

## INDEPENDENT RESOURCE MODEL REPORT

on the

### YOUANMI DEEPS UNDERGROUND GOLD PROJECT

at the

YOUANMI PROJECT

Latitude -28°45'00" S Longitude 118°48'00" W

For

## GOLDCREST RESOURCES LTD

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#### 1. SUMMARY

Ravensgate (Ravensgate) was requested by Goldcrest Resources Ltd (Goldcrest) to prepare an Independent Resource Report on the Youanmi Deeps Underground Project gold deposit at the historic Youanmi Gold Project, owned and operated by Goldcrest.

This report complies with disclosure and reporting requirements set forth in the Canadian Venture Exchange (CNDX) Corporate Finance Manual, National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1.

The Youanmi Gold Project is centred at latitude -28°45'00" S and longitude 118°48'00" W in the central-west of Western Australia and is located approximately 480km north-east of Perth and approximately 400km east of the coastal town of Geraldton within the East Murchison Mineral Field of Western Australia.

Goldcrest personnel embarked on an exploration project and ongoing resource development study at the Youanmi Gold Project area commencing in 2002; with part of the work focused on an existing deeper extension of gold mineralisation in the Youanmi Main Zones (Pollard, Main, and Hill End), known as the Youanmi Deeps Underground Project. These three zones are contiguous and are situated within the main Youanmi Gold Project Area. The recent work carried out by Goldcrest on the Youanmi Deeps Underground Project area, comprised database validation, geological interpretation, and conceptual targeting; but has involved no additional deep drilling.

Most of the exploration data relating to the Youanmi Project was generated by various exploration and mining companies over a 15 year period from 1983 to 1997. Between 2000 and 2001 Aquila Resources Ltd completed exploration only targeting near-surface oxide gold resources. Much of the data used in this study refers to observations and assumptions outlined in reports compiled by Goldcrest (Sauter, 2005), (Lubieniecki, 2005) and (Lubieniecki, and Preston, 2005) and a report compiled by RSG Global (Yeates, 2003). These reports incorporated extensive due diligence and verification of the available sample and assay procedures related to the data associated with this study. Although RSG Global made every effort to identify and review the source data relating to the mineral resources at the time, some information was either no longer available or inconsistently reported. RSG Global reported that the reliability of all the data could not be reasonably established. However RSG Global also report that the Youanmi Project has a mining history which involves the development, mining and processing of eight open pit deposits and a major underground operation spanning 12 years.

Ravensgate's main objective, in interpreting all potential underground mineralised structures and generating new block models for the project area, was to estimate a representative gold distribution field necessary for the generation of a Mineral Resource Estimate within the various geological domains of the project area. Ravensgate carried out delineation of historically mined mineralised lodes, as well as additional interpreted footwall and hanging wall mineralised structures. A total of 970 Reverse Circulation drillholes (RC), 462 Diamond drillholes and 126 RAB drillholes was used for helping to generate the lode interpretations.

The major material type definitions used in the block model were supplied by Goldcrest, including a database of core density measurements. In general, geological domaining and a coincident, where applicable, nominal 2.0g/t Au grade delineation regime was employed using Diamond Drilling and RC results to define all existing or observable mineralised zone domains. The approach was not to use a rigid grade cut-off for mineralised zones; but to interpret consistent trends.

The interpolation estimation runs carried out for each of the geological domains in the project area used the Ordinary Kriging interpolation technique. Further work was undertaken by Goldcrest to rationalise and verify the existing underground mined voids; with latest data used to code the block model for mined areas.



A summary of the Mineral Resource Statements are included in Table 1, for the Youanmi Deeps Underground Project Area.

Table 1 Mineral Resource Statement 14th July, 2006 - Youanmi Deeps Underground Project Area - Reported at a lower cut-off of 4.00 g/t Au							
		Indicated			Inferred		
	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)	
TOTAL	808,400	8.1	210,200	1,605,100	8.7	447,700	

The Mineral Resources as stated, have been estimated by John Haywood BSc (Hons), MAusIMM; Principal Consultant of Ravensgate, for Goldcrest in July, 2006. Ravensgate is an independent consultancy based in Perth, Western Australia and specialises in geological modelling and resource estimation. This resource estimation has been carried out to professional industry and best practice standards and is compiled by a Qualified and Competent Person, as required in terms of the rules of National Instrument NI43-101, and the ASX and the JORC code - December 2004.

The effective date of the Mineral Resource estimate is 14 July 2006.

#### 2. INTRODUCTION AND TERMS OF REFERENCE

This Independent Resource Model Report (Report) is prepared at the request of Goldcrest Resources Ltd (Goldcrest) to provide an up-dated model on the Youanmi Deeps Underground deposit within the overall Youanmi Project.

This Report has been compiled in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code-December 2004). This code was prepared by the Joint Ore Reserves Committee (JORC) which is comprised of representative members from the Australasian Institute of Mining and Metallurgy (AusIMM), the Australian Institute of Geoscientists (AIG), the Minerals Council of Australia (MCA), the Australian Stock Exchange (ASX), and the Securities Institute of Australia (SIA).

It is mandatory for all companies actively working on exploration, mining and mineral processing projects within the minerals sector to report all exploration results, mineral resources and ore reserves using the JORC Code as a reporting guideline.

The JORC Code provides minimum standards for public reporting, so as to ensure that investors and their advisors have the necessary information they reasonably require to form reliable opinions on the results and estimates being reported.

This Report also complies with the National Instrument 43-101 and has been prepared in compliance with this Instrument, Companion Policy 43-101CP and Form 43-101F1. It is supported by an independently prepared technical report by RSG Global (Yeates, 2003), which has been filed with the TSX Venture Exchange (TSX), and other reports from Goldcrest (Sauter, 2005), (Lubieniecki, 2005) and (Lubieniecki, and Preston, 2005).

This Report has been compiled based on information available up to and including the date of this Report. Consent has been given for the distribution of this report in the form and context in which it appears.



Ravensgate, its employees, directors and associates are not, nor intend to be, directors, officers or other direct employees of Goldcrest and have no material interest in the projects of Goldcrest. The relationship with Goldcrest is solely one of professional association between clients and independent consultants. The review work and this report are prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

#### 3. DISCLAIMER

Goldcrest is the beneficial owner and manager of the Youanmi Deeps Underground deposit area forming part of the Youanmi Gold Project. This resource model, resource definition and project review is based on information provided by the title holders, along with technical reports by consultants, associated contractors, previous tenement holders, and other relevant published and unpublished data for the area. This Report is supported primarily by the RSG Global Report (Yeates, 2003). It is also based upon a subsequent report by Goldcrest (Sauter, 2005).

In addition, reference has been made to a previous NI43-101 reports compiled by Ravensgate (Holden and Hyland, 2004) which details the updated resource report for the 'Commonwealth Connemarra', 'Plant Zone' and 'Penny West' areas; and (Hyland, 2005) which details the updated resource report for the Youanmi 4-Pits and Youanmi South zones These reports detail technical aspects of the project area that have been utilised by Ravensgate in due diligence studies and resource model development. Also the report entitled Youanmi Underground Geological Evaluation, Youanmi, Western Australia (Sauter, 2005) was referenced in preparing sections of the report.

As required by the guidelines of JORC Code (JORC 2004), this report by Ravensgate discusses technical aspects of the project and provides information on data interpretation and usage. Goldcrest has acted as the primary auditor for aspects relating to data quality and as such, attest to its integrity. Discussions on mineralisation, exploration drilling, sampling methods, sample preparation, sample analysis, sample security and data verification are included in the reports by Goldcrest and RSG Global.

Ravensgate has endeavoured, by making all reasonable enquiries, to confirm the authenticity and completeness of the technical data upon which this report is based. Ravensgate is satisfied that the work completed by Goldcrest and RSG Global is comprehensive and complete in its entirety. It should be noted, however, that some minor aspects related to data quality still need to be addressed prior to any further work being carried out.

Members of Ravensgate consulting staff involved in the preparation of this Independent Resource Report are all considered to be Qualified Persons according to Appendix 5A of the ASX and the JORC Code. All are geologists with more than 15 years experience in mineral exploration, and in this particular case, have sufficient previous experience in gold deposit modelling and development to meet the prerequisite Competent Person definitions. All participants are Members of the Australasian Institute of Mining and Metallurgy.

Ravensgate was incorporated in 1997 in response to the demand for geological and resource modelling and resource estimation services. The company has focused on providing quality of service and on positioning itself as an alternative consulting group in the fields of resource modelling and evaluation, up to and including reports to bankable feasibility acceptance. Ravensgate strives to deliver these professional skills in a cost effective manner to the junior resource sector it aims to service. In recent times the company has undergone expansion to provide geological services, GIS mapping services and environmental science and reporting. Members of Ravensgate, and their relevant qualifications, involved in the preparation of this report are listed as follows;



#### John Haywood BSc (Hons), MAusIMM Principal Consultant, Ravensgate

John Haywood has over 17 years experience in mining geology and resource modelling, and has worked in Australia, West Africa, and Southern Africa in gold and base metals. John Haywood holds the relevant qualifications and professional associations required by the ASX, JORC and ValMin Codes in Australia. He is a Qualified Person under the rules of the CIM and NI 43-101.

#### Stephen Hyland BSc, MCIMM, MAusIMM, GAA Principal Consultant, Ravensgate

**Stephen Hyland** has over 20 years experience in exploration geology and resource modelling and has worked offshore in Africa, Eastern and Western Europe, Central and South East Asia, modelling base metals, gold, precious metals and industrial minerals. He is responsible for all computer modelling, resource estimation, resource reporting and JORC and other regulatory compliance issues. Stephen Hyland holds the relevant qualifications and professional associations required by the ASX, JORC and ValMin Codes in Australia. He is a Qualified Person under the rules of the CIM and NI43-101.

#### 4. PROPERTY DESCRIPTION AND LOCATION

The Youanmi Gold Project straddles a 36km strike length of the Youanmi Greenstone Belt, lying within the Southern Cross Province of the Archaean Yilgarn Craton in Western Australia (Figure 1). The Youanmi Gold Project is situated approximately 480km to the northeast of the city of Perth, and 400km inland and to the east of the port of Geraldton within the East Murchison Mineral Field of Western Australia. It is centred upon latitude 28°45'S and longitude 118°48'E, comprising an aggregate of 184km<sup>2</sup>. Details of individual tenements are given in Yeates (2003).





#### Figure 1 Youanmi Location Plan

#### 5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

#### 5.1 Access

The Youanmi Gold Project can be accessed by the sealed Great Northern Highway for a distance of 418km from Perth to Paynes Find, and then via the unsealed Paynes Find to Sandstone road for a distance of 150km to the turn-off to the formed gravel Diemals road which leads to the project area a few kilometres to the east.



#### 5.2 Climate

An arid to semi-arid, sub-tropical to temperate continental regime is experienced by the project area; with hot dry summers with very occasional thunderstorms and sub-tropical depressions, and cool winters with occasional showers associated with frontal weather patterns. Mean average annual rainfall is 245mm (approximately 10 inches). Mean temperature ranges from a maximum mean of 35.8°C in January to a minimum mean of 5.1°C in July; often with extreme diurnal temperature ranges.

#### 5.3 Local Resources and Infrastructure

The project area is linked to the nearest settlements of Sandstone (95km to the northeast) and Mount Magnet (145km to the west) by formed gravel and sealed roads. Mount Magnet lies on the junction of the Great Northern Highway connection to Perth (480km to the southwest), and the Murchison Highway connecting to the port of Geraldton (400km to the west). A previously wellmaintained airstrip is established at the project area, suitable for large charter aircraft.

Further details can be referenced in Yeates (2003).

#### 5.4 Physiography

The project area is characterised by flat or very gently undulating terrain. Vegetation comprises moderately to sparsely developed acacia scrub interspersed with expanses of annual grasses; which are consistent with the semi-arid to arid climate.



#### 6. HISTORY

Thomas Payne first discovered gold in the Youanmi area in 1894, in the area of the now Golden Crown workings, and the ore was carted to the government gold battery at Mount Magnet, some 145km west of Youanmi, until 1896. . However, the first significant mines, United and Hill End, were not commenced until 1905; with the Main Lode located in 1908 and first developed in 1911.

Further discoveries led to the development of the Pollard Lodes and Currans to the south, where a small treatment battery was established. The mine first closed in 1922. Mining recommenced in August 1936 and was in production until 1942, when a shortage of skilled labour due to World War II, resulted in a second closure. In the period 1908-1942, a total of approximately 750,000 tonnes at 11.44g/t Au was mined to produce 276,000oz of gold.

Eastmet Limited, following construction of a 600,000tpa conventional CIP processing facility, commenced open cut mining of the Youanmi Main lode in 1986 and continued until 1989. This was followed by successive satellite discoveries until March 1991. The high grade Penny-West pit was mined between 1991 and 1992. Drilling evaluated the deeper parts of the main lode sequence between 1990 and 1993, resulting in the definition of an underground resource to a maximum of 750m vertical depth.

Gold Mines of Australia Limited (GMA) was created in 1993-94 when Eastmet, Metana and Paragon Resources NL were merged. In October 1993, the GMA board approved development of the Youanmi Deeps, however the operation ultimately failed to achieve production targets, and in light of the declining gold price, the underground mine was closed in November 1997. A total of eight open pits produced approximately 263,000oz of gold from 2,665,500 tonnes at 3.4g/t Au through until 1992. Underground production to closure in 1997, provided a further 128,300oz of gold from 411,900 tonnes at 11.4g/t Au.

The Youanmi assets ultimately found their way into Aquila Resources Limited (Aquila), which listed on the ASX in June 2000. Aquila completed limited exploration for near-surface oxide gold resources for a two-year period without significant success, following which Goldcrest Mines Pty. Ltd (formerly Goldcrest Mines Limited) negotiated the agreement to acquire the assets in September 2002.

Goldcrest obtained the Youanmi Gold Project through the acquisition of Goldcrest Mines Limited in October, 2003. Further more comprehensive history details can be referenced in Yeates (2003).





Figure 2 Principal Deposits of the Youanmi Project





Figure 3 Location of Youanmi Main Pit and Underground Workings

#### 7. GEOLOGICAL SETTING

The Youanmi Gold Project straddles a 36km strike length of the Youanmi Greenstone Belt, lying within the Southern Cross Province of the Archaean Yilgarn Craton in Western Australia (Figure 1).

The greenstone belt is approximately 80km long and 25km wide, and incorporates an arcuate, north-trending major crustal structure termed the Youanmi Fault Zone (YFZ). This structure separates two discordant greenstone terrains, with the stratigraphy to the west characterised by a series of weakly deformed, layered mafic complexes (Windimurra, Black Range, Youanmi and Barrambie) enveloped by strongly deformed, north-northeast trending greenstones. The greenstone successions to the east of the YFZ are characterised by a dominant north-northwest orientation. Mineral assemblages within the greenstone succession are consistent with regional metamorphism to upper greenschist or lower amphibolite facies.



The greenstone succession and mafic-ultramafic complex are intruded and enveloped by weakly foliated to massive biotite-muscovite granite and adamellite batholiths. The most prominent of these intrusives, informally termed the Youanmi Granite, occupies the core of a steeply south-plunging anticline, which is confined to the east and west by sheared greenstones. A series of northwest trending splay faults, which appear to provide the primary control on gold mineralisation, diverge from the YFZ and traverse the steeply dipping basal greenstone stratigraphy. The most significant of these is a brittle-ductile structure termed the Main Lode Shear Zone (MLSZ) lying along the western contact of the Youanmi granite.

The main source of gold produced from Youanmi has been from the MLSZ, which in the Main Pit and Youanmi Deeps underground workings, displays a continuous planar fabric over a strike length of 1,100m and a down dip extent of at least 900m. The MLSZ varies in width from less than 1m to 25m, is oriented more or less parallel to the granite-greenstone contact, and contains multiple gold lodes.

#### 8. DEPOSIT TYPES

The gold deposits of the project area are a result of Mesothermal Gold Mineralisation within the Yilgarn Craton. The Yilgarn Craton comprises a complex series of Archaean intrusive, volcanic, and sedimentary rock types. Current understaning implies a series of contractional and extensional deformation events being superimposed upon the complex lithological and structural associations; including a tectonically late craton-wide alteration-mineralisation event to which the majority of the craton's gold endowment has been attributed. A number of greenstone-hosted gold deposits of one million ounce size or greater have been developed during this mineralising episode. Further information may be referenced in Yeates (2003).

#### 9. MINERALISATION

Gold mineralisation is developed semi-continuously over a strike length of 2,300m along the western margin of the Youanmi granite associated with the MLSZ. The principal deposits include Youanmi Main, Hill End, United North, Kathleen, Rebel and Kurrajong (Figure 2).

The Youanmi gold lodes are invariably associated with a high pyrite and arsenopyrite content and the primary ore is partially to totally refractory.

There are a series of major fault systems cutting through the Youanmi trend mineralisation (Figure 6) that have generated some significant off-sets. The Youanmi Deeps project area is subdivided into three main areas or fault blocks by cross-cutting steep south-east trending faults; and these are named Pollard, Main, and Hill End from south to north respectively.

Although some limited, small-scale faulting occurs locally within the main host-rock, Ravensgate is of the opinion that these have minor impact on the local gold mineralisation trends, but do have a significant impact upon ore recovery and dilution in underground development and stoping.

The depth of oxidation is fairly well defined, although small changes are associated with structural shear or fault locations. In general, the oxide/fresh interface is approximately 80m vertical from surface.

The structural contact is offset at regular intervals by high angle oblique faulting, however the persistence of mineralisation across these structures in the Rebel-Kurrajong pit suggests that the MLSZ was active over an extended period.



Felsic porphyry dykes of various oblique orientations appear to post-date the mineralisation event. The gold mineralisation is structurally controlled and favours a position at/or around the contact between granite and greenstone along the south-west margin of the Youanmi Granite, where north to northwest trending shears and faults splay off the YFZ. Abundant porphyry bodies intruded into and around this contact are spatially related to mineralisation in many places, but appear to have disrupted and diminished the gold lodes, rather than having enriched them.

The majority of gold produced at Youanmi has come from mineralisation located within hundreds of metres of the granite-greenstone contact. The workings extend from the Main Pit in the south to the Rebel-Kurrajong pit in the north, and to approximately 700 metres below surface elevation.

The granite-greenstone contact is irregular, with common greenstone embayments and xenoliths in the granite, and porphyry/granite dykes in the greenstones close to the contact. The dip of the contact varies from sub-vertical at the southern end of the workings (Main pit) to shallow and locally sub-horizontal at the northern end (Rebel), but varies between 50° to 70° to the west.

Gold mineralised lodes within the project area are seen to cut across lithology types (mafic volcanic, felsic volcanic, and BIF) within the MLSZ. Alteration within lodes typically consists of a sericite-carbonate-quartz-pyrite-arsenopyrite +/- stibnite schist or mylonite (Boddington and Johnston, 1992), and shear zones and lodes contain early stage deformed quartz veins.

Another mineralisation type occurs within altered granite, such as the lower-grade quartz stockwork within McDowells (southwest boundary of the Kathleen pit), and the higher-grade lode style within United North. Alteration assemblages associated with the mineralisation include silica-sericite-carbonate and chlorite-carbonate in mafics and quartz-kaolin in granite.

Geological modelling, grade data distribution, and ongoing interpretation reveal that the trend of the Main Lode mineralisation at the Youanmi Deeps Underground is relatively consistent in orientation and generally predictable between drill sections; within the three defined zones of Pollard, Main, and Hill End from south to north respectively. However, there are differences between the three zones; with each bounded by a major cross-cutting south-east trending fault. In addition, the dip and orientation of individual mineralised structures show variations from one surface to another.





# Figure 4 Local Outcrop and Interpreted Geology (top) and Longitudinal Projection Looking East (bottom), Youanmi Main Project Area.



YOUANMI PROJECT Main Lode Shear Zone Plan and Long Section



#### 10. EXPLORATION

The bulk of previous exploration has been carried out by Eastmet, and GMA from the late 1980's through to the late 1990's. The major campaign of surface diamond drilling took place from 1989 to 1992, with additional drillholes between 1993 and 1996; whilst underground diamond drilling took place between 1994 and 1997.

A summary of previous exploration programmes is given in Table 2 to 4.

Table 2Youanmi Main Area (including Youanmi Deeps)Summary of Previous Exploration					
Company	Period	Work Completed			
WMC	1971 - 1973	RAB, RC, and surface diamond drilling.			
Newmont	1976	10 surface diamond drillholes (predominantly targeting base metals).			
ВНР	1980 - 1986	RAB, RC, and surface diamond drilling (predominantly targeting base metals) .			
Eastmet	1986 - 1993	RAB, RC, and surface diamond drilling.			
Gold Mines of Australia	1993 -1997	RAB, RC, and surface diamond drilling. Underground mining and associated underground diamond drilling			
Aquila Resources Ltd	2000 - 2003	Shallow RAB and RC drilling			
Goldcrest Resources Ltd	2004 - 2005	Shallow RAB and RC drilling; data validation.			

Table 3 Youanmi Main Area - Summary of Eastmet / GMA Surface Diamond Drilling					
Surface Diamond Drillholes	Period	Work Completed			
YD0001 - YD0092	1989 - 1992	113 drillholes for 43,241 metres			
YD0112 - YD0119					
93YDD093 - 93YDD111	1993	55 drillholes for 18,610 metres			
93YDD121					
94YDD120 - 94YDD122	1994	5 drillholes for 1,933 metres			
95YDD1563 - 95YDD1564	1995	2 drillholes for 200 metres			
96YDD123 - 96YDD127	1996	7 drillholes for 4,952 metres			



Table 4 Youanmi Main Area - Summary of Eastmet / GMA Underground Diamond Drilling					
Surface Diamond Drillholes	Period	Work Completed			
YUG001 - YUG281	1994 - 1997	279 drillholes for 15,399 metres			
Various	1994 - 1997	48 drillholes for 5,706 metres			

#### 11. DRILLING

Historical drilling and sampling details are documented in the referenced reports (Lubieniecki, 2005, Lubieniecki, and Preston, 2005, Yeates, 2003, and Holden, and Hyland, 2004). The following sections summarises these reports;

#### 11.1 RAB Drilling

RAB drilling was carried out using Rotary Air Blast drill rigs using a blade bit down to the top of fresh rock. Drillholes were typically drilled vertically or at an angle of -60° to grid east. Note that whilst RAB drillholes were used in initial lode interpretations, the reported underground resource lies below the depth of any RAB drilling.

#### 11.2 RC Drilling

Where recorded by previous explorers, RC drilling was generally carried out using a face-sampling hammer, particularly for the more recent programmes. Various drilling contractors were used over the years; with G&K Drilling being the primary contractor employed by Eastmet and subsequently GMA responsible for the majority of the drilled metres. Drillhole collar positions were surveyed by mine surveyors. It is recorded that most of the RC holes were down-hole surveyed, however the survey method is often unrecorded. Recent RC drilling by Goldcrest was carried out by two independent drilling contractors;

- Layne Drilling, using a Schramm rig with 5.5" face sampling hammer, and
- Blue Spec Mining, using a VDR650 rig with face sampling 4.5" hammer

#### 11.3 Diamond Drilling

Most historical diamond drilling was undertaken using an NQ diameter bit. Collar positions were surveyed by mine surveyors and down-hole surveys conducted by Eastman single-shot and / or

Maxibor tools. The major surface diamond drilling programme conducted by Eastmet and subsequently GMA employed G&K Drilling using multi-purpose RC / Diamond drill rigs. Underground diamond drilling was carried out using Kempe and Onram drill rigs. No additional diamond drilling was undertaken by Goldcrest within the resource project area.



#### 12. SAMPLING METHOD AND APPROACH

#### 12.1 RAB Sampling

The majority of the RAB cuttings were either bagged or placed directly on the ground at 1m sample intervals and subsequently spear sampled and composited into 4m or 5m samples for assay. Anomalous samples were resampled at 1m intervals.

#### 12.2 RC Sampling

RC samples were collected every metre via a cyclone into a plastic bag prior to splitting with a Jones riffle splitter. A 1.5-3kg sample split was collected into a calico bag for laboratory submission. In some cases, composite samples of up to 5m were collected via spear sampling. Anomalous composite samples were usually re-assayed at 1m intervals where composite assays were greater than 50ppb, 80ppb or 250ppb depending on the program.

#### 12.3 Diamond Core Sampling

Mineralised intercepts from diamond drillcore were cut using a diamond saw into half-core and sampled on either a 1m basis or over geological intervals to a maximum of 1m. Core is stored at the Youanmi mine site. Information relating to sample recovery and quality, while often noted on logs, has not always been well documented. However, Goldcrest is of the opinion that good sample recovery should have been obtained based on the recorded information and the drilling equipment used.

#### 13. SAMPLING PREPARATION, ANALYSIS, AND SECURITY

Almost all of the exploration data relating to the project area was generated over the period 1983 to 1997 by a number of different exploration and mining companies. In addition, the majority of this data relates to resources which have subsequently been mined by open pit or underground methods.

Various sample preparation and assaying methods have been used by the historical exploration programmes. A summary is given in Table 5.



Table 5   Summary of various Assay Laboratories used						
Exploration Company	Analytical Laboratory	Assay Technique				
Eastmet / GMA		30g or 50g Fire Assay, or Aqua				
(surface drillholes)	Metana Lab Perth	Regia AAS* with re-assay via Fire Assay on samples returning preliminary results >1g/t.				
(some early surface	Australian Assay Laboratories					
drillholes)	Group	50g Fire Assay, AAS* finish.				
(underground drillholes)	Analabs Pty Ltd	50g Fire Assay, AAS* finish. Aqua Regia - AAS*.				
(early surface drillholes and some of underground drillholes)	Youanmi Mine Laboratory					
Aquila	Genalysis, Perth	Fire Assay, AAS* Finish				
Goldcrest	Genalysis, Perth	Composite RC samples using Aqua Regia digest and single metre RC and core samples using Fire Assay, AAS* finish				

NOTE: \* Atomic Absorption Spectrometry



#### 14. DATA VERIFICATION

With reference to the report by RSG Global, Yeates (2003), it is evident that the quality of data collected throughout the project is generally of high standard. In some cases, however, the data quality is variable or unknown, and Ravensgate has avoided making assumptions regarding data quality in such cases. Ravensgate is in agreement with RSG Global that repeating the older drilling will increase the confidence of the Mineral Resource Estimate. It is Ravensgate's opinion that the sampling procedures employed at the various Youanmi Project Areas were consistent with accepted practices at the time. Ravensgate considers that a detailed validation exercise of the historical data, at the present time, is impractical.

RSG Global have concluded in their report that, "Recent drilling has successfully allowed historic drilling results to be used in the resource calculations by showing that the earlier assay values are similar to, although consistently lower than the recent results" (Yeates, 2003). The results of recent drilling at shallow depths at the Youanmi 4-Pits and Youanmi South have been verified against original drill logs and assay certificates, with favourable results. This confirms the relative continuity and reliability of the earlier work for shallower mineralisation; but no recent verification drilling has taken place covering the deeper mineralisation of the underground resource area. RSG Global determined that the 'intermediate' level of confidence in the historical data would result in a coincident lower level of resource classification. Ravensgate agrees with this assessment, particularly in the light of the revised JORC 2004 code, which places greater emphasis on assessment of data quality.

In addition to the detailed review of data conducted by RSG Global, the overall project database was reviewed by Goldcrest. These reviews and the recommendations thereby derived were used by Ravensgate to select the data for incorporation in this resource model study. In addition, the author validated 622 of the 925 assay samples from surface diamond drillholes, and 347 of the 935 assay samples from underground diamond drillholes selected from the provided data inside the interpreted mineralised lodes against hard copies of original assay reports. In general, the data was valid; but there were some instances where original data was not found, totalling almost 18% of those checked for surface diamond drillholes, and 9.5% of those checked for the underground diamond drillholes.

Analysis of validated lode assays with repeat assays was made for results from surface diamond drillholes, and underground diamond drillholes, shown in Figures 5 to 7. The data available showed acceptable values for sample repeats.





Figure 5 Plot of AU3 Original Fire Assay versus AU6 Second Sample from Pulp Fire Assay - Surface Diamond Drilling.

Figure 6 Plot of AU3 Original Fire Assay versus AU6 Second Sample from Pulp Fire Assay - Underground Diamond Drilling.







Figure 7 Plot of AU3 Original Fire Assay versus AU6 Second Sample from Pulp Fire Assay - Surface Diamond Drilling.

The morphology and orientation of mineralised zones at Youanmi has been determined with varying levels of confidence. Bulk density was determined by means of some standard Specific Gravity (SG) measurements carried out between 1989 and 1992. The data-set used for SG determinations extended along most of the strike length of the deposit; but with sparse coverage in the Pollard area. Whilst this data-set was fairly detailed, a degree of variability in the results was found, and Ravensgate considers that a thorough review of the SG determinations should be carried out in the future; and that efforts should be made to increase the number of measurements in sparsely sampled areas. Treatment of the SG parameter in the block model is discussed in more detail in the 'block model construction' methodologies section.





Figure 8 Plan Location of SG Measurements from Diamond Drillhole Core within Project Area.

#### **15.** ADJACENT PROPERTIES

#### 15.1 Freddie Well VMS Deposit

The Freddie Well VMS deposit is located 15km to the west of the Youanmi Project Area. Data published by the Department of Industry and Resources, Western Australia cites that the massive sulphide lenses at Freddie Well are estimated to comprise an Inferred Resource compliant to the JORC Code of 680,000 tonnes at 7%Zn. This estimate is not compliant with section 1.3 of NI 43-101. This style of mineralisation, however, should not be considered indicative of the styles of gold mineralisation concerned in the project area.

#### 15.2 Windimurra and Youanmi Vanadium Deposits

Two deposits of vanadium pentoxide  $(V_2O_5)$  of economic or potentially economic grade and size have been delineated in the Youanmi region. The Windimurra deposit has been mined from early 2000 by a joint venture between Precious Metals Australia Limited, Glencore International AG, and Xstrata AG; with the operation put on care and maintenance. The Youanmi deposit is located immediately adjacent to the project area. This style of mineralisation, however, should not be considered indicative of the styles of gold mineralisation concerned in the project area.



#### 16. MINERAL PROCESSING AND METALLURGICAL TESTING

This report directly uses the equivalent section from Yeates (2003) below;

#### 16.1 Metallurgy

The oxide ores at Youanmi are essentially free milling, with historic oxide plant performance via the conventional CIP circuit demonstrating an average gold recovery of 89.4% over the seven years of operation.

The Youanmi sulphide ores are partially refractory in nature, requiring sulphide flotation and biological oxidation prior to conventional cyanide leaching and gold extraction. Production records relating to of the sulphide processing circuit demonstrate an average gold recovery of 87% over the four years of operation.

Whilst a scatter plot of drill core sample assay data for gold versus sulphur demonstrates a reasonably wide spread of values, the majority of gold values lie in the 2.5% to 8% sulphur range, corresponding to an approximate sulphide species content of between 7% and 24%, supporting observations in mineralised diamond core. More importantly from a mineral processing viewpoint, the average sulphur values plotted against gold cut-off grade demonstrate that sulphur has an even distribution from 6.35% to 7.90%, the maximum corresponding to 30g/t Au, equating to approximately 0.26% S per 1g/t Au.

#### 16.2 Processing History

Oxide ore treatment commenced at the Youanmi site in 1986 via a conventional 600,000tpa CIP circuit. During the period 1986 to 1992, production records indicate a total of 2.7Mt of ore was treated at an average head grade of 3.4g/t to produce approximately 260,000oz.

Following completion of oxide ore treatment, a decline was developed during 1993 to support underground mining and processing via a 220,000tpa sulphide flotation and bio-oxidation circuit constructed in 1994. The existing oxide circuit was retained for comminution and CIP treatment.

To the cessation of operations in November 1997, production records indicate a further 400,000t of ore at an average head grade of 11.3g/t was treated, producing approximately 130,000z of gold. Metallurgical recoveries improved steadily over this period, increasing progressively from 85% in 1994 up to 89.5% in 1997. The unit process operating cost in the last full year of production was A\$44/t milled. The processing circuit was de-commissioned during November 1997 and has been under caretaker supervision until the present.

#### 16.3 Mineral Processing Plant

The Youanmi sulphide circuit has a rated treatment capacity of 220,000tpa, although the best full year result achieved was 184,000tpa. Run-of-mine ore is crushed via a conventional crushing circuit, utilising a primary jaw crusher and secondary hammer mill crusher. The crushed product is subsequently ground within a conventional ball-milling circuit to a typical size of 80% passing 75 micron.

The sulphide mineralisation is pre-concentrated via conventional froth flotation, with the resulting concentrate reporting to a bacterial oxidation (BIOX) circuit. The concentrate is oxidised in a series of agitated vessels, with the resulting pulp being neutralised prior to conventional CIP treatment for gold extraction.



#### 16.4 Oxide Ore Treatment

#### **Specifications**

The original processing plant at Youanmi was designed to process the easy milling surface oxidised ores. The plant was a classic oxide ore treatment plant with conventional crushing and grinding circuits ahead of the cyanide leaching and carbon-in-pulp (CIP) circuit. The loaded carbon was then stripped and gold recovered to the gold room to be poured as bullion and shipped to the Perth Mint for final refining. The oxide processing plant specifications are shown in Table 16.3\_1 and a more detailed description is provided below.

#### Crushing

The Youanmi processing plant is fed by front-end loader and comprises a standard two stage crushing circuit utilising a jaw crusher for primary crushing and a hammer mill for secondary crushing. These operate in closed circuit with a double-deck vibrating screen designed to collect - 12mm ore for delivery to the fine ore bin prior to grinding.

#### Grinding

The milling circuit can be operated in two modes depending upon the ore types. Grinding of the softer oxidised ores involves the two mills in parallel to treat the -12mm material from the crushing plant. Cyclones provide a feed pulp to leaching at about 40% solids (w/w) and at a particle size of about P80 =75 $\mu$ m. The feed rate is about 80tph for the softer ores, which have a Bond work index of approximately 10kWh/t.

#### **Gravity**

A later addition at Youanmi was the installation of a Knelson high G-force gravity concentrator. This is a 30" unit designed to process all underflow product from the primary grinding mill when processing sulphide ores, or about half the underflow when processing the oxide ores. Depending on the nature of the ore, the gravity circuit could recover up to 50% of the contained gold. The concentrate from the Knelson would normally be processed over a standard table and the resulting high-grade concentrate either treated with acid or calcined prior to smelting.

#### Leaching

Oxide ore is processing via a conventional leaching circuit using draught tube technology and comprising three leach tanks with a total volume of 1,500m3. At 40% solids and an 80tph throughput, this is equivalent to approximately 6.5 hours of retention time. In this mode of operation there will be an extra 8 hours of leaching in the CIP circuit for a total of about 14.5 hours.

#### Carbon In Pulp (CIP)

The conventional CIP circuit comprises mechanically swept cylindrical interstage screens. Pulp is advanced up the CIP circuit with airlifts except for CIP #1, which utilises a vertical recessed impeller pump for loaded carbon transfer. The carbon used is Norit synthetic sized at 1.4mm x 3.2mm. The CIP tailings residue passes over a screen to catch any lost carbon and then is pumped to the tailings storage facility.

#### Gold Elution and Recovery

The loaded carbon is washed, passed over a loaded carbon screen and then sent to the elution column, which has a 2t capacity. The carbon is acid washed to remove calcium and other deleterious material prior to rinsing and elution. A hot cyanide-caustic solution is pumped through the column to strip or elute the gold from the carbon surfaces. The strip solution then passes through a small electrowinning (EW) circuit where the gold is won onto steel wool cathodes. The solution is then heated using a liquid thermal heater and a heat exchanger. The steel wool is removed from the EW cell and acid-treated prior to drying and smelting.

After elution, the carbon is regenerated using a vertical kiln regeneration unit and is then recycled back to the CIP plant.

#### **Reagents**

Reagents are the main cost contributor to the Youanmi plant. When treating oxide ores the main reagents required are sodium cyanide, lime, carbon and lesser quantities of caustic soda and LPG.

Table 6 Youanmi Project Youanmi Ore Treatment Specifications						
Area	Equipment	Description	Capacity	Comments		
Crushing	Primary Crushing Secondary Crusher Screen Crushed Ore Bin	Jaw Crusher; 42 x 30 Single Toggle, 110kW Hammer Mill; 185kW Double Deck; 6 X 16, bottom deck 12mm Metal Bin	100tph 3,000t storage	Feed size at 600mm and product at 100mm This unit is high maintenance and should be changed to a cone crusher About 1,400t live		
Grinding	Ball Mill # 1 Ball Mill #2 Cyclones	Marcy 2.9m X 4.0m; 500kW drive Hardinge 2.4m X 1.5m, 220kW drive 3 at 250mm. and 2 at 150mm	25tph on Primary. 80tph on soft ores	Throughput depends on ore types and hardness Used as regrind with primary ores		
Leaching	Leach Tanks	3 ea. Draught tube tanks, 340m3; 18.5kW agitators		Capacity depends upon application.		
Carbon-In-Pulp (CIP)	Tanks Interstage Screens	6 ea at 200 m <sup>3</sup> ; 18.5kW agitators 1m X 1.2m cylindrical mechanical swept		Total leach and CIP retention is 2220m <sup>3</sup>		
Gold Recovery	Split AARL	Heater at 750kW Electrowinning Cell; 9 cathodes 800 x 800	Column at about 2t			
Flotation	Rougher-Scavenger Concentrate Thickener Tails Thickener	6 ea Cells at 6.5m <sup>3</sup> ; 22kW drives 5m conventional; 3kW drive 6m High Rate		Along with associated pumps etc. Along with associated pumps etc. Along with associated pumps etc.		
Bacterial Oxidation	First Stage Second Stage CCD Thickening Neutralisation. Cooling Tower Air Compressors	4 each tanks at 500m3 and 75kW drives 2 each tanks at 500m3 and 55kW drives 3-stage countercurrent 10m high rate units 4 ea SS tanks at 104m <sup>3</sup> each, 5.5kW drives 250kW equiv. 2 ea at 7,200m <sup>3</sup> /h at 102kPa and 270kW		SS tanks based on oxidising 0.5tph S Supaflo make, 3kW drives		


Table 6 Youanmi Project Youanmi Ore Treatment Specifications											
Area	Equipment	Description	Capacity	Comments							
Reagents	Limestone Quicklime Flocculant Cyanide Caustic Soda Collector CuSO4 Frother Nutrients	A limestone mill 188kW; 30t bin 15kW slaking mill; 75t bin Nalco/Supaflo 2 ea 28m <sup>3</sup> tanks 1 ea 28m <sup>3</sup> tank 1 at 2.1m <sup>3</sup> 1 at 1.5m <sup>3</sup> Barrel pump 16m <sup>3</sup>	800L/h	Along with associated pumps etc.							

# 16.5 Sulphide Ore Treatment

# **Specifications**

Metallurgical investigation determined that the sulphide ores from the Youanmi Main Lode were refractory requiring a flotation step to produce a concentrate containing the gold bearing sulphides such as arsenopyrite and, to a lesser degree, pyrite. This concentrate could then be treated using an oxidation step to destroy the sulphides and liberate the gold for downstream cyanide leaching. Bacterial oxidation (BIOX), provided by Perth-based technology company BacTech<sup>M</sup>, was selected as the optimum process for gold liberation and a 200,000tpa plant was installed in tandem with the existing conventional CIP plant. The sulphide processing plant specifications are also shown in Table 6 above and a more detailed description is provided below.

# Grinding

Harder primary sulphide ore destined for flotation and bacterial oxidation (BIOX) uses the primary mill for initial grinding to provide a product for flotation, while the smaller mill acts as a regrind mill for the sulphide flotation concentrates. The particle size distribution for the bacterial oxidation pulp approximates P80 = $45\mu$ m.

# **Flotation**

The general experience, depending upon the ore treated, is that the flotation circuit will produce a concentrate at about 20% to 25% by weight of the feed ore. The concentrates are thickened and then delivered to a storage tank prior to being oxidised in the bio-oxidation circuit. The flotation tailings are also thickened with the pulp then sent to tank #2 of the leaching circuit.

### Bacterial Oxidation (BIOX)

The BIOX circuit is the heart of the refractory sulphide ore treatment plant. In order to be able to leach the gold from refractory ores the sulphide species (in particular arsenopyrite) must be oxidised. The technology utilised at Youanmi is environmentally benign and is quite effective in allowing the ores to be economically exploited. The Youanmi plant has been designed to process about 0.5t/h of sulphur and the air sparging and cooling system is designed to allow the sulphur to be oxidised in a period of 5 days. The sulphide concentrate pulp is fed from the stock tank through a four-way splitter to the first 4 tanks for the initial stage of oxidation. Nutrients are added to allow the bacteria to survive and air is sparged into each vessel to provide the necessary oxygen to allow sulphur oxidation. The reaction is exothermic thereby necessitating the use of cooling coils within each tank. The temperature is maintained at about 45°C via the use of standard cooling towers. A second stage completes the oxidation process.



Once oxidised the BIOX pulp is sent to a 3-stage counter-current decantation (CCD) washing step. Utilising three liquid solid separation thickeners, the pulp solids are washed to allow the solids to be cleanly separated from the liquor. The overflow liquor from the first CCD unit is neutralised with limestone before being pumped to the tailings storage facility. The underflow is sent to the cyanide leach circuit for gold recovery.

### Leaching

Flotation tailings are delivered to the third leach tank, while the oxidised material from the BIOX circuit is fed to the first tank. The oxidised pulp is leached in two tanks and sent to the adsorption tanks. The pulp from the flotation tailings leach agitator also overflows to the CIP adsorption units. Leach time for the oxidised pulp is about 44 hours, while the flotation tailings are leached in about 14 hours. The CIP circuit adds about a further 24 hours.

### **Reagents**

When treating the sulphide ores the reagents are more diverse. Along with sodium cyanide, lime and activated carbon required for the conventional CIP process, other reagents include flotation collector, flotation promoter, copper sulphate, frother, nutrients, flocculants, limestone and sulphuric acid.

# 16.6 Ancillary Processing Services

### Power

Power for the processing plant is provided by a diesel generating plant and is reticulated throughout the site including the accommodation complex. The connected power in the processing plant is about 3,600kW. The power generation plant has been removed and it is the intent of Goldcrest to have the new power generation provided on contract by a third party.

# <u>Water</u>

Water will be provided from a bore as well as being recycled from the tailings storage facility. Mine water will also be used indirectly since it is also discharged to the tailings storage facility. Exclusive of recycled tailings decant and mine water, the Youanmi plant will require about 150m3/h for the treatment of the oxide ores and about 50m3/h is required when treating sulphide ores.

### <u>Air</u>

As noted above the special air required for the BIOX plant is provided. Similarly, there are low pressure blowers allowed for in the flotation circuit. Other plant air is provided at high pressure (700kPa) by a general use plant compressor. Instrument air is provided by a refrigeration and drying plant.

### Instrumentation

The plant is equipped with a moderate provision of instrumentation including some centralised control.

# **Laboratory**

The Youanmi site has a very good facility for fire assay and AAS. All that now exists is the building and the dust collection ducting and equipment.

### Workshops and Offices

The site has a very good workshop facility with lay-down areas and electrical benches. There also is a large warehousing building along with a substantial storage yard. Demountable office buildings are well laid out and of sufficient size.



# Tailings Storage Facility

Two storage facilities provide for oxide and sulphide tailings, and both are essentially storage dams erected above ground in a "turkeys nest" configuration. The decanted water from the oxide plant can be recycled but the decanted liquor from the sulphide plant has to be evaporated.

# 16.7 Processing Plant Performance

The two most recent phases of commercial exploitation at Youanmi were based on open pit, oxide ores from 1987 to 1992, and underground sulphide ores from 1995 to 1997. As such, they required different process technologies. The oxide plant is a conventional CIP gold recovery plant, whilst the sulphide plant utilises BacTech<sup>M</sup> bio-oxidation technology. The oxide plant can operate independently, but the bio-oxidation plant has to be operated in conjunction with the oxide plant.

# Oxide Processing Performance

The conventional Youanmi CIP oxide ore treatment plant in isolation performed over a period of 7 years from 1987 to 1993, during which time production records indicate over 2.66Mt of ore was processed averaging 3.4g/t Au, recovering 262,687oz or 89.4% of the contained gold. Table 7 details the performance of the Youanmi oxide treatment plant.

	Table 7 Youanmi Project - Oxide Ore Treatment Plant Performance												
Operating Year	Units	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	Total				
Days	no.	N/A	365	365	365	365	365	N/A	N/A				
Ore Treated	tonnes	149,411	358,448	429,191	466,436	648,029	485,231	128,789	2,665,535				
Grade	g/t	3.24	3.81	3.13	2.63	2.43	5.59	3.34	3.43				
Contained Metal	g	484,092	1,365,687	1,343,368	1,226,727	1,574,710	2,712,441	430,155	9,137,180				
Gold	g	440,021	1,198,107	1,170,798	1,022,372	1,419,190	2,560,938	359,059	8,170,485				
Produced	oz	14.147	38,520	37,642	32,870	45,628	82,336	11,544	262,687				
Overall Recovery	%	90.9	87.7	87.2	83.3	90.1	94.4	83.5	89.4				

# Sulphide (BIOX) Processing Performance

The historical performance between 1995 and 1997 of the sulphide plant utilising flotation and bio-oxidation technology, as detailed in mine production records, is shown in Table 16.5\_2 below.

The generally lower than budgeted annualised performance of the plant was due almost entirely to ore deliveries from the mine not achieving targeted levels. The plant hardly, if ever, achieved its full capability, however it consistently exceeded the projected metallurgical recovery of 81%, with an average recovery of 87.5%.

The use of bio-oxidation was relatively new in Australia when the Youanmi circuit was commissioned. The process is now considered well proven, has gained solid commercial acceptance, and is proven to be technically successful at Youanmi. Blending of ore was not anticipated prior to commissioning and feed variability created significant problems for both the flotation and bio-oxidation circuits. A recurring theme in the historical operating reports is a lack of technical support and control instrumentation for the flotation and bio-oxidation circuits.



Operating performance history demonstrates a steadily increasing recovery, with initial commissioning values of 85% increasing rapidly to a maximum of 92.4% in 1994-95. This is indicative of improving metallurgical control and diminishing amounts of reactive sulphide from transitional zones. Based on historical operating data, one of the most significant factors affecting both throughput and recovery was mechanical and equipment failures within the bio-oxidation circuit.

Table 8 Youanmi Project Sulphide Ore Treatment Plant Performance											
Parameter	Units	Design	1994/95	1995/96	1996/97	1997/98	Total				
Days	no.	365	273 29,863	365	365	153 58,527	1,156				
Ore Treated	tonnes	200,000	11.58	134,257	184,621	12.72	407,268				
Grade	g/t	15.0	345,902	10.68	11.34	744,338	11.34				
Contained Treatment rate	g	3,000,000	15.5	1,433,929	2,093,067	20.3	4,617,237				
Operating Time	tph	25	1,927	20.4	22.2	2,880	20.7				
	hrs	8,000	29.4	6,585	8,320	78.4	19,712				
Gold Produced	%	91.3	278,469	75.2	95.0	677,806	71.1				
	g	2,420,000	8,953	1,237,824	1,839,893	21,792	4,033,993				
Recovery Overall Recovery	ozs	77,800	92.4	39,797	59,154	83.3	129,696				
Flotation Oxidation, Sulphur	%	81	85.4	89.8	86.5	88.5	87.5				
	%	80 - 85	n/a	85.5	88.5	n/a	87.0				
	%	32 <sup>1</sup>		n/a	N/a		n/a				

Arsenopyrite oxidation at 85% to 95%, with pyrite only at 28%, for an overall 32% oxidation.

# 17. MINERAL RESOURCE ESTIMATES

Prior to the geological and mineralogical modelling and subsequent resource estimation calculations, Ravensgate referred to the previous RSG Global and the recent Goldcrest reports. The data obtained from extensive due diligence, and verification studies of the sample and assay procedures, was subsequently used in the generation of the current Youanmi Deeps Underground block model. Ravensgate is satisfied that the work and reports compiled by RSG Global and Goldcrest are complete and comprehensive.

The continued update and review of data allowed the construction of a new comprehensive set of 3-D ore zone surfaces for the Main, footwall, and hanging wall structures required for new block model generation for the Youanmi Deeps Underground area. The new block model allowed for the generation of one definitive block model field describing Au distribution and generation of a classification matrix for reportable mineral resources.

The primary field generated in the block model was for gold expressed as g/t Au. The major material type definitions used for the resource block model were supplied by Goldcrest and their associated contractors. This data includes the overall ore zone interpretation data, which was used to delineate the grade distribution of gold within the deposit areas and the relative oxidation state of mineralised material, as well as an indicative relative distribution of Specific Gravity values for different locations within the known ore zones for the newly constructed block model. Importantly, a new rigorous re-assessment by Goldcrest of available survey data of mined development and stoping has resulted in a greater understanding of previous mining activities. Consequently, the block model could be depleted with greater confidence than previously. However, the survey data in some areas is of poor quality, and a conservative approach was adopted with respect to potential remnant areas, such that the model was depleted in areas of uncertainty.



Note that the term 'ore zone' used throughout this report refers to terminology generally used in the geological modelling and geostatistical resource estimation procedures, and does not imply or necessarily have any bearing on 'ore reserves'.

In general, a geological domaining regime and a broadly coincident nominal 2.00g/t Au grade delineation regime, using the existing diamond, RC, and RAB drilling was employed to define the ore zones. Domains were interpreted using dtm surfaces to define the hanging wall and footwall surfaces of each domain; these dtm surfaces were used for selection of drill data, and coding of the block model for interpolation.

	Ra	vensgate			ORE MO	DEL PARAME	TER TABL	E	
YOUANMIUNDER	RGROUND RESOURCE MODEL	vu0606m.dm	Notes:						
Date:	Jun-06	*							
SURFCOD E ł FILENAME	DOMAIN	Descriptio	HV COLOUR	FV COLOUR	VIF TYPE	PARENT CELL	SPLITTIN	RESOL	Owned Bg
	401	Main - Main Lode High Grade South Domain	4	5	dtms	40×40×40	40x40x20	0	
	402	Main - Main Lode Low Grade North Domain	4	5	dtms	40×40×40	40x40x20	0	
	6	Main - Lower Footwall Lode	6	7	dtms	40x40x40	40x40x20	0	
	801	Main - Upper Footwall Lode - High Grade Domain	8	9	dtms	40x40x40	40x40x20	0	
	802	Main - Upper Footwall Lode - Low Grade Domain	8	9	dtms	40×40×40	40x40x20	0	
	1701	Main - Central Footwall Lode - High Grade Domain	17	18	dtms	40×40×40	40x40x20	0	
	1702	Main - Central Footwall Lode - Low Grade Domain	17	18	dtms	40×40×40	40x40x20	×	
	24	Main - Hanging Wall Lode 1	24	26	dtms	80x80x80	40x40x20	0	
	41	Main - Hanging Wall Lode 2	41	43	dtms	40×40×40	40x40x20	0	
	10	Hill End - Main Lode	10	11	dtms	40×40×40	40x40x20	0	
	48	Hill End - Hanging Wall Lode 1	48	50	dtms	40×40×40	40x40x20	0	
	19	Hill End - Hanging Wall Lode 2	19	20	dtms	40×40×40	40x40x20	0	
	53	Pollard - Main Lode	53	55	dtms	40×40×40	40x40x20	0	
	42	Pollard - Footwall Lode	42	44	dtms	80x80x80	40x40x20	0	
	2	Pollard - Hanging Wall Lode 1	2	3	dtms	80x80x80	40x40x20	0	
	35	Pollard - Hanging Wall Lode 2	35	37	dtms	80x80x80	40x40x20	0	
	47	Pollard - Hanging Wall Lode 3	47	49	dtms	80x80x80	40x40x20	0	
				0					•••••••

 Table 9 Ore Parameter Table listing defined Domains





Figure 9 Interpreted Lode Domain Wireframes - Hanging Wall View looking east.





Figure 10 Interpreted Lode Domain Wireframes - Footwall View looking west.

The interpolation calculations carried out for each domain in the block model used the Ordinary Kriging Interpolation technique. (DATAMINE Studio v2.1.1444). Separate sets of geostatistical calculations were carried out for each Domain. These calculations relied on geostatistical data derived from the current drilling database and, in particular, for Au within each specific Domain.

# 17.1 Database and Drillhole Data

The sample/assay data supplied by Goldcrest for the Youanmi Deeps project area comprised 126 RAB drillholes, 970 RC drillholes and 509 diamond core drillholes. The drillhole data and survey data was supplied by Goldcrest in standard digital ASCII, Microsoft Access, and/or 3-D DXF format.

Table 10 Spatial Limits of Drillhole Data											
Easting Northing Elevation											
Minimum	4714.3	1795.1	624.4								
Maximum	5761.4	3242.3	1483.0								

Although the sample quality from the RAB drillholes may not be of the highest standard, all available assay data was used to define the main mineralisation surfaces where necessary. However, the RAB drillholes were of very shallow nature and have little or no bearing upon the underground resource, and only 9 RAB assay values (being within the uppermost extent of the Pollard wireframe interpretations and not within the final resource area).



All information from current drillholes, including the associated assay data, was loaded into Datamine Studio (v2.1.1444) software to enable verification and review of data integrity and continuity. This was then compared to some of the original datasets.



Figure 11 Goldcrest Drillhole Data Set Coded by Drillhole Type, Datamine STUDIO Visualiser View

FILTERS: Trace Category	
RAB	
RC	
DIA	

In general, the data is of acceptable quality with no major assay or survey inconsistencies evident. This observation is confirmed by due diligence of the sampling procedures, preparation, analysis, security and data verification carried out by previous project owners, and is noted in the previous reports by RSG Global and Goldcrest personnel and their associated contractors. However, some adjustment was made to the wedge holes off parent drillholes to convert their effective collar back to the actual point of the wedge take-off, rather than at the collar of the parent drillhole.

As the drillholes used were a combination of RC, diamond and RAB drillhole types, full analysis was made of statistics for differing drillhole types for each domain to test compatibility. Analysis showed that it was reasonable to combine the diamond and RC data for the estimation process. However, the bulk of the estimated volume at Youanni Deeps Underground Project modelled by Ravensgate was based upon assay data from diamond drilling by nature of the drillhole distributions; with RC holes in the upper portions only. Table 11 gives the breakdown of assay methodology for samples used in the reported resource estimate, below 1300mRL elevation.

![](_page_44_Picture_0.jpeg)

Table 11 Assay Method for Assay Values Used in Reported Resource Estimate (Unmined and below 1300mRL elevation)													
Assay Method Number of Percentage of Total Assays Assays Used													
Fire Assay	773	56.3%											
Aqua Regia	478	34.8%											
Unknown	10	0.7%											
Not assayed - assigned nominal value of 0.01g/t	111	8.1%											
TOTAL	1,372												

The standard sample interval used at Youanmi was variable over the different drill programmes, but the assay interval used for most of the drillholes was around 1 metre, though some sample intervals followed lithologic boundaries and were allocated shorter or longer lengths depending on drill program and location. To assess sample support, a thorough review of the deposit statistics was carried out, after which Ravensgate decided to composite all drillhole data to a standard 1m down-hole composite length. The 1m composited data-set was used to develop representative semi-variograms for the interpreted Domains, and the data from these were used directly in the Block Model interpolation calculations.

# 17.2 Geological Model

# Principles of geological modelling

Ravensgate's preferred approach for resource and ore reserve estimation is to base all statistical and grade interpolation methods on spatially constrained real features that are identifiable from the data. Where appropriate, mineral resource estimation methods can use statistical and grade interpolation procedures, which are based on data contained within spatially constrained geological features identifiable from logging or mapping. Ideally, these features should be of such a form that they can be incorporated into a three dimensional (3-D) geological model. The geological 'solid' volumes from the model are used to control the interpolation of grade data into and throughout the block model.

It is important that the geological features modelled represent structures that do actually exist in reality. This cannot always be assumed with traditional interpretation methods that may rely on cross-sections and independently interpreted plans or sections. It is frequently necessary to construct 3D 'solid' or 'wire-frame', models to ensure that any cross-sectional interpretations are internally consistent and that they, as far as is practical, define geometrical shapes that do actually exist. Ravensgate will refer to such models and modelling methods in this report as 3-D 'wireframes, or 'dtm surfaces'.

# Methods adopted for the Youanmi Deeps Underground Mineralised Areas

A preliminary interpretation of mineralisation geometry was possible from the reports supplied by RSG Global and Goldcrest, and previous underground development and production stoping. Some preliminary interpretation of mineralised zones as strings for the Main Lode surfaces were also supplied by Goldcrest; but no major interpretations of footwall and hanging wall surfaces were supplied. Previous work where available was used as a guide to a new set of string interpretations of lode surfaces.

![](_page_45_Picture_0.jpeg)

The strings were processed to produce a hanging wall surface digital terrain model (dtm) surface, and a footwall dtm surface by Ravensgate; and were also used to directly code the primary material domains and select drillhole assay data within each domain.

The Ordinary Kriging interpolation calculations ultimately carried out also incorporated parameters which were used later for determination of Quality field levels, and then material classifications.

General surface survey data has also been supplied by Goldcrest, and includes the most recent pit survey 'pick-ups' of all existing pit surfaces within the Youanmi 4-Pits and Youanmi South areas. These pre-existing pit surfaces are significant in that substantial volumes of ore material have been mined historically from the various near-surface deposits at Youanmi. Similarly, survey data of the extensive underground workings present at Youanmi was supplied by a sub-contractor. For resource summary accounting, all pre-existing mining activity and the associated 'mined volumes' needed to be depleted from the known ore zone areas. The current topographic surface and pit surfaces were also used to trim/limit material volumes from the tops of some of the ore zone domains; and a final elevation cut-off of 1300mRL was used to define the underground resource, as separate from the previously reported near-surface resource.

The density of drill data varied markedly within domains and between domains.

All of the drillholes used for this study were collared either from the natural topographic surface, or from prepared drill platforms within the existing pit areas, or from underground development.

The main ore zone domains of the three fault blocks (Domain=10 - Hill End, 4 (subset to 401 and 402) - Main, and 53 - Pollard) were reasonably predictable from one cross-section to the next. However, locally, smaller scale faulting and complexities in the granite footwall are noted. Analysis of available underground ore drive geological mapping indicates often intensive small scale faulting, and occasional 'stoping out' of the lode by footwall granite.

Within the Main fault block, three footwall surfaces (Domain=6, 17 (subset into 1701 and 1702), and 8 (subset to 801 and 802) at a slightly flatter dip than the main ore surface were interpreted from drillhole and development data. Within this fault block, two hanging wall surfaces (Domain=24 and 41) were also interpreted.

Within the Pollard fault block, a single footwall surface (Domain=42) was interpreted, at a flatter dip than the main ore zone (Domain=53); and three footwall surfaces (Domain=2, 35, and 47) based upon limited drill data were modelled.

Within the Hill End fault block, two hanging wall lodes (Domain=19 and 48) were interpreted.

Analysis of the supplied data, and also hard copy geological plans in the Goldcrest office, was carried out to see if there was any correlation between lithological type and gold tenor. However, the available data failed to show any clear correlation; such that, no sub-domaining was carried out based upon lithology.

# 17.3 Compositing and Spatial Domaining and Statistical Analysis

# Principles of statistical analysis

Statistical analysis is used to identify whether populations are significantly similar or differentiated and to investigate the general nature of the data distributions. Integral to this assessment is the effect that a particular data distribution may have on methods to be used for grade estimation. Highly skewed distributions can be problematic if appropriate measures are not taken to manage proportional effects and outliers. However, it should be noted that 'pure' statistical methods do not take into account the spatial relationships within data and it is essential that an adequate geological interpretation determines how data should be grouped for resource evaluation.

# Principles of flagging data

![](_page_46_Picture_0.jpeg)

Statistical studies are most meaningful when dealing with data from geologically homogenous populations. To allocate the data most effectively to the various spatially defined geological populations, the drillhole intervals are intersected with the wireframed triangulations and flagged according to the different parts of the geological interpretation they relate to. Any particular sample may occur within a number of triangulations as may be defined separately by the defined spatial positions according to identifiable geological domains related to lithology, weathering, alteration, etc.

# Principles of compositing

It is necessary to ensure that all data-sets being used for statistical analysis have the same sample 'support'. Support generally refers to the various attributes that define a sample population, where ideally all the samples collected are equivalent. The concept of 'uniform' sample support usually includes sample volume, sample orientation and sampling technique. Support, with respect to resource modelling is generally taken to include uniform sample length, assuming that all drillholes are of the same diameter and the same size of 'sample split' is used. In order to ensure that all samples have practically the same sample length, they are frequently composited, where necessary, from 'non-uniform' sample lengths. This is best achieved by compositing to the most common sampling length, so that in effect all samples are treated as equivalent. Compositing was applied after the selection of drillhole data within domains.

### Principles of spatial declustering

It is common in sampling campaigns to sample suspected high grade areas more thoroughly to assess the value of these regions with greater accuracy. Unfortunately, such an arrangement of closely spaced samples (clustering) can lead to biased statistics as the higher grade areas are over-represented. Therefore, it is good practice to apply spatial declustering to the composite database. Univariate statistics can then be calculated using the declustered data to eliminate any bias in the statistical results arising from 'over-drilling' of high grade zones. Declustering is generally carried out using a moving search window or cell. The optimum size of the search window/cell is a subjective assessment, although as a general rule the average spacing between drilling sections and the average spacing between drillholes on the sections, is a good starting point for the dimensions of the search window.

Analysis of declustered statistics in relation to raw and composite data was made at varying grid sizes for all domains.

# Cumulative log-probability plots

Cumulative log-probability plots are commonly used to determine the overall sample distribution (un-constrained) and can be used as a guide to determine whether it is necessary to cut or reduce the localised influence of any high grade assays. They are also very useful for indicating whether multiple populations are present. Significant features to look for on such plots include points of 'inflection' joining two or more 'straight lines' as these represent a change in variance and may be indicative of more than one statistical population.

# The proportional effect

Both the near straight line nature of cumulative log-probability plots and the highly skewed shape of the frequency histograms are indicative of long-tailed positively skewed sample distributions and are typically seen with a variety of mineral deposits. In practice, it is often found that highly skewed distributions of this nature exhibit a proportional effect, i.e. the presence of a relationship between the mean and the standard deviation of grouped data.

The presence of a proportional effect can be problematic in variographic analysis, as the 'nonstationarity' of the spatial variation may lead to the generation of highly erratic experimental variograms, from which it is extremely difficult to recognise the mineralogical or structural characteristics of the deposit. Under these conditions, pair-wise relative variograms, covariograms, or correlograms may be preferred in place of normal (absolute) variograms, in order to model the continuity of grade values. With these methods the fluctuations of the

![](_page_47_Picture_0.jpeg)

variogram caused by higher magnitude grade variance differences generated as a function of increasing grade can be reduced, therefore revealing smoother and more easily modelled structures.

The presence of a proportional effect is often determined by generating a scatter-plot of standard deviation versus the means of samples falling into a moving window of a specified size (usually a much larger window than that used for declustering data). In the presence of a proportional effect, the plot will show a systematic increase of the standard deviation as the mean increases. The proportional effect can often be summarised and described using a linear regression analysis.

### Methods adopted for the Youanmi Deeps Underground Gold Project

The complete drillhole database was subset into domains using the dtm surfaces produced within the DATAMINE Studio programme. Down-hole compositing to 1m of the sub-sets was then applied; which provides a consistent sample length improving geostatistical support.

These composites were also coded by Domain using the dtm surfaces. A series of log and histogram plots describing the constrained composites within these domains was produced for each of the deposit domains in the graph collection which is included in Appendix A. A comprehensive set of reports of raw drillhole samples and sample composites by domain is included in the tables following.

Once the composite database was verified, an entire new set of analytical statistics for each domain was generated. Analysis of the statistical data, population percentiles, and graphical logarithmic and histogram presentations, allowed the delineation of top cut values by domain. In addition, the effect of varying top cuts, particularly upon the coefficient of variation, was examined to determine the most appropriate value in each case.

In the case of original domains, 4, 8, and 17 in the Main Fault Block, analysis of the data distribution and gold tenor resulted in splitting of each of these 3 original domains into 2 subdomains, namely domains 401, 402, 801, 802, 1701, and 1702. There were clear statistical differences between the sub-domains; but insufficient drill density and geological information available to confirm a geological reason for the differences. The following figures show the data distribution, gold tenor, and applied sub-domain boundary strings. For each of the 3 cases, composites were selected using "soft" boundaries involving a 20m overlap outside the original "hard" boundary strings. Estimation was made into model cells constrained by the original "hard" boundary strings.

![](_page_48_Picture_0.jpeg)

![](_page_48_Figure_1.jpeg)

![](_page_48_Figure_2.jpeg)

Figure 13 Sub-Domaining of Domain 8 into Domains 801 and 802, showing drillhole composites coded by AU (g/t), Plan View

![](_page_48_Figure_4.jpeg)

![](_page_49_Picture_0.jpeg)

![](_page_49_Figure_1.jpeg)

Figure 14 Sub-Domaining of Domain 17 into Domains 1701 and 1702, showing drillhole composites coded by AU (g/t), Plan View

From this data, the parameters required for variogram generation were determined (tables 12 to 14). In addition, any interpolation constraints necessary for later block modelling interpolation could be assessed.

![](_page_50_Picture_0.jpeg)

	Revenzete						DESCRIPTIVE STATISTICS OF INPUT DATA						
TOUANNI	UNDERGROUM	DRESOU	RCE MODE	L	DOMAIN: ar lirted Notor:								
Date:			Jun-	2006	SURFCO	DE:							
Tariable	Presie	Tes Cal	Pala	Banker of	Count	History	Having	Heat	Std Day	Variance	Cuaff	Datamin	
		40	Tarriel	Samples	and a	471	a aft	alt	-	4/12	af Tar	+ Camp.	
Au Bau	-	Uncut	AII	1,119	1.119	0.005	200.000	8.287	18,851	355 356	2.275		
		Uncut		935	935	0.005	200.000	9,504	20,299	412.050	2.136		
		Uncut	UGDD	529	529	0.005	200.000	8.093	20.693	428.205	2.557	•	
		Uncut	Surface DD	404	404	0.010	152.000	11.394	19.656	386.377	1.725		
		Uncut	RC	184	184	0.005	32.500	2.105	4.639	21.524	2.204	••••••	
		Uncut	RAB										
		Uncut	RC/DD	1,119	1,119	0.005	200.000	8.287	18.851	355.356		••••••	
Au 1m Comparitor	4	Uncut	All	952	952	0.005	200.000	6.500	14.254	203.186	2.193	1.00	
	401	Uncut	All	804	804	0.005	200.000	7.276	15.325	234.854	2.106	2.00	
	402	Uncut	All	198	198	0.005	58.551	2.770	5.425	29.428	1.958	3.00	
	4	Uncut	DD	763	763	0.005	200.000	7.602	15.562	242.178	2.047	1.00	
	4	Uncut	UGDD	494	494	0.005	200.000	6.445	16.453	270.688	2.553	1.00	
	4	Uncut	Surface DD	268	268	0.010	75.822	9.756	13.538	183.265	1.388	1.00	
	4	Uncut	RC	189	189	0.005	32.500	2.050	4.590	21.067	2.239	1.00	
	4	Uncut	RAB									1.00	
	4	Uncut	RC/DD	952	952	0.005	200.000	6.500	14.254	203.186			
Au 1m Comparitor		60	RC/DD	952	952	0.005	60.000	6.122	11.241	126.354	1.836	1.00	
		50	RC/DD	952	952	0.005	50.000	5.968	10.554	111.396	1.769	1.00	
	4	40	RC/DD	952	952	0.005	40.000	5.729	9.636	92.849	1.682	1.00	
	401	<u></u>	RC/DD	804	<u> </u>	0.005	60.000	6.829	12.023	144.542	1.761	2.00	
	402	16	RC/DD	198	198	0.005	16.000	2,451	3.243	10.516	1.323	3.00	
Doclurtorod 20x20			RC/DD	261	261	0.001	40.000	5.050	8.010	64.150	1.586	1.00	
Doclurtorod 40x40			RC/DD	157	157	0.001	40.000	5.540	8.100	65.670	1.462	1.00	
Declartered 80x80			RC7DD			0.001	40.000	6.520	8.190	(1.200	1.548	1.00	
Declartored 160×160			RC7DD	30	30 	0.050	21.630	5.530	5.400	29.1/0	0.976	1.00	
Declartored 20x20			RCrDD	<u></u>	<u> </u>	0.001	60.000	6.290	10.650	113.390	1.693	1.00	
Declareara 40x40			BOJDD	120			60.000	0.070	43 54 6	457.600	1.004	1.00	
Declarcorod 00x00			BCJDD			0.001	22650	2 000	6 240	191.000	0.007	1.00	
D. clustered 100x100	442		BCJDD			0.030	63.030 A 700	2 470	2 140	30.020 A E00	0.001	1.00	
Declustered d0xd0	442	16	BCADD	44		0 010	9 720	2 420	2 200	4 240	0 909	1.00	
Declustered 80x80	442	16	BC/DD		28	0 010	9 780	2 590	2 220	4 920	0 257	100	
Declustered 160×160	442	16	BC/DD	14	· · · · · · · · · · · · · · · · · · ·	0.680	6 dd0	2 8 d fi	1 200	3 230	0.634	100	
			1	··················	17			<b>6</b>					
Au Block Model	401	68			<u>.</u>	0.051	25.835	7.459	6.004	36.047	0.805	•	
	402	16	1			0.599	13.754	3.300	1.946	3.787	0.590		
			1		••••••							:	
Longth Raw			All	1,119	1,119	0.010	14.400	0.843	0.883	0.779	1.047		
			DD	935	935	0.010	14.400	0.807	0.954	0.911	1.183	•	
			UGDD	529	529	0.010	14.400	0.928	1.202	1.444	1.294		
			Surface DD	404	404	0.010	4.100	0.649	0.415	0.172	0.640	[	
			RC	184	184	1.000	4.000	1.027	0.264	0.070	0.257		
			RAB										
			RC/DD	1,119	1,119	0.010	14,400	0.843	0.883	0.779			
Longth 1m Comparitor			AU	952	952	0.380	1.450	0.990	0.097	0.009	0.098	1.00	
			DD	763	į <u></u>	0.380	1.450	0.988	0.108	0.012	0.109	1.00	
			I UGDD	494	494	0.400	1.450	0.993	0.083	0.007	0.084	1.00	
			Surface DD	268	268	0.380	1.400	0.977	0.141	0.020	0.144	1.00	
			RC	189	189	1.000	1.000	1.000				1.00	
			BAB				4.450					1.00	
			I KCYDD	1 952	; 99Z	0.580	: 1.450	0.990	. 0.097	0.009	0.098	: 1.00	

# Figure 15 Descriptive Statistics for Domain 4 and sub-domains 401 and 402 (Main Lode - Main Fault Block)

![](_page_51_Picture_0.jpeg)

Ravens		DESCRIPTIVE STATISTICS OF INPUT DATA									
YOUANMI UNDERGROUM	D RESOU	RCE MODEI	L	DOMAIN	: as listed			Notes:			
Date:		Jun-2	2006	SURFCO	DE:						
Tariable Damain	Tup Cut	Data	Humber of	Count	Hisimum	Mazimu	Mean	Std Dev	Variance	Coeff	Datamine
	als	Type(x)	Sampler	wed	475	n g/t	glt	glt	g/t2	of Yar	Comp.
Au Baw 6	Uncut	All	163	163	0.010	74.900	7.944	10.988	120.734	1.383	
	Uncut	DD	163	163	0.010	74.900	7.944	10.988	120.734	1.383	
	Uncut	UG DD	118	118	0.010	74.900	7.835	11.293	127.540	1.441	
	Uncut	Surface DD	42	42	0.010	41.670	8,791	10.266	105.388	1.168	
	Uncut	RC									
	Uncut	RAB									
	Uncut	RC/DD	163	163	0.010	74.900	7.944	10.988	120.734		
Au 1m Composites	Uncut	All	151	151	0.010	56.108	6.277	9.689	93.882	1.544	1.00
	Uncut	DD	151	151	0.010	56.108	6.277	9.689	93.882	1.544	1.00
	Uncut	UGDD	128	128	0.010	56.108	5.807	9.654	93.203	1.663	1.00
	Uncut	Surface DD	22	22	0.010	40.125	9.301	9,477	89,816	1.019	1.00
	Uncut	RC									1.00
	Uncut	RAB									1.00
	Uncut	RC/DD	151	151	0.010	56.108	6.277	9.689	93.882	1.544	
Au 1m Composites	30	RC/DD	151	151	0.010	30.000	5.945	8.458	71.539	1.423	1.00
		RC/DD									1.00
		RC/DD									1.00
Declustered 20x20	30	RC/DD	43	43	0.010	22.500	5.720	6.430	41.360	1.124	1.00
Declustered 40x40	30	RC/DD	28	28	0.010	22.500	6.830	6.350	40.360	0.930	1.00
Declustered 80x80	30	RC/DD	16	16	0.010	20.880	7.050	6.190	38.350	0.878	1.00
Declustered 160x160	30	RC/DD	Э.		0.010	17.020	7.960	5.000	24.980	0.628	1.00
Au Block Model	30				2.112	14.857		2.646	7.001	0.340	
Los est. De us			46.0	46.0	0.040	07.900		0 4 4 9	Faaa	0 6 9 7	
Length Haw		<u> </u>	100	100	0.010	21.300	0.300	2.443	5.330	2.031	
			100	440	0.010	21.300	1.065	2.443	0.000	2.031	
			110	110	0.010	21.300	1.005	2.000	0.122	2.001	
		DC DC	42	42	0.020	1.400	0.504	0.345	0.113	0.005	
			46.2	46.2	0.010	97,900	0 909	0449	5 9 9 9		
Length Im Composition		411	151	151	0.010	1470	0.000	0.139	0.019	0 14 2	1.00
congar in composites			151	151	0.350	1470	0.978	0.139	0.019	0.142	100
			128	128	0.030	56 108	5 807	9.654	93 203	1663	100
		Surface DD	29	20	0.350	1470	0.962	0.250	0.063	0.260	100
		DC			0.000	1.410		0.670	0,000	0.200	100
		BAB						••••••			100
		RC/DD	151	151	0.350	1.470	0.978	0.139	0.019	0.142	1.00

# Figure 16 Descriptive Statistics for Domain 6 (Footwall Lode - Main Fault Block)

![](_page_52_Picture_0.jpeg)

		DESCRIPTIVE STATISTICS OF INPUT DATA										
TOUANHI U	NDERGROUN	D RESOUR	CE MODEL		DOMAIN:	ar lirted			Notes:			
Date:			Jun-	2006	SURFCO	DE:						
Tariable	Demain	Tup Cut	Data	Humber	Caunt	Hisimum	Hezime	Henn	Std Dev	Tariance	Cueff	Detemine
		475	Type(x)	=f	weat	475	math	415	4/1	4/12	of Ter	Camp.
			I									
AuRau	17	Uncut	All	80	80	0.005	\$5.220	7.542	17.191	295.537	2.279	
		Uncut	DD	80	\$0	0.005	\$5.220	7.542	17.191	295.537	2.279	
		Uncut	UGDD	42	42	0.010	\$5.220	8.536	19.131	366.003	2.241	
		Uncut	Surface DD	38	38	0.005	64,400	6.443	14.675	215.354	2.278	
		Uncut	RC									
		Uncut	RAB						ļļ			
		Uncut	RC/DD	\$0	\$0	0.005	\$5.220	7.542	17.191	295.537		
Au 1m Comparitor		Uncut	All		91	0.005	\$5.220	3.989	12.040	144.959	3.019	1.00
		Uncut	DD		91	0.005	\$5.220	3.989	12.040	144.959	3.019	1.00
		Uncut	UGDD		64	0.010	\$5.220	3.581	11.882	141.184	3.318	1.00
		Uncut	Surface DD	27	27	0.005	64.400	4.954	12.352	152.582	Z.493	1.00
		Uncut	RC									1.00
		Uncut	KAB			0.005	05 220		47.040	444.050		1.00
		Uncue Uncue	BCIDD		71	0.005	09.220	2.707	47 320	244.727	2.017	1.00
		Uncue Uncue	BCIDD	40	40	0.005	09.220	1,722	11.660 ; 2 264 ;	276.004 E 102	4 722	1.00
Au 1m Compositor	17	32	BC/DD	91	41	0.005	32 000	3.048	6.979	48 703	2 290	1.00
He in compares	47	20	BC/DD	91	41	0.005	20 000	2 542	5 2 8 4	27.478	2 041	1.00
	17	16	BC/DD	91		0.005	16.000	2.383	4.642	21.552	1.948	1.00
	1701	32	BC/DD	40	40	0.005	32.000	5.812	9,603	92.222	1.652	1.00
	1702	nil	RC/DD	35	35	0.005	9.120	1.303	2.259	5.102	1.733	1.00
Doclurtorod 20x20	17	16	RC/DD	36	36	0.001	16.000	3.890	5.060	25.600	1.301	1.00
Doclartorod 40x40	17	16	RC/DD	30	30	0.010	16.000	3.650	4.550	20.730	1.247	1.00
Doclartorod 80x80	17	16	RC/DD	14	14	0.010	11.520	3.050	3.900	15.180	1.279	1.00
Declartered 160x160	17	16	RC/DD	7	7	0.010	4.670	1.620	1.590	2.530	0.981	1.00
Doclartorod 20x20	1701	32	RC/DD	20	20	0.001	32.000	7.910	9,640	92.870	1.219	2.00
Doclurtorod 40x40	1701	32	RC/DD		17	0.010	32.000	6.720	8.510	72.380	1.266	3.00
Doclartorod 80x80	1701	32	RC/DD		*	0.010	16.430	6.120	6.110	37.350	0.998	4.00
Doclartorod 160x160	1701	32	RC/DD	5	5	0.010	11.910	5.230	4.480	20.110	0.857	5.00
Doclartorod20x20	1702		RC/DD	18	18	0.001	5.750	1.310	1.830	3.330	1.397	6.00
Doclurtorod 40×40	1702	<b>nil</b>	RC/DD		16	0.001	5.750	1.440	1.880	3.520	1.306	7.00
Doclurtorod 80x80	1702		RC/DD			0.010	3.990	1.080	1.410	1.980	1.306	8.00
Doclurtorod 160x160	1702		RC/DD			0.010	3.990	1.240	1.480	2.180	1.194	9.00
			<b>+</b>				47.035			44 45 4	0.453	
Au Block Model	4743	- 32	<b>+</b>			1.945	11.835	1.677	3.331	11.138	0.451	
		<b></b>	t				2.192	1.211	v.104	0.204	0.401	
Lonath Bau			 الم	20	20	0.050	25 600	1 113	2 843	\$ 372	2 599	
				80	80	0.050	25.600	1.113	2.893	8.372	2.599	
			UGDD	42	42	0.050	25.600	1.542	3.928	15.431	2.547	
			Surface DD	38	38	0.050	1.600	0.639	0.376	0.141	0.588	
			RC									
			RAB									
			RC/DD	80	\$0	0.050	25.600	1.113	2.893	8.372		
Longth 1m Comparitor			All	91	91	0.400	1.400	0.973	0.144	0.021	0.148	1.00
			DD	91	91	0.400	1.400	0.973	0.144	0.021	0.148	1.00
			UGDD	64	64	0.800	1.115	1.009	0.054	0.003	0.054	1.00
			Surface DD	27	27	0.400	1.400	0.888	0.230	0.053	0.259	1.00
			RC									1.00
			RAB									1.00
			RC/DD	91	91	0.400	1.400	0.973	0.144 5	0.021	0.148	1.00

# Figure 17 Descriptive Statistics for Domain 17 and sub-domains 1701 and 1702 (Footwall Lode - Main Fault Block)

![](_page_53_Picture_0.jpeg)

		DESCRIPTIVE STATISTICS OF INPUT DATA											
TOUAHHI UN	IDERGROUM	D RESOUR	RCE MODEL		DOMAIN: er lirt#4 Nator:								
Date:			Jun-	2006	SURFCO	DE:							
Tariable	Presie	Tay Cal	Bala	Rocker of	Const	History	Hezimu	Henn	Std Daw	Terience	Casff	Detemine	
			Tarrisi	Samples			- 4/2	qft	4/t	4/12	af Tar	Camp.	
AvRau		Uncut	All	278	278	0.005	\$0.000	5.723	11.289	127.451	1.973		
		Uncut	DD	64	64	0.010	77.100	6.550	14.426	208.114	2.202		
		Uncut	UGDD	26	26	0.010	57.900	8.875	16.115	259.684	1.816		
		Uncut	Surface DD	38	38	0.010	77.100	4.960	12.907	166.600	2.602		
		Uncut	RC	214	214	0.005	\$0.000	5.475	10.152	103.062	1.854		
		Uncut	RAB										
		Uncut	RC/DD	278	278	0.005	\$0.000	5.723	11.289	127.451			
Au 1m Comparitor		Uncut	All	273	273	0.005	80.000	5.185	10.358	107.284	1.998	1.00	
		Uncut	DD	59	59	0.010	77.100	4.130	11.008	121.180	2.665	1.00	
		Uncut	UGDD	29	29	0.010	23.976	2.319	5.672	32.176	2.446	1.00	
		Uncut	Surface DD	30	30	0.010	77.100	5.881	14.177	200.982	2.411	1.00	
		Uncut	RC	214	214	0.005	\$0.000	5.475	10.152	103.062	1.854	1.00	
		Uncut	RAB									1.00	
		Uncut	RC/DD	273	273	0.005	\$0.000	5.185	10.358	107.284	1.998	1.00	
Au 1m Comparitor	8	40	RC/DD	273	273	0.005	40.000	4.791	8.192	67.113	1.710	1.00	
		30	RC/DD	273	273	0.005	30.000	4.568	7.341	53.890	1.607	1.00	
	8	25	RC/DD	273	273	0.005	25.000	4.386	6.748	45.532	1.539	1.00	
	801	Uncut	RC/DD	247	247	0.005	80.000	5.689	10.764	115.871	1.892	2.00	
	802	Uncut	RC/DD	49	49	0.005	13.500	1.100	2.302	5.301	2.094	3.00	
	801	40	RC/DD	247	247	0.005	40.000	5.253	8.479	71.892	1.614	4.00	
	802	10	RC/DD	49	49	0.005	10.000	1.028	1.943	3.775	1.890	5.00	
Doclurtorod 20x20		25	RC/DD	127	127	0.001	19.580	3.340	4.650	21.600	1.392	1.00	
Doclustored 40x40	8	25	RC/DD	63	63	0.001	16.480	3.440	4.100	16.830	1.192	1.00	
Doclurtorod 80x80	8	25	RC/DD	29	29	0.001	15.740	3.400	3.940	15.540	1.159	1.00	
Doclurtorod 160×160	8	25	RC/DD	12	12	0.070	9.370	2.950	2.960	8.740	1.003	1.00	
Doclurtorod 20x20	801	40	RC/DD	106	106	0.001	27.580	4.130	5.470	29.940	1.324	2.00	
Doclurtorod 40x40	801	40	RC/DD	54	54	0.001	16.480	4.120	4.580	20.980	1.112	3.00	
Doclurtorod 80x80	801	40	RC/DD	24	24	0.001	15.740	4.150	4.250	18.100	1.024	4.00	
Doclurtorod 160×160	801	40	RC/DD		9	0.070	10.710	4.140	3.410	11.660	0.824	5.00	
Doclurtorod 20x20	802	10	RC/DD	36	36	0.001	6.200	0.730	1.230	1.510	1.685	6.00	
Doclurtorod 40×40	802	10	RC/DD	18	18	0.010	6.200	0.970	1.430	2.030	1.474	7.00	
Doclurtorod 80x80	802	10	RC/DD	9	9	0.110	1.920	0.780	0.630	0.400	0.808	8.00	
Doclurtorod 160×160	802	10	RC/DD		5	0.110	1.500	0.650	0.550	0.300	0.846	9.00	
								·····			·····.		
Au Block Model	801	40	<b>.</b>			0.083	14.383	4.187	2.577	6.641	0.615		
	802	10				0.050	3.981	1.175	0.727	0.529			
Lonath Bau			AII	278	278	0.010	5,810	0.959	0.513	0.264	0.535		
			DD	64	64	0.010	5.810	0.823	1.059	1.121	1.286		
			UGDD	26	26	0.010	5.810	1.008	1.550	2.403	1.537		
			Surface DD		38	0.010	2.550	0.697	0.452	0.205	0.649		
			RC BAB	z14	214	1.000	1.000	1.000					
			RC/DD	278	278	0.010	5,810	0.959	0.513	0.264			
Longth 1m Comparitor			All	273	273	0.330	1.290	0.977	0.105	0.011	0.107	1.00	
			DD	59	59	0.330	1.290	0.893	0.205	0.042	0.229	1.00	
			UGDD	29	29	0.330	1.280	0.904	0.200	0.040	0.221	1.00	
			Surface DD BC	30	30 244	0.490	1.290	0.883	0.209	0.044	0.237	1.00	
			BAB		- 14	1.999	1.YYYY	1.220				1.00	
			RC/DD	273	273	0.330	1.290	0.977	0.105	0.011	0.107	1.00	

# Figure 18 Descriptive Statistics for Domain 8 and sub-domains 801 and 802 (Footwall Lode - Main Fault Block)

![](_page_54_Picture_0.jpeg)

Ravensgate					DESCRIPTIVE STATISTICS OF INPUT DATA							
YOUANMI U	NDERGROUN	D RESOU	RCE MODE	L	DOMAIN: as listed Notes:							
Date:			Jun-2	2006	SURFCO	DE:						
Tariable	Demain	Tap Cut	Data	Humber of	Count	Hisises	Maximu	Mean	Std Dev	Variance	Coeff	Datamine
		474	Type(x)	Sampler	west	att	n git	glt	glt	g/t2	of Yar	Comp.
Au Raw	24	Uncut	All	80	80	0.010	163.800	7.582	24.270	589.043	3.201	
		Uncut	DD	80	80	0.010	163.800	7.582	24.270	589.043	3.201	
		Uncut	UGDD	21	21	0.010	163.800	19,794	43.613	1,902.086	2.203	
		Uncut	Surface DD	59	59	0.010	33.800	3.092	6.294	39.614	2.035	
		Uncut	RC									
		Uncut	RAB									
		Uncut	RC/DD	80	80	0.010	163.800	7.582	24.270	589.043		
Au 1m Composites		Uncut	All	63	63	0.010	163.800	7.565	23.420	548.489	3.096	1.00
		Uncut	<u>DD</u>	63	63	0.010	163.800	7.565	23.420	548.489	3.096	1.00
		Uncut		18	18	0.010	163.800	17.663	41.047	1,684.845	2.324	1.00
		Uncut	Surface DD	45	45	0.010	27.504	3.506	6.077	36.931	1.733	1.00
		Uncut	RC									1.00
		Uncut	RAB									1.00
		Uncut	RC/DD	63	63	0.010	163.800	1.565	23.420	548.489	3.096	1.00
Au 1m Composites		60		63	63	0.010	60.000	5.625	12.83(	164.(33	2.282	1.00
		40	RC/DD	63	63	0.010	40.000	4.((4	9.483	89.931	1.981	1.00
Durlant diagona		30	RC/DD	63	63	0.010	30.000	4.231	r.805	60.323	1.816	1.00
Declustered 20x20				30	30	0.010	11.410	3.120	4.010	23,160	1.242	1.00
Declustered 40x40		30		<u> </u>	<u> </u>	0.010	11.410	2.750	4.300	24.020	1.400	1.00
Declustered 00x00		30		42	20 42	0.010	12.450	3.130	4,530	45 210	1.224	1.00
Declustered 100x100		30	- RC/DD	13	10	0.010	13.450	3.040	3.310	15.510	1.014	1.00
Au Block Model			+			0.454	7 667	2 262	1 250	1829	0.350	
As block Model			<b>†</b>			0.474	1.001		1.002	1.020	0.000	
Longth Bow			All	80	80	0 010	3 2 2 0	0.748	0 504	0.254	0.674	
Longention				80	80	0.010	3 220	0.748	0 504	0.254	0.674	
				21	21	0.300	1.000	0.812	0.267	0.071	0.329	
			Surface DD	59	59	0.010	3,220	0.715	0.563	0.317	0.788	
			BC									
			BAB						:			
			RC/DD	80	80	0.010	3.220	0.748	0.504	0.254		
Length 1m Composites			All	63	63	0.400	1.160	0.938	0.155	0.024	0.166	1.00
			DD	63	63	0.400	1.160	0.938	0.155	0.024	0.166	1.00
				18	18	0.450	1.000	0.947	0.130	0.017	0.138	1.00
			Surface DD	45	45	0.400	1.250	0.938	0.170	0.029	0.181	1.00
			RC									1.00
			RAB									1.00
			RC/DD	63	63	0.400	1.160	0.938	0.155	0.024	0.166	1.00

# Figure 19 Descriptive Statistics for Domain 24 (Hanging Wall Lode - Main Fault Block)

![](_page_55_Picture_0.jpeg)

			DES	CRIPTIV	E STAT	ISTICS O	F INPUT D.	ATA				
YOUANMI U	NDERGROUN	D RESOU	RCE MODE	L	DOMAIN: as listed Notes: SURFCODE:							
Date:			Jun-2	2006	SURFCO	DE:					•••••	
Tariable	Demain	Tap Cut	Data	Humber of	Count	Hisises	Maximu	Mean	Std Der	Variance	Coeff	Datamine
		als.	Type(x)	Sampler	ured	qft	m g/t	glt	glt	g/t2	of Yar	Comp.
Au Baw	41	Uncut	All	17	17	0.010	28.000	6.447	10.137	102.763	1.572	
		Uncut	DD	17	17	0.010	28.000	6.447	10.137	102.763	1.572	
		Uncut	UGDD									
		Uncut	Surface DD	17	17	0.010	28.000	6.447	10.137	102.763	1.572	
		Uncut	RC									
		Uncut	RAB									
		Uncut	RC/DD	17	17	0.010	28.000	6.447	10.137	102.763		
Au 1m Composites		Uncut	All	12	12	0.010	28.000	6.004	10.007	100.148	1.667	1.00
		Uncut	DD	12	12	0.010	28.000	6.004	10.007	100.148	1.667	1.00
		Uncut	UGDD									1.00
		Uncut	Surface DD	12	12	0.010	28.000	6.004	10.007	100.148	1.667	1.00
		Uncut	RC									1.00
		Uncut	RAB									1.00
		Uncut	RC/DD	12	12	0.010	28.000	6.004	10.007	100.148	1.667	1.00
Au 1m Composites		20	RC/DD		12	0.010	20.000	4.674	7.109	50.536	1.521	1.00
			RC/DD									1.00
			RC/DD									1.00
Declustered 20x20		20	RC/DD	10	10	0.010	20.000	5.190	7.610	57.930	1.466	1.00
Declustered 40x40		20	RC/DD	10	10	0.010	20.000	5.190	7.610	57.930	1.466	1.00
Declustered 80x80		20	RC/DD	7	7	0.010	9.440	3.410	3.460	11.990	1.015	1.00
Declustered 160x160		20	RC/DD	4	4	0.220	8.060	3.540	3.300	10.900	0.932	1.00
Au Block Model		20				1,230	10,725	5.082	2.020	4.082	0.398	
Length Raw			All	17	17	0.020	1.800	0.654	0.460	0.212	0.704	
-			DD	17	17	0.020	1.800	0.654	0.460	0.212	0.704	
			UGDD									
			Surface DD	17	17	0.020	1.800	0.654	0.460	0.212	0.704	
			RC									
			RAB									
			RC/DD	17	17	0.020	1.800	0.654	0.460	0.212		
Length 1m Composites			All	12	12	0.550	1.300	0.927	0.203	0.041	0.220	1.00
			DD	12	12	0.550	1.300	0.927	0.203	0.041	0.220	1.00
			UGDD									1.00
			Surface DD	12	12	0.550	1.300	0.927	0.203	0.041	0.220	1.00
			RC									1.00
			RAB									1.00
			I RC/DD	12	12	0.550	1.300	0.927	0.203	0.041	0.220	1.00

# Figure 20 Descriptive Statistics for Domain 41 (Hanging Wall Lode - Main Fault Block)

![](_page_56_Picture_0.jpeg)

	Ravense		DESCRIPTIVE STATISTICS OF INPUT DATA									
YOUANMI UN	DERGROUN	D RESOU	RCE MODE	L	DOMAIN	as listed			Notes:			
Date:			Jun-2	2006	SURFCO	DE:					•••••	
Tariable	Demain	Tap Cut	Data	Humber of	Count	Hisiana	Maximu	Mean	Std Der	Variance	Coeff	Datamine
		alt	Type(r)	Sampler	ured	alt	n git	glt	glt	g/t2	of Yar	Comp.
Au Raw	53	Uncut	All	435	435	0.005	60.300	4.496	8.760	76.739	1.949	
		Uncut	DD	33	33	0.010	13.350	2.442	3.302	10.905	1.352	
		Uncut	UG DD									
		Uncut	Surface DD	33	33	0.010	13.350	2.442	3.302	10.905	1.352	
		Uncut	RC	397	397	0.005	60.300	4.700	9.093	82.691	1.935	
		Uncut	RAB	5	5	1.360	3.160	1.832	0.675	0.455	0.368	
		Uncut	RC/DD	430	430	0.005	60.300	4.527	8.806	77.543		
Au 1m Composites		Uncut	All	432	432	0.005	60.300	4.438	8.774	76.983	1.977	1.00
		Uncut	DD	26	26	0.010	6.580	1.631	1.771	3.136	1.086	1.00
		Uncut	UG DD									1.00
		Uncut	Surface DD	26	26	0.010	6.580	1.631	1.771	3.136	1.086	1.00
		Uncut	RC	401	401	0.005	60.300	4.653	9.060	82.083	1.947	1.00
		Uncut	RAB	5	5	1.360	3.160	1.832	0.675	0.455	0.368	1.00
		Uncut	RC/DD	427	427	0.005	60.300	4.469	8.820	77.798	1.974	1.00
Au 1m Composites		42	All	432	432	0.005	42.000	4.350	8.298	68.864	1.908	1.00
·		38	All	432	432	0.005	38.000	4.275	7.970	63.515	1.864	1.00
		35	All	432	432	0.005	35.000	4.206	7.684	59.045	1.827	1.00
Declustered 20x20		35	All	125	125	0.001	20.240	2.620	3.460	11.980	1.321	1.00
Declustered 40x40		35	All	59	59	0.001	20.240	2.760	3.310	10.980	1.199	1.00
Declustered 80x80		35	All	28	28	0.040	7.420	2.540	2.030	4.140	0.799	1.00
Declustered 160x160		35	All	13	13	0.040	6.580	2.570	1.930	3.740	0.751	1.00
Au Block Model		35				0.176	10.682	2.447	1.626	2.643	0.664	
Length Raw			All	435	435	0.050	3.000	0.992	0.189	0.036	0.191	
-			DD	33	33	0.050	2.750	0.771	0.487	0.237	0.632	
			UG DD									
			Surface DD	33	33	0.050	2.750	0.771	0.487	0.237	0.632	
			RC	397	397	1.000	3.000	1.010	0.123	0.015	0.121	
			RAB	5	5	1.000	1.000	1.000			-	
			RC/DD	430	430	0.050	3.000	0.992	0.190	0.036		
Length 1m Composites			All	432	432	0.530	1.100	0.998	0.033	0.001	0.033	1.00
			DD	26	26	0.530	1.100	0.963	0.131	0.017	0.136	1.00
			UG DD									1.00
			Surface DD	26	26	0.530	1.100	0.963	0.131	0.017	0.136	1.00
			RC	401	401	1.000	1.000	1.000			-	1.00
			RAB	5	5	1.000	1.000	1.000			-	1.00
			RC/DD	427	427	0.530	1.100	0.998	0.034	0.001	0.034	1.00

# Figure 21 Descriptive Statistics for Domain 53 (Main Lode - Pollard Fault Block)

![](_page_57_Picture_0.jpeg)

	Ravense		DESCRIPTIVE STATISTICS OF INPUT DATA									
YOUANMI U	DERGROUN	D RESOU	RCE MODEI	L	DOMAIN	: as listed			Notes:			
Date:			Jun-2	2006	SURFCO	DE:						
Tariable	Demain	Tup Cut	Data	Humber of	Caust	Hisiana	Mazimu	Mean	Std Dev	Variance	Coeff	Datamine
		alt	Type(x)	Sampler	ared	alt	n git	glt	glt	g/t2	of Yar	Comp.
Au Raw	42	Uncut	All	336	336	0.005	110.500	3.868	9.254	85.645	2.392	
		Uncut	DD	17	17	0.010	110.500	14.116	26.519	703.258	1.879	
		Uncut	UG DD									
		Uncut	Surface DD	17	17	0.010	110.500	14.116	26.519	703.258	1.879	
		Uncut	RC	315	315	0.005	69.700	3.363	6.877	47.298	2.045	
		Uncut	RAB	4	4	0.005	0.250	0.091	0.094	0.009	1.030	
		Uncut	RC/DD	332	332	0.005	110.500	3.914	9.301	86.503		
Au 1m Composites		Uncut	All	356	356	0.005	110.500	3.827	9.366	87.727	2.447	1.00
		Uncut	DD	15	15	0.200	110.500	20.159	28.151	792.455	1.396	1.00
		Uncut	UG DD									1.00
		Uncut	Surface DD	15	15	0.200	110.500	20.159	28.151	792.455	1.396	1.00
		Uncut	RC	337	337	0.005	69.700	3.144	6.700	44.896	2.131	1.00
		Uncut	RAB	4	4	0.005	0.250	0.091	0.034	0.009	1.030	1.00
		Uncut	RC/DD	352	352	0.005	110.500	3.869	9.411	88.564	2.432	1.00
Au 1m Composites		40	All	356	356	0.005	40.000	3,520	6.992	48.893	1.986	1.00
		30	All	356	356	0.005	30.000	3.373	6.310	39.813	1.870	1.00
		25	All	356	356	0.005	25.000	3.263	5.874	34.499	1.800	1.00
Declustered 20x20		25	All	116	116	0.001	25.000	2.480	4.220	17.800	1.702	1.00
Declustered 40x40		25	All	56	56	0.001	25.000	2.650	4.150	17.180	1.566	1.00
Declustered 80x80		25	All	24	24	0.010	17.580	2.340	3.660	13.430	1.564	1.00
Declustered 160x160		25	All	12	12	0.020	6.220	1.780	1.810	3.270	1.017	1.00
Au Block Model		25				0.028	13.269	2.649	2.225	4.952	0.840	
Length Raw			All	336	336	0.050	23.000	1.061	1.204	1.451	1.135	
			DD	17	17	0.050	2.000	0.915	0.513	0.270	0.568	
			UG DD									
			Surface DD	17		0.050	2.000	0.915	0.513	0.270	0.568	
			RC	315	315	1.000	23.000	1.070	1.238	1.532	1.157	
			RAB	4	4	1.000	1.000	1.000			-	
			RC/DD	332	332	0.050	23.000	1.062	1.212	1.468		
Length 1m Composites			<u>All</u>	356	356	1.000	1.200	1.002	0.013	0.000	0.013	1.00
			DD	15	15	1.000	1.200	1.037	0.050	0.002	0.048	1.00
			UG DD									1.00
			Surface DD	15		1.000	1.200	1.037	0.050	0.002	0.048	1.00
			RC	337	337	1.000	1.000	1.000			-	1.00
			RAB	4	4	1.000	1.000	1.000			-	1.00
			RC/DD	352	352	1.000	1.200	1.002	0.013	0.000	0.013	1.00

# Figure 22 Descriptive Statistics for Domain 42 (Footwall Lode - Pollard Fault Block)

![](_page_58_Picture_0.jpeg)

		DESCRIPTIVE STATISTICS OF INPUT DATA										
YOUANMI UN	DERGROUN	D RESOU	RCE MODEI	L	DOMAIN	: as listed			Notes:			
Date:			Jun-2	2006	SURFCO	DE:						
Tariable	Demain	Tup Cut	Data	Humber of	Caust	Hisiana	Mazimu	Mean	Std Dev	Variance	Coeff	Datamine
		att	Type(x)	Sempler	west	alt	m g/t	glt	glt	g/t2	of Yar	Comp.
Au Baw	2	Uncut	All	26	26	0.010	24.870	4.052	7.936	62.975	1.959	
		Uncut	DD	25	25	0.010	24.870	4.203	8.056	64.896	1.917	
		Uncut	UG DD									
		Uncut	Surface DD	25	25	0.010	24.870	4.203	8.056	64.896	1.917	
		Uncut	RC	1	1							
		Uncut	RAB									
		Uncut	RC/DD	26	26	0.010	24.870	4.052	7.936	62.975		
Au 1m Composites		Uncut	All	16	16	0.010	24.870	2.560	6.217	38.647	2.428	1.00
		Uncut	DD	15	15	0.010	24.870	2.713	6.391	40.847	2.356	1.00
		Uncut	UG DD									1.00
		Uncut	Surface DD	15		0.010	24.870	2.713	6.391	40.847	2.356	1.00
		Uncut	RC	1								1.00
		Uncut	RAB	45		0.040	04.030	0.540		00.643		1.00
1.1.0		Uncut	RC/DD	16	16	0.010	24.810	2,560	6.21(	38.641	2.420	1.00
Au în Composites		20	RC/DD	10	16	0.010	20.000	2.255	5,143	20,400	2.200	1.00
		10		10	10	0.010	10.000	1.631	3,103	10.134	1.352	1.00
Dustration discussion		40	RCIDD	40	40	0.040	10,000	1 900	2 470	12 040	1006	1.00
Declustered 20x20		10		10	10	0.010	10.000	2 350	3.410	14 740	1634	1.00
Declustered 40x40		10		7	7	0.010	5 130	1870	2 070	4 280	1 107	1.00
Declustered (60x160		10		6	6	0.000	5 130	1670	1840	4.200	1 102	1.00
Declastered looxido				······	×	0.000			1.040		1.106	
An Block Model		10				0.523	3 555	2 3 9 6	0.548	0.300	0.229	
Length Raw			All	26	26	0.030	2.180	0.482	0.463	0.214	0.961	
<b>j</b>			DD	25	25	0.030	2.180	0.461	0.460	0.212	0.998	
			UGDD						1			
			Surface DD	25	25	0.030	2.180	0.461	0.460	0.212	0.998	
			RC	1	1	1.000	1.000	1.000			-	
			RAB									
			RC/DD	26	26	0.030	2.180	0.482	0.463	0.214		
Length 1m Composites			All	16	16	0.340	1.090	0.783	0.275	0.076	0.351	1.00
			DD	15	15	0.340	1.090	0.769	0.278	0.077	0.362	1.00
			UG DD									1.00
			Surface DD	15	15	0.340	1.090	0.769	0.278	0.077	0.362	1.00
			RC			1.000	1.000	1.000				1.00
			RAB									1.00
			RC/DD	16	16	0.340	1.090	0.783	0.275	0.076		

# Figure 23 Descriptive Statistics for Domain 2 (Hanging Wall Lode - Pollard Fault Block)

![](_page_59_Picture_0.jpeg)

	Ravensgate						DESCRIPTIVE STATISTICS OF INPUT DATA								
YOUANMI UP	DERGROUN	D RESOU	RCE MODE	L	DOMAIN	: as listed			Notes:						
Date:			Jun-2	2006	SURFCO	DE:									
Variable	Demain	Tap Cut	Data	Humber of	Caust	Hisises	Mazimu	Mean	Std Dev	Variance	Coeff	Datamine			
		att	Type(r)	Sampler	ared	att	n git	glt	glt	g/t2	of Yar	Comp.			
Au Baw	35	Uncut	All	82	82	0.005	44.000	4.940	10.158	103.176	2.056				
		Uncut	DD	23	23	0.020	32.450	10.630	12.316	151.685	1.159				
		Uncut	UG DD												
		Uncut	Surface DD	23	23	0.020	32,450	10.630	12.316	151.685	1.159				
		Uncut	RC	59	59	0.005	44.000	2.722	8.169	66.727	3.001				
		Uncut	RAB												
		Uncut	RC/DD	82	82	0.005	44.000	4.940	10.158	103.176					
Au 1m Composites		Uncut	All	75	75	0.005	44.000	3.800	8.872	78.719	2.335	1.00			
		Uncut	DD	16	16	0.020	32.450	7.776	10.141	102.845	1.304	1.00			
		Uncut	UG DD									1.00			
		Uncut	Surface DD	16	16	0.020	32.450	7.776	10.141	102.845	1.304	1.00			
		Uncut	RC	59	59	0.005	44.000	2.722	8.169	66.727	3.001	1.00			
		Uncut	RAB									1.00			
		Uncut	RC/DD	75		0.005	44.000	3.800	8.872	78.719	2.335	1.00			
Au 1m Composites		33	RC/DD			0.005	33.000	3.547	7.835	61.393	2.209	1.00			
		25	RC/DD	75		0.005	25.000	3.214	6.673	44.533	2.076	1.00			
		18	RC/DD	75		0.005	18.000	2.758	5.261	27.680	1.908	1.00			
Declustered 20x20		18	RC/DD	42	42	0.001	18.000	1.360	3.860	14.830	1.363	1.00			
Declustered 40x40		18	RC/DD	25		0.020	18.000	2,510	4.430	19.660	1.765	1.00			
Declustered 80x80		18	RC/DD	12		0.020	18.000	4.250	5.630	31.730	1.325	1.00			
Declustered 160x160		18	RC/DD		ь	0.170	11.640	4.620	4.260	18.140	0.922	1.00			
							44,000			E 054					
Au Block Model		18				0.183	14.333	2.641	2,413	5.851	0.316	••••••			
Los est. Deux						0.050	4 9 9 9	0 000	0.047	0.064	0.070	•••••			
Length Haw			<u>0</u>	02	0 <u>4</u>	0.050	1.300	0.300	0.241	0.061	0.213				
				20	20	0.050	1.300	0.612	0.315	0.141	0.553				
			Surface DD			0.050	1300	0.679	0.375	0.141	0.559				
			DC DC	ev 59	E9	1,000	1.000	1000	0.010		0.333				
			DAR DAR			1.000	1.000	1.000				•••••			
			BC/DD	82	82	0.050	1300	0.908	0.247	0.061		•••••			
Length Im Composites			All	75	75	0.400	1 100	0.993	0.070	0.005	0 070	100			
congar in compositos				16	16	0.400	1,100	0.966	0.148	0.022	0.154	1.00			
			UG DD	,		0.400			0.140	v.ves.	Y.187	1.00			
			Surface DD	16	16	0.400	1,100	0.966	0.148	0.022	0.154	1.00			
			BC	59	59	1.000	1.000	1.000	20,72			1.00			
			BAB	1								1.00			
			RC/DD	75	75	0.400	1.100	0.993	0.070	0.005	0.070	1.00			

# Figure 24 Descriptive Statistics for Domain 35 (Hanging Wall Lode - Pollard Fault Block)

![](_page_60_Picture_0.jpeg)

	Ravense		DESCRIPTIVE STATISTICS OF INPUT DATA									
YOUANMI UN	DERGROUN	D RESOU	RCE MODEI	L	DOMAIN	: as listed			Notes:			
Date:			Jun-2	2006	SURFCO	DE:						
Tariable	Demain	Tap Cut	Data	Humber of	Gaust	Hisimon	Mazimu	Mean	Std Der	Variance	Coeff	Datamine
		alt	Type(x)	Sampler	west	4/1	m g/t	glt	glt	g/t2	of Yar	Comp.
Au Baw	47	Uncut	All	17	17	0.010	17.500	3.702	5.539	30.679	1.496	
		Uncut	DD	12	12	0.010	17.500	4.217	6.269	39.306	1.487	
		Uncut	UG DD									
		Uncut	Surface DD	12	12	0.010	17.500	4.217	6.269	39.306	1.487	
		Uncut	RC									
		Uncut	RAB									
		Uncut	RC/DD	17	17	0.010	17.500	3.702	5.539	30.679		
Au 1m Composites		Uncut	All	15	15	0.010	17.500	2.367	4.530	21.064	1.939	1.00
		Uncut	DD	10	10	0.010	17.500	2.318	5.261	27.683	2.270	1.00
		Uncut	UG DD									1.00
		Uncut	Surface DD	10	10	0.010	17.500	2.318	5.261	27.683	2.270	1.00
		Uncut	RC									1.00
		Uncut	RAB									1.00
		Uncut	RC/DD	15	15	0.010	17.500	2.367	4.590	21.064	1.939	1.00
Au 1m Composites		8	RC/DD	15	15	0.010	8.000	1.734	2.741	7.511	1.581	1.00
			RC/DD									1.00
			RC/DD									1.00
Declustered 20x20		8	RC/DD	13	13	0.010	8.000	2.000	2.850	8.140	1.425	1.00
Declustered 40x40		8	RC/DD	11	11	0.010	8.000	2.330	2.990	8.920	1.283	1.00
Declustered 80x80		8	RC/DD	8	8	0.010	6.700	2.630	2.610	6.810	0.992	1.00
Declustered 160x160		8	RC/DD	5	5	0.010	4.910	2.120	2.030	4.140	0.958	1.00
Au Block Model		8				1.216	3.822	2.064	0.566	0.320	0.274	
Length Raw			<u>^</u>			0.160	3.250	0.865	0.669	0.448	0.113	
				12	12	0.160	3.250	0.809	0.130	0.624	0.916	
					4.0							
			Surface DD	12	12	0.160	3.250	0.809	0.130	0.624	0.316	
			RC RC									
			RAD		49							
			RUYDD	10		0.160	3.250	0.865	0.663	0.448		4.00
Length Im Composites			<u></u>	<u>.</u>	15	0.400	1.300	0.361	0.135	0.038	0.138	1.00
				10	10	0.400	1.300	0.311	0.230	0.051	0.245	1.00
				40	40	0.400	1200	0.974	0.029	0.057	0.045	1.00
			DC	10	10	0.400	1.300	0.311	0.238	0.051	0.245	1.00
												1.00
			BOUDD	45	45	0.400	1202	0.004	0.495	0.000	0 490	1.00
			I RC/DD	15 :	15	0.400 3	1.300 3	0.381	: 0.185 (	0.038	0.198 3	1.00

# Figure 25 Descriptive Statistics for Domain 47 (Hanging Wall Lode - Pollard Fault Block)

![](_page_61_Picture_0.jpeg)

		DESCRIPTIVE STATISTICS OF INPUT DATA										
YOUANMI UNI	DERGROUN	D RESOU	RCE MODEL		DOMAIN	: as listed			Notes:			
Date:			Jun-2	2006	SURFCO	DE:						
Tariable	Demain	Tap Cut	Data	Humber of	Count	Hisiman	Mazimu	Mean	Std Dev	Variance	Coeff	Datamine
		alt	Type(r)	Sampler	ured	4/5	m g/t	glt	g/t	g/t2	of Yar	Comp.
Au Baw	10	Uncut	All	355	355	0.005	89.500	5.030	9.487	90.003	1.886	
		Uncut	DD	318	318	0.005	89.500	5.471	9.918	98.371	1.813	
		Uncut	UG DD	186	186	0.005	89.500	6.362	11.233	126.187	1.766	
		Uncut	Surface DD	132	132	0.010	62.300	4.214	7.515	56.477	1.783	
		Uncut	RC	37	37	0.005	4.100	1.239	1.429	2.042	1.154	
		Uncut	RAB									
		Uncut	RC/DD	355	355	0.005	89.500	5.030	9.487	90.003		
Au 1m Composites		Uncut	All	310	310	0.005	67.917	4.774	9.133	83.415	1.913	1.00
		Uncut	DD	273	273	0.005	67.917	5.253	9.619	92.521	1.831	1.00
		Uncut	UG DD	183	183	0.005	67.917	5.538	10.219	104.437	1.845	1.00
		Uncut	Surface DD	91	91	0.010	62.300	4.627	8.200	67,239	1.772	1.00
		Uncut	RC	37	37	0.005	4.100	1.239	1.429	2.042	1.154	1.00
		Uncut	RAB									1.00
		Uncut	RC/DD	310	310	0.005	67.917	4.774	9.133	83.415	1.913	1.00
Au 1m Composites		60	RC/DD	310	310	0.005	60.000	4.741	8,919	79.555	1.881	1.00
		40	RC/DD	310	310	0.005	40.000	4.559	7.985	63,753	1.752	1.00
		30	RC/DD	310	310	0.005	30.000	4.346	7.132	50.861	1.641	1.00
Declustered 20x20		30	RC/DD	71	71	0.001	27.650	4.410	5.900	34.790	1.338	1.00
Declustered 40x40		30	RC/DD	37	37	0.010	20.950	3.970	5.130	26.270	1.292	1.00
Declustered 80x80		30	RC/DD	22	22	0.010	8.480	3.090	2.590	6.690	0.838	1.00
Declustered 160x160		30	RC/DD	10	10	0.010	5.350	2.970	2.160	4.680	0.727	1.00
An Block Medal		30				0 009	10 512	4 221	9 5 9 4	6 271	0.582	
							12.010		E.964	0.011		
Length Raw			All	355	355	0.010	8.700	0.862	0.821	0.674	0.953	
			DD	318	318	0.010	8,700	0.845	0.866	0.750	1.024	
			UGDD	186	186	0.050	8.700	0.969	0.966	0.933	0.996	
			Surface DD	132	132	0.010	7.200	0.671	0.664	0.441	0.990	
			RC	37	37	1.000	1.000	1.000			-	
			RAB						Î			
			RC/DD	355	355	0.010	8.700	0.862	0.821	0.674		
Length 1m Composites			All	310	310	0.400	1.450	0.987	0.085	0.007	0.086	1.00
			DD	273	273	0.400	1.450	0.985	0.090	0.008	0.092	1.00
			UGDD	183	183	0.400	1.450	0.985	0.093	0.009	0.095	1.00
•			Surface DD	91	91	0.620	1.300	0.973	0.080	0.006	0.083	1.00
•			RC	37	37	1.000	1.000	1.000			-	1.00
•			RAB				1		Î			1.00
•			RC/DD	310	310	0.400	1.450	0.987	0.085	0.007	0.086	1.00

# Figure 26 Descriptive Statistics for Domain 10 (Main Lode - Hill End Fault Block)

![](_page_62_Picture_0.jpeg)

		DESCRIPTIVE STATISTICS OF INPUT DATA										
YOUANMI UN	DERGROUN	D RESOU	RCE MODE	L	DOMAIN	: as listed			Notes:			
Date:			Jun-2	2006	SURFCO	DE:						
Tariable	Demain	Tup Cut	Data	Humber of	Count	Hisises	Maximu	Mean	Std Der	Variance	Coeff	Datamine
		475	Type(r)	Sampler	west	474	m g/t	glt	glt	g/t2	of Yar	Comp.
Au Raw	19	Uncut	All	48	47	0.010	95.500	6.466	14.384	206.889	2.224	
		Uncut	DD	48	47	0.010	95.500	6.466	14.384	206.889	2.224	
		Uncut	UGDD	[								
		Uncut	Surface DD									
		Uncut	RC									
		Uncut	RAB									
		Uncut	RC/DD	48	47	0.010	95,500	6.466	14.384	206.889		
Au 1m Composites		Uncut	All	44		0.010	50.325	5.358	9.010	81.183	1.682	1.00
		Uncut	DD	44	44	0.010	50.325	5.358	9.010	81.183	1.682	1.00
		Uncut	UGDD									1.00
		Uncut	Surface DD									1.00
		Uncut	RC									1.00
		Uncut	RAB									1.00
		Uncut	RC/DD	44	44	0.010	50.325	5.358	9.010	81.183	1.682	1.00
Au 1m Composites		25	RC/DD	44.		0.010	25.000	4.782	6.608	43.665	1.382	1.00
			RC/DD	<b>.</b>								1.00
Destance data an			RC/DD				45 430	4 000			4 400	1.00
Declustered 20x20		25	RC/DD		<u></u>	0.260	15,410	4.030	4.410	20.020	1.103	1.00
Declustered 40x40		23	RC/DD			0.260	15,410	3.000	4.000	20,230	1.220	1.00
Declustered ouxou Declustered 45 Out5 O		23		ł		0.200	15,410	4.100	4.040	23,400	0.770	1.00
Declustered 100x100		دع	- BCrDD	+ <b>+</b>	4.	0.200	5.530	2.520	1.340	3.100	0.110	1.00
Au Block Model		25	<b>†</b>	t		1.367	12.691	4.201	2,269	5.150	0.540	
			1	1								
Length Raw			All	48	48	0.050	9.200	0.881	1.263	1.596	1.434	
-			DD	48	48	0.050	9.200	0.881	1.263	1.596	1.434	
			UGDD	I								
			Surface DD	I								
			RC	[								
			RAB									
			RC/DD	48	48	0.050	9.200	0.881	1.263	1.596		
Length 1m Composites			All	44	44	0.460	1.014	0.961	0.117	0.014	0.121	1.00
			DD	44	44	0.460	1.014	0.961	0.117	0.014	0.121	1.00
			UGDD	Ì								1.00
			Surface DD									1.00
			RC									1.00
			RAB									1.00
			RC/DD			0.460	1.014	0.961	0.117	0.014	0.121	1.00
				<b>.</b>								

# Figure 27 Descriptive Statistics for Domain 19 (Hanging Wall Lode - Hill End Fault Block)

![](_page_63_Picture_0.jpeg)

			DES	CRIPTIY	E STAT	ISTICS OF	F INPUT DA	ATA				
YOUANMI UN		DOMAIN	: as listed			Notes:						
Date:			Jun-2	2006	SURFCO	DE:						
Tariable	Demain	Tup Cut	Data	Humber of	Count	Hisises	Mazimu	Mean	Std Der	Variance	Coeff	Datamine
		als	Type(r)	Sampler	ared	att	n glt	glt	glt	g/t2	of Yar	Comp.
Au Raw	48	Uncut	All	37	37	0.010	40.900	5.162	8.762	76.770	1.697	
		Uncut	DD	36	36	0.010	40.900	5.296	8.845	78.239	1.670	
		Uncut	UG DD									
		Uncut	Surface DD	36	36	0.010	40.900	5.296	8.845	78.239	1.670	
		Uncut	RC	1	1							
		Uncut	RAB									
		Uncut	RC/DD	37	37	0.010	40.900	5.162	8.762	76.770		
Au 1m Composites		Uncut	All	25	25	0.010	26.193	3.755	5.762	33.198	1.534	1.00
		Uncut	DD	24	24	0.010	26.193	3.897	5.837	34.075	1.498	1.00
		Uncut	UG DD									1.00
		Uncut	Surface DD	24	24	0.010	26.193	3.897	5.837	34.075	1.498	1.00
		Uncut	RC	1	1							1.00
		Uncut	RAB									1.00
		Uncut	RC/DD	25	25	0.010	26.193	3.755	5.762	33.198	1.534	1.00
Au 1m Composites		20	RC/DD	25	25	0.010	20.000	3.507	4.853	23.553	1.384	1.00
			RC/DD									1.00
			RC/DD									1.00
Declustered 20x20		20	RC/DD	18	18	0.010	12.330	3.310	3.700	13.710	1.118	1.00
Declustered 40x40		20	RC/DD	14	14	0.010	8.560	3.000	2.720	7.380	0.907	1.00
Declustered 80x80		20	RC/DD	9	9	0.340	6.710	2.960	2.170	4.690	0.733	1.00
Declustered 160x160		20	RC/DD	6	6	1.160	6.160	3.090	1.580	2.500	0.511	1.00
Au Block Model		20				0.746	8.384	3.936	1.958	3.833	0.497	
Length Raw			All	37	37	0.050	1.600	0.604	0.409	0.167	0.677	
			DD	36	36	0.050	1.600	0.593	0.409	0.167	0.690	
			UG DD									
			Surface DD	36	36	0.050	1.600	0.593	0.409	0.167	0.690	
			RC	1	1	1.000	1.000	1.000			-	
			RAB									
			RC/DD	37	37	0.050	1.600	0.604	0.409	0.167		
Length 1m Composites			All	25	25	0.400	1.400	0.894	0.195	0.038	0.218	1.00
			DD	24	24	0.400	1.400	0.889	0.198	0.039	0.223	1.00
			UG DD									1.00
			Surface DD	24	24	0.400	1.400	0.889	0.198	0.039	0.223	1.00
			RC	1	1	1.000	1.000	1.000			-	1.00
			RAB									1.00
			RC/DD	25	25	0.400	1.400	0.894	0.195	0.038	0.218	1.00

# Figure 28 Descriptive Statistics for Domain 48 (Hanging Wall Lode - Hill End Fault Block)

The gold distribution within the Main Lode (Domain=10,401,402,53), and defined footwall and hanging wall domains at the Youanmi Deeps Underground areas generally has high coefficient of variation; which required top cut application to reduce the overall coefficient of variation values, and improve quality of block model interpolation calculations.

# 17.4 Variography

# Principles of variography

The objectives of variography are to determine the major directions of geological or grade continuity within a deposit, and to provide key variogram parameters for geostatistical grade interpolation. The experimental semi-variogram (commonly referred to as the variogram) is the basic diagnostic tool of spatial geostatistics. It is a mathematical function used to quantify the spatial variation and correlation of sample grades in various directions within a deposit. The variogram calculation is similar to generalised variance determination and it is arithmetically simple. The differences between pairs of sample values at a particular distance apart are squared and this is repeated for increasing distances for all samples within a homogeneous zone. Ultimately, the variogram values plotted are the sum of the squared differences divided by twice the number of pairs.

The experimental variogram can incorporate several important geological characteristics of a deposit. In practical application of the experimental variogram, the information conveyed must be quantified, ideally by fitting a smooth curve (called a variogram model) to the experimental variogram data points. The modelled variogram is based on numerical equations (typically 'spherical', 'Gaussian', 'cubic', 'linear' or 'exponential') and the numerical parameters derived from these are used to control various factors of geostatistical grade interpolation.

![](_page_64_Picture_0.jpeg)

The variogram is based on a variance function, and ideally the variances generally defined should be positive. Consequently, all values calculated from it should be positive. Ideally, it is best to use a model that represents the spatial variation in the ore deposit under review. For typical gold and base metal deposits the spherical scheme model is most widely used.

In the case of data with high variability from highly skewed distributions (such as gold grades), pair-wise relative variograms may be used. This requires that the square of the difference of each pair is standardised to the square of the mean of the pair of values. This calculation involves dividing half the squared differences of sample pairs by the square of the mean of the same sample pair.

# Principles of continuity criteria for selection of variogram models

When examining large numbers of experimental variograms to identify the directions of continuity in the deposit, it is good practice to reject variograms of minor structural importance. The selection criteria used during analysis of variograms (to establish the major directions of continuity in a deposit) usually need to consider:

- recognisable variogram structures
- low nugget to sill ratios
- sufficient number of pairs for variogram calculation
- good continuity shown by the longer ranges of the variograms

In general, 3-D spherical models derived from variograms characterise the spatial variation within most deposits according to the following principal directions:

- major axis (in the major direction of the plunge of the mineralisation)
- semi-major axis (perpendicular to the major axis but still in the plane of the mineralisation)
- minor axis (in the direction across the dip of the ore zone).

Variogram modelling is a critical part of the geostatistical study. Variogram structures must be discerned by informed use of the data. This entails flagging the samples to separate geological structures so that separate variograms can be calculated for each structure. It is also desirable to define appropriate geological, geographical and statistically homogeneous zones, whilst also identifying outliers and assessing their associated effects.

![](_page_65_Picture_0.jpeg)

# Methods adopted for the Youanmi Deeps Underground Deposit

A set of down-hole variograms was generated using the DATAMINE Studio programme VGRAM and VARFIT functions for all available domains at the Youanmi Deeps Underground Deposit. All the variograms were calculated and developed using the 1m down-hole composite set for each respective deposit area. These are included in Appendix B.

	Ravensgate YOUANMI UNDERGROUND RESOURCE MODEL gu0606m.dm												VAF	logr	AM P	ARAN	METER TA	ABLE	
YOUANMI U	NDEF	RGRO	UNDI	RESC	URCE	: МО	ODEL ju0606m.dm Notes:												
Date:	J	une-O	6																
AREA	VREFNUM	VANGLET	VANGLE2	VANGLE3	VAXISI	VAXIS2	VAXIS3	NUGGET	STI	STIPARI	STIPAR2	STIPAR3	STIPAR4	ST2	ST2PARI	ST2PAR2	ST2PAR3	ST2PAR4	TOTAL VARIANCE NUGGET
		axis 1	axis 2	axis 3	axis 1	axis 2	axis 3	Nugget	1st Structure Spherical	pri. axis (x)	sec. axis (y)	ter. axis (2)	variance	2nd Structure Spherical	pri. axis (x)	sec. axis (y)	ter. axis (z)	variance	
		/	otatior	7	101	ation a	anis												i
YOUANMIUG																	i		
YOUANMIUG	401	65	-50	20	3	1	2	63.40	1	20.0	20.0	10.0	44.00	1	75.0	75.0	25.0	37.30	144.70 44%
YOUANMIUG	402	-25	40	25	3	2	1	3.70	1	80.0	80.0	25.0	6.90						10.60 35%
YOUANMIUG	6	-20	50	10	3	2	1	31.20	1	20.0	20.0	10.0	24.800	1	75.0	75.0	25.0	44.200	100.200 31%
YOUANMIUG	801	0	50	10	3	2	1	28.600	1	20.0	20.0	10.0	29.700	1	62.5	62.5	25.0	26.100	84.400 34%
YOUANMIUG	802	0	50	10	3	2	1	0.850	1	60.0	60.0	25.0	3.150						4.000 21%
YOUANMIUG	1701	-20	50	0	3	2	1	40.800	1	48.0	48.0	25.0	91.800	[					132.600 31%
YOUANMIUG	1702	-20	50	0	3	2	1	1.569	1	48.0	48.0	25.0	3.531						5.100 31%
YOUANMIUG	24	-40	30	30	3	2	1	28.200	1	55.0	55.0	25.0	50.700						78.900 36%
YOUANMIUG	41	0	40	5	3	2	1	20.500	1	45.0	45.0	25.0	34.600						55.100 37%
YOUANMIUG	10	-20	40	15	3	2	1	20.747	1	25.0	25.0	10.0	59.996	1	40.0	60.0	25.0	- 29.882	50.860 41%
YOUANMIUG	48	0	42	-3	3	2	1	14.000	1	20.0	20.0	10.0	12.600	1	55.0	55.0	25.0	10.200	36.800 38%
YOUANMIUG	19	0	30	-2	3	2	1	16.400	1	65.0	65.0	25.0	24.500						40.900 40%
YOUANMIUG	53	80	-65	0	3	1	2	28.600	1	100.0	100.0	25.0	30.600						59.200 48%
YOUANMIUG	42	80	-50	0	3	1	2	16.700	1	30.0	45.0	25.0	20.800						37.500 45%
YOUANMIUG	2	0	45	-25	3	2	1	3.489	1	25.0	25.0	10.0	1.911	1	65.0	65.0	25.0	4.735	10.134 34%
YOUANMIUG	35	-30	50	-10	3	2	1	8.400	1	25.0	25.0	10.0	4.600	1	65.0	65.0	25.0	11.400	24.400 34%
YOUANMIUG	47	0	42	-26	3	2	1	2.586	2	25.0	25.0	10.0	1.416	2	65.0	65.0	25.0	3.509	7.511 34%

# Table 12 Variogram Parameter Table

# 17.5 Block Model Construction - General Description

# Principles of modelling

The main purpose of block modelling is to create regular and measurable mining units that represent the ore deposit. Typically block modelling is carried out within a deposit where the ore zones between widely spaced drill-holes have been delineated. This wide spacing of data points may be problematic when choosing an optimal selective mining unit (SMU) which is required for definition of ore zones in 3-D space. Changes in the selective mining unit can directly influence the assigned or interpolated grades calculated from the actual drilling points. Block modelling typically uses various interpolation techniques to define grades for points between the known drill-hole points, or within geologically defined volumes. Ideally this is done in a manner which does not compromise sample support or distorting the underlying deposit grade distribution.

![](_page_66_Picture_0.jpeg)

# Principles of the selective mining unit (SMU)

In general, the SMU block size represents the smallest mineable volume that can be extracted from the mineral deposit, given that the resolution of sampling either at the resource definition or at the grade control sampling stage, is still imperfect. Factors such as grade control sampling, mining equipment, and mining strategy could affect the actual SMU that is eventually used.

Geostatistical studies including those which describe point variance, block variance and the total deposit variance are useful for selecting optimal SMU's. Sample variance relationships are sometimes considered with respect to Krige's relationship, which describes the difference between the volume of sample point values (eg. sample composites) within a homogeneous domain and the volume of the selected SMU (and its assigned grade value). This relationship is also referred to as the volume-variance relationship. This states that the variance of samples within a domain of interest is (or should be) equal to the variance of samples within SMU sized blocks, as well as the variance of SMU-sized blocks within the domain of interest.

# Principles of kriging

Drillhole assays and the sample variances observed from them, are regarded as known data points in 3-D space and may be used, if practicable, to estimate the grades for all other unknown points. A number of methods are available to interpolate the grade at each of these unknown points. The 'remote interpolated' grades may then be aggregated to produce grades for SMU volumes, for example the volumes represented by each of the cells or SMU blocks in a block model.

An effective and commonly used method of estimating grades into the cells of a block model by interpolating from known drillhole data points is kriging. This method uses parameters objectively established and obtained from a variography study. These studies, and the modelled variogram plots selected after objectively reviewing the associated assay data, will assist in determining the directional relationships and continuity relationships between samples within homogenous geological domains.

### Methods adopted for the Youanmi Deeps Underground Deposit

The selection of an appropriate parent cell estimation block size was carefully considered during the mineralisation geometry review, as the density of data points within the various domains varies widely. An optimal block size adequately defines the ore zones within the block model, whilst simultaneously not compromising the localised calculated block variances. The parent cell estimation block sizes chosen were either 20m x 20m or 40m x 40m in plan view; but Datamine Studio software allows extensive sub-celling to "seam fill" between the domain dtm surfaces.

Ravensgate elected to use the Ordinary Kriging method at the Youanmi Deeps Underground Project area. This method is commonly used for deposits with locally constrained sample population sets and relatively low coefficients of variation within any given specific mineralisation zone/geological domain. The spatial distribution relationships of samples at Youanmi Deeps Underground Project were closely examined during construction of a series of semi-variograms for the various mineralised domains within the deposit area.

The various estimation parameters by domain used for input into DATAMINE Studio software, and the fields to be generated are shown in Table 13. The search parameters by domain used for input into DATAMINE Studio software, and the fields to be generated are shown in Table 14. DATAMINE Studio requires the three input parameter files for variogram, estimation, and search parameters for input into the estimation function.

![](_page_67_Picture_0.jpeg)

Table 13	Estimation	Parameter	Table
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VOLVAMIUS Date:         VIOL June	
Date:         June6         University	
VICE         VICE <th< th=""><th></th></th<>	
VEX.W0         VI. MUS         VI. MUS <th< th=""><th></th></th<>	
NM         University         SV         V           VOULANIM US         401         401         10         1<	L L
VOUANNIUG         A         -	×.
VUUANNI UC         401         401         401         401         0	
	5
YOUANMIUC         401         401         3         1         0         0         1         1         1         2         001         3         1         1         2         AU         AU         NS         SV         Y           YOUANMIUC         401         401         401         101         1         0         0         1         1         1         2         AU         AU         NS         SV         Y           YOUANMIUC         401         401         401         101         1         0         0         1         1         1         2         AU         AU         K         K         Y         YOUANMIUC         402         402         402         101         1         0         0         0         1         1         1         2         001         3         1         1         2         AU         AU         K         NS         SV         Y           YOUANMIUC         6         6         6         1         0         0         0         1         1         1         2         AU         AU         AU         NS         SV         Y           YOUANMIUC <td>rigin ce</td>	rigin ce
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YOUANNU US       401       401       401       101       1       0       0       0       1       1       1       2       AU       F         YOUANNU US       401       402       NS       SV       N         YOUANNU 6       6       6       6       101       1       0       0       1       1       1       2       001       0       0       1       1       1       2       001       0       0       1       1       1       2       001       0       0       0       0 <td< td=""><td>√F</td></td<>	√F
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YOLANMIUG         402         402         402         402         102         1         0         0         1         1         1         2         0	√F
YOUANNIUG         402         402         402         102         1         0         0         0         1         1         1         2         AU         LG           YOUANNIUG         6         6         6         10         1         1         1         2         0.01         3         1         1         2         AU         LG           YOUANNIUG         6         6         6         100         1         1         1         2         0.01         3         1         1         2         AU         AU         NS         SV         Y           YOUANNUG         60         601         801         801         101         1         0         0         1         1         2         0.01         0 <t< td=""><td></td></t<>	
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YOUANMIUG       6       6       6       102       1       0       0       0       1       1       1       2       001       3       1       1       2       AU       LG       LG <thlg< th="">       LG       <thlg< th=""></thlg<></thlg<>	VF.
YOUANMIUG       801       801       801       801       801       801       1       1       0       0       0       1       1       1       1       1       2       AU       NS       SV       N         YOUANMIUG       801       801       801       101       1       0       0       0       1       1       1       2       001       0	
YOUANMIUG       801       801       801       101       1       0       0       0       1       1       1       2       AU       F	VF
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YOUANMIUG       802       10       1       1       2       001       0       0       0       1       1       2       0       0       0       0       1       1       2       0       0       0       0       0       1       1       2       0       0       0       0       0       1       1       2       0       0       0       0       1       1       2       0       0       0       0       1       1       1       2       0       0       0       0       0       1       1       2       0       0       0       0       0       1       1       2       0	√F
YOUANMIUG         802         802         802         102         1         0	
YOUANMIUG       1/01	
YOUANMIUG       101       11	√F
YOUANMIUG       1702       110       0       0       1       1       1       2       0.0       0 <td></td>	
YOUANMIUG       1702       102       1       0       0       0       1       1       1       2       0.0       0	VF
OUANNIUG       24       24       24       24       3       1       0       0       0       1       1       1       2       AU       L0       L0       NS       SV       NS         YOUANNIUG       24       24       24       101       1       0       0       0       1       1       1       2       AU       F       L0       NS       SV       N         YOUANNIUG       24       24       24       100       1       0       0       1       1       1       2       00       0       0       0       1       1       2       001       0	
YOUANMIUG       24       24       24       24       101       1       0       0       0       1       1       1       2       0.0       0	√F
YOUANMIUG       24       24       24       102       1       0       0       1       1       1       2       0.0       0       1       1       1       0	
YOUANMIGS       41       41       41       3       1       0       0       1       1       2       0.01       3       1       1       2       AU       NS       SV       NS         YOUANMIUG       41       41       41       102       1       0       0       0       1       1       1       2       AU       F       Image: SV       NS	
YOUANMIUG       11       11       100       1       0       0       0       1 <th1< th="">       1       1       <th1< th=""> <th< td=""><td>VF</td></th<></th1<></th1<>	VF
YOUANMIUG       10       10       10       3       1       0       0       0       1       1       1       2       0.0       0       10       10       10       NS       SV       Y         YOUANMIUG       10       10       10       10       10       10       10       10       10       10       10       10       11       1       2       0.0       0	
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YOLANMI UG       10       10       10       10       10       10       10       10       10       10       10       11       12       10       10       10       10       10       10       10       11       12       10       10       10       11       12       10       10       11       12       10       11       12       10       11       11       12       10       11       11       12       10       11       11       12       10       11       11       12       10       11       11       12       10       11 <th11< th="">       11       11</th11<>	
YOUANMIUG       48       48       48       101       1       0       0       0       1       1       1       2       0.0       0       1       1       1       2       0.0       1       1       1       2       0.0       0	√F
YOUANMIUG         48         48         48         102         1         0         0         1         1         2         0.01         3         1         1         2         AU         LG	
YOUANMIUG         19         19         19         3         1         0         0         1         1         2         0.01         3         1         1         2         A0         NS         SV         Y           YOUANMIUG         19         19         19         101         1         0         0         1         1         1         2         0.01         3         1         1         2         AU         F         YOUANMIUG         19         19         19         102         1         0         0         1         1         2         0.01         3         1         1         2         AU         F         YOUANMIUG         19         19         19         102         1         0         0         1         1         2         0.01         3         1         1         2         AU         F         YOUANMIUG         19         19         19         102         1         0         0         0         0         0         0         0         0         0         1         1         2         0.01         3         1         1         2         AU         LG         XU <t< td=""><td>UF.</td></t<>	UF.
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	۷r
YOUANMUG 2 2 2 102 1 0 0 1 1 1 1 2 0 0 0 0 0 0 0	
YOUANMIUG 35 35 35 3 1 0 0 1 1 1 2 0.01 0 0 0 1 1 1 1 2 0.01 V 0 0 0 0 0 1 3 1 1 2 AU AU NS SV V	√F
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OUTANING 05         30         30         30         102         1         0         0         1         1         2         10         10         10         11         12         10         10         10         11         12         10         10         10         11         11         12         10         10         10         11         11         12         10         10         10         11         11         12         10         10         10         11         11         12         10         10         10         11         11         12         10         10         10         11         11         12         10         10         10         11         11         12         10         10         10         11         11         12         10 <th< td=""><td>VF</td></th<>	VF
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YOUANMIUG 47 47 47 102 1 0 0 0 1 1 1 2 0.01 0 0 0 0 1 1 1 2 0.01 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

![](_page_68_Picture_0.jpeg)

Ravensgate										SEARCH PARAMETER TABLE															
YOUANMI UNDERGROUND RESOURCE MODEL yu0606m.dm							Notes:																		
Date:	Jı	ın-06																							
AREA	SREFNUM	DOMAIN	SMETHOD	SDIST1	SDIST2	SDIST3	SANGLE1	SANGLE2	SANGLE3	SAXIS1	SAXIS2	SAX1S3	OCTMETH	MINOCT	MINPEROC	MAXPEROC	MINNUM1	MAXNUM1	SV0LFAC2	MINNUMZ	MAXNUM2	SVOLFAC3	EMUNNIM	MAXNUM3	MAXKEY
			1=cuboid; 2=ellipse	x axis	y axis	z axis	axis 1	axis 2	axis 3	axis 1	axis 2	axis 3	octants O=don't use 1=duse	min. octants to fill	min. samples in octant	max. samples in octant	min. samples 1st search	max. samples 1st search	2nd search expansion factor	min. samples 2nd search	max. samples 2nd search	3rd search expansion factor	min. samples 3rd search	max. samples 3rd search	max. samples per hole
	search distance			ance	r	otatio	n	rotation axis octa				octant definition sample number definition													
YOUANMI UG	401	401	2	115	115	40	65	-50	20	3	1	2	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	402	402	2	150	150	40	-25	40	25	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	6	6	2	110	110	40	-20	50	10	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	801	801	2	90	90	40	0	50	10	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	802	802	2	90	90	40	0	50	10	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	1701	1701	2	75	75	40	-20	50	0	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	1702	1702	2	75	75	40	-20	50	0	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	24	24	2	80	80	40	-40	30	30	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	41	41	2	65	65	40	0	40	5	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	10	10	2	60	90	40	-20	40	15	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	48	48	2	80	80	40	0	42	-3	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	19	19	2	95	95	40	0	30	-2	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	53	53	2	150	150	40	80	-65	0	3	1	2	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	42	42	2	45	65	40	80	-50	0	3	1	2	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	2	2	2	95	95	40	0	45	-25	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	35	35	2	95	95	40	-30	50	-10	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
YOUANMI UG	47	47	2	95	95	40	0	42	-26	3	2	1	0	2	1	4	6	24	1.5	6	24	3	4	24	4
							Ι	I											I						

# Table 14 Search Parameter Table

# 17.6 Grade Interpolation and Cut-Off Levels

# Smoothing effects of grade interpolation

Estimated average block grades produced by linear interpolation methods (such as inverse distance and ordinary block kriging) may contribute to the smoothing of grade and consequent conditional bias, i.e. the over-estimation of low grades and under-estimation of high grades. Ideally, the interpolation procedure should honour the contact boundary between the mineable ore and the surrounding lower grade mineralisation. This would avoid smoothing of the grade across boundaries, providing a more realistic estimate. The use of reasonably large parent cell estimation blocks also minimizes any smoothing effects. However, the data density available will govern to a large extent the ability to balance the amount of smoothing of grade.

# Methods adopted for the Youanmi Deeps Underground Deposit

The distribution of Au composite grades within the project area ore zones was examined in detail. Ravensgate observed that each domain displayed "outlier" composites, generally above the 98th or 99th percentile on the standard log and histogram plots, shown in Appendix A. Ravensgate deemed that these isolated composites required some form of treatment and/or restriction at the interpolation stage. While this is common industry practice, the implementation of any restriction or limitation is dependent on local circumstances. The top cut grades applied and general parameters for the ore domains used at Youanmi Deeps Underground are given in Table 15.

![](_page_69_Picture_0.jpeg)

	Ra	avensgate	ORE MODEL PARAMETER TABLE							
YOUANMI UNDER	RGROUND RESOURCE MODE	yu0606m.dm	Notes:							
Date:	Jun-06									
SURFCODE / FILENAME	DOMAIN	Description	IW COLOUR	-W COLOUR	W/F TYPE	PARENT CELL	SPLITTING	RESOL		
	401	Main - Main Lode High Grade South Domain	4	5	dtms	40×40×40	40×40×20	Ω		
	402	Main - Main Lode Low Grade North Domain	4	5	dtms	40x40x40	40x40x20	0		
	6	Main - Lower Footwall Lode	6	7	dtms	40x40x40	40x40x20	0		
	801	Main - Upper Footwall Lode - High Grade Domain	8	9	dtms	40x40x40	40x40x20	0		
	802	Main - Upper Footwall Lode - Low Grade Domain	8	9	dtms	40x40x40	40x40x20	0		
	1701	Main - Central Footwall Lode - High Grade Domain	17	18	atms	40x40x40	40x40x20	0		
	1702	Main - Central Footwall Lode - Low Grade Domain	17	18	dtms	40x40x40	40x40x20	`		
	24	Main - Hanging Wall Lode 1	24	26	dtrns	80x80x80	40x40x20	0		
	41	Main - Hanging Wall Lode 2	41	43	dtrns	40x40x40	40x40x20	0		
	10	Hill End - Main Lode	10	11	dtrns	40x40x40	40x40x20	0		
	48	Hill End - Hanging Wall Lode 1	48	50	dtms	40x40x40	40x40x20	0		
	19	Hill End - Hanging Wall Lode 2	19	20	dtms	40x40x40	40x40x20	0		
	53	Pollard - Main Lode	53	55	dtrns	40x40x40	40x40x20	0		
	42	Pollard - Footwall Lode	42	44	dtms	80x80x80	40x40x20	0		
	2	Pollard - Hanging Wall Lode 1	2	3	dtms	80x80x80	40x40x20	0		
	35	Pollard - Hanging Wall Lode 2	35	37	dtms	80x80x80	40x40x20	0		
	4/	Pollard - Hanging Wall Lode 3	4/	49	dtrns	80x80x80	40x40x20	U		
MAIN	PCUT	OSITES / Invium Posite	A USED	RIKE	40	UNGE	SCAT COLLED BY			
DQ	2	CONF	DAT	2	_	đ	CONTR			
401	60	1.0/0.3 *MODE=1	DD/RC	155	50V	705	QUALITY			
402	16	1.0/0.3 *MODE=1	DD/RC	155	40V	65S	QUALITY			
6	30	1.0/0.3 *MODE=1	DD/RC	160	50V	805	QUALITY			
801	40	1.0/0.3 *MODE=1	DD/RC	180	50V	805	QUALITY			
802	10	1.0/0.3 *MODE=1	DD/RC	180	50V	805	QUALITY			
1701	32	1.0/0.3 *MODE=1	DD/RC	160	50V	-	QUALITY			
1702	nil	1.0/0.3 *MODE=1	DD/RC	160	50W	-	QUALITY			
24	30	1.0/0.3 *MODE=1	DD/RC	140	30W	60S	QUALITY			
41	20	1.0/0.3 *MODE=1	DD/RC	140	40W	85S	QUALITY			
10	30	1.0/0.3 *MODE=1	DD/RC	160	40W	75S	QUALITY			
48	20	1.0/0.3 *MODE=1	DD/RC	180	42∀	87N	QUALITY			
19	25	1.0/0.3 *MODE=1	DD/RC	180	30V	88N	QUALITY			
53	35	1.0/0.3 *MODE=1	DD/RC/RAB	350	65V	-	QUALITY			
42	25	1.0/0.3 *MODE=1	DD/RC/RAB	350	50W	-	QUALITY			
2	10	1.0/0.3 *MODE=1	DD/RC	180	45∀	65N	QUALITY			
35	18	1.0/0.3 *MODE=1	DD/RC/RAB	150	50W	80N	QUALITY			
47	8	1.0/0.3 *MODE=1	DD/RC	180	<b>4</b> 2∀	64N	QUALITY			

# Table 15 Ore Parameter Table

# 17.7 Bulk Density Determination and Modelling

Bulk density data relating to the Youanmi Deeps Underground Project area was supplied in database format by Goldcrest, predominantly derived from some standard Specific Gravity (SG) measurements carried out between 1989 and 1992. This was imported into DATAMINE Studio software, and the values selected inside the defined mineralised domains. For the considered project area, only fresh material is present; but a range of specific gravity measurements were seen, as may be expected from the variable host lithology types, and variable alteration. The data-set used for SG determinations extended along most of the strike length of the deposit; but with sparse coverage in the Pollard area.

![](_page_70_Picture_0.jpeg)

![](_page_70_Figure_1.jpeg)

Figure 29 Histogram of Specific Gravity (Density) Measurements within Lodes

The available bulk density data within the interpreted mineralised lodes, had a Mean value of 2.96tm<sup>-3</sup>. The density and distribution of data is such that it was not deemed possible to subdomain into areas of differing bulk density values. A single value of 2.9tm<sup>-3</sup> was assigned to the fresh lode material throughout the deposit. It is recommended, however, that efforts be made to better understand the variability through increased measurements, particularly in areas of potentially economic grade.

# 17.8 Mineral Resource Classification

The supplied survey data of existing previously mined voids was used to produce a set of strings to code the block model for mined status (MSTATUS: 0=unmined, 1=open pit mined, 2=underground mined) by a "cookie-cut" method.

The estimated block model carried values for number of composites used to estimate the block (NS field), and search volume number (SV) in which the block was estimated. Several other fields are present which can be then used to calculate a field for Kriged Efficiency (KE). The three fields NS, SV, and KE are then used to assign points to a new field Quality; and the value of the Quality field is then used to assign a Resource Category field (RESCAT).

Plots of the calculated values for the KE, NS, and SV fields are included in Appendix C.

![](_page_71_Picture_0.jpeg)

Table 16       Matrix for Calculation of QUALITY Field								
FIELD	RANGE	QUALITY POINTS						
Kriged Efficiency	60-100	4						
(KE)	40-60	3						
	0-40	2						
	-50-0	1						
	<-50	0						
Search Volume	1	3						
(SV)	2	1						
	3	0						
Number Composites	28-36	3						
(NS)	20-28	2						
	6-20	1						

Table 17 Matrix for Calculation of RESCAT Field								
QUALITY Points	RESCAT	VALUE						
9-10	Measured	5						
6-8	Indicated	4						
3-5	Inferred	3						
1-2	Potential	2						
0	Pre-Resource	1						

The RESCAT fields approved by the CIM under National Instrument 43-101 Guidelines are Measured, Indicated, and Inferred Resource. In light of the sub-optimal QAQC regime at the time of the drilling of the modelled deposit, Ravensgate has downgraded any Measured Resource material under the matrix used to Indicated Resource category. The category of Potential Resource was included in the model for use by Goldcrest; but does not form a part of the reported resource in this instance. The resource estimates have been calculated at a series of lower cut-off grades from 0 g/t Au to 10.00g/t Au; shown in summary in Table 15, and in detail in Appendix E. For overall reporting, the nominal cut-off grade of 4.00g/t Au was used. The following figures show the block values for the RESCAT and AU Fields for each domain.


Table 18 Resource Summary 14 July, 2006 at Varying Lower Cut-Off Grades						
Lower Cut-Off Value		Indicated Inferred				
	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
0.0g/t	1,401,100	5.8	262,500	2,762,400	6.1	540,800
0.2g/t	1,398,400	5.8	262,500	2,753,600	6.1	540,800
1.0g/t	1,388,000	5.9	262,300	2,657,700	6.3	538,900
2.0g/t	1,273,700	6.3	256,200	2,333,800	7.0	523,300
4.0g/t	808,400	8.1	210,200	1,605,100	8.7	447,700
6.0g/t	450,900	10.6	153,300	967,200	11.2	348,400
10.0g/t	203,700	14.4	94,500	456,800	15.3	224,500

Note: 4.0 g/t has been adopted for lower cut-off for reporting of these resources at the request of Goldcrest.





Figure 30 Block Model RESCAT Values, Domain 401 - Main Lode, Main Fault Block.

Figure 31 Block Model AU (g/t) Values, Domain 401 - Main Lode, Main Fault Block.







Figure 32 Block Model RESCAT Values, Domain 402 - Main Lode, Main Fault Block.

Figure 33 Block Model AU (g/t) Values, Domain 402 - Main Lode, Main Fault Block.







Figure 34 Block Model RESCAT Values, Domain 6 - Footwall Lode, Main Fault Block.

Figure 35 Block Model AU (g/t) Values, Domain 6 - Footwall Lode, Main Fault Block.







Figure 36 Block Model RESCAT Values, Domain 1701 - Footwall Lode, Main Fault Block.

Figure 37 Block Model AU (g/t) Values, Domain 1701 - Footwall Lode, Main Fault Block.







Figure 38 Block Model RESCAT Values, Domain 1702 - Footwall Lode, Main Fault Block.

Figure 39 Block Model AU (g/t) Values, Domain 1702 - Footwall Lode, Main Fault Block.







Figure 40 Block Model RESCAT Values, Domain 801 - Footwall Lode, Main Fault Block.

Figure 41 Block Model AU (g/t) Values, Domain 801 - Footwall Lode, Main Fault Block.







Figure 42 Block Model RESCAT Values, Domain 802 - Footwall Lode, Main Fault Block.

Figure 43 Block Model AU (g/t) Values, Domain 802 - Footwall Lode, Main Fault Block.







Figure 44 Block Model RESCAT Values, Domain 24 - Hanging Wall Lode, Main Fault Block.

Figure 45 Block Model AU (g/t) Values, Domain 24 - Hanging Wall Lode, Main Fault Block.







Figure 46 Block Model RESCAT Values, Domain 41 - Hanging Wall Lode, Main Fault Block.

Figure 47 Block Model AU (g/t) Values, Domain 41 - Hanging Wall Lode, Main Fault Block.







Figure 48 Block Model RESCAT Values, Domain 10 - Main Lode, Hill End Fault Block.

Figure 49 Block Model AU (g/t) Values, Domain 10 - Main Lode, Hill End Fault Block.







Figure 50 Block Model RESCAT Values, Domain 48 - Hanging Wall Lode, Hill End Fault Block.

Figure 51 Block Model AU (g/t) Values, Domain 48 - Hanging Wall Lode, Hill End Fault Block.







Figure 52 Block Model RESCAT Values, Domain 19 - Hanging Wall Lode, Hill End Fault Block.

Figure 53 Block Model AU (g/t) Values, Domain 19 - Hanging Wall Lode, Hill End Fault Block.







Figure 54 Block Model RESCAT Values, Domain 53 - Main Lode, Pollard Fault Block.

Figure 55 Block Model AU (g/t) Values, Domain 53 - Main Lode, Pollard Fault Block.







Figure 56 Block Model RESCAT Values, Domain 42 - Footwall Lode, Pollard Fault Block.

	FILTERS: Trace Category
- the -	0-0.2
XIZ.	0.2-1
- FR-	1.2
- Av-	Z-4
	6-10
	>10

Figure 57 Block Model AU (g/t) Values, Domain 42 - Footwall Lode, Pollard Fault Block.





Figure 58 Block Model RESCAT Values, Domain 2 - Hanging Wall Lode, Pollard Fault Block.

Figure 59 Block Model AU (g/t) Values, Domain 2 - Hanging Wall Lode, Pollard Fault Block.







Figure 60 Block Model RESCAT Values, Domain 35 - Hanging Wall Lode, Pollard Fault Block.

Figure 61 Block Model AU (g/t) Values, Domain 35 - Hanging Wall Lode, Pollard Fault Block.







Figure 62 Block Model RESCAT Values, Domain 47 - Hanging Wall Lode, Pollard Fault Block.

Figure 63 Block Model AU (g/t) Values, Domain 47 - Hanging Wall Lode, Pollard Fault Block.





### 17.9 Mineral Resource Statement

The Mineral Resources are classified in accordance with the CIM guidelines *Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines* - (2002); and *National Instrument 43-101 (2005)*. A Mineral Resource summary is given in Table 19 for the Youanmi Deeps Underground Project area.

Table 19 Mineral Resource Statement 14 July 2006- Youanmi Deeps Underground ProjectArea - Reported at a lower cut-off of 4.00 g/t Au						
		Indicated			Inferred	
	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
TOTAL	808,400	8.1	210,200	1,605,100	8.7	447,700

The Mineral Resources as stated have been estimated by John Haywood BSc (Hons), MAusIMM; Principal Consultant of Ravensgate, for Goldcrest in July, 2006. Ravensgate is an independent consultancy based in Perth, Western Australia which specialises in geological modelling and resource estimation. This resource estimation has been carried out to professional industry and best practice standards and is compiled by a Qualified and Competent Person, as required in terms of the *National Instrument 43-101 (2000)*, and the rules of the ASX and the JORC code, December 2004.

The effective date of the Mineral Resource estimate is 14 July, 2006.

Tabulations of the resource by domain and varying lower cut-off grades are given in Appendix E. Figure 66 below shows the grade-tonnage curve for the defined resource.





Figure 64 Grade Tonnage Curve, Measured and Indicated Resource Material



# 17.10 Reliability and Confidence in the Resource Estimates

From the information relating to the historical data, Ravensgate is of the opinion that the drillhole data is adequate with respect to its method of collection. In general, Ravensgate considers the majority of the mineral resources for the Youanmi Deeps Underground Project area to be relatively robust. However, there remains a degree of risk associated with the historical data in terms of the limited quality assurance and quality control data. Table 20 provides a summary of the of the sampling techniques and data review which associated with the historical and current drillhole data.

	Table 20	Sampling Techniques and Data Review
Sampling techniques	4	RC samples were collected over 1m intervals and riffle split, bagged and dispatched to the laboratories.
	>	Diamond core was cut according to lithological intervals and dispatched to the laboratories.
	> 	Of those assays used in the final reported resource estimate, 773 assays or 56.3% were by Fire Assay, 478 assays or 34.8% were by Aqua Regia digest, and 10 assays or 0.7% were by unknown method. In addition, 111 intervals or 8.1% that were unsampled but within defined estimated domains were assigned a nominal value of 0.01g/t in the absence of assay data.
Drilling techniques		The Youanmi Deeps Underground Project is based on the results of 126 RAB drillholes, 970 RC drillholes and 509 diamond core drillholes; providing 9 RAB assay values, 1213 RC assay values, and 1870 diamond core assay values within the interpreted mineralized lodes. Most of the drilling relevant to the current resource estimation was conducted by project owners prior to the current Goldcrest involvement. All RC drilling used face sampling hammers. Diamond drilling, predominantly made use of NQ size drill bits.
Drill sample recovery	>	No records relating to historical (pre Goldcrest) RC or diamond core sample recoveries have been identified, however, where described, sampling and recovery procedures are consistent with standard Australian industry standards (Yeates, R.J. 2003).
Logging	~	All RC and diamond core samples were geologically logged. RC drilling returns were logged in sufficient detail, recording all significant properties, to allow geological maps and sections to be constructed.
Sub-sampling techniques and sample preparation	>	Most of the historical (pre-Aquila and Goldcrest) diamond core was sampled using a diamond saw to provide half core with a maximum sample length of 1m.
	>	Most of the historical RC intervals were sampled on a 1m basis via a cyclone into a plastic bag prior to splitting with a Jones riffle splitter.
		Resampling of RC samples took place where composite assays were greater than 50ppb, 80ppb or 250ppb Au depending upon the programme.



Quality of assay data and laboratory tests	$\checkmark$	Most of the historical diamond core samples were assayed at Metana in-house laboratory, mainly using fire assay techniques.
	A	Recent Goldcrest samples were assayed for Au at Genalysis Laboratories of Maddington, Perth, using 50g charge fire assay to 0.01ppm detection limit.
Verification of sampling and assaying	A A	Historical assay quality control measures are largely unknown. Regular duplicates with satisfactory results were reported from some programmes. The Metana (bulk of historical samples) laboratory appears to have systematically undertaken a 10% duplicate fire assay analysis. No system of submission of standard reference material and blank samples is believed to have been in place at the time of this drilling, in line with local industry practice at that time
		Goldcrest took field duplicates, standards and blanks on an approximate 1 in 20 basis (5%) and all Goldcrest drill samples were submitted for assay.
	$\blacktriangleright$	Goldcrest twin drilling in shallower areas has verified the drill results of previous explorers.
	•	The vast majority of the assay data relate to resources that have subsequently been mined. Historical quality assurance and quality control data relating to the remaining resources is either no longer available or is inconsistently reported. Given the vast amount of exploration data and the long time period over which the data was generated it was not possible to for RSG (Yeates, 2003) to independently verify the quality of the data.
Location of data points	A	Goldcrest drillhole positions have been surveyed to sub-metre accuracy using Differential GPS and/or total Station systems on the AMG84 grid. Eastmet/GMA survey by mine surveyors.
	A	Approximately 90% of drillholes longer than 100m at Youanmi Deeps Underground Project have been down-hole surveyed. Drillholes less than 100 m long typically show a minor degree of down-hole deviation.
Data density and distribution	$\mathbf{A}$	Average drillhole density at Youanmi Deeps Underground Project is highly variable, ranging from 20m x 20m to 160m x 160m, and generally decreasing with depth.
Orientation of data in relation to geological structure	$\checkmark$	RC and diamond drillholes were oriented, wherever possible, perpendicular to the main shear/ore zone structure containing the mineralisation.
Survey data for mined underground voids	$\checkmark$	The reliability of the survey data for previously mined underground voids is highly variable; with much of the data having questionable accuracy
Audits or reviews	$\triangleright$	Goldcrest conducted a thorough review of sampling and assay techniques and data in September, 2004.
	A	Ravensgate validated 67% of assays within the interpreted mineralized lodes from surface diamond drillholes against original hard copy assay reports.



Table 2	1 Est	imation and Reporting of Mineral Resources
Database integrity	ð	Since acquiring the project, Goldcrest completed a stringent validation of the historical database, excluding unreliable data as relevant.
		Standard validation techniques have been applied to the data of Goldcrest Mines and previous explorers.
Geological interpretation	>	Interpretation of the lithological boundaries and the proposal of a conceptual model for the mineralisation are supported by the sufficient amount of drilling. Geological continuity is based upon a coherent and predictable model, and is confirmed in both sectional and plan analyses. The model is an acceptable genetic model of shear hosted gold mineralisation.
		A geological model were developed for Youanmi Deeps Underground using all available diamond core and RC drillhole data and surface exposures. Three dimensional mineralised shells were constructed using the geological models as a guide, and these were subsequently filled with blocks for resource estimation. Further drilling and/or mapping is expected to refine the geological model in the future.
Dimensions	>	The Youanmi Deeps Underground Resource comprises several broadly north-south trending zones of mineralisation comprising ~1.5 km strike length, 850m depth extent.
Estimation and modeling techniques	A	The resource estimations presented here were generated using standard 3-D block modelling techniques and specifically the Ordinary Kriging Interpolation technique. This series of calculations required a rigorous review of the localised deposit geostatistics. Higher grade outlier samples were cut. Parent cell block sizes for Youanmi Deeps Underground Project were set at 20m x 20m x 20m or 40m x 40m x 40m.
	<b>A</b>	Classification of resources also relied on ancillary Block Model interpolation items such as kriged efficiency, number of sample composites available within block vicinity, and search volume pass. The final block model grades were checked with respect to the local domain geometry and domain statistical summaries. Only once the assumptions used in the data generation and compilation were eliminated or minimized, was the data used in these block model calculations. The localised variations in drilling and sampling density were carefully considered.
Moisture	۶	Tonnage calculations were carried out on a dry basis to conform to reported assay results.
Cut-off parameters		All Mineral Resources have been reported are at lower cut-off of 4.00 g/t Au at the request of the directors of Goldcrest
Mining factors or assumptions		No assumptions were made about mining methods.
Metallurgical factors or assumptions.	$\triangleright$	No assumptions were made about process methods.
Bulk density	$\succ$	GMA carried out determinations of in-situ bulk densities on drill core using the weight in water/weight in air method for fresh core.



Table 2	1 Est	imation and Reporting of Mineral Resources
Classification	~	Resources comply with the National Instrument 43-101 – Standards of Disclosure for Mineral Projects (2000), and associated guidelines by the CIM Standing Committee on Reserve Definitions.
Audits or reviews	$\triangleright$	No independent audits or reviews, other than Ravensgate's internal peer review, have been carried out on this estimate.
Discussion of relative accuracy/confidence		The reported grades, tonnages and contained ounces may be rounded to two significant figures in accordance with recommendations of the JORC code.

#### 17.11 Reconciliation of Block Model to Previous Mining

An attempt was made to reconcile the block model with previous underground production at the Youanmi Deeps Underground project area. Firstly, the model was evaluated for areas coded as mined and within a string outline defining the limits of the underground mining under Eastmet / GMA during the period 1993 to 1995. In addition, two of the lower stopes were evaluated to compare against the available production claimed hoist figures. The results are shown in Table 22.

Table 22 Reconciliation of Block Model to Historical Production Records								
	Block Model Production Hoist Data					Block Model		
	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)		
All Mined Areas (1993-1995)	427,800	10.8	148,700	411,900	11.4	150,400		
920hw stope	14,100	13.7	6,200	14,900	15.3	7,300		
880hw stope	6,000	10.5	2,000	6,500	16.6	3,500		

The analysis strongly supports the overall tenor of the block model; although locally it is less accurate. This is expected, given the overall drillhole spacing and associated large parent cell sizes used in the estimation.

#### 17.12 Comparison to Previous Resource Estimates

A comparison between this resource estimate, a preliminary estimate made by Ravensgate in 2002, and the GMA resource estimate of June, 1997, the latter two referenced in Yeates, 2003, is shown in Table 23 below.



Table 23 Comparison of Resource Estimate to previous Resource Estimates						
	Measured and Indicated Inferred					
	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
Ravensgate 2006	808,400	8.1	210,200	1,605,100	8.7	447,700
Ravensgate 2002*	742,700	7.8	185,600	752,000	9.8	237,500
GMA June 1997**	52,900	15.6	26,500	172,200	17.3	95,900
GMA November 1997**	19,800	10.1	6,400	172,200	17.3	95,900

\*Ravensgate estimate in 2002 was classified as High, Medium, Low Confidence - for this table only as a comparison they are modified to Indicated (High Confidence) and Inferred (Low and Medium Confidence).

\*\*GMA June 1997 estimate was followed by a further four months of production - depleted figures from June 1997 are given as November 1997 figures from Yeates (2003); but no final GMA report was made.

The Ravensgate 2002 estimate was a preliminary ordinary kriged estimation with no final resource categorisation outside of indicative confidence levels, with recommendation to better define the voids from previous mining. The latest estimate incorporates re-interpretation of mineralised lodes in the 2002 estimate, as well as the addition of some hanging wall and footwall structures not previously modelled. The 2002 estimate depleted the mined voids through multiple mineralised lodes where it was unclear which had been mined, and which were still in situ; whilst the updated resource used improved void information to more selectively deplete with a corresponding increase in relative resource tonnage.

The GMA 1997 estimate references predominantly that material adjacent to the existing developed levels of the underground mine. The GMA estimate incorporated close-spaced face and stope sample assay data, as well as drillhole data, and was estimated by polygonal methods. A minimum true width of 1.5 metres, lower cut-off of 6g/t, top cut of 30g/t, and a specific gravity of  $3.0t/m^3$  were used in the estimate.

## 17.13 Model Sections and Plans

A series of sections and plans through the block model are included in Figures 65 to 73.



Figure 65 Block Model Au (g/t), Section 3060N Hill End Area





Figure 66 Block Model Au (g/t), Section 2740N Main North Area





Figure 67 Block Model Au (g/t), Section 2660N Main North Area





Figure 68 Block Model Au (g/t), Section 2500N Main South Area





Figure 69 Block Model Au (g/t), Section 2420N Main South Area





Figure 70 Block Model Au (g/t), Section 2340N Pollard Area





Figure 71 Block Model Au (g/t), Plan 1200mRL





# Figure 72 Block Model Au (g/t), Plan 1000mRL





### Figure 73 Block Model Au (g/t), Plan 800mRL





#### 17.14 Canadian and Australian Mineral Resource Codes

A comparison between the CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines (prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council August 20, 2000) and the Australasian Code for Reporting of Mineral Resources and Ore Reserves, or JORC code, (prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC) and effective from September 1999) is set out in the following table.

Table 24 Mineral Re	esource Definitions
Comparison of Mineral	Resource Definitions
Canadian Code (CIM) 2000	Australian JORC Code (AusIMM) 2004
An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes	An 'Inferred Mineral Resource' is that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes which may be limited or of uncertain quality and reliability.

# 18. INTERPRETATION, CONCLUSIONS AND RECOMMENDATIONS

The Youanmi Deeps Underground Project area has been modelled and analysed by standard 3-D interpretation and also by use of the Ordinary Kriging technique. The results of this study show the continuation of previously mined higher grade Main Lode zones to depth; and the potential for increased resource material from interpreted footwall and hanging wall structures.

Further drilling is required to better define the mineralisation extent and tenor in the Main Lode domains; and also to confirm and test the further potential in the interpreted footwall and hanging wall mineralised lodes. Sampling of existing diamond core intersecting any of the interpreted mineralised lodes that has not been done previously should also be carried out.

The overall quality of the available survey data can still be improved; and, if original data is available, reconstruction of strings and wireframes should be attempted. It is further recommended that any such improvement in the survey void data be accomplished prior to further lode interpretations, such that the void data can be used to better constrain the interpretations.

The metallurgical characteristics of the hanging wall mineralised lodes should be further investigated, as they may be potentially different to the previously mined Main Lode zones.

Ravensgate recommends that routine SG measurements should be taken from any additional diamond drilling undertaken into the project area, in order to better model any variation.



# **19. REFERENCES**

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#### **20.** EFFECTIVE DATE

The effective date of the Mineral Resource estimate is 14 July, 2006.


#### 21. CERTIFICATES

I, John Christopher Haywood hereby certify that:

- 1. I am a principal consultant geologist, of Ravensgate whose offices are located at Ground Floor, 49 Ord Street, West Perth, Western Australia;
- 2. I am a graduate of Aston University, Birmingham, UK (BSc. (Hons) Geological Sciences);
- 3. I have the experience relevant to this report which includes 17 years industry experience in the fields of mining geology, geological and resource modelling, and exploration. I have experience in the commodities of gold and base metals;
- 4. I am a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM);
- 5. This Independent Resource Report is based on my personal review of the information available on the properties; and discussions with geological personnel associated with Goldcrest Resources Ltd. I am responsible for compilation and verification of all sections of the report based on information provided by Goldcrest Resources Ltd and their associated consultants and/or contractors;
- 6. It is my professional opinion that the Youanmi Deeps Underground Project area is a property of merit and that further exploration of this property is warranted;
- 7. I am not, nor intend to be, a director, officer or other direct employee of Goldcrest Resources Ltd and have no material interest in the projects or the company Goldcrest Resources Ltd. My relationship with Goldcrest Resources Ltd is solely one of professional association between client and independent consultant. The review work and this Report are prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent upon the results of this Report;
- 8. Ravensgate has previously undertaken work for Goldcrest Resources Ltd and may elect to undertake further work for this report and other work if requested to do so as an independent geological consultancy. I do not expect to receive remuneration other than normal professional fees and reimbursement of expenses incurred;
- 9. The Independent Resource Report has been compiled based on information available up to and including the date of this report. I have given my consent for the distribution of this report in the form and context in which it appears;
- 10. I have not visited the properties in connection with the compilation of this report. This Independent Resource Report is supported by technical reports supplied by Goldcrest Resources Ltd and their associated consultants and/or contractors. I have relied on these reports for the determination of project merit, including aspects related to exploration potential and data quality. To my knowledge there have been no material changes on the property since the time of writing of those reports, other than what had been referred to in this report;
- 11. For the purposes of this technical report I am a 'Qualified Person' as defined by the National Instrument 43-101 Standards of Disclosure for Mineral Projects (2000), and as defined by the Australasian JORC code (December 2004).

Signed at Perth, Western Australia this 25<sup>th</sup> day of July, 2006.



Smatter 9

John C Haywood BSc (Hons) MAusIMM



I, Stephen James Hyland hereby certify that:

- 1. I am a principal consultant geologist, of Ravensgate whose offices are located at Ground Floor, 49 Ord Street, West Perth, Western Australia;
- 2. I am a graduate of James Cook University, North Queensland (BSc. Geology);
- 3. I have the experience relevant to this report which includes 20 years industry experience in the fields of exploration, mining geology, geological and resource modelling, and mineral asset appraisal. I have wide experience in a range of commodities including gold, base metals, industrial minerals and mineral sands;
- 4. I am a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM) and the Geostatistical Association of Australasia and the Canadian Institute of Mining and Metallurgy;
- 5. This Independent Resource Report is based on my personal review of the information available on the properties; and discussions with geological personnel associated with Goldcrest Resources Ltd. I am responsible for compilation and verification of all sections of the report based on information provided by Goldcrest Resources Ltd and their associated consultants and/or contractors;
- 6. It is my professional opinion that the Youanmi Deeps Underground Project area is a property of merit and that further exploration of these properties is warranted;
- 7. I am not, nor intend to be, a director, officer or other direct employee of Goldcrest Resources Ltd and have no material interest in the projects or the company Goldcrest Resources Ltd. My relationship with Goldcrest Resources Ltd is solely one of professional association between client and independent consultant. The review work and this Report are prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent upon the results of this Report;
- 8. Ravensgate has previously undertaken work for Goldcrest Resources Ltd and may elect to undertake further work for this report and other work if requested to do so as an independent geological consultancy. I do not expect to receive remuneration other than normal professional fees and reimbursement of expenses incurred;
- 9. The Independent Resource Report has been compiled based on information available up to and including the date of this report. I have given my consent for the distribution of this report in the form and context in which it appears;
- 10. I have not visited the properties in connection with the compilation of this report. This Independent Resource Report is supported by technical reports supplied by Goldcrest Resources Ltd and their associated consultants and/or contractors. I have relied on these reports for the determination of project merit, including aspects related to exploration potential and data quality.

To my knowledge there have been no material changes on the property since the time of writing of those reports, other than what had been referred to in this report;

12. For the purposes of this technical report I am a 'Qualified Person' as defined by the Australasian JORC code (December 2004).

Signed at Perth, Western Australia this 25<sup>th</sup> day of July, 2006.



S. Hyland.

Stephen J Hyland BSc MAusIMM GAA CIM



# **APPENDIX A**

## Logarithmic and Histogram Plots of Raw Assay and Composite Data



Figure 74 Domain 4 - Main Lode, Main Fault Block - Au and Composite Length











Figure 76 Domain 402 (Lower grade northern sub-domain from Domain 4) Au and Composite Length

Figure 77 Domain 6 - Footwall Lode, Main Fault Block - Au and Composite Length







Figure 78 Domain 8 - Footwall Lode, Main Fault Block - Au and Composite Length

Figure 79 Domain 801 (High grade southern sub-domain from Domain 8) Au and Composite Length









Figure 80 Domain 802 (Lower grade southern sub-domain from Domain 8) Au and Composite Length

Figure 81 Domain 17 - Footwall Lode, Main Fault Block - Au and Composite Length







#### Figure 82 Domain 1701 (High grade central sub-domain from Domain 17) Au and Composite Length

Figure 83 Domain 1702 (Lower grade north and south sub-domain from Domain 17) Au and Composite Length









#### Figure 84 Domain 24 - Hanging Wall Lode, Main Fault Block - Au and Composite Length





0

0.5

0.7

0.9

Length Bin

1.1

1.3

0 -

13 1 9 7 5 3 13 1 9 7 5 3 15

Au Bin

19 21 25 27 29 29

#### Figure 85 Domain 41 - Hanging Wall Lode, Main Fault Block - Au and Composite Length





#### Figure 86 Domain 10 - Main Lode, Hill End Fault Block - Au and Composite Length





#### Figure 87 Domain 48 - Hanging Wall Lode, Hill End Fault Block - Au and Composite Length





#### Figure 88 Domain 19 - Hanging Wall Lode, Hill End Fault Block - Au and Composite Length





Figure 89 Domain 53 - Main Lode, Pollard Fault Block - Au and Composite Length





#### Figure 90 Domain 42 - Footwall Lode, Pollard Fault Block - Au and Composite Length





#### Figure 91 Domain 2 - Hanging Wall Lode, Pollard Fault Block - Au and Composite Length





#### Figure 92 Domain 35 - Hanging Wall Lode, Pollard Fault Block - Au and Composite Length





Figure 93 Domain 47 - Hanging Wall Lode, Pollard Fault Block - Au and Composite Length



# APPENDIX B

## Semi-Variograms and Ellipses

Figure 94 Domain 401 - Main Lode, Main Fault Block - Downhole Variogram, shows 39% nugget



Figure 95 Domain 401 - Main Lode, Main Fault Block - Semi-Variogram







Figure 96 Domain 402 - Main Lode, Main Fault Block - Semi-Variogram

Figure 97 Domains 401 and 402 - Main Lode, Main Fault Block - Ellipse Orientations







#### Figure 98 Domain 6 - Footwall Lode, Main Fault Block - Semi-Variogram

Figure 99 Domain 6 - Footwall Lode, Main Fault Block - Ellipse Orientation







Figure 100 Domain 801 - Footwall Lode, Main Fault Block - Semi-Variogram

Figure 101 Domain 802 - Footwall Lode, Main Fault Block - Semi-Variogram







### Figure 102 Domains 801 (right) and 802 (left) - Footwall Lode, Main Fault Block - Ellipse Orientations





Figure 103 Domain 1701 - Footwall Lode, Main Fault Block - Semi-Variogram

Figure 104 Domains 1701 (centre) and 1702 (left) - Footwall Lode, Main Fault Block - Ellipse Orientations







Figure 105 Domain 24 - Hanging Wall Lode, Main Fault Block - Semi-Variogram

Figure 106 Domain 24 - Hanging Wall Lode, Main Fault Block - Ellipse Orientation







Figure 107 Domain 41 - Hanging Wall Lode, Main Fault Block - Semi-Variogram

Figure 108 Domain 41 - Hanging Wall Lode, Main Fault Block - Ellipse Orientation







Figure 109 Domain 10 - Main Lode, Hill End Fault Block - Semi-Variogram

Figure 110 Domain 10 - Main Lode, Hill End Fault Block - Ellipse Orientation







Figure 111 Domain 48 - Hanging Wall Lode, Hill End Fault Block - Semi-Variogram

Figure 112 Domain 48 - Hanging Wall Lode, Hill End Fault Block - Ellipse Orientation







Figure 113 Domain 19 - Hanging Wall Lode, Hill End Fault Block - Semi-Variogram

Figure 114 Domain 19 - Hanging Wall Lode, Hill End Fault Block - Ellipse Orientation







Figure 115 Domain 53 - Main Lode, Pollard Fault Block - Semi-Variogram

Figure 116 Domain 53 - Main Lode, Pollard Fault Block - Ellipse Orientation







Figure 117 Domain 42 - Footwall Lode, Pollard Fault Block - Semi-Variogram

Figure 118 Domain 42 - Footwall Lode, Pollard Fault Block - Ellipse Orientation







Figure 119 Domain 35 - Hanging Wall Lode, Pollard Fault Block - Semi-Variogram



# APPENDIX C

# Plots of Block Model Kriged Efficiency (KE), Number of Composites Used (NS), and Search Volume Pass (SV)

Figure 120 Domain 401 - Main Lode, Main Fault Block - Kriged Efficiency (KE)



Figure 121 Domain 401 - Main Lode, Main Fault Block - Number of Composites Used (NS)







Figure 122 Domain 401 - Main Lode, Main Fault Block - Search Volume (SV)

SV			
NAME	FROM	то	
SV1	0.5	1.5	
SV2	1.5	2.5	
sv3	2.5	3.5	

Figure 123 Domain 402 - Main Lode, Main Fault Block - Kriged Efficiency (KE)







Figure 124 Domain 402 - Main Lode, Main Fault Block - Number of Composites Used (NS)

Figure 125 Domain 402 - Main Lode, Main Fault Block - Search Volume (SV)



FROM

0.5 1.5

2.5

TO 1.5 2.5

35




### Figure 126 Domain 6 - Footwall Lode, Main Fault Block - Kriged Efficiency (KE)

Figure 127 Domain 6 - Footwall Lode, Main Fault Block - Number of Composites Used (NS)



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5			

то

2.0

4.0

8.0

12.0

16.0

24.0

32.0

40.0

60.0





### Figure 128 Domain 6 - Footwall Lode, Main Fault Block - Search Volume (SV)

SV			
NAME	FROM	то	
SV1	0.5	1.5	
SV2	1.5	2.5	
SV3	2.5	3.5	

## Figure 129 Domain 1701 - Footwall Lode, Main Fault Block - Kriged Efficiency (KE)







### Figure 130 Domain 1701 - Footwall Lode, Main Fault Block - Number of Composites Used (NS)

Figure 131 Domain 1701 - Footwall Lode, Main Fault Block - Search Volume (SV)



SV			
AME	FROM	то	
V1	0.5	1.5	
V2	1.5	2.5	
V3	2.5	3.5	





### Figure 132 Domain 1702 - Footwall Lode, Main Fault Block - Kriged Efficiency (KE)

Figure 133 Domain 1702 - Footwall Lode, Main Fault Block - Number of Composites Used (NS)



S		
ROM	то	
5	2.0	
0	4.0	
0	8.0	
0	12.0	
2.0	16.0	
6.0	24.0	
4.0	32.0	
2.0	40.0	

60.0





### Figure 134 Domain 1702 - Footwall Lode, Main Fault Block - Search Volume (SV)

SV			
JAME	FROM	то	
5V1	0.5	1.5	
SV2	1.5	2.5	
SV3	2.5	3.5	

Figure 135 Domain 801 - Footwall Lode, Main Fault Block - Kriged Efficiency (KE)









Figure 136 Domain 801 - Footwall Lode, Main Fault Block - Number of Composites Used (NS)

Figure 137 Domain 801 - Footwall Lode, Main Fault Block - Search Volume (SV)



SV			
NAME	FROM	то	
SV1	0.5	1.5	
SV2	1.5	2.5	
sv3	2.5	3.5	





#### Figure 138 Domain 802 - Footwall Lode, Main Fault Block - Kriged Efficiency (KE)

Figure 139 Domain 802 - Footwall Lode, Main Fault Block - Number of Composites Used (NS)







### Figure 140 Domain 802 - Footwall Lode, Main Fault Block - Search Volume (SV)

V			
AME	FROM	то	
/1	0.5	1.5	
/2	1.5	2.5	
/3	2.5	3.5	

Figure 141 Domain 24 - Hanging Wall Lode, Main Fault Block - Kriged Efficiency (KE)







Figure 142 Domain 24 - Hanging Wall Lode, Main Fault Block - Number of Composites Used (NS)

Figure 143 Domain 24 - Hanging Wall Lode, Main Fault Block - Search Volume (SV)



Page 155 01 214	Page	153	of	214
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FROM

0.5

1.5

2.5

то

1.5

2.5

3.5





#### Figure 144 Domain 41 - Hanging Wall Lode, Main Fault Block - Kriged Efficiency (KE)

Figure 145 Domain 41 - Hanging Wall Lode, Main Fault Block - Number of Composites Used (NS)



то

2.0

4.0

8.0

12.0

16.0

24.0

32.0

40.0

60.0





### Figure 146 Domain 41 - Hanging Wall Lode, Main Fault Block - Search Volume (SV)

SV NAME	FROM	то	
	0.5	15	
5V2	1.5	2.5	
sv3	2.5	3.5	

Figure 147 Domain 10 - Main Lode, Hill End Fault Block - Kriged Efficiency (KE)







## Figure 148 Domain 10 - Main Lode - Hill End Fault Block - Number of Composites Used (NS)

VS		
ROM	то	
0.5	2.0	
2.0	4.0	
4.0	8.0	
3.0	12.0	
12.0	16.0	
16.0	24.0	
24.0	32.0	
32.0	40.0	
40.0	60.0	

Figure 149 Domain 10 - Main Lode, Hill End Fault Block - Search Volume (SV)



SV			
NAME	FROM	то	
SV1	0.5	1.5	
SV2	1.5	2.5	
sv3	2.5	3.5	





### Figure 150 Domain 48 - Hanging Wall Lode, Hill End Fault Block - Kriged Efficiency (KE)

Figure 151 Domain 48 - Hanging Wall Lode - Hill End Fault Block - Number of Composites Used (NS)



NS		
FROM	TO	
0.5	2.0	
2.0	4.0	
4.0	8.0	
8.0	12.0	
12.0	16.0	
16.0	24.0	
24.0	32.0	
32.0	40.0	
40.0	60.0	





### Figure 152 Domain 48 - Hanging Wall Lode, Hill End Fault Block - Search Volume (SV)

V			
AME	FROM	то	
/1	0.5	1.5	
/2	1.5	2.5	
/3	2.5	3.5	

### Figure 153 Domain 19 - Hanging Wall Lode, Hill End Fault Block - Kriged Efficiency (KE)







#### Figure 154 Domain 19 - Hanging Wall Lode - Hill End Fault Block - Number of Composites Used (NS)

Figure 155 Domain 19 - Hanging Wall Lode, Hill End Fault Block - Search Volume (SV)



SV			
AME	FROM	то	
V1	0.5	1.5	
V2	1.5	2.5	
V3	2.5	3.5	





#### Figure 156 Domain 53 - Main Lode, Pollard Fault Block - Kriged Efficiency (KE)

Figure 157 Domain 53 - Main Lode - Pollard Fault Block - Number of Composites Used (NS)







## Figure 158 Domain 53 - Main Lode, Pollard Fault Block - Search Volume (SV)

ME	FROM	то	
1	0.5	1.5	
2	1.5	2.5	
3	2.5	3.5	

Figure 159 Domain 42 - Footwall Lode, Pollard Fault Block - Kriged Efficiency (KE)







# Figure 160 Domain 42 - Footwall Lode - Pollard Fault Block - Number of Composites Used (NS)

IS		
ROM	то	
.5	2.0	
.0	4.0	
.0	8.0	
.0	12.0	
2.0	16.0	
6.0	24.0	
4.0	32.0	
2.0	40.0	
0.0	60.0	

Figure 161 Domain 42 - Footwall Lode, Pollard Fault Block - Search Volume (SV)



SV JAME	FROM	то	
V1	0.5	1.5	
V2	1.5	2.5	
V3	2.5	3.5	





### Figure 162 Domain 2 - Hanging Wall Lode, Pollard Fault Block - Kriged Efficiency (KE)



Figure 163 Domain 2 - Hanging Wall Lode - Pollard Fault Block - Number of Composites Used (NS)



NS		
FROM	то	
0.5	2.0	
2.0	4.0	
4.0	8.0	
8.0	12.0	
12.0	16.0	
16.0	24.0	
24.0	32.0	
32.0	40.0	
40.0	60.0	





### Figure 164 Domain 2 - Hanging Wall Lode, Pollard Fault Block - Search Volume (SV)

SV			
VAME	FROM	то	
SV1	0.5	1.5	
5V2	1.5	2.5	
5V3	2.5	3.5	

Figure 165 Domain 35 - Hanging Wall Lode, Pollard Fault Block - Kriged Efficiency (KE)



-60	
-40	
-20	
0	
H20	
:0-40	
0-60	
0-80	
0-100	





# Figure 166 Domain 35 - Hanging Wall Lode - Pollard Fault Block - Number of Composites Used (NS)

S		
ROM	то	
.5	2.0	
.0	4.0	
.0	8.0	
.0	12.0	
2.0	16.0	
6.0	24.0	
4.0	32.0	
2.0	40.0	
0.0	60.0	

Figure 167 Domain 35 - Hanging Wall Lode, Pollard Fault Block - Search Volume (SV)



V			
AME	FROM	то	
/1	0.5	1.5	
/2	1.5	2.5	
/3	2.5	3.5	





### Figure 168 Domain 47 - Hanging Wall Lode, Pollard Fault Block - Kriged Efficiency (KE)

Figure 169 Domain 47 - Hanging Wall Lode - Pollard Fault Block - Number of Composites Used (NS)



NS		
FROM	то	
0.5	2.0	
2.0	4.0	
4.0	8.0	
8.0	12.0	
12.0	16.0	
16.0	24.0	
24.0	32.0	
32.0	40.0	
40.0	60.0	





# Figure 170 Domain 47 - Hanging Wall Lode, Pollard Fault Block - Search Volume (SV)

AME	FROM	то	
V1	0.5	1.5	
V2	1.5	2.5	
vз	2.5	3.5	



# APPENDIX D

## Block Model versus Drillhole Data Validation Graphs



Figure 171 Domain 401 - Main Lode, Main Fault Block - Comparison by 20m RL Increments

Figure 172 Domain 401 - Main Lode, Main Fault Block - Comparison by 80m Northing Increments







Figure 173 Domain 401 - Main Lode, Main Fault Block - Comparison by 40m Easting Increments

Figure 174 Domain 402 - Main Lode, Main Fault Block - Comparison by 20m RL Increments







Figure 175 Domain 402 - Main Lode, Main Fault Block - Comparison by 80m Northing Increments

Figure 176 Domain 402 - Main Lode, Main Fault Block - Comparison by 40m Easting Increments







Figure 177 Domain 6 - Footwall Lode, Main Fault Block - Comparison by 20m RL Increments

Figure 178 Domain 6 - Footwall Lode, Main Fault Block - Comparison by 80m Northing Increments







Figure 179 Domain 6 Footwall Lode, Main Fault Block - Comparison by 40m Easting Increments

Figure 180 Domain 801 - Footwall Lode, Main Fault Block - Comparison by 20m RL Increments







Figure 181 Domain 801 - Footwall Lode, Main Fault Block - Comparison by 80m Northing Increments

Figure 182 Domain 801 Footwall Lode, Main Fault Block - Comparison by 40m Easting Increments







Figure 183 Domain 802 - Footwall Lode, Main Fault Block - Comparison by 20m RL Increments

Figure 184 Domain 802 - Footwall Lode, Main Fault Block - Comparison by 80m Northing Increments







Figure 185 Domain 802 Footwall Lode, Main Fault Block - Comparison by 40m Easting Increments

Figure 186 Domain 1701 - Footwall Lode, Main Fault Block - Comparison by 20m RL Increments







Figure 187 Domain 1701 - Footwall Lode, Main Fault Block - Comparison by 80m Northing Increments

Figure 188 Domain 1701 Footwall Lode, Main Fault Block - Comparison by 40m Easting Increments







Figure 189 Domain 1702 - Footwall Lode, Main Fault Block - Comparison by 20m RL Increments

Figure 190 Domain 1702- Footwall Lode, Main Fault Block - Comparison by 80m Northing Increments







Figure 191 Domain 1702 Footwall Lode, Main Fault Block - Comparison by 40m Easting Increments

Figure 192 Domain 24 - Hanging Wall Lode, Main Fault Block - Comparison by 20m RL Increments







Figure 193 Domain 24- Hanging Wall Lode, Main Fault Block - Comparison by 80m Northing Increments

Figure 194 Domain 24 Hanging Wall Lode, Main Fault Block - Comparison by 40m Easting Increments







Figure 195 Domain 41 - Hanging Wall Lode, Main Fault Block - Comparison by 20m RL Increments

Figure 196 Domain 41- Hanging Wall Lode, Main Fault Block - Comparison by 80m Northing Increments






Figure 197 Domain 41 Hanging Wall Lode, Main Fault Block - Comparison by 40m Easting Increments









Figure 199 Domain 10 - Main Lode, Hill End Fault Block - Comparison by 80m Northing Increments

Figure 200 Domain 10 - Main Lode, Hill End Fault Block - Comparison by 40m Easting Increments







Figure 201 Domain 48 - Hanging Wall Lode, Hill End Fault Block - Comparison by 20m RL Increments

Figure 202 Domain 48 - Hanging Wall Lode, Hill End Fault Block - Comparison by 80m Northing Increments







Figure 203 Domain 48 - Hanging Wall Lode, Hill End Fault Block - Comparison by 40m Easting Increments

Figure 204 Domain 19 - Hanging Wall Lode, Hill End Fault Block - Comparison by 20m RL Increments







Figure 205 Domain 19 - Hanging Wall Lode, Hill End Fault Block - Comparison by 80m Northing Increments

Figure 206 Domain 19 - Hanging Wall Lode, Hill End Fault Block - Comparison by 40m Easting Increments







Figure 207 Domain 53 - Main Lode, Pollard Fault Block - Comparison by 20m RL Increments

Figure 208 Domain 53 - Main Lode, Pollard Fault Block - Comparison by 80m Northing Increments







Figure 209 Domain 53 - Main Lode, Pollard Fault Block - Comparison by 40m Easting Increments

Figure 210 Domain 42 Footwall Lode, Pollard Fault Block - Comparison by 20m RL Increments







Figure 211 Domain 42 - Footwall Lode, Pollard Fault Block - Comparison by 80m Northing Increments

Figure 212 Domain 42 - Footwall Lode, Pollard Fault Block - Comparison by 40m Easting Increments







Figure 213 Domain 2 Hanging Wall Lode, Pollard Fault Block - Comparison by 20m RL Increments

Figure 214 Domain 2 - Hanging Wall Lode, Pollard Fault Block - Comparison by 80m Northing Increments







Figure 215 Domain 2 - Hanging Wall Lode, Pollard Fault Block - Comparison by 40m Easting Increments

Figure 216 Domain 35 Hanging Wall Lode, Pollard Fault Block - Comparison by 20m RL Increments







Figure 217 Domain 35 - Hanging Wall Lode, Pollard Fault Block - Comparison by 80m Northing Increments

Figure 218 Domain 35 - Hanging Wall Lode, Pollard Fault Block - Comparison by 40m Easting Increments







Figure 219 Domain 47 Hanging Wall Lode, Pollard Fault Block - Comparison by 20m RL Increments

Figure 220 Domain 47 - Hanging Wall Lode, Pollard Fault Block - Comparison by 80m Northing Increments







Figure 221 Domain 47 - Hanging Wall Lode, Pollard Fault Block - Comparison by 40m Easting Increments



# APPENDIX E

**Resource Tabulations** 

	Ravensgate			
Mined Sta	4			
Mined Sta	atus			0
DOMAIN				ALL
Filter App	lied to Eval	uation		
Previous	Model Nam	e		
New Mod	el Name			yu0606m.dm
RESCAT	Cutoff (g/t)	ALI	DOMA	INS
		quantity (t)	grade (g/t)	metal (oz)
00	0.0	1,401,106	5.8	262,546
E E	0.2	1,398,365	5.8	262,540
H H	1.0	1,388,014	5.9	262,259
C/S	2.0	1,273,710	6.3	256,220
	4.0	808,387	8.1	210,161
ΨZ	6.0	450,890	10.6	153,267
	10.0	203,708	14.4	94,481
Q	0.0	-	-	-
Ш	0.2	-	-	-
۳	1.0	-	-	-
SI	2.0	-	-	-
V.	4.0	-	-	-
U U U	6.0		-	-
	10.0	-	-	-
0	0.0	1,401,106	5.8	262,546
μ	0.2	1,398,365	5.8	262,540
L L	1.0	1,388,014	5.9	262,259
10	2.0	1,273,710	6.3	256,220
ā	4.0	808,387	8.1	210,161
Z	6.0	450,890	10.6	153,267
	10.0	203,708	14.4	94,481
0	0.0	2,762,356	6.1	540,807
Ш	0.2	2,753,623	6.1	540,804
ERR	1.0	2,657,711	6.3	538,853
	2.0	2,333,835	7.0	523,293
L.	4.0	1,605,112	8.7	447,698
Z	6.0	967,166	11.2	348,411
	10.0	456,790	15.3	224,466

# Table 25 Resource Tabulation All Domains



	Ravensgate			
Mined Sta	atus			0
DOMAIN				All Main
Filter App	lied to Eval	uation		
Previous	Model Nam	e		
New Mod	0			
RESCAT	Cutoff (a/t)	MA	AIN TOT	AL
	caton (grt)	quantity (t)	grade (g/t)	metal (oz)
0.0	0.0	1.186.017	6.0	229.453
	0.2	1,183,277	6.0	229,447
AL T	1.0	1,175,986	6.1	229,232
ບັດ	2.0	1,065,446	6.5	223,380
.s.ŏ	4.0	658,725	8.7	183,446
WZ	6.0	418,455	10.8	145,748
	10.0	201,223	14.5	93,584
e	0.0	-	-	-
RE	0.2	-	-	-
5	1.0		-	-
St	2.0	-	-	-
Ш	4.0	-	-	-
N	10.0		_	
	0.0	1 186 017	60	229 453
	0.2	1,183,277	6.0	229,447
Ę	1.0	1,175,986	6.1	229,232
CA	2.0	1,065,446	6.5	223,380
ĕ	4.0	658,725	8.7	183,446
N	6.0	418,455	10.8	145,748
	10.0	201,223	14.5	93,584
0	0.0	2,249,582	6.6	475,693
Ξ	0.2	2,240,862	6.6	475,689
SR SR	1.0	2,188,297	6./	4/4,63/
Ē	2.0	1,947,050	7.4	463,023
<u>ل</u>	4.0	861 425	9.2	303,701
	10.0	453 520	15.3	223,707
	0.0	747 004	,0.0 E N	104 170
â	0.0	7/16/759	5.2 50	124,176
JIF IE	10	703 433	5.2	124,170
ASS	2,0	581 465	5.5 63	116 943
CL	4.0	310,838	8.8	88 227
NN	6.0	118,413	15.5	58,952
	10.0	72,643	20.3	47,382

#### Table 26 Resource Tabulation - All Main Fault Block Domains



Mined Status         0           DOMAIN         All Hill End           Filter Applied to Evaluation         All Hill End           Previous Model Name         0           New Model Name         0           Rescat           Quantity (t)         grade (g/t)         metal (oz)           Quantity (t)         grade (g/t)         metal (oz)           1.0         209,382         4.9         32,830           0.0         212,442         4.8         32,896           1.0         209,382         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2.485         11.2         897           0.0         2.12,442         4.8         32,896           1.0         -         -         -           0.0         2.435         7.2         7,519           1.0         -         -         -           0.0         2.12,442         4.8         32,896           0.1         -         -         -           0.0         2.12,442         4.8         32,896	Ravensgate				Youanmi UG
Mined Status0All Hill EndFilter Applied to EvaluationPrevious Model NameNew Model Name0New Model NameOutoff (g/t)HILL END TOTALquantity (t)grade (g/t)metal (oz)Quantity (t)grade (g/t)metal (oz)Outoff (g/t)Quantity (t)grade (g/t)metal (oz)Outoff (g/t)Quantity (t)grade (g/t)metal (oz)Outoff (g/t)Quantity (t)grade (g/t)metal (oz)OUTO212,4424.832,830O.0212,4424.832,830O.02.02.02.0O.02.02.02.0O.02.02.02.0O.0212,4424.832,830O.02.02.02.0O.02.02.02.0O.02.02.0O.02.12,4424.832,830O.02.12,4424.832,830O.02.12,4424.832,830O.02.12,4424.832,830O.02.12,4424.832,830O.02.12,4424.832,830O.02.12,4424.832,830O.13.0 <th< th=""><th></th><th></th><th></th><th></th><th></th></th<>					
DOMAINAll Hill EndFilter Applied to EvaluationAll Hill EndPrevious Model Name0New Model Name0RescatCutoff (g/t)HILL END TOTALQuantity (t)grade (g/t)metal (oz)QUADE212,4424.832,8960.0212,4424.832,8960.0212,4424.832,8961.0209,3824.932,6444.0149,6625.626,7156.032,4357.27,51910.02,48511.28970.00.010.02,48511.28970.010.010.010.010.010.0212,4424.832,8960.2212,4424.832,89610.0212,4424.832,89610.0212,4424.832,89610.0221705.826,7156.032,4357.27,51910.02248511.28970.0229,1705.349,78310.02248511.289710.02248511.289710.02248511.289710.02248511.289710.02248511.289710.0 <t< th=""><th>Mined Sta</th><th>itus</th><th></th><th></th><th>0</th></t<>	Mined Sta	itus			0
Filter Applied to Evaluation           Previous Model Name         0           New Model Name         0           Rescar         Cutoff (g/t)         HILL END TOTAL           quantity (t)         grade (g/t)         metal (oz)           QUADE         212,442         4.8         32,830           0.2         212,442         4.8         32,830           0.2         212,442         4.8         32,830           1.0         209,5618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         -         -         -           1.0         -         -         -           2.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           0.0         212,442         4.8         32,896           1.0         209,5618         4.9         32,644           1.0 <t< th=""><th>DOMAIN</th><th></th><th></th><th></th><th>All Hill End</th></t<>	DOMAIN				All Hill End
Previous Model Name         0           Rescat         Cutoff (g/t)         HILL END TOTAL           quantity (t)         grade (g/t)         metal (oz)           Quantity (t)         grade (g/t)         grade (g/t)           Quantity (t)         grade	Filter App	lied to Eval	uation		
New Model Name0RESCATCutoff (g/t)HILL END TOTALquantity (t)grade (g/t)metal (oz)quantity (t)grade (g/t)grade (g/t)quantity (t)grade (g/t)grade (	Previous	Model Nam	e		
RESCAT         Cutoff (g/t)         HILL END TOTAL           quantity (t)         grade (g/t)         metal (oz)           QUADITY (t)         grade (g/t)         metal (oz)           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,830           2.0         205,618         4.9         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2.485         11.2         897           0.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,830           2.0         205,618         4.9         32,844           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0 </th <th>New Mod</th> <th>0</th>	New Mod	0			
Cutoff (g/t)         HILL END TOTAL           quantity (t)         grade (g/t)         metal (oz)           Quantity (t)         grade (g/t)         metal (oz)           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,830           0.2         212,442         4.8         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.1         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,896           1.0         209,382         4.9 <td< th=""><th></th><th></th><th></th><th></th><th>TAL</th></td<>					TAL
Quantity (t)         grade (g/t)         metal (oz)           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,896           1.0         209,382         4.9         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         -         -         -           0.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         2         212,442         4.8         32,896           0.2         212,442         4.8         32,896           0.2         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0	RESCAT	Cutoff (g/t)	HILL	ENDIC	TAL
O         212,442         4.8         32,896           0.2         212,442         4.8         32,896           1.0         209,382         4.9         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         -         -         -           1.0         -         -         -           0.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435 <td< th=""><th></th><th></th><th>quantity (t)</th><th>grade (g/t)</th><th>metal (oz)</th></td<>			quantity (t)	grade (g/t)	metal (oz)
O.2         212,442         4.8         32,896           1.0         209,382         4.9         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         -         -         -           0.2         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,896           0.2         212,442         4.8         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         24,85         11.2         897           0.0	00	0.0	212,442	4.8	32,896
Ino         209,382         4.9         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         -         -         -           0.2         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         2.0         212,442         4.8         32,896           0.2         212,442         4.8         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           1.0         22,92,170		0.2	212,442	4.8	32,896
2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         -         -         -           0.2         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           1.0         -         -         -           6.0         -         -         -           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,896           0.2         212,442         4.8         32,896           1.0         209,382         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.2         292,170         5.3         49,783           0.2         292,170	AL T	1.0	209,382	4.9	32,830
4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         -         -         -           0.2         -         -         -           1.0         -         -         -           2.0         -         -         -           4.0         -         -         -           10.0         -         -         -           6.0         -         -         -           10.0         -         -         -           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,896           0.2         212,442         4.8         32,896           1.0         209,382         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.2         292,170         5.3         49,783           1.0         291,506 <td< th=""><th>ບັນ</th><th>2.0</th><th>205,618</th><th>4.9</th><th>32,644</th></td<>	ບັນ	2.0	205,618	4.9	32,644
B         6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         -         -         -           0.2         -         -         -           1.0         -         -         -           2.0         -         -         -           4.0         -         -         -           6.0         -         -         -           6.0         -         -         -           6.0         -         -         -           10.0         -         -         -           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         292,170         5.3         49,783           0.2         292,170         5.3         49,783           0.2         292,170	A D	4.0	149,662	5.6	26,715
10.0         2,485         11.2         897           0.0         -         -         -           0.2         -         -         -           1.0         -         -         -           2.0         -         -         -           4.0         -         -         -           6.0         -         -         -           10.0         -         -         -           6.0         -         -         -           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,896           0.2         212,442         4.8         32,896           1.0         209,382         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         29,170         5.3         49,783           0.2         292,170         5.3         49,783           1.0         291,506         5.3         49,783           1.0         224,949         6.1         43,977           6.0         105,226	II II	6.0	32,435	7.2	7,519
O.0         -         -         -         -           0.2         -         -         -         -           1.0         -         -         -         -           2.0         -         -         -         -           4.0         -         -         -         -           6.0         -         -         -         -           6.0         -         -         -         -           0.0         212,442         4.8         32,896           0.2         212,442         4.8         32,830           2.0         205,618         4.9         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         292,170         5.3         49,783           1.0         291,506         5.3         49,762           2.0         272,063         5.6         48,786           4.0         224,949         6.1         43,977           6.0 <th></th> <th>10.0</th> <th>2,485</th> <th>11.2</th> <th>897</th>		10.0	2,485	11.2	897
Image         0.2         -         -         -         -           1.0         -         -         -         -         -           2.0         -         -         -         -         -           4.0         -         -         -         -         -           6.0         -         -         -         -         -           10.0         -         -         -         -         -           10.0         212,442         4.8         32,896         32,830           0.2         212,442         4.8         32,896         32,644           4.0         149,662         5.6         26,715         6.0         32,435         7.2         7,519           10.0         292,170         5.3         49,783         0.2         292,170         5.3         49,783           0.2         292,170         5.3         49,783         49,783         49,783         49,783           0.0         229,2170         5.3         49,783         49,783         49,783         49,783         49,783         49,783         49,783         49,783         49,783         49,782         2.0         2,72,063         5	<u>e</u>	0.0	-	-	-
Image: Note of the system         Im	RE	0.2		-	-
SP         2.0         -	5	1.0		-	-
Image: Barbon Stress         Image: Ba	St	2.0	-	-	-
Image: No.0	Ш	4.0	-	-	-
OD         212,442         4.8         32,896           0.2         212,442         4.8         32,896           1.0         209,382         4.9         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         292,170         5.3         49,783           0.2         292,170         5.3         49,783           0.2         292,170         5.3         49,783           1.0         291,506         5.3         49,783           1.0         291,506         5.3         49,762           2.0         272,063         5.6         48,786           4.0         224,949         6.1         43,977           6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.2         229,500         4.7         34,337           0.2         229,500         4.7         34,332           2.0         197,417         5.2<	Σ	10.0		-	
OD         D10         D12         D10         D10         D10         D10         D10         D10         D10         D2         R8         G32,896         G32,896         G32,896         G32,896         G32,830         G32,830         G32,830         G32,830         G32,830         G32,830         G32,830         G32,830         G32,844         G32,644         G32,643         G32,643         G32,643         G33,643         G33,643 <th< th=""><th></th><th>0.0</th><th>212 442</th><th>48</th><th>32 896</th></th<>		0.0	212 442	48	32 896
Ind         209,382         4.9         32,830           2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         292,170         5.3         49,783           0.2         292,170         5.3         49,783           1.0         291,506         5.3         49,762           2.0         272,063         5.6         48,786           4.0         224,949         6.1         43,977           6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560		0.2	212.442	4.8	32,896
Virtual         2.0         205,618         4.9         32,644           4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         292,170         5.3         49,783           0.2         292,170         5.3         49,783           0.2         292,170         5.3         49,783           1.0         291,506         5.3         49,783           4.0         224,949         6.1         43,977           6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           0.2         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,	<b>H</b>	1.0	209,382	4.9	32,830
Yei         4.0         149,662         5.6         26,715           6.0         32,435         7.2         7,519           10.0         2,485         11.2         897           0.0         292,170         5.3         49,783           0.2         292,170         5.3         49,783           1.0         291,506         5.3         49,783           1.0         291,506         5.3         49,783           1.0         291,506         5.3         49,783           1.0         291,506         5.3         49,783           1.0         291,506         5.3         49,783           1.0         291,506         5.3         49,783           1.0         21,20         7.3         24,581           1.0.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,332           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847 </th <th>A:</th> <th>2.0</th> <th>205,618</th> <th>4.9</th> <th>32,644</th>	A:	2.0	205,618	4.9	32,644
Image: Book state s	ĕ	4.0	149,662	5.6	26,715
IO.0         2,485         11.2         897           0.0         292,170         5.3         49,783           0.2         292,170         5.3         49,783           1.0         291,506         5.3         49,783           2.0         272,063         5.6         48,786           4.0         224,949         6.1         43,977           6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594	N N	6.0	32,435	7.2	7,519
O.0         292,170         5.3         49,783           O.2         292,170         5.3         49,783           1.0         291,506         5.3         49,762           2.0         272,063         5.6         48,786           4.0         224,949         6.1         43,977           6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	_	10.0	2,485	11.2	897
0.2         292,170         5.3         49,783           1.0         291,506         5.3         49,762           2.0         272,063         5.6         48,786           4.0         224,949         6.1         43,977           6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,337           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	0	0.0	292,170	5.3	49,783
1.0         291,506         5.3         49,762           2.0         272,063         5.6         48,786           4.0         224,949         6.1         43,977           6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	Ш	0.2	292,170	5.3	49,783
2.0         272,063         5.6         48,786           4.0         224,949         6.1         43,977           6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	ĸ	1.0	291,506	5.3	49,762
4.0         224,949         6.1         43,977           6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,337           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	ü	2.0	272,063	5.6	48,786
6.0         105,226         7.3         24,581           10.0         3,271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	L L	4.0	224,949	6.1	43,977
0.0         3.271         12.5         1,317           0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	É	6.0	105,226	7.3	24,581
0.0         229,500         4.7         34,377           0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560		10.0	3,2/1	12.5	1,317
0.2         229,500         4.7         34,377           1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	9	0.0	229,500	4.7	34,377
1.0         228,082         4.7         34,332           2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	FIE	0.2	229,500	4.7	34,377
2.0         197,417         5.2         32,760           4.0         146,878         5.8         27,594           6.0         52,847         7.4         12,560	SS	1.0	228,082	4.7	34,332
<b>6.0</b> 52,847 7.4 12,560	:LA	2.0	197,417	5.2	32,760
- 0.0 32,047 7.4 12,360	JNC	4.0	140,070 51.077	5.0 7.4	27,394
<b>10.0</b> 1 300 10.0 <i>M</i> 19		10.0	1 300	7.4 10.0	12,300 <u>/</u> 19

### Table 27 Resource Tabulation All Hill End Fault Block Domains



Ravensgate				Youanmi UG
Mined Sta	itus			0
DOMAIN				All Pollard
Filter App	lied to Eval	uation		
Previous	Model Nam	е		
New Model Name				0
RESCAT	Cutoff (a/t)	POLI	ARD TO	DTAL
	(3. 4	quantity (t)	grade (g/t)	metal (oz)
00	0.0	2,647	2.3	197
	0.2	2,647	2.3	197
H H H	1.0	2,647	2.3	197
ີຮັ້ນ	2.0	2,647	2.3	197
5 <u>6</u>	4.0	-	-	-
₩ Z	6.0	-	-	-
	10.0	-	-	-
Ö	0.0		-	-
E E	0.2	-	-	-
5	1.0		-	-
St	2.0	-	-	-
E I	4.0	-	-	-
Σ	10.0	-	-	-
	0.0	2.647	23	197
l 🔒	0.2	2 647	2.3	197
Ë	1.0	2.647	2.3	197
×.	2.0	2.647	2.3	197
N N	4.0	-	-	-
H H	6.0	-	-	-
	10.0	-	-	-
0	0.0	220,604	2.2	15,332
	0.2	220,590	2.2	15,332
Ř	1.0	177,908	2.5	14,453
	2.0	114,722	3.1	11,484
Ľ.	4.0	21,859	4.9	3,442
≧	6.0	515	7.8	129
	10.0	-	-	-
0	0.0	1,103,019	2.5	90,352
HEI	0.2	1,102,749	2.5	90,351
ssil	1.0	1,054,839	2.6	89,255
LA	2.0	690,947	3.2	70,181
NC	4.0	112,610	6.1	21,909
Þ	6.0	33,061	9.6	10,175
	10.0	19,461	10.9	6,791

# Table 28 Resource Tabulation All Pollard Fault Block Domains



Ravensgate				Youanmi UG	
Mined Sta	atus			0	
DOMAIN	DOMAIN				
Filter App	lied to Ev	valuation			
Previous	Model Na	ame		•	
New Mod	vu0606m.dm				
				Juccoonnam	
DESCAT	Cutoff	DC	DMAIN 4	01	
NESCAI	(g/t)	quantity (t)	arade (a/t)	metal (oz)	
0.0	0.0	561 830	82	147 265	
	0.2	561,830	8.2	147,265	
R F	1.0	561,151	8.2	147,253	
SUS	2.0	553,158	8.3	146,793	
ă ă	4.0	412,910	9.9	131,751	
빌님	6.0	298,609	11.8	113,656	
	10.0	175,367	14.8	83,546	
Ω	0.0	-	-	-	
E C	0.2	-	-	-	
۳.	1.0	-	-	-	
S	2.0	-	-	-	
	4.0	-	-	-	
Σ	10.0		-	-	
-	0.0	561.830	82	147.265	
	0.2	561,830	82	147,265	
E,	1.0	561,151	8.2	147.253	
N N	2.0	553,158	8.3	146,793	
ĕ	4.0	412,910	9.9	131,751	
N	6.0	298,609	11.8	113,656	
	10.0	175,367	14.8	83,546	
0	0.0	621,616	11.7	233,138	
Ш	0.2	621,616	11.7	233,138	
SR SR	1.0	616,064	11.8	233,007	
i i i	2.0	611,991	11.8	232,829	
<u>ц</u>	4.0	518,175	13.3	222,344	
≤	6.0	459,270	14.4	212,854	
	10.0	356,120	10.3	100,513	
9	0.0	66,869	20.4	43,763	
EIE	0.2	66,869	20.4	43,/63	
SS	1.0	bb,442	20.5	43,/55	
CLA	2.0	65,749	20.7	43,729	
Ň	4.0 6.0	62 220	20.0	43,005 //3 191	
	10.0	62.188	21.6	43,183	

#### Table 29 Resource Tabulation Main Fault Block - Domain 401



	Youanmi UG			
Mined Sta	atus			0
DOMAIN				402
Filter App	lied to E	valuation		
Previous	Model Na	ame		
New Mod	el Name			yu0606m.dm
	6.4.1			0.2
RESCAT				UZ
	(9/9	quantity (t)	grade (g/t)	metal (oz)
00	0.0	418,526	3.1	41,947
	0.2	418,526	3.1	41,947
U F A T	1.0	412,507	3.1	41,756
S C	2.0	315,250	3.6	36,644
	4.0	73,375	6.1	14,317
ΣĽ	6.0	25,064	8.9	7,149
	10.0	9,/32	12.2	3,823
Ĥ	0.0	32,247	3.U 2.O	200,0
RI	1.0		. J.U 33	2,000
Ň	2.0	20,007	36	2,550
AS	4.0	7 626	43	1 060
Ш	6.0	-	-	-
2	10.0	-	-	-
0	0.0	386,279	3.1	38,884
	0.2	386,279	3.1	38,884
Τ	1.0	384,500	3.1	38,829
C1	2.0	293,472	3.6	34,094
ā	4.0	65,749	6.3	13,257
Z	6.0	25,064	8.9	7,149
	10.0	9,752	12.2	3,823
Q	0.0	741,578	J.9 20	93,399
E C	10	735 035	3.9 20	22,222
RF	2.0	626,262	J.J.	87 807
Ш	4.0	315,919	5.3	53.912
N	6.0	57.705	8.2	15,193
	10.0	17,334	12.0	6,685
	0.0	-	-	-
ED	0.2	-	-	-
SIFI	1.0	-	-	-
AS	2.0	-	-	-
ICL	4.0	-	-	-
5	6.0	-	-	-
	10.0	-	-	-

# Table 30 Resource Tabulation Main Fault Block - Domain 402



	Raver	nsgate		Youanmi UG	
Mined Sta	atus			0	
DOMAIN				6	
Filter App	Filter Applied to Evaluation				
Previous	Model Nam	e			
New Mod	New Model Name				
		_		-	
RESCAT	Cutoff (a/t)	D	OMAIN	6	
		quantity (t)	grade (g/t)	metal (oz)	
00	0.0	119,396	6.6	25,277	
	0.0	119,396	6.6	25,277	
JR T	0.0	119,396	6.6	25,277	
U S	0.0	119,396	6.6	25,277	
A D	0.0	109,867	6.8	24,158	
<b>N</b>	0.0	64,934	8.1	16,926	
	0.0	10,242	11.6	3,817	
<u> </u>	0.0	-	-	-	
R.	0.0	-	-	-	
5	0.0	-	-	-	
S	0.0	-	-	-	
Ē	0.0	_			
Σ	0.0	-	-	-	
•	0.0	119,396	6.6	25,277	
	0.0	119,396	6.6	25,277	
F	0.0	119,396	6.6	25,277	
ຽ	0.0	119,396	6.6	25,277	
ā	0.0	109,867	6.8	24,158	
Z	0.0	64,934	8.1	16,926	
	0.0	10,242	11.6	3,817	
0	0.0	310,932	8.3	82,640	
Ш	0.0	310,932	8.3	82,640	
RR	0.0	210,932	0.3	02,040	
Ш	0.0	210,932	0.3	82,640	
L L	0.0	263 810	89	75 369	
	0.0	67.696	11.6	25.306	
	0.0	39 370	 а д	11 664	
ED	0.0	38 370	9.0 9.5	11 664	
SIFI	0.0	38,370	95	11 664	
ASS	0.0	38.370	9.5	11.664	
ICL	0.0	38,370	9.5	11,664	
NN	0.0	38,045	9.5	11,616	
	0.0	10,340	12.5	4,147	

# Table 31 Resource Tabulation Main Fault Block - Domain 6



Mined Status     •       DOMAIN     1701       Filter Applied to Evaluation     Previous Model Name	ned Sta		Ravensgate				
Mined StatusImage: organizationDOMAIN1701Filter Applied to EvaluationImage: organizationPrevious Model NameImage: organization	ned Sta						
DOMAIN       1701         Filter Applied to Evaluation       Previous Model Name		0					
Filter Applied to Evaluation Previous Model Name	MAIN				1701		
Previous Model Name	ter App	lied to Ev	aluation				
	evious I	Model Na	ame				
New Model Name yu0606m.dm	w Mode	el Name			yu0606m.dm		
					20.4		
	ESCAT	Cutoff	DO	MAIN 17	01		
(g/t) quantity (t) grade (g/t) metal (oz)		(g/t)	quantity (t)	grade (g/t)	metal (oz)		
0 0 0.0 16,290 9.0 4,69		0.0	16,290	9.0	4,694		
<u>u</u> <u>u</u> 0.2 16,290 9.0 4,69	U 🖬 🗌	0.2	16,290	9.0	4,694		
<u> </u>	Ϋ́Ε	1.0	16,290	9.0	4,694		
v ひ ひ 2.0 16,290 9.0 4,69	ກີບໍ່	2.0	16,290	9.0	4,694		
4.0 15,508 9.2 4,59	۲ă	4.0	15,508	9.2	4,598		
₩ <b>Ξ</b> 6.0 13,245 10.0 4,24	ΪZ.	6.0	13,245	10.0	4,241		
10.0 5,863 12.7 2,39		10.0	5,863	12.7	2,397		
	0	0.0	-	-	-		
	E E	0.2	-	-	-		
5 1.0	5	1.0	-	- Y	-		
	S T	2.0	-	-	-		
	Щ.	4.0	-	-	-		
	2	10.0		-	-		
00 16 290 9.0 4 69		0.0	16 290	90	4 694		
$\begin{array}{c} \begin{array}{c} \begin{array}{c} 0.0 \\ \end{array} \end{array}$	0	0.2	16,200	9 N	4 694		
<b>1.0 16.290 9.0 4.69</b>	H ا	1.0	16,290	9.0	4,694		
<b>2.0</b> 16,290 9.0 4,69	Y.	2.0	16,290	9.0	4,694		
<b>4.0</b> 15,508 9.2 4,59	ă	4.0	15,508	9.2	4,598		
	Z	6.0	13,245	10.0	4,241		
<b>10.0</b> 5,863 <b>1</b> 2.7 2,39		10.0	5,863	12.7	2,397		
<b>0.0</b> 51,779 6.7 11,18		0.0	51,779	6.7	11,183		
<b>0.2</b> <u>51,779</u> <u>6.7</u> <u>11,18</u>	<b>.</b>	0.2	51,779	6.7	11,183		
	Ë.	1.0	51,779	6.7	11,183		
	Ш.	2.0	51,396	6.8	11,164		
	ц.	4.0	38,658	7.9	9,780		
= 6.0 28,583 8.9 8,19	=	6.0	28,583	8.9	8,198		
		10.0	9,696	12.0	3,/32		
<b>0.0</b> 18,481 4.9 2,93	0	0.0	18,481	4.9	2,934		
	H	0.2	18,481	4.9	2,934		
	SS	1.0	18,481	4.9	2,934		
	CLA	2.0	18,4/8	4.9	2,934		
	Ň	4.0 6.0	0,000 5 / 90	0.5 7 /	1,092		
		10.0	115	7.4 14.2	1,307 52		

# Table 32 Resource Tabulation Main Fault Block - Domain 1701



	Youanmi UG					
Mined Sta	0					
DOMAIN				1702		
Filter App	lied to E	aluation				
Previous	Model Na	ame				
New Mod	el Name			vu0606m.dm		
	Cutoff	D0	MAIN 17	702		
RESCAT	(a/t)					
	(9/9	quantity (t)	grade (g/t) 10	1 066		
0.0	0.0	17,450	1.9	1,000		
	1.0	14,710	2.2	1,000		
۲. ۲	2.0	8,827	2.5	766		
AS	4.0	-				
빌님	6.0	-	-	-		
2 -	10.0	-	-	-		
0	0.0	-	-	-		
	0.2	-	-	-		
Ř	1.0	-	-	-		
ະເ	2.0	-	-	-		
EA	4.0	-	-	-		
W	6.0	-	-	-		
	10.0	-	-	-		
0	0.0	17,450	1.9	1,066		
μ	0.2	14,/10	2.2	1,060		
АТ	1.0	14,117	2.3	1,047		
<u> </u>	2.0	0,027	2.1	/ 00		
₽	4.0	-	-	-		
=	10.0					
	0.0	117 517	14	5 439		
0	0.2	108.797	1.6	5.436		
S S S	1.0	86,710	1.8	5.022		
L.	2.0	28,931	2.5	2,369		
	4.0	-	-	-		
Z	6.0	-	-	-		
	10.0	-	-	-		
Q	0.0	121,106	1.8	6,939		
EE	0.2	120,640	1.8	6,939		
SSI	1.0	115,421	1.8	6,800		
LA	2.0	24,093	2.6	2,002		
NC	4.0	-	-	-		
>	6.U 10.0		-	-		
	10.0	-	-	-		

# Table 33 Resource Tabulation Main Fault Block - Domain 1702



	Youanmi UG				
	-				
Mined Sta	0				
DOMAIN				801	
Filter App	Filter Applied to Evaluation				
Previous	Model Na	ame			
New Mod	New Model Name				
	Cutoff			01	
RESCAT	(q/t)	quantity (t)	nrada (n/t)	metal (07)	
	0.0	39 467	grade (g/t) 56	7 1/2	
	0.2	39,467	5.6	7,142	
<u> </u>	1.0	39.467	5.6	7.142	
E E	2.0	39,467	5.6	7,142	
SUS	4.0	34,006	6.0	6,559	
Χŏ	6.0	16,603	7.1	3,776	
₩Z	10.0	-	-	-	
		-	-	-	
		-	-	-	
0	0.0	-	-	-	
Ē	0.2	-	-	-	
Ч	1.0	-	-	-	
\S	2.0	-	-	-	
Ξ	4.0	-	-	-	
Σ	0.0 10.0	-	-	-	
	0.0	- 39,467	- 56	71/0	
	0.0	39,407	5.0 5.6	7,142	
<b>H</b>	1.0	39 467	5.0	7 142	
Ř	2.0	39,467	5.6	7.142	
S	4.0	34,006	6.0	6,559	
	6.0	16,603	7.1	3,776	
	10.0	-	-	-	
0	0.0	83,477	3.9	10,477	
Ш	0.2	83,477	3.9	10,477	
ж К	1.0	68,746	4.6	10,229	
<b>ü</b>	2.0	62,349	4.9	9,887	
L.	4.0	34,860	6.7	7,453	
≤	6.0	18,161	8.2	4,774	
	10.0	2,6/4	10.6	913	
G	0.0	15,910	1.2	594	
IFIE	1.0	10,910 5,950	1.2 วง	594 44C	
SSV	2.0	5,050	2.4 2.5	440 /16	
CLA	4.0	5,103	2.0	410	
Ň	6.0	-	-	-	
	10.0	-	-	-	

# Table 34 Resource Tabulation Main Fault Block - Domain 801



	Rav	ensgate		Youanmi UG
Mined Sta	atus			0
DOMAIN				802
Filter App	lied to Ev	aluation		
Previous	Model Na	ame		
New Mod	el Name			yu0606m.dm
	Cutoff	D		02
RESCAT	(g/t)	quantity (t)	(t/n) ahar	metal (oz)
	0.0	-		-
	0.2	-	-	-
RH	1.0	_	-	-
N SI	2.0	-	-	-
БŪ	4.0	-	-	-
Σ≤	0.0	-	-	-
	0.0	-	-	-
G	0.2	-	-	-
R	1.0	-	-	-
SL	2.0	-	-	-
A III	4.0	-	-	-
Σ	6.0	-	-	-
	10.0	-	-	-
<u>e</u>	0.0	-	-	-
μ	1.0	-	-	-
A S	2.0	-	-	-
ă	4.0	-	_	-
Z	6.0	-	-	-
	10.0	-	-	-
0	0.0	46,458	1.3	1,978
SEI S	1.0	40,450 16 158	1.3	1,978
Ř	2.0		-	-
Ш	4.0	-	-	-
Z	6.0	-	-	-
	10.0	-	-	-
SSIFIED	0.0	26,711	1.8	1,552
	0.2	26,711	1.8	1,552
	2.0	26,/11 2 071	1.8 2 F	1,552
CLA	4.0	- 2,571	- 2.0	- 200
Ň	6.0	-	-	-
	10.0	-	-	-

# Table 35 Resource Tabulation Main Fault Block - Domain 802



	Youanmi UG					
Mined Sta	atus			0		
DOMAIN				24		
Filter App	lied to E	aluation				
Previous	Model Na	ame		•		
New Mod	el Name			vu0606m.dm		
iten meu	Cutoff			<i>y</i> aoooonn.ann		
RESCAT						
	(9/4	quantity (t)	grade (g/t)	metal (oz)		
00	0.0	13,059	4.9	2,063		
モモ	0.2	13,059	4.9	2,063		
U L	1.0	13,059	4.9	2,063		
AS	2.0	13,039	4.9	2,003		
ШЭ	4.0	13,039	4.9	2,003		
≥ =	10.0	-	-	-		
	0.0		-	-		
<u> </u>	0.0					
RE	1.0	_	_	-		
IJ,	2.0	-	<u> </u>	_		
AS	4.0	-	-	-		
JE V	6.0	-	-	-		
2	10.0	-	-	-		
	0.0	13,059	4.9	2.063		
e e e e e e e e e e e e e e e e e e e	0.2	13,059	4.9	2,063		
Ë	1.0	13,059	4.9	2,063		
CA	2.0	13,059	4.9	2,063		
ă	4.0	13,059	4.9	2,063		
Z	6.0	-	-	-		
	10.0	-	-	-		
	0.0	266,730	4.2	35,931		
	0.2	266,730	4.2	35,931		
R.	1.0	262,177	4.3	35,837		
L L L L L L L L L L L L L L L L L L L	2.0	245,694	4.4	34,819		
Ц.	4.0	138,980	5.3	23,679		
≤	6.0	32,191	6.6	6,821		
	10.0	-	-	-		
<u>e</u>	0.0	452,406	J.8	55,659		
	1.0	452,406 404,700	3.8 10	800,00 200,00		
SS	2.0	424,700 110 212	4.U 1/1	20,002		
CLA	2.0	103 376	4. I 1 Q	20,094		
Ň	6.0	12 669	4.5 7.0	2 837		
	10.0	- 12,000		2,007		

# Table 36 Resource Tabulation Main Fault Block - Domain 24



	Youanmi UG				
Mined Sta	0				
DOMAIN	41				
Filter App	lied to Ev	aluation			
Previous	Model Na	ame		•	
New Mod	vu0606m.dm				
	1				
RESCAT	(q/t)	auontity (t)		motal (a7)	
	0.0	quantity (t)	grade (g/r)	inietai (02)	
<u> </u>	0.0		-	-	
R H	1.0	-	-	-	
SU SU	2.0	-	-	-	
NO O	4.0	-	-	-	
₩Z	6.0	-	-	-	
	10.0	-	-	-	
0	0.0	-	-	-	
<u> </u>	0.2	-	-	-	
۳	1.0	-	-	-	
SI	2.0	-	-	-	
EA	4.0	-	-	-	
Σ	5.0	-	-	-	
	0.0	-	-	-	
Ω	0.0	-	-	-	
Ë	10	-	-	-	
.Y	2.0	_	_		
Se	4.0	-	-	-	
ž	6.0	-	-	-	
_	10.0	-	-	-	
	0.0	9,495	4.9	1,508	
<u> </u>	0.2	9,495	4.9	1,508	
RE	1.0	9,495	4.9	1,508	
L H	2.0	9,495	4.9	1,508	
Η	4.0	4,880	6.1	953	
≤	6.0	1,705	8.9	490	
	10.0	-	-	-	
<u>e</u>	0.0	7,3/0	4.5	1,0/0	
IF IE	1.0	7,37U 07C 7	4.5 //	1,070	
SSV	2.0	7,370	4.0 1.5	1,070	
CLA	4.0	5 871	4.0	884	
Ň	6.0	-	-	-	
	10.0	-	-	-	

### Table 37 Resource Tabulation Main Fault Block - Domain 41



	Youanmi UG			
Mined Sta	0			
DOMAIN	10			
Filter App	lied to Eval	uation		
Previous	Model Nam	e		••••••
New Mod	el Name	•		ww0606m dm
			-	yuuuuu
RESCAT	Cutoff (g/t)	D	OMAIN 1	0
		quantity (t)	grade (g/t)	metal (oz)
00	0.0	200,314	4.8	30,678
	0.0	200,314	4.8	30,678
J. F	0.0	197,234	4.8	30,011
AS	0.0	137,535	4.9	24 497
ШЧ	0.0	30,512	7.3	7,126
2 =	0.0	2.485	11.2	897
	0.0	-	-	-
	0.0	-	-	-
R	0.0	-	-	-
ะร	0.0	-	-	-
A.	0.0	-	-	-
ž.	0.0	-	-	-
	0.0	-	-	-
0	0.0	200,314	4.8	30,678
Ē	0.0	200,314	4.8	30,678
Ā	0.0	197,254	4.0	30,011
2	0.0	137,535	4.3	30,425 27 / 197
물	0.0	30 512	73	7 126
=	0.0	2.485	11.2	897
	0.0	206,540	5.3	35,232
<u>e</u>	0.0	206,540	5.3	35,232
R	0.0	206,540	5.3	35,232
R.	0.0	188,762	5.7	34,359
Ë.	0.0	167,651	6.0	32,164
≤	0.0	73,589	7.3	17,155
	0.0	1,632	12.4	649
e	0.0	77,854	4.7	11,861
	0.0	//,864	4.7	11,861
SS	0.0	/b,43/ 	4.8	11,010
CLA	0.0	20,494 20,494	0.U 7 1	0,775 0.016
Ň	0.0	28 925	7.1	7 254
	0.0	1.300	10.0	419

# Table 38 Resource Tabulation Hill End Fault Block - Domain 10



	Youanmi UG			
Mined Sta	0			
DOMAIN				19
Filter App	lied to Ev	aluation		•
Previous	Model Na	me		
Now Mod				
New Mod	ername			уи0606m.am
RESCAT	Cutoff	D (	omain 1	9
	(g/t)	quantity (t)	grade (g/t)	metal (oz)
0	0.0	12,128	5.7	2,218
	0.2	12,128	5.7	2,218
R F	1.0	12,128	5.7	2,218
	2.0	12,128	5.7	2,218
¶ ⊡	4.0	12,128	5.7	2,218
Ī≦≦	6.0	1,923	6.4	394
	10.0	-	-	-
Ω	0.0	-	-	-
۳ ۳	0.2	-	-	-
5	2.0	-	-	-
4S	2.0	-	-	-
<u> </u>	4.0 6.0	-		
≥	10.0		_	
	0.0	12 128	57	2 218
e	0.2	12,128	57	2,218
Ë	1.0	12,128	5.7	2.218
Y S	2.0	12.128	5.7	2.218
ĕ	4.0	12,128	5.7	2,218
Z	6.0	1,923	6.4	394
	10.0	-	-	-
	0.0	25,246	7.0	5,645
â	0.2	25,246	7.0	5,645
R.	1.0	25,246	7.0	5,645
2	2.0	25,246	7.0	5,645
E	4.0	25,240	7.0	5,644
≤	6.0	16,484	7.6	4,046
	10.0	1,639	12.7	669
<u>e</u>	0.0	27,464	4.1	3,610
EE	0.2	27,464	4.1	3,610
SS	1.0	27,464	4.1	3,610
ILA.	2.0	24,688	4.4 E E	3,475
NI	4.0	100,11 202 S	5.5 7 0	2,009
	10.0		r.2	UJZ
	10.0	-	-	

# Table 39 Resource Tabulation Hill End Fault Block - Domain 19



	Rav	ensgate		Youanmi UG	
Mined Sta	0				
DOMAIN				48	
Filter App					
Previous					
New Mod	ww0606m dm				
				yuuooonn.um	
RESCAT	Cutoff	D	OMAIN 4	-8	
	(g/t)	quantity (t)	grade (g/t)	metal (oz)	
0.0	0.0	-	-	-	
	0.2	-	-	-	
ATA	1.0		-	-	
IC N	2.0	-	-	-	
Ъ	4.0	-	-	-	
Σ≤	0.0		-	-	
	0.0	-	-	-	
e	0.0	-	_	_	
R	10	-			
, D	2.0	-	_	_	
AS	4.0	-	-	-	
ΨË	6.0	-	-	-	
	10.0	-	-	-	
	0.0	-	-	-	
	0.2	-	-	-	
Ē	1.0	-	-	-	
C 4	2.0	-	-	-	
ā	4.0	-	-	-	
	6.0	-	-	-	
	10.0	-	-	-	
~	0.0	60,384	4.6	8,905	
	0.2	60,384	4.6	8,905	
SR .	1.0	59,719	4.6	8,885	
Ш.	2.0		4.7	0,/02 6 169	
뿔	4.0	32,000	0.0 6 G	3 380	
	10.0	10,102	- 0.5		
	0.0	124 182	- 17	18 906	
E	0.2	124,102	4.7 47	18,906	
SIF	1.0	124,182	4.7	18,906	
AS	2.0	117.235	4.9	18.511	
CL	4.0	96,086	5.4	16,569	
NN	6.0	20,327	6.8	4,473	
	10.0	-	-	-	

# Table 40 Resource Tabulation Hill End Fault Block - Domain 48



	Rav	ensgate		Youanmi UG	
Mined Sta	0				
DOMAIN	53				
Filter App					
Previous	Model Na	ame			
New Mod	al Nama				
				yuuooom.am	
RESCAT	Cutoff	D	omain 5	53	
	(g/t)	quantity (t)	grade (g/t)	metal (oz)	
0.0	0.0	2,647	2.3	197	
	0.2	2,647	2.3	197	
EN E	1.0	2,647	2.3	197	
5 0	2.0	2,647	2.3	197	
Ш	4.0	-	-	-	
≥≤	6.0	-	-	-	
	10.0	-	-	-	
Ω	0.0	-	-	-	
l li	0.2	-	-	-	
5	2.0	-	-	-	
St	2.0	-	-	-	
<u> </u>	6.0	_		_	
≥	10.0				
	0.0	2647	23	197	
e	0.0	2,047	2.3	197	
Ë	1.0	2,647	2.3	197	
×.	2.0	2.647	2.3	197	
N N	4.0		-	-	
ž	6.0	-	-	-	
_	10.0	-	-	-	
	0.0	145,259	2.2	10,488	
e.	0.2	145,245	2.2	10,488	
2 2	1.0	115,743	2.6	9,830	
l in the second se	2.0	66,869	3.5	7,605	
Ë	4.0	21,859	4.9	3,442	
≤	6.0	515	7.8	129	
	10.0	-	-	-	
	0.0	285,283	2.0	17,990	
	0.2	285,283	2.0	17,990	
SS	1.0	255,258	2.1	17,249	
LA	2.0	110,109	2.8	9,913	
NC	4.0	13,766	4.2	1,857	
>	0.0	-	-	-	
	10.0	-			

# Table 41 Resource Tabulation Pollard Fault Block - Domain 53



	Youanmi UG				
Minad Statua					
DOMAIN	40				
DOMAIN	42				
Filter App	Filter Applied to Evaluation				
Previous	Model Na	ame			
New Mod	el Name			yu0606m.dm	
DECCAT	Cutoff	D		12	
RESCAL	(g/t)	guantity (t)	arade (a/t)	metal (oz)	
	0.0	-		-	
	0.2	-	_	-	
E E	1.0	-	-	-	
SU	2.0	-	-	-	
ЭЮ	4.0	-	-	-	
ΨZ	6.0	-	-	-	
	10.0	-	-	-	
0	0.0	-	-	-	
	0.2	-	-	-	
Ц	1.0	-	-	-	
ะร	2.0	-	-	-	
A S	4.0	-	-	-	
E E	6.0	-	-	-	
	10.0	-	-	-	
~	0.0	-	-	-	
Ш	0.2	-	-	-	
L L	1.0	-	-	-	
<u>i</u>	2.0	-	-	-	
⊡	4.0	-	-	-	
≦	6.0		-	-	
	10.0	-	-	-	
0	0.0	-	-	-	
Ш	0.2	-	-	-	
ĸ	1.0	-	-	-	
出	2.0	-	-	-	
뿌	4.0	-	-	-	
	10.0	-	-	-	
	0.0	75 500		6 570	
8	0.0	75,300	2.7	د/د, o ۶٫۵٫۵	
III III	10	aen aa	2./	20,073	
ISS	2.0	A7 246	т.с А Я	5 525	
CLA	4.0	18 871	48	2 922	
Ň	6.0	2.064	7.6	502	
	10.0		-	-	

### Table 42 Resource Tabulation Pollard Fault Block - Domain 42



	Youanmi UG				
Mined Sta	0				
DOMAIN	2				
Filter App	lied to Ev	aluation			
Previous	Model Na	me			
New Mod	ww0606m dm				
				yuuooonn.um	
RESCAT	Cutoff	D	OMAIN	2	
	(g/t)	quantity (t)	grade (g/t)	metal (oz)	
00	0.0	-	-	-	
	0.2	-	-	-	
ATA	1.0		-	-	
N C	2.0	-	-	-	
ШĢ	4.0	-	-	-	
∑≦	6.U 10.0		-	-	
	10.0	-	-	-	
Q	0.0	-	-	-	
쀭	1.0	-	-	-	
5	2.0	-	-	-	
٩S	2.0	-	Ī	-	
Ш́Ш	6.0	_	-	_	
≥	10.0	_	_	-	
	0.0	_	_	-	
<u>e</u>	0.2	-	-	-	
L H	1.0	-	-	-	
AC AC	2.0	-	-	-	
ĕ	4.0	-	-	-	
Ī	6.0	-	-	-	
	10.0	-	-	-	
	0.0	53,610	2.1	3,577	
e e e e e e e e e e e e e e e e e e e	0.2	53,610	2.1	3,577	
R	1.0	40,430	2.6	3,356	
L H	2.0	39,567	2.6	3,302	
<u> </u>	4.0	-	-	-	
≤	6.0	-	-	-	
	10.0	-	-	-	
e	0.0	230,697	2.4	17,735	
	0.2	230,697	2.4	17,735	
SS	1.0	230,697	2.4	17,735	
LA	2.0	213,457	2.4	16,780	
NC	4.0	-	-	-	
>	0.0	-	-	-	
	10.0	-			

### Table 43 Resource Tabulation Pollard Fault Block - Domain 2



	Rav	ensgate		Youanmi UG
Mined Sta	0			
DOMAIN	35			
Filter App	lied to E	aluation		
Previous	Model Na	ame		
New Mod	el Name			wu0606m dm
			-	yuuuuu
RESCAT	Cutoff	D	OMAIN 3	55
	(g/l)	quantity (t)	grade (g/t)	metal (oz)
00	0.0	-	-	-
	0.2	-	-	-
A C	1.0		-	-
N AS	2.0	-	-	-
ШĢ	4.0	-	-	-
≥≤	10.0	-	-	-
	0.0	-	-	-
<u>e</u>	0.0	-	-	
2	1.0			_
⊃°	2.0	-	-	-
Ϋ́	4.0	-	-	-
ų	6.0	-	-	-
<	10.0	-	-	-
_	0.0	-	-	-
E C	0.2	-	-	-
Ē	1.0	-	-	-
ຽ	2.0	-	-	-
ā	4.0	-	-	-
Z	6.0	-	-	-
	10.0	-	-	-
~	0.0	2,629	1.1	96
Ш	0.2	2,629	1.1	96
R K	1.0	2,629	1.1	96
Ш	2.0	-	-	-
۳	4.0	-	-	-
	10.0		-	-
	0.0	221.886	42	30.250
E	0.2	221,000	4.2 4.2	30,259
ASSIFI	1.0	214,283	4.4	30.072
	2.0	202.078	4.6	29.587
CL	4.0	79,973	6.7	17,130
N N	6.0	30,997	9.7	9,673
	10.0	19,461	10.9	6,791

# Table 44Resource Tabulation Pollard Fault Block - Domain 35



	Youanmi UG					
Mined Sta	0					
DOMAIN				47		
Filter App						
Previous	Previous Model Name					
New Mod	ww0606m dm					
New Mou				yuuooonn.am		
RESCAT	Cutoff	D	OMAIN 4	-1		
	(g/t)	quantity (t)	quantity (t)   grade (g/t)			
00	0.0		-	-		
	0.2	-	-	-		
ATA	1.0		-	-		
N C	2.0	-	-	-		
ШĢ	4.0	-	-	-		
∑≤	0.U 10.0		-	-		
	0.0	-	-	-		
<u>e</u>	0.0	-	-	-		
E E E E E E E E E E E E E E E E E E E	10		-			
, Dž	2.0	_	_	_		
AS	4.0	-	-	-		
U U U	6.0	-	-	-		
-	10.0	-	-	-		
_	0.0	-	-	-		
	0.2	-	-	-		
Ē	1.0	-	-	-		
C C	2.0	-	-	-		
ā	4.0	-	-	-		
⊒	6.0	-	-	-		
	10.0	-	-	-		
~	0.0	19,107	1.9	1,172		
	0.2	19,107	1.9	1,172		
ЯX	1.0	19,107	1.9	1,172		
μ	2.0	0,200	Z.Z.	576		
뿔	4.0 6.0	-	-	-		
—	10.0		-			
	0.0	289 564	19	17 795		
ED	0.2	289.564	1.9	17,795		
SIFI	1.0	289.564	1.9	17.795		
AS	2.0	118,058	2.2	8,377		
ICL	4.0	-	-	-		
N	6.0	-	-	-		
	10.0	-	-	-		

### Table 45 Resource Tabulation Pollard Fault Block - Domain 47