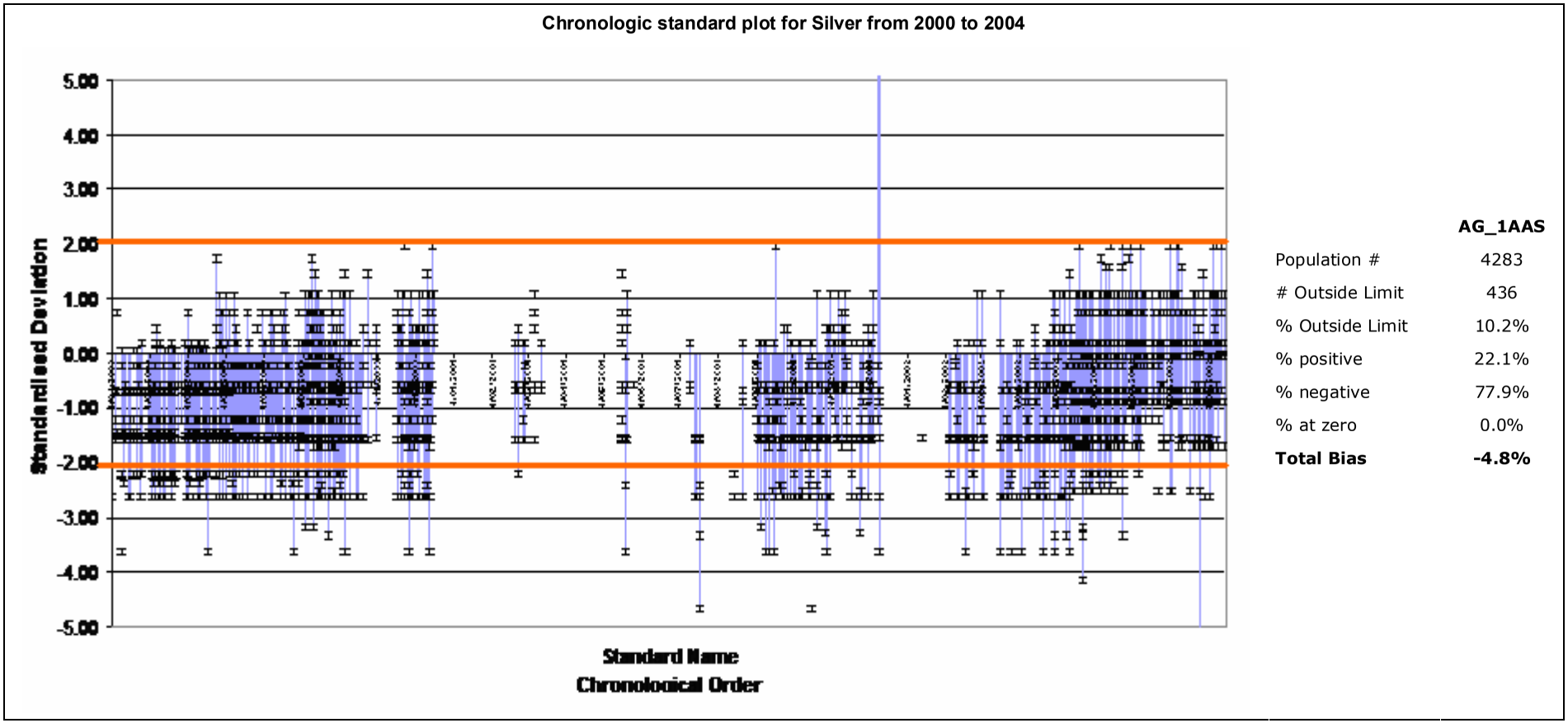
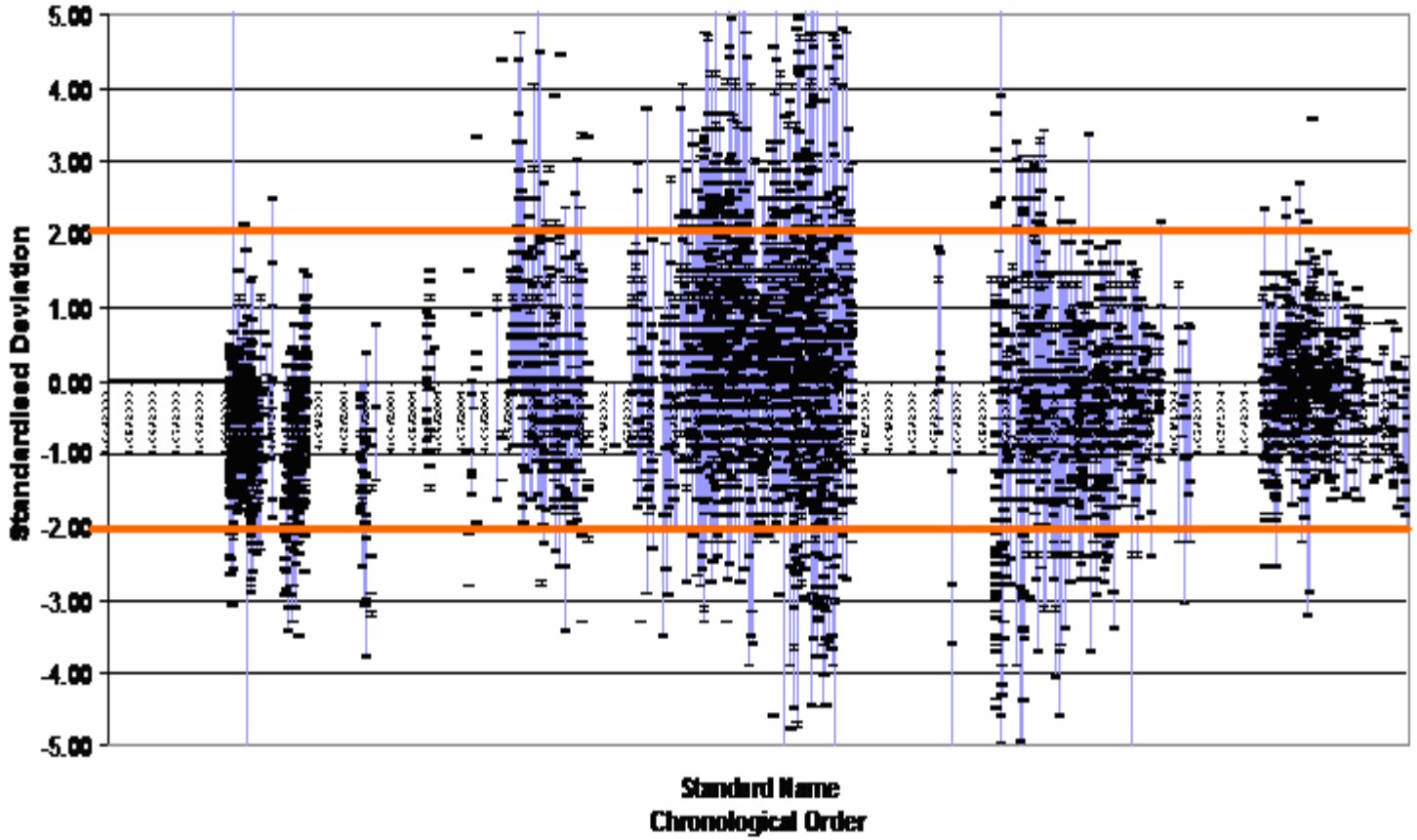

Chronologic standard plot for Silver from 2000 to 2004
Standardised Deviation
5.00
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
Standard Name
Chronological Order
AG_1AAS
Population # 4283
Outside Limit 436
% Outside Limit 10.2%
% positive 22.1%
% negative 77.9%
% at zero 0.0%
Total Bias -4.8%

Standard plot for Gold covering Bucium drilling from 2000 to 2004



Population #	3949
# Outside Limit	606
% Outside Limit	15.3%
% positive	48.7%
% negative	50.2%
% at zero	1.1%
Total Bias	**-0.6%**