

Independent National Instrument 43-101 Technical Report on the Namoya Gold Project, Maniema Province, Democratic Republic of the Congo

Prepared for Namoya Mining SARL (a subsidiary of Banro Corporation)

Reference No.:- D1417R

Effective Date of Report:- 31st December 2013

Final Report Date:- 12th May 2014

ANDREW CLAY

M.Sc. (Geol.), M.Sc. (Min.Eng.), Dip.Bus.Man.,
Pr.Sci.Nat., MSAIMM, FAusIMM, ,
FGSSA, MAIMA, MSPE, IoD.

Qualified Person

TARRYN ORFORD

B.Sc. Hons (Geol.),
MGSSA, MGASA, MMINSA.

Mineral Project Analyst

GBENGA OJO

M.Eng. (Mineral Economics),
B.Eng. (Met. and Mat. Eng.),
MSAIMM, MPMI.

Mineral Project Advisor

JACOBUS MYBURGH

B.Sc. (Mathematics),
MIASSA, MGASA.

Mineral Project Analyst

MUNYARADZI CHIRISA

B.Eng. Hons (Chem.Eng.)
Cand. Tech. Eng., MSAIMM, MAusIMM

Mineral Project Analyst

S. DYKE

MSc. (Env. Sci.), Cand. Sci. Nat
MIAIASA, MGSSA, MIAIASA

Environmental Industry Advisor

Independent National Instrument 43-101 Technical Report on the Namoya Gold Project, Maniema Province, Democratic Republic of the Congo

Synopsis Item 1

Venmyn Deloitte was commissioned by Namoya Mining SARL (Namoya Mining) to review the Namoya Gold Project and prepare an Independent National Instrument 43-101 (NI 43-101) Technical Report. This report describes the Namoya Project in terms of its historical and recent exploration data, which would have a bearing on the techno-economic value of the contributing Exploitation Permit. The effective date of this review is the 31st December 2013. This report was prepared as a review and compilation of information prepared by Namoya Mining to check for reasonableness, accuracy and compliance. Venmyn Deloitte reviewed the economic assessment completed by an independent contractor to Namoya Mining but completed no economic valuation or management function during the preparation of this report.

The Namoya Project is a gold mine located in a remote area of the Maniema Province, Democratic Republic of the Congo (DRC), approximately 195km west of Lake Tanganyika, near the provincial border of the South Kivu Province. Bukavu, the nearest business district, lies over 200km northeast of the Namoya Project.

The Namoya Project consists of one wholly owned Exploitation Permit (PE No.18, CAMI/CE/923/2004) held by Namoya Mining, a subsidiary of Banro Corporation (Banro). The Exploitation Permit will expire in 2016 and is subject to renewal for consecutive 15 year periods. Under this permit, the Namoya Project covers 203 Carrés, which is equal to an area of 174km².

The Namoya Project is located within the 2.5Ga Kibaran Mobile Belt, a Proterozoic aged intracontinental mobile belt situated between the Congo and the Tanzanian Cratons. The Namoya Project consists of six individual prospects which are referred to as Mwendamboko, Muviringu, Kakula, Namoya Summit, Seketi and Kangurube. These are typically near-vertical, linear bodies consisting of mineralised fine-grained sericite schist and quartz stockworks hosted within metasediments. The quartz systems tend to host a higher concentration of gold than the sericite schist orebodies.

Exploration began at Namoya in 2004 with soil, adit and trench geochemical sampling, regional scale mapping and drilling. In 2005, more detailed sampling and mapping was carried out to increase geological confidence and to verify the accuracy of historical data. The result of this program was the upgrade of a portion of Inferred Mineral Resources to Indicated Mineral Resources. In 2007, a second phase of exploration yielded an increase in Indicated Mineral Resources where confidence in the resources increased. The third phase of drilling brought the total boreholes completed to 295 resulting in a total of 24.77Mt Measured and Indicated Mineral Resources at an average grade of 1.99g/t or 1.58Moz gold, and a total of 9.47Mt Inferred Mineral Resources at an average grade of 1.44g/t or 0.44Moz gold.

The latest phase of exploration completed by Namoya between 21st November 2012 and 31st December 2012 included 375 new trench and channel samples and 141 diamond drillholes, bringing the total number of diamond boreholes completed to 350 and the total number of auger holes to 2,074.

Exploration is ongoing for development purposes and includes investigating a number of gold occurrences at Kakula West, Kakula-Namoya Summit, Kimbala, Matongo and Filon B. These are not discussed as part of this report.

The Namoya Project is an open pit mine that is currently in the development and pre-commissioning ramp up stage. Construction commenced in the first quarter of 2012. The mine is currently operating and heap leaching has commenced on a trial basis. The main processing plant comprising crushing, scrubbing, gravity recovery and CIL are still being completed by MDM Engineering Group Limited. Steady state mining for initial commercial operations is anticipated to be 2.0Mtpa throughput, increasing to 2.6Mtpa throughput in year 3, with a Life of Mine of 8 years plus 2 additional years processing stockpiles. Pre-commissioning trial heap leach gold production commenced December 2013, with the pouring of a starter bar of 320oz of gold.

Several metallurgical testwork programmes have been conducted at Namoya. This work includes the following:-

- comminution;
- mineralogy;

- diagnostic leaching;
- gravity separation;
- cyanidation;
- compacted permeability testwork;
- agglomeration tests;
- simulated heap leach testwork;
- column tests;
- settling tests;
- preg-robbing; and
- cyanide detoxification.

Venmyn Deloitte has reviewed the metallurgical testwork and concludes that it is extensive and thorough to the extent that it can support the design of a process plant and allow for economic analysis to be performed with a high level of confidence.

The process design has been based on heap leaching combined with a gravity recovery section. This design is founded upon the metallurgical testwork conducted. Essentially, the process plant has a capacity of 400tph. The crushing circuit reduces material to a topsize of 10mm. The -10+2mm fraction reports to the heap leach pad whilst the -2mm fraction undergoes gravity separation to recover any gravity recoverable gold. The tails from this section are screened at 150µm with the oversize reporting to the heap leach pad whilst the undersize reports to a carbon-in-leach (CIL) section. The pregnant solution arising from heap leaching operations will be processed at a carbon-in-solution plant. After recovery of gold, it is smelted to produce a gold doré for further refining at an appropriate refinery.

Mineral Resources have been estimated by Namoya Mining for the Namoya Project and independently reviewed by Venmyn Deloitte. These have been defined in accordance with NI43-101 and are summarised in the tables below.

Summary of Measured and Indicated Mineral Resources for the Namoya Project estimated by Namoya Mining as at 31st December 2013

PROSPECT	MEASURED MINERAL RESOURCES			INDICATED MINERAL RESOURCES		
	Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)	Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)
Mwendamboko	8.61	2.38	0.66	1.46	1.96	0.09
Muviringu	4.16	1.67	0.22	2.45	1.60	0.13
Kakula	4.64	1.68	0.25	1.40	1.35	0.06
Namoya Summit	5.62	1.87	0.34	0.33	1.01	0.01
Seketi	0.48	1.35	0.02	0.34	1.85	0.02
Kangurubi	0.23	2.45	0.02	0.05	2.36	0.00
TOTAL	23.75	1.98	1.51	6.03	1.62	0.31

At a cut-off grade of 0.4g/t

At a gold price of USD1,600/oz

Estimated to a maximum depth of 375m

Summary of Inferred Mineral Resources for the Namoya Project estimated by Namoya Mining as at 31st December 2013

PROSPECT	INFERRED MINERAL RESOURCES		
	Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)
Mwendamboko	0.05	1.67	0.00
Muviringu	4.16	1.57	0.21
Kakula	0.90	1.27	0.04
Namoya Summit	1.10	2.13	0.07
Seketi	0.28	1.09	0.01
Kangurubi	0.03	3.95	0.00
TOTAL	6.52	1.61	0.34

At a cut-off grade of 0.4g/t

At a gold price of USD1,600/oz

Estimated to a maximum depth of 375m

Mineral Reserves have been estimated and signed off by Namoya Mining for the Namoya Project and independently reviewed by Venmyn Deloitte. These have been defined in accordance with NI43-101 and are summarised in the tables below.

Summary of Proven and Probable Mineral Reserves for the Namoya Project estimated by Namoya Mining as at 31st December 2013

PROSPECT	PROVEN MINERAL RESERVES			PROBABLE MINERAL RESERVES		
	Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)	Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)
Mwendamboko	9.73	2.06	0.65	0.22	1.54	0.01
Muviringu	2.41	1.37	0.11	0.46	1.56	0.02
Kakula	4.57	1.52	0.22	0.46	1.12	0.02
Namoya Summit	4.98	1.68	0.27	0.13	0.72	0.00
Seketi	0.45	1.23	0.02	0.01	0.97	0.00
Kangurube	0.26	2.24	0.02	0.02	2.52	0.00
TOTAL	22.39	1.78	1.28	1.31	1.34	0.06

At a cut-off grade of 0.45g/t

At a gold price of USD1,200/oz

Estimated to a maximum depth of 281m

Data collection and reporting for the biophysical and social environment baseline studies was undertaken during the Preliminary Assessment in 2007. These studies were undertaken as part of an Environmental and Social Impact Assessment (ESIA) process, which was managed by SRK Consulting South Africa Limited (SRK). A stakeholder engagement process was managed and conducted by SRK from November 2007 to June 2008 as part of the original ESIA process, which included consultation with authorities and interested and affected parties (IAPs). Subsequently, all previously undertaken specialist studies, inclusive of all public consultation processes, and associated outcomes have been included and addressed in the final ESIA report compiled by SLR Consulting. The document presents the project plan as defined by Namoya Mining, results of specialist work undertaken for the project, identifies and assesses potential impacts on the receiving environment in both the unmitigated and mitigated scenarios, including cumulative impacts, and identifies measures together with monitoring programmes to monitor and mitigate potential impacts.

Significant impacts identified, and for which monitoring programmes have been compiled, include:-

- hazardous excavations and structures;
- erosion and slope stability;
- physical destruction and general disturbance of terrestrial and aquatic biodiversity
- pollution of surface water resources;
- contamination of groundwater;
- dewatering impacts on third party users
- increase in air pollution;
- increase in noise levels;
- blasting hazards; and
- social and health-related changes.

Namoya Mining has committed to, following closure of operations, that waste and tailings disposal infrastructure will be decommissioned and rehabilitated in a manner that it does not present a long term safety and/or stability risk.

The closure liability for the Namoya Project has been estimated by Namoya Mining as USD15,905,840 based on the requirements of the DRC Mining Code and related Annexes of the Mining Regulations

A Relocation Action Plan has been developed for the affected communities, with the concurrent establishment of two representative working group- the Community Social Repositioning Forum and the Social Repositioning Working Group. These two bodies form the basis of the communication structures used to disseminate information about the project and resettlement requirements to the local communities.

The economic analysis has been undertaken and signed off by Namoya Mining for the Namoya Project and independently reviewed by Venmyn Deloitte. The Discount Cashflow model indicates that the Namoya Project has positive NPVs ranging from USD208 at a discount rate of 15% to USD313 at 5%. Venmyn Deloitte is of the opinion that the value estimated by management is reasonable and the technical and economic input parameters are appropriate.

Venmyn Deloitte concludes that Namoya Mining is a gold exploration and mining company located in the DRC. Their asset is an operating gold mine in the Maniema Province of the DRC. Namoya Mining's project has been demonstrated to be technically prospective for gold due to historical mining activities, locality in a prospective area, detailed recent exploration and the declaration of Mineral Resource and Mineral Reserves for the Project.

Venmyn Deloitte recommends that studies be conducted on the use of a Fleet Management System (FMS) to optimize the entire loading and hauling operation specifically as the number of active mining areas increase with increased mining fleet.

Disclaimer and Risks

Venmyn Deloitte has prepared this NI43-101 Report and, in so doing, has utilised information provided by Namoya Mining and its contractors as to its operational methods and forecasts. Where possible, this information has been reviewed from independent sources with due enquiry in terms of all material issues that are a prerequisite to comply with the National Instrument.

The authors of this NI43-101 Report are not qualified to provide extensive commentary on legal issues associated with Namoya Mining's right to the mineral properties. Namoya Mining and its attorneys have provided certain information, reports and data to Venmyn Deloitte in preparing this Technical Report which, to the best of Namoya Mining's knowledge and understanding, is complete, accurate and true and Namoya Mining acknowledges that Venmyn Deloitte has relied on such information, reports and data in preparing this Technical Report. No warranty or guarantee, be it express or implied, is made by the authors with respect to the completeness or accuracy of the legal aspects of this document.

Operational Risks

The businesses of mining and mineral exploration, development and production by their natures contain significant operational risks. The businesses depend upon, amongst other things, successful prospecting programmes and competent management. Profitability and asset values can be affected by unforeseen changes in operating circumstances and technical issues.

Political and Economic Risks

Factors such as political and industrial disruption, currency fluctuation, increased competition from other prospecting and mining rights holders and interest rates could have an impact on Namoya Mining's future operations, and potential revenue streams can also be affected by these factors. The majority of these factors are, and will be, beyond the control of Namoya Mining or any other operating entity.

Forward Looking Statements

This report contains forward-looking statements. These forward-looking statements are based on the opinions and estimates of Venmyn Deloitte and Namoya Mining at the date the statements were made. The statements are subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those forward-looking statements anticipated by Venmyn Deloitte and Namoya Mining. Factors that could cause such differences include changes in world gold markets, equity markets, costs and supply of materials, and regulatory changes. Although Venmyn Deloitte believes the expectations reflected in the forward-looking statements to be reasonable, Venmyn Deloitte does not guarantee future results, levels of activity, performance or achievements.

Independent National Instrument 43-101 Technical Report on the Namoya Gold Project, Maniema Province, Democratic Republic of the Congo

List of Contents

1.	Introduction Item 2.....	13
1.1.	Terms of Reference and Purpose (NI 2b).....	13
1.2.	Sources of Information (NI 2c).....	13
1.3.	Scope of the Opinion	13
1.4.	Qualified Persons Declaration and Statement of Independence.....	14
1.5.	Personal Inspection (NI 2d)	14
2.	Reliance on Other Experts Item 3	14
3.	Property Description and Location Item 4	15
3.1.	Location (NI 4a, 4b)	15
3.2.	Legal Aspects and Tenure (NI 4c, 4d, 4g, 4h)	15
3.3.	Surface Rights and Access (NI 4d).....	17
3.4.	Material Agreements (NI 4e).....	17
3.5.	Financial Obligations	17
3.6.	Environmental Liabilities (NI4f)	19
3.7.	Exploitation Permits	19
4.	Accessibility, Climate, Local Resources, Infrastructure and Physiography Item 5	19
4.1.	Topography, Climate and Vegetation (NI 5a, 5d).....	19
4.2.	Access and Infrastructure (NI 5b, 5c)	19
4.3.	Local Resources	20
5.	History Item 6	20
5.1.	Historical Ownership (NI6a).....	20
5.2.	Historical Exploration (NI6b)	22
5.2.1.	Mwendamboko	22
5.2.2.	Muviringu	22
5.2.3.	Kakula.....	22
5.2.4.	Filon B and Namoya Summit	24
5.3.	Historical Production (NI6d).....	24
5.4.	Previous Mineral Resource Estimate (NI6c)	24
6.	Geological Setting and Mineralization Item 7	25
6.1.	Regional Geology (NI7a)	25
6.1.1.	Structural Geology	26
6.2.	Local Geology (NI7a).....	26
6.3.	Property Geology and Mineralisation (NI 7a, 7b)	31
6.3.1.	Mwendamboko	31
6.3.2.	Muviringu	31
6.3.3.	Kakula.....	31
6.3.4.	Namoya Summit and Filon B	35
6.3.5.	Seketi.....	35
6.3.6.	Kangurube	37
7.	Deposit Types Item 8	37
8.	Exploration Item 9	40
8.1.	Landsat Imagery	40
8.2.	Mapping	40
8.3.	Soil Sampling.....	41
8.4.	Trenching and Channelling	41

8.5.	Adit Sampling.....	41
8.6.	Remote or Geophysical Exploration	41
8.7.	Surveying Methods	41
9.	Drilling Item 10	44
9.1.	Drilling Protocols.....	45
9.1.1.	Diamond Drilling	45
9.1.2.	Auger Drilling	47
9.2.	Core Logging Protocols	48
10.	Sample Preparation, Analysis and Security Item 11	48
10.1.	Sampling Methods	48
10.1.1.	Soil Sampling Protocols	48
10.1.2.	Rock Sampling Protocols.....	49
10.1.3.	Trench Sampling Protocol.....	49
10.1.4.	Channel Sampling Protocols.....	50
10.1.5.	Adit Sampling Protocols.....	50
10.1.6.	Core Sampling Protocol	50
10.2.	Sample Preparation	50
10.3.	Laboratory Analyses	51
10.4.	Security.....	52
10.5.	QA / QC	52
10.5.1.	Sampling Procedures.....	52
10.5.2.	Laboratory Procedures	53
10.5.3.	Inter-Laboratory Check Assays.....	53
10.5.4.	Standard Samples	53
10.5.5.	Duplicate Coarse Split	53
10.5.6.	Blank Samples	54
11.	Data Verification Item 12.....	54
11.1.	Data Acquisition and Validation	54
11.2.	Database Management	54
12.	Mineral Processing and Metallurgical Testing Item 13	55
12.1.	Nature and Extent of Testwork (NI 13a, 13c).....	55
12.1.1.	Initial Scoping Testwork	55
12.1.2.	The 2011 Study Testwork	56
12.1.2.1.	SGS - Sample Selection and Preparation	57
12.1.2.2.	SGS - Mineralogy.....	57
12.1.2.3.	SGS - Head Grade Assay	58
12.1.2.4.	SGS - Communitation Testwork.....	58
12.1.2.5.	SGS - Simulated Heap Leach Testwork.....	59
12.1.2.6.	KCA - Sample Selection and Preparation	59
12.1.2.7.	KCA - Head Grade Analysis.....	59
12.1.2.8.	KCA - Bottle Roll Leach Testwork	59
12.1.2.9.	KCA - Agglomeration and Percolation Testwork	60
12.1.2.10.	KCA - Compacted Permeability Testwork	60
12.1.2.11.	KCA - Heap Leach Recovery Testwork.....	60
12.1.2.12.	KCA - Heap Leach Variability Testwork	61
12.1.2.13.	Conclusion on the 2011 Study Testwork	61
12.1.3.	The 2013 Study Testwork on Transitional Ore.....	62
12.1.3.1.	Simulated Heap Leach	64
12.1.3.2.	Gravity Separation	65
12.1.3.3.	Thickening.....	65
12.1.3.4.	Preg-Robbing and Dissolution Appraisal.....	66
12.1.3.5.	Percolation Tests	66
12.1.3.6.	Pressure Percolation Tests	67
12.1.3.7.	Column Heap Leach Trial.....	67
12.1.3.8.	Conclusions on the 2013 Study Testwork Programme	67
12.2.	Basis of Recovery Estimates (NI 13b)	67

12.3.	Representativity of Test Samples (NI 13c)	68
12.4.	Potential Economic Extraction Risk Factors (NI 13d)	68
12.5.	Concluding Opinion on Testwork	68
13.	Mineral Resource Estimates Item 14	68
13.1.	Orebody Modelling and Results	69
13.1.1.	Source Data Validation	69
13.1.2.	Wireframe and Block Model Methodology Verification	69
13.1.3.	Estimation Parameters Validation	69
13.1.4.	Input Parameters	71
13.1.4.1.	Volume	71
13.1.4.2.	Density	71
13.1.4.3.	Tonnage	71
13.1.4.4.	Grade	73
13.2.	Mineral Resource Classification and Estimation	73
13.2.1.	Key Assumptions	73
13.2.2.	Resource Classification	73
13.2.3.	Previous Mineral Resource Estimate	73
13.2.4.	Difference between Previous and Current	73
13.2.5.	Current Resource Statement	74
14.	Mineral Reserve Estimates Item 15	82
14.1.	Method of Delineating the Mineral Reserve	82
14.2.	Historical Mineral Reserve Statement	82
14.3.	Current Mineral Reserve Statement	82
14.3.1.	Modifying Factors	83
15.	Mining Methods Item 16	84
15.1.	Site Preparation	85
15.2.	Drill and Blast	85
15.3.	Load and Haul	86
15.4.	Mining Work Schedule	87
15.5.	Manpower	87
15.6.	Pit Design	89
15.7.	Production Rates	89
15.8.	Mining Equipment	89
16.	Recovery Methods Item 17	93
16.1.	Process Description and Plant Design (NI 17a, NI 17b)	93
16.1.1.	Primary Crushing	93
16.1.2.	Secondary and Tertiary Crushing	93
16.1.3.	Gravity Recovery Section	95
16.1.4.	Heap Leaching	95
16.1.5.	Carbon-in-Solution	95
16.1.6.	Carbon-in-Leach	96
16.1.7.	Acid Wash	96
16.1.8.	Elution	96
16.1.9.	Electrowinning	96
16.1.10.	Gold Room	96
16.2.	Process Requirements (NI 17c)	96
16.2.1.	Detoxification and Tailings Storage	96
16.2.2.	Raw Water	97
16.2.3.	Process Water	97
16.2.4.	Potable Water	97
16.2.5.	Cyanide Make-up	97
16.2.6.	Other Process Requirements	97
16.3.	Concluding Opinion on Recovery Methods	97
17.	Project Infrastructure Item 18	98
17.1.	Road Network	98

17.2.	Security.....	98
17.3.	Power	98
17.4.	Water	98
17.5.	Communication.....	98
17.6.	Accommodation.....	101
17.6.1.	Permanent Mine Village.....	101
17.6.2.	Operations Village	101
17.6.3.	Construction Camp	101
17.6.4.	Police and Security Accommodation.....	101
17.6.5.	Infrastructure.....	101
17.6.6.	Main Accommodation Block.....	102
17.7.	Mining Infrastructure	102
17.7.1.	Mining Maintenance Workshop and Maintenance Facilities	102
17.7.2.	Explosives Storage	102
17.8.	Administration and Plant Infrastructure	102
17.8.1.	Mining and Administration Offices	102
17.8.2.	Dispatch Offices.....	103
17.8.3.	Mine Stores.....	103
17.8.4.	Fuel Farm and Power Generation.....	103
17.8.5.	Access Control Building	103
17.8.6.	Plant Offices	103
17.8.7.	Plant Laboratory	103
17.9.	Waste Disposal and Sewerage.....	103
17.10.	Relocation.....	103
18.	Environmental Studies, Permitting, and Social or Community Impact Item 20.....	104
18.1.	Scope of the Review.....	104
18.2.	Assumptions and Limitations	104
18.3.	Legislative Framework and Standards.....	105
18.4.	International Regulatory Framework.....	106
18.4.1.	Equator Principles And World Bank Group Requirements.....	106
18.4.1.1.	Principle 1: Review and Categorisation.....	106
18.4.1.2.	Principle 2: Social and Environmental Assessment	107
18.4.1.3.	Principle 3: Applicable Social and Environmental Standards	107
18.4.1.4.	Principle 4: Action Plan and Management System.....	107
18.4.1.5.	Principle 5: Consultation and Disclosure.....	108
18.4.1.6.	Principle 6: Grievance Mechanism.....	108
18.4.1.7.	Principle 7: Independent Review.....	108
18.4.1.8.	Principle 8: Covenant	108
18.4.1.9.	Principle 9: Independent Monitoring and Reporting	109
18.4.1.10.	Principle 10: EPFI Reporting.....	109
18.4.2.	International Finance Corporation (IFC) Best Practice Guidelines (BPG).....	109
18.5.	International Agreements and Conventions.....	110
18.6.	Summary of the Environmental Studies Undertaken (NI 20a i)	111
18.6.1.	Environmental and Social Impact Assessment (ESIA).....	111
18.6.2.	Environmental Management System	115
18.7.	Potential environmental issues (NI 20a ii).....	115
18.8.	Requirements and plans for waste and tailings disposal (NI 20b)	115
18.8.1.	Operations	115
18.8.2.	Post mine closure	116
18.9.	Site monitoring plans (NI 20b)	116
18.9.1.	Operations	116
18.9.2.	Post Mine Closure	117
18.10.	Water Management Plan (NI 20b)	117
18.10.1.	Operations	117
18.10.2.	Post mine closure	119

18.11.	Project Permitting Requirements (NI20c i).....	119
18.12.	Status of permit applications (NI 20 c ii)	119
18.13.	Requirements for post-performance or reclamation bonds (NI 20c iii).....	119
18.14.	Potential social or community related requirements and plans for the project (NI 20d i)	120
18.14.1.	Community Economic Management	120
18.14.2.	Establishment of a Community Relations Department.....	121
18.14.3.	Community Health Monitoring Plan	122
18.14.4.	Management plan - resettlement of communities	122
18.15.	Status of any Negotiations or Agreements with Local Communities (NI 20d ii)	122
18.15.1.	Community Relocation Action Plan.....	122
18.16.	Mine closure	123
18.16.1.	Requirements	123
18.16.2.	Closure Programme.....	123
18.16.3.	Costing.....	124
19.	Capital and Operating Costs Item 21	124
20.	Economic Analysis Item 22	124
20.1.	Discounted Cash Flow Economic Analysis.....	125
20.2.	Summary of the Namoya Project Economic Analysis	128
21.	Adjacent Properties Item 23	128
22.	Other Relevant Data and Information Item 24.....	128
22.1.	DRC Country Profile	128
22.1.1.	Political and Economic Climate.....	128
22.1.2.	Minerals Industry	129
22.1.3.	Minerals Industry Policy	129
22.1.4.	Physiography and Climate of the DRC	130
22.1.5.	Political Risk	130
22.2.	Gold Market Review Item 19.....	131
22.2.1.	Demand	131
22.2.2.	Supply.....	132
22.2.3.	Gold Price Trend.....	133
22.2.4.	Gold Market Outlook.....	133
23.	Interpretation and Conclusions Item 25.....	134
24.	Recommendations Item 26	134
25.	Date and Signature	134

List of Figures

Figure 1 :	Location and Infrastructure of the Namoya Project in Relation to the DRC.....	16
Figure 2:	Change of Ownership of Namoya Project since 1996.....	18
Figure 3:	Legal Tenure and Local Infrastructure Map for the Namoya Project.....	21
Figure 4:	Regional Geology Showing the Kibaran Mobile Belt.....	27
Figure 5:	Regional Geology of the Namoya Project within the DRC	28
Figure 6:	Local Geology of the Namoya Project.....	29
Figure 7:	Mwendamboko: Geology (Plan at Level 960m) and Cross-Section	32
Figure 8:	Muviringu: Geology (Plan at Level 930m) and Cross-Section.....	33
Figure 9:	Kakula: Geology (Plan at Level 900m) and Cross-Section	34
Figure 10:	Namoya Summit: Geology (Plan at Level 960m) and Cross-Section.....	36
Figure 11:	Seketi: Geology (Plan at Level 940m) and Cross Section.....	38
Figure 12:	Kangurube: Geology (Plan at Level 940m) and Cross Section	39
Figure 13:	The Landsat Image and Interpretation for Namoya Project.....	42

Figure 14: Soil Sampling for the Namoya Project.....	43
Figure 15: Diamond Drilling for the Namoya Project	46
Figure 16: the 2011 Study Stage Metallurgical Testwork	57
Figure 17: Process Flow Diagram for the Definitive Feasibility Study Testwork	63
Figure 18: Simulated Heap Leach Results	64
Figure 19: Simulated Heap Leach Results	68
Figure 20: Namoya Orebody Wireframes	70
Figure 21: Namoya Orebody Modelling.....	72
Figure 22: Mwendamboko Mineral Resources	76
Figure 23: Muviringu Mineral Resources	77
Figure 24: Kakula Mineral Resources	78
Figure 25: Namoya Summit Mineral Resources	79
Figure 26: Seketi Mineral Resources	80
Figure 27: Kangurube Mineral Resources	81
Figure 28: Pit Designs for the Namoya Project	88
Figure 29: Namoya Process Flow Diagram.....	94
Figure 30: Project Infrastructure and Mine Layout	99
Figure 31: Infrastructure and Development Photos	100
Figure 32: Operating Income Sensitivity	127
Figure 33: Operating Expenditure Sensitivity	127
Figure 34: Capital Expenditure Sensitivity.....	128
Figure 35: Gold demand in 2012 in tonnage terms	131
Figure 36: Gold Price	133

List of Tables

Table 1: Reliance on Other Experts	15
Table 2: Summary of Historical Ownership and Activity	22
Table 3: Summary of Historical Exploration	23
Table 4: Summary of the Regional Geological Formation	26
Table 5: Summary of Exploration Results	40
Table 6: Initial Scoping Metallurgical Testwork Results.....	55
Table 7: KCA Bottle Leach Testwork Results.....	60
Table 8: KCA - Compacted Permeability Testwork Results	60
Table 9: KCA Heap Leach Recovery Testwork Results	61
Table 10: Laboratory Test Results - Determination of Ore Crusher Indices	63
Table 11: Laboratory Test Results - Gold Deportment.....	64
Table 12: Laboratory Test Results - Gravity Recovery Testwork	65
Table 13: Laboratory Test Results - Thickener Tests.....	66
Table 14: Ellipsoid Dimensions for each Prospect	71
Table 15: Density Factors for each Material Type.....	71
Table 16: Previous Measured and Indicated Mineral Resource estimate as at 31 st December 2012	73
Table 17: Previous Inferred Mineral Resource estimate as at 31 st December 2012	73
Table 18: Measured and Indicated Mineral Resource Estimate estimated by Namoya Mining as at 31 st December 2013.....	74
Table 19: Inferred Mineral Resource Estimate estimated by Namoya Mining as at 31 st December 2013	75
Table 20: Planned Pit Depths.....	82
Table 21: Mineral Reserve Estimate estimated by Namoya Mining as at 31 st December 2013	83

Table 22: Key Technical Assumptions	84
Table 23: Parameters used for the Drill and Blast Design.....	86
Table 24: Namoya Mining Work Schedule	87
Table 25: Operations Labour Requirement	87
Table 26: Namoya Pit Design Parameters	89
Table 27: Equipment Requirements.....	90
Table 28: Life of Mine Production Profile.....	91
Table 29: Mining Production schedule by Pit	91
Table 30: Namoya Process Plant Design Basis	93
Table 31: Additional Applicable Mining Sectoral Requirements	105
Table 32: IFC Performance Standards.....	109
Table 33: International Agreements and Conventions Ratified by the DRC.....	110
Table 34: Summary Capex for the Namoya Project.....	124
Table 35 : Summary Opex for the Namoya Project.....	124
Table 36: Economic Input Parameters for the Namoya Project Economic Analysis.....	125
Table 37: Technical Input Parameters for the Namoya Project Economic Analysis	125
Table 38: Capital Expenditure for Mining and Processing.....	125
Table 39: Operating Expenditure for Mining and Processing	126
Table 40: Estimated Global Gold Reserves in 2012.....	132
Table 41: Estimated Global Gold Production for 2011 and 2012	133

List of Appendices

Appendix 1: References Item 27	135
Appendix 2: Qualified Person's Certificates	136
Appendix 3: Glossary	146
Appendix 4: Abbreviations.....	148

1. Introduction Item 2

Venmyn Deloitte was requested by Namoya Mining SARL (Namoya Mining) to compile a National Instrument 43-101 (NI 43-101) compliant Technical Report (the Report) on the Namoya Gold Project (the Namoya Project or The Project), located in the Democratic Republic of the Congo (DRC) as per the requirements of the applicable Canadian securities laws. In order to achieve this, Venmyn Deloitte reviewed the available technical information for reasonableness and compliance with NI 43-101. This process included an independent Quality Assurance and Quality Control (QA/QC) check, and a Mineral Resource and Mineral Reserve estimate review.

Namoya Mining is a subsidiary of Banro Corporation (Banro), a Canadian gold mining and exploration company with a substantial footprint in the Democratic Republic of the Congo (DRC). Venmyn Deloitte understands that this report will be publicly filed by Banro on SEDAR and EDGAR.

1.1. Terms of Reference and Purpose (NI 2b)

This report serves the purpose of identifying the current value of Namoya Mining's material mineral asset, the Namoya Project, and describes the Namoya Project in terms of its historical and recent exploration and mining data, which would have a bearing on the techno-economic value of the assets.

Venmyn Deloitte consents to the publication of this report by Namoya Mining and to the referencing of any part of this report, provided that no portion is used out of context or in such a manner as to convey a meaning which differs from that set out in the whole report.

The effective date of this report is 31st December 2013.

1.2. Sources of Information (NI 2c)

Venmyn Deloitte has relied upon various reports and information provided by other experts. The document references are summarised in Appendix 1 and include internal documents compiled by Banro and Namoya Mining. Venmyn Deloitte also relied on geological models and technical information provided by Banro and Namoya mining staff.

In addition, digital maps and personal communication were utilized in conjunction with these reports. Wherever possible, Venmyn Deloitte utilised information available in the public domain, such as company websites and public library documents.

Namoya Mining has warranted in writing that it has openly provided all material information to Venmyn Deloitte, which, to the best of its knowledge and understanding, is complete, accurate and true, having made due enquiry. Venmyn Deloitte is not aware of any current or pending litigation or liabilities attached to the Namoya project.

1.3. Scope of the Opinion

Venmyn Deloitte has undertaken an independent technical review of the Namoya Project, in order to identify all the factors of a technical nature that would influence the future viability of the project. Venmyn Deloitte considered the strategic merits of each asset on an open and transparent basis. This report has been compiled in order to incorporate all currently available and material information that will enable the reader to make a reasoned and balanced judgement regarding the economic merits of the mineral assets reviewed.

Venmyn Deloitte's professional advisors are Qualified Persons as defined by NI43-101. Venmyn Deloitte's advisors are, therefore, internationally accredited. The Qualified Persons involved in the preparation of this report are members in good standing with their respective professional institutions.

NI-43-101 is considered by Venmyn Deloitte to be a concise recognition of the best-practice due-diligence methods for these types of mineral projects and accord with the principles of open and transparent disclosure that are embodied in internationally accepted Codes for Corporate Governance.

This work has been based upon technical information which has been supplied by Namoya Mining and Namoya Mining's contractors and has been independently due diligenced by Venmyn Deloitte, where possible.

Venmyn Deloitte confirms that, to the best of its knowledge and having taken all reasonable care to ensure that such is the case, the information contained in the report is in accordance with the facts, contains no omission likely to affect its import, and no material change has occurred from 31st December 2013 to the date hereof that would require any amendment to the report.

Venmyn Deloitte reserves the right to, but will not be obliged to, revise this report or sections therein, and conclusions thereto, if additional information becomes known to Venmyn Deloitte subsequent to the date of this report.

It must be noted that this review does not form an assurance report in accordance with the International Auditing and Assurance Standards Board (IAASB) standards.

1.4. Qualified Persons Declaration and Statement of Independence

This report has been compiled by Venmyn Deloitte, an independent advisory company. Its consultants have extensive experience in preparing technical, competent persons', technical advisers' and valuation reports for mining and exploration companies. The information in this report and the associated appendices is based on information compiled by Mr. Andrew Clay and Mr. Godknows Njowa. Their Qualified Persons certificates are set out in Appendix 2. Mr. Clay and Mr. Njowa have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Qualified Person, as defined in NI 43-101. The Qualified Persons involved in preparing this report are employed by Venmyn Deloitte.

Neither Venmyn Deloitte nor its staff or subcontractors have, or have had, any interest in these projects capable of affecting their ability to give an unbiased opinion and, have not received, and will not receive, any pecuniary or other benefits in connection with this assignment, other than normal consulting fees. Neither Venmyn Deloitte nor any of its personnel involved in the preparation of this report have any material interest in Banro or in any of the properties described herein.

Venmyn Deloitte was remunerated a fixed fee amount for the preparation of this report, with no part of the fee contingent on the conclusions reached or the content of this report. Except for these fees, Venmyn Deloitte has not received and will not receive any pecuniary or other benefit whether direct or indirect for or in connection with the preparation of this report.

1.5. Personal Inspection (NI 2d)

Venmyn carried out a personal inspection, with the Qualified Person Mr. Clay present, of the site on the 9th June 2011. During the site visit Venmyn was able to carry out a technical inspection of the site, inspect some drill core, and interview the geologists and Project Manager on the sampling and drilling site protocols and security as well as QA/QC issues. Venmyn was also able to visit the Banro Group sample preparation laboratory in Bukavu and carry out an independent audit on its procedures and standards. No further site visit was considered necessary as Venmyn Deloitte is fully familiar with the project as well as similar projects in the area.

2. Reliance on Other Experts Item 3

The authors of this report are all currently in the employ of Venmyn Deloitte. Venmyn Deloitte was reliant upon reports as compiled by Namoya Mining, MDM Engineering and SLR Consulting (Africa) (Pty) Ltd (SLR Consulting). Venmyn Deloitte has relied upon these companies, who have contributed to this report, as detailed in Table 1. The document references are summarised in Appendix 1 and include internal documents compiled by Banro and Namoya Mining.

Information regarding ownership, corporate matters, legal tenure, geology, geological modelling, Mineral Resources and Mineral Reserves and mining methods was provided by Namoya Mining. These studies were independently reviewed by Venmyn Deloitte to ensure compliance with NI43-101.

Table 1: Reliance on Other Experts

COMPANY	QUALIFIED PERSON	SPECIALIST AREA
Namoya Mining	D. Bansah	Mineral Resource Estimation
		Mineral Reserve Estimate and Mining
		Capital and Operating Costs
		Economic Analysis
MDM Engineering	Various	Mineral Processing and Metallurgical Testwork
		Recovery Methods
		Processing Plant and Infrastructure
SLR Consulting	Nicholas Arnott	Tailings Management Facility
		Environmental and Social Impact Assessment

3. Property Description and Location Item 4

3.1. Location (NI 4a, 4b)

The Namoya Project is a gold mine, located in the Maniema Province of DRC, approximately 195km west of Lake Tanganyika, crossing the provincial border of the South Kivu Province, as shown in Figure 1. Kinshasa, the capital city of DRC lies 1,355km west of the Project, while business districts of Bukavu (South Kivu Province, DRC), Bujumbura in Burundi and Kigali in Rwanda are each located more than 200km to the northeast of the property.

The Namoya Project consists of one Permit d'Exploitation (PE) or Exploitation Permit, PE18, which occupies an area of 174km². Within this PE, six prospects have been identified.

The proposed mining operation will consist of four opencast pits that will mine oxide, transitional and sulphide/fresh materials, which will be processed using a heap leach pad and Carbon-In-Leach Processing Plant (CIL). Detailed exploration concluded in December 2012 and 2013 saw the completion of various test work and specialist studies by independent contractors.

3.2. Legal Aspects and Tenure (NI 4c, 4d, 4g, 4h)

Namoya Mining holds a PE, over the extent of the Namoya Project, which was issued in the form of a Certificat d'Exploitation (EC) or Exploitation Certificate for the exploitation of gold on PE18.

PE18 was issued to Société Aurifère du Kivu et du Maniema SARL (Sakima SARL) with licence number CAMI/CE/923/2004 on the 9th November 2004 and is valid from November 1998 and expires on July 2016, subject to renewal for consecutive 15-year periods. Sakima subsequently ceded all its mineral rights to Namoya Mining. Cadasterie Minière (CAMI) transferred the mineral rights to Namoya Mining on the 27th December 2004. It is Namoya Mining's responsibility to apply for renewal prior to expiry. Venmyn Deloitte cannot comment on the likelihood of renewal being accepted.

Namoya Mining is a subsidiary of Banro. The history of the legal tenure and ownership of Namoya Project is far reaching and complex. In 1976, a mining company called La Société Minière et Industrielle du Kivu SARL (SOMINKI) was formed from the amalgamation of previous mining companies in Zaire. SOMINKI held 10 PEs covering an area of 238km² and 47 mining concessions covering 10,034km².

In 1996, SOMINKI was owned by a joint venture between African Mineral Resources Inc. (AMRI), a wholly owned subsidiary of Banro (then Banro Resource Corporation), Mines D'Or du Zaire (MDDZ) and the then Government of Zaire. Banro and MDDZ each held 36% equity, while the government held 28% ownership in SOMINKI. Banro acquired MDDZ's 36% equity in SOMINKI in December 1996, which made it the majority shareholder in SOMINKI with 72%.

In 1997, Banro, SOMINKI and the Government of the DRC agreed to compile a new Mining Convention, in which all of SOMINKI's gold assets would be transferred to a separate company. This company was named Sakima and Banro had the controlling interest 93% while 7% was held by the Government of the DRC according to the terms of the Mining Convention.

LOCATION AND INFRASTRUCTURE OF THE NAMOYA PROJECT IN RELATION TO THE DRC



In July 1998, President Laurent D. Kabila issued a Presidential Decree, which amongst other things, effectively expropriated SAKIMA's gold assets. In response to this, Banro initiated international arbitration proceedings against the Government of the DRC with the aim of receiving compensation for its expropriated assets.

In April 2002, the Government of the DRC formally signed a settlement agreement with Banro to resolve the arbitration proceedings against it. The agreement, amongst other things, called for Banro to hold a 100% interest in the Namoya Property under a revised Mining Convention which expires in March 2027 and is subject to extensions of consecutive 15 year terms as per the New Mining Code.

Namoya's PE 18 is therefore valid until 2027 over a total project area of 174km². The PE is valid for the exclusive right to carry out research, develop and exploit gold and associated minerals.

3.3. Surface Rights and Access (NI 4d)

According to DRC laws, the surface rights and the mineral rights pertaining to one property are not separated. Therefore, Namoya Mining has access to both the surface and mineral rights to the Namoya Project under its exploitation permit.

3.4. Material Agreements (NI 4e)

The Namoya Project is subject to the Mining Convention between Banro, SAKIMA and the Government of the DRC. This agreement was originally compiled in 1997 and subsequently amended in 2002 due to developments discussed in Section 3.2. It was compiled to:-

- transfer the mineral rights from SOMINKI to SAKIMA;
- affirm the conditions under which SAKIMA will be formed;
- initiate the programme prepared by SAKIMA; and
- establish legal, economic, financial and social conditions under which SAKIMA would operate.

To this end, the following key issues emerge from the Mining Convention:-

- SAKIMA would be exonerated from paying all professional tax on profits to the State for the first 10 years from the start of production. From the 11th year the professional tax would be fixed at 30%;
- SAKIMA would be exonerated from Interior Turnover Tax for the first 5 years of production and from the 6th to the 10th year, would have to pay 6%; and thereafter 10%; and
- SAKIMA would be exonerated from Expatriate Salary Tax for the first 5 years of production and from the 6th to the 10th year, would have to pay 9%; and thereafter 15%.

The change in ownership of the Namoya Project is shown in Figure 2.

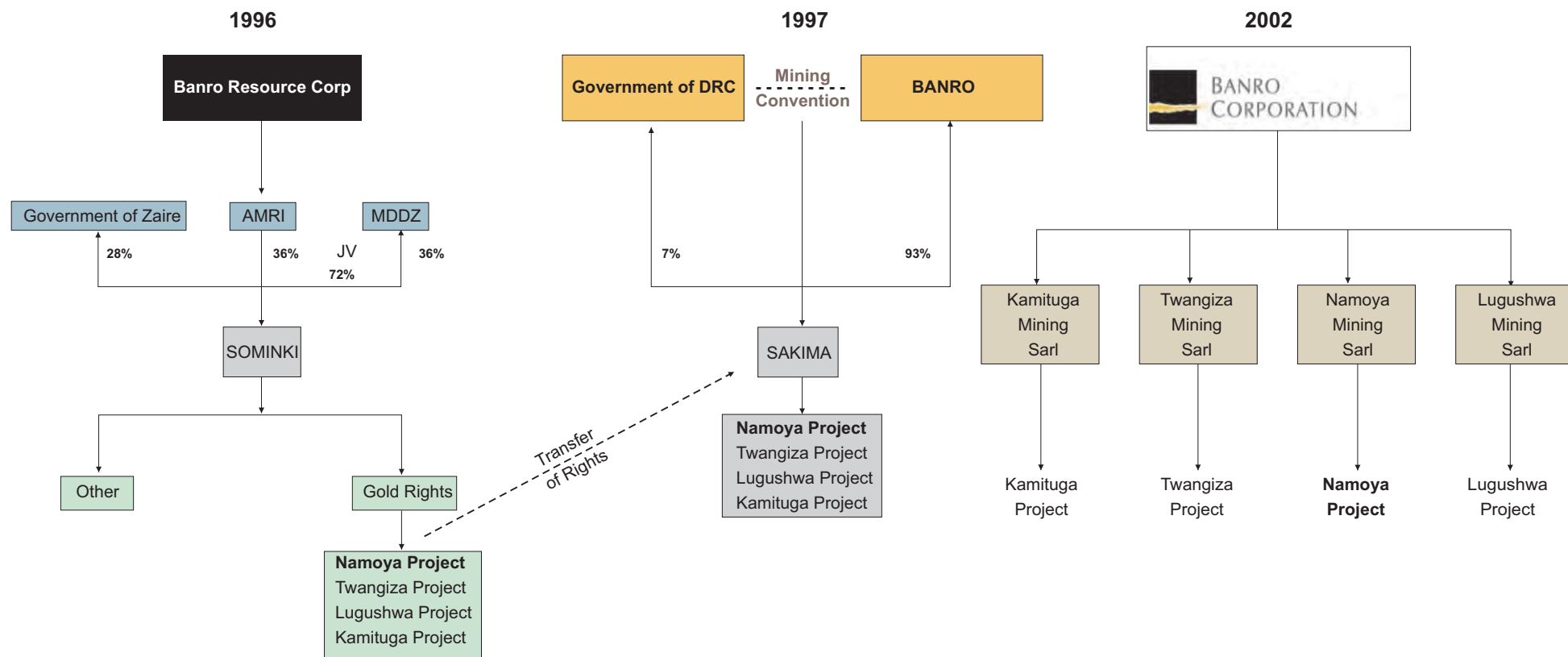
3.5. Financial Obligations

Under Article 9 of the Mining Convention, discussed in Section 3.4, it is stated that "...the STATE shall grant SAKIMA Sarl, for the full duration of this Convention, total and complete exemption from all duties, taxes, contributions and deductions of whatever nature, whether direct or indirect, fiscal or parafiscal, national, regional or local; payable to the State, decentralized administrative bodies, professional or parastatal bodies, existing or yet to be established..." This implies that Banro is exempt from any fees, taxes or rates with respect to its mineral and surface rights besides those detailed in Section 3.4.

In August 2009, Banro agreed to enhance its existing commitment to the DRC and the local communities of South Kivu and the Maniema provinces through:-

- A pledge of USD200,000 to settle legacy issues with SOMINKI SARL and the transfer to the central government of certain real estate assets redundant to the Company's operations;

CHANGE OF OWNERSHIP OF NAMOYA PROJECT SINCE 1996



- 4% of future net profits, after return of capital, allocated through the central government to the communities of South Kivu and Maniema provinces for the building of infrastructure projects, including roads and bridges, schools and health care facilities;
- A royalty of 1% on gold revenues.

3.6. Environmental Liabilities (NI4f)

Namoya Mining has committed to, following closure of operations, that waste and tailings disposal infrastructure will be decommissioned and rehabilitated in a manner that does not present a long term safety and/or stability risk. The closure liability for the Namoya Project has been estimated by Namoya Mining as USD15,905,840 based on the requirements of the DRC Mining Code and related Annexes of the Mining Regulations.

3.7. Exploitation Permits

The DRC Mining Convention was enacted by Law No. 007/2002 on the 11th July 2002. The implementing measures of the Mining Convention are provided by the Mining Regulation, enacted by Decree No. 038/2003 on the 26th March 2003. The legislation includes environmental standards applicable to mining activities, also including quarry rights. The Mining Convention provides for the issuance of exploration permits and exploitation permits. Namoya Mining holds CE18 for the Namoya Project, which entitles it to carry out exploration, development, construction and mining on the property.

According to the review of Namoya Mining's legal standing with regards to the Project, Namoya Mining has no outstanding issues and is fully compliant with regards to its legal obligations. Venmyn Deloitte is not aware of any other significant legal factors or risks that could materially impact on the Namoya Project.

4. Accessibility, Climate, Local Resources, Infrastructure and Physiography Item 5

4.1. Topography, Climate and Vegetation (NI 5a, 5d)

The Namoya area can be divided into two main topographic domains, namely the broad flat flood plains to the south of Namoya village, and the mountainous domain to the north. The plains lie between 800m above mean sea level (amsl) and 900mamsl. The summit of Mount Mwendamboko, to the north, peaks at approximately 1,300mamsl. The northern region is cut by deep valleys with a well-formed drainage system made up of a dense dendritic network of short streams, less than 10km in length. The rivers are generally narrow and shallow with many rapids along their course.

The climate in the eastern DRC is tropical. It is hot and humid in the equatorial river basin and cooler and wetter in the eastern highlands. The wet season takes place in April to October and the dry season from December to February. The climate allows for exploration and mining activities all year round. Activities are more challenging during the wet season, as roads become muddy and slippery, pits are rapidly filled by water and field work will be extremely difficult.

The land around the Namoya Project is mainly equatorial rain forest, with very tall trees and grass. The plains south of the village of Namoya consist of equatorial forest interspersed with savannah and agricultural land, while the mountainous northern region is covered by extensive equatorial forest. There are several rivers which can provide water for the Project.

4.2. Access and Infrastructure (NI 5b, 5c)

The Project lies far from business districts and built up areas and is therefore situated a long distance away from the major road and rail networks and the power grid. Infrastructure in the DRC is generally limited and in poor condition as a result of destruction during the civil war of 1996. The general lack of maintenance and destruction of bridges in recent times also contributes to the challenging access conditions. Namoya Mining is continuously carrying out basic repairs to improve access around the site.

The N2 road and accompanying bridges have been reconstructed between Bukavu and the Namoya Project area by Namoya Mining. The area is now fully accessible by all forms of vehicle and is used to transport supplies. The road is maintained by Namoya Mining.

The Namoya site can also be accessed via a small dirt airstrip approximately 1,000m long, which currently provides access for personnel and equipment. A schematic plan of the property is given in Figure 3, which provides views of the topography and physiography around the Namoya Project.

Many of the streams and rivers draining the hills are being mined and used for washing ore by artisanal miners, and an area of processed washings exists in the valley next to Mwendamboko village. A detailed infrastructure breakdown is provided in Section 17.

4.3. Local Resources

There are a number of small villages inhabited by artisanal miners in proximity to the property, notably the village of Namoya to the south of the known deposits. The village of Kama lies 4km southwest of the project area. A labour force is available locally from these and other villages, and includes semi-skilled laborers, tradesmen and prospectors remaining as a result of historical activity in the area.

5. History Item 6

5.1. Historical Ownership (NI6a)

In January 1996, Banro Resource Corporation's (now Banro Corporation) wholly-owned subsidiary, African Mineral Resources Inc. (AMRI), in conjunction with its joint venture partner Mines D'Or du Zaïre (MDDZ), completed the purchase of the outstanding privately held shares of La Société Minière et Industrielle du Kivu SARL (SOMINKI). This privately owned company was formed in 1976 as a result of the amalgamation of nine companies, including Compagnie Minière Zairoises Des Grand Lacs (MGL), and held 10 mining permits covering an area of 238km² and 47 mining concessions covering 10,034km². AMRI and MDZZ each controlled 36% of SOMINKI, with the remaining 28% held by the Government of Zaïre (DRC). Banro subsequently acquired MDDZ's 36% interest in SOMINKI in December 1996.

In early 1997, Banro, SOMINKI and the government of the DRC agreed upon a new 30 year Mining Convention that provided for SOMINKI to transfer its gold assets to a newly created company. Société Aurifère du Kivu et du Maniema SARL (SAKIMA) was incorporated to acquire the assets of SOMINKI as stipulated in the new Mining Convention. In addition, the Mining Convention included a ten year tax moratorium from the start of commercial production, the ability to export all gold production, the ability to operate in United States (US) currency, the elimination of import duties and title confirmation for all of the concessions. The Mining Convention provided for Banro to control 93% of SAKIMA, with the remaining 7% held by the Government of the DRC as a net carried interest.

In July 1998, President Laurent D. Kabila issued presidential decrees, which amongst other things, effectively expropriated SAKIMA's gold assets. As a result of these actions Banro initiated arbitration proceedings against the Government of the DRC seeking compensation for the expropriation of Banro's gold assets.

In April 2002, the Government of the DRC formally signed a settlement agreement with Banro which led to Banro holding, through Namoya Mining, a 100% interest in the Namoya Property under the revived Mining Convention discussed in Section 3.2 and Section 3.6. A summary of historical ownership and activity is set out in Table 2.

Table 2: Summary of Historical Ownership and Activity

DATE	COMPANY	ACTIVITY
Pre-1961	Cobelmin	Exploration, bulk test work and mining.
1976	SOMINKI	SOMINKI formed as amalgamation of nine companies
1996	AMRI and MDDZ	Purchased SOMINKI's privately held shares
1996	Banro and MDDZ	Banro acquired 36% interest in SOMINKI from MDDZ
1997	Banro, Sominki, Government of DRC and SAKIMA	Banro acquired 93% of SAKIMA, remaining 7% held by Government of DRC
1998	Banro and Government of DRC	SAKIMA's assets were expropriated by the Government of DRC
2002	Banro and Government of DRC	Settlement in which Banro, through Namoya Mining, gained 100% interest in Namoya
2004	Namoya Mining SARL	Exploration began with the intention of developing the Namoya Project.

5.2. Historical Exploration (NI6b)

Exploration activities in the Namoya area can be divided into pre-2004 and post-2004 activities. All pre-2004 exploration and assay information for the area was conducted by the Compagnie Zairoise d'Enterprises Minières (Cobelmin). Historical exploration is summarised in Table 3.

The historical exploration data from Cobelmin includes:-

- 10,820 prospecting samples from 1,237 pits over an area of 4.5km²;
- 519 samples from 12 trenches totalling 519m;
- 10,144 samples from 103 adits and crosscuts totalling 8,530m;
- 6,462 samples from 112 diamond drill holes totalling some 9,540m; and
- 2,751 samples from four bench levels in the Mwendamboko open pit.

Cobelmin ceased operations in 1961 due to civil unrest, and no further work appears to have been conducted in the area prior to 2004. Artisanal miners continue to work in the area to this day.

Namoya Mining began exploration in 2004. Initial exploration included gridding, geological mapping, soil sampling, trenching, surveying, adit sampling and drilling.

5.2.1. Mwendamboko

Historical exploration at Mwendamboko began with trenching in 1946 and the first of 25 adits were excavated to 1,273 level during 1947. A total of 59 diamond drill holes were drilled prior to 1951 and sufficient reserves were delineated to justify a 300tpd cyanidation project with power supplied by a hydro-electric power station situated 70km to the east. Nine parallel adits were driven on the 1,273 level, 13 adits on the 1,253 level and three adits on the 1,200 level. A series of crosscuts and horizontal drill holes are also located within the 1,200 level adits. A 1,039m long access adit on the 1,068 level with a series of horizontal drill holes explored the deeper and southeastern section of the deposit.

5.2.2. Muviringu

The first drill hole at Muviringu was drilled during 1958 and was followed in 1959 by five adits totalling 393m in length driven on the 1,203 level. A total of 17 diamond drill holes were drilled totalling 2,450m.

5.2.3. Kakula

Historical exploration was limited to the upper portions of the hill and began in the late 1940s with a comprehensive trenching and pitting programme. Little of the original geological data had been located by Namoya Mining and its consultants. The available data consists mainly of basic trench plans and incomplete geological logs. The first phase of adit excavation on the 1,240 level began in 1950 and ended in 1952. This was followed by two more adits on the 1,240 level and a long access adit on the 1,200 level.

Table 3: Summary of Historical Exploration

DATE	COMPANY	LOCATION	PURPOSE	DIAMOND DRILL HOLES	AUGER DRILL HOLES	SOIL SAMPLES	STREAM SEDIMENT SAMPLES	TRENCHING (km)	OTHER	LABORATORY FOR QUALITY		USED IN MODEL		
Pre-1961	Cobelmin	Namoya Project	Exploration	112		10,820		519	9.54m adits and cross-cuts	Unknown		No		
2004-2012	Namoya	Mwendamboko	Resource	90	2,077	21,690	1,708	15194.17	2,692.5m adits and cross-cuts	ALS Chemex/ SGS, Mwanza & Tarkwa/ Genalysis, Australia	Yes			
			Metallurgy	3						SGS, Mwanza, SGS, Lakefields, KCA, Nevada	2 out of 3 sampled and used in resource			
		Muviringu	Resource	59						ALS Chemex/ SGS, Mwanza & Tarkwa/ Genalysis, Australia	Yes			
			Metallurgy	5						SGS, Mwanza, SGS, Lakefields, KCA, Nevada	3 out of 5 sampled and used in resource			
		Kakula	Resource	56						ALS Chemex/ SGS, Mwanza & Tarkwa/ Genalysis, Australia	Yes			
			Metallurgy	3						SGS, Mwanza, SGS, Lakefields, KCA, Nevada	Yes			
		Namoya Summit	Resource	77						ALS Chemex/ SGS, Mwanza & Tarkwa/ Genalysis, Australia	Yes			
			Metallurgy	5						SGS, Mwanza, SGS, Lakefields, KCA, Nevada	Yes			
		Seketi	Resource	24						ALS Chemex/ SGS, Mwanza & Tarkwa/ Genalysis, Australia	Yes			
		Kangurube	Resource	20						ALS Chemex/ SGS, Mwanza & Tarkwa/ Genalysis, Australia	Yes			
		Filon B	Exploration	27						ALS Chemex/ SGS, Mwanza & Tarkwa/ Genalysis, Australia	Yes			
		Exploration camp	Project Development	1								9,540m adits and cross-cuts		No
		Heap leach pad		8					10					No
		Plant Site		4										No
		TMF		4										No
		Primary Crusher		1										No
		Kibiswa Aggregate		3					24					No
TOTAL				502	2,111	32,510	1,708	15,713.17	12,242.04-					

Note: Project Development drill holes=Water well, Geotech, Locating suitable source of construction aggregates

Between 1957 and 1958, diamond drilling was conducted from the 1,200 level adit. This drilling consisted of a series of horizontal and vertical drill holes designed to test the extent of the mineralization. Data for the 1,859m of adits and 1,311m of diamond drilling consists mostly of assay data and simplified geological codes. Some early attempts at geological interpretation exist in map form, but the majority of the geological data available comes from the regional work by Kamitcheff (1959, 1968).

5.2.4. Filon B and Namoya Summit

In 1947, the gold bearing Filon B was discovered on the south flank of Namoya Summit. Access to Filon B was gained by a series of adits and raises between the 1,116 and 1,227 levels. Underground diamond drilling was conducted during 1954 from the 1,159 and 1,116 level adits. Approximately 313m of core was drilled from 10 holes. Five adits with a total length of 574m were driven on the 1,254 level at Namoya Summit. Limited exploration was conducted at Filon C (assumed to be the easterly strike extension of Filon B) in the late 1950s and consisted of two adits, perpendicular to each other and totalling 175m in length.

Senet reviewed the historical exploration results and found that, although pitting was conducted over the core of the mineralized zone, it was not successful in delineating anomalous zones. The apparent failure may be due in part to the analytical methods used at the time. A large volume of the pit data appears to be below a detection limit of 0.01g/t or 10ppb. A certain degree of scepticism exists in this regard, as it is felt that the analytical techniques in use during the 1950s would not be able to achieve such levels of detection.

The majority of the pit assays consisted of simple panning with a few samples being submitted for amalgam assays. The results would represent a value for visible or coarse gold, but it would be unlikely to represent fine or microscopic gold values. A result of 0.01g/t would therefore represent a sample with no coarse gold visible, but which may still contain anomalous amounts of fine gold. This method of prospecting may have been adequate for testing gravel or bedrock, but would probably be ineffective for geochemical soil samples. If shear zone hosted quartz vein mineralization for the Namoya Project is assumed, gold liberation and dispersion in the regolith would be limited. For example, pit spacing was such that it would be feasible to miss something on the scale of Filon B. If gravel samples are assumed to be either alluvial or eluvial they would either bear no relation to the bedrock or suffer the same drawbacks as the regolith. The greatest level of gold dispersion would be expected in the soil horizons. Anomalous values in such cases may be as low as 25ppb Au.

5.3. Historical Production (NI6d)

Filon B has been extensively mined by Cobelmin and has also been the main target for artisanal mining since the closure in 1961. Underground mining conducted at Filon B between 1947 and 1955 is believed to have produced between 5,000tpa and 6,000tpa. The mill feed at the beginning of this period is reported as 65g/t from tailings, to 25g/t Au towards the end of the period. Between 1947 and 1955 an average gold recovery from the Filon B ore was 34g/t. The gravity plant was unable to deal with the sulphide mineralization, and tailings of up to 7g/t Au were stockpiled.

The workings at Mwendamboko justified the construction of a 10,000tpm capacity processing plant, which was commissioned in 1955. Production from Mwendamboko open pit took place between 1955 and 1960, producing 800 to 1,000kg of gold per year. The material extracted from the open pit at Mwendamboko has been calculated to be 318,230m³.

5.4. Previous Mineral Resource Estimate (NI6c)

Mineral Resource estimates for the Namoya Project have been carried out in-house by Namoya Mining and the most recent previous Mineral Resource estimate is discussed in 13.2.3.

6. Geological Setting and Mineralization Item 7

6.1. Regional Geology (NI7a)

The Namoya Project lies on the western edge of the Kibaran Mobile Belt (KMB). The KMB is an intercontinental mobile belt which was formed during the Mesoproterozoic between 1.4Ga and 0.9Ga when the supercontinent Rodinia was formed. The KMB is also known as a metallogenic province. The KMB is bounded to the west by the Congo Craton, and to the east by the Tanzania Craton and the Bangweulu Block as shown in Figure 4. The KMB formed during the collision of these adjacent cratons during the Kibaran Orogeny and as a result, has been heavily metamorphosed and structurally altered.

Within the KMB, Neoproterozoic schists, gneisses and, to a lesser extent, Archaean granitoids, granulites and greenstone belts are exposed in cores of anti-formal and uplifted blocks including lower Proterozoic sediments and gneisses of the Burundian Group. Both Proterozoic and basement features are well exposed in the northern extension of the KMB, where a clear unconformity, often marked by conglomerates, exists.

The KMB trends northnorth east- southsouth west over a strike of approximately 2,000km from Katanga to Lake Victoria and attains a maximum width of 500km north of the Twangiza-Namoya area. The Congo Craton occupies a large part of central southern Africa, and its oldest rocks occur in an area of granitic basement and greenstone belts (3.5 - 3.2 Ga).

The KMB can be divided onto three lithological units:-

- the Lower Group consists of dark, laminated politic sedimentary rocks. Sedimentary structures are prevalent. This group is several thousand metres thick;
- the Middle Group is characterised by arenaceous units with a basal quartzite marker. Intrusive sills occur to the west, associated with carbonate bands. Granitic intrusions are common during the formation of the Middle Group; and
- the Upper Group is composed of immature clastic sediments with a minor basal unconformity. The group is preserved in major synforms.

The KMB is exposed in antiforms and uplifted blocks and does not exhibit typical Proterozoic features. The belt has a strong structural grain that cuts across the grain of the craton. The mineralization also contradicts the expected features and is comprised of typically shear-related granophile elements including tin, tungsten, lithium, beryllium, tantalum and gold.

All units within the KMB have undergone either lower-greenschist or amphibolite facies metamorphism, related to periods of major failed extension (or rifts) and collision. The KMB most likely represents the response to the formation and destruction of oceanic crust between the adjacent continental crust along craton margins and records the major extension and collision between the cratons. The relationship with the basement is well documented as a clear unconformity marked by a conglomerate marker. A gradual increase in metamorphic grade occurs within the KMB from north to south. Metamorphism is typically lower greenschist facies resulting in stockwork zones parallel to schistosity with subvertical dip. Folding is complex with weak to moderate localised shearing, thrusting and foliation.

The change in metamorphic grade in the KMB is understood to be the result of varying ages of terrains forming the KMB. The metamorphic grade at Twangiza is sub-greenschist with very weak mineral alignment and no mineral segregation to form schistose fabric. This is attributed to recent sedimentation in the Neoproterozoic period marked by north-south to northnorth west-southsouth east regional structural trends. Metamorphism at Lugushwa is noticeably higher.

Metamorphism increases further towards Namoya where chlorite and sericite schists are the dominant lithology. This is attributed to Palaeoproterozoic north-west-southeast trending terrain, which cross-cuts the main northeast-southwest trend of the KMB. The geological history spans most of the Proterozoic as summarised in Figure 4. Table 4 summarises the sequence of geological events.

Table 4: Summary of the Regional Geological Formation

UNIT	AGE	EVENT	OUTCOME
Palaeoproterozoic	2.5Ga	Sedimentation	-
	2.1-1.8Ga	Eburnian Orogeny	Northwest-southeast trend.
			Metamorphism to amphibolite facies.
			Uplift of mountain chain.
Mesoproterozoic	1.8Ga	Sedimentation on shale intracratonic basins	S0 and S1 fabric due to load pressures.
	1.4Ga	Extensional setting	Crustal thinning and bi-modal magmatism.
	1.0Ga	Irumide Collision	Main fold-belt develops with S2 fabric.
Neoproterozoic	970Ma		Widespread syntectonic granite intrusions.
			Possible gold mineralization.
			Restricted Sedimentation continues.
	750Ma	West African Rift Valley	Alkaline complex intrusion.
	550-520Ma	Pan African Orogeny	North-south folding.
			Possible gold mineralization.

The long history of the KMB is punctuated by several periods of regional and local scale structural reactivation and these add to the complexity of the belt as a whole. The regional geology of the DRC is illustrated in Figure 5.

6.1.1. Structural Geology

The main structural phase of the Kibara Belt occurred around 1.3Ga with the Kibaran Orogeny, marked by syntectonic granitic intrusion into upright folds, a characteristic structural feature of the belt. It is assumed that the KMB which formed during this time have been eroded prior to the next phase, around 1.28Ga, when formation of rifts and half-grabens occurred.

The Lomamian Orogeny followed around 950Ma and was characterised by numerous tin-granite intrusions as well as faulting and folding cross-cutting the structures formed in the Kibaran Orogeny. This period also saw shortening across the KMB by as much as 50%. At this stage there is still no evidence to suggest involvement of oceanic crust in the evolution of the KMB.

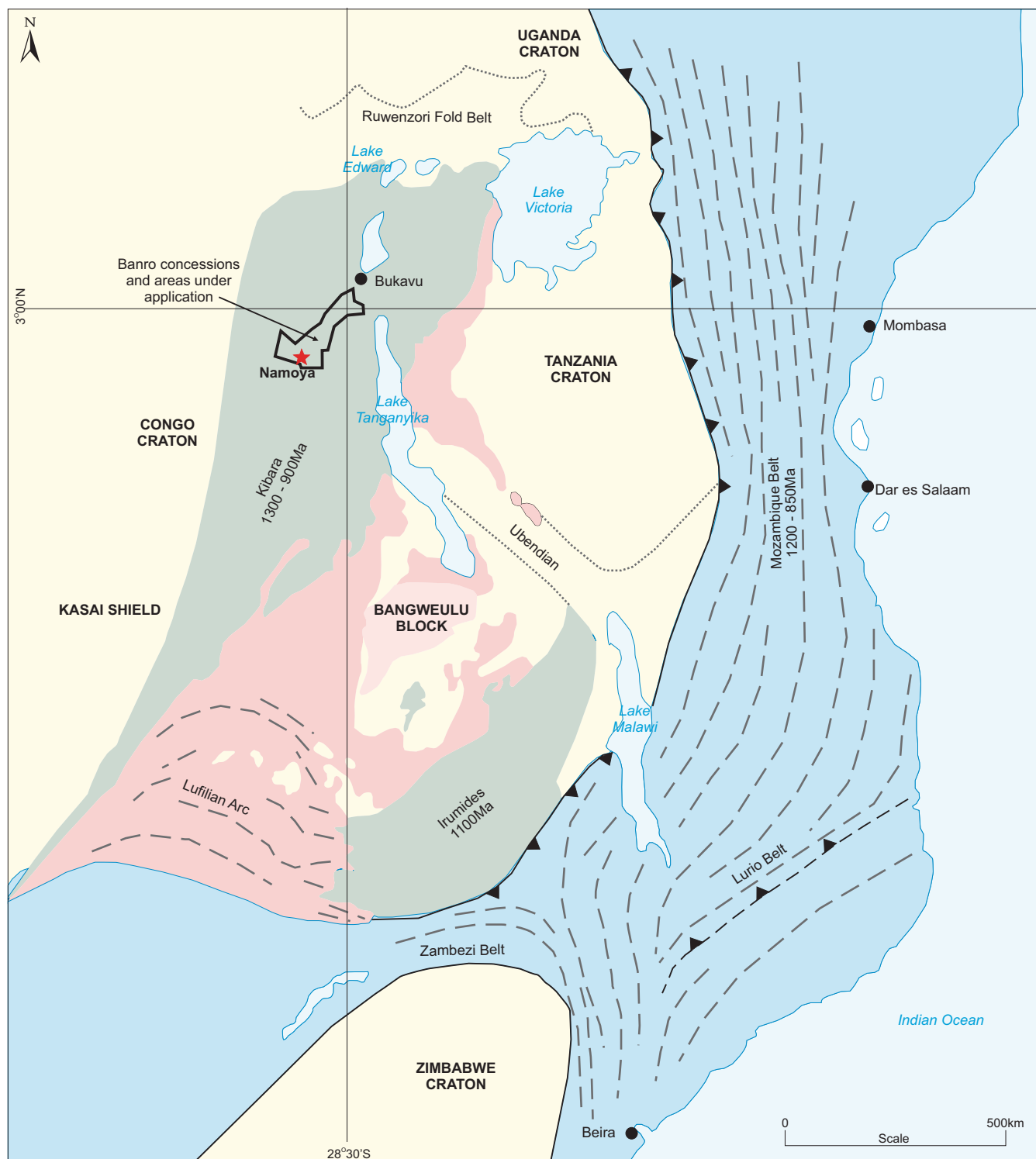
The final regional tectonic event to which the KMB was exposed was that of Pan African Orogeny, that occurred at approximately 550Ma and resulted in north-south upright folding, reactivation of older structural features and further gold mineralisation. It is still unclear as to where the gold in the Namoya Project originates: it is best accepted as resulting from a combination of all the regional tectonic events described above.

6.2. Local Geology (NI7a)

The Namoya Project is made up of six prospects, namely Mwendamboko, Muviringo, Kakula, Namoya Summit, Seketi and Kangurube. The Namoya Project is dominated by metasedimentary rocks of the Lower Burundian Supergroup.

Locally, it can be concluded that the mineralising hydrothermal fluids appear to be structurally controlled as can be seen in Figure 6. The main Mwendamboko-Namoya ridge is considered to be a northwest-southeast shear zone with the main areas associated with east-west and northnorth west-southsouth east en-echelon shear zones. A secondary northnorth east-southsouth west trend is also be noted.

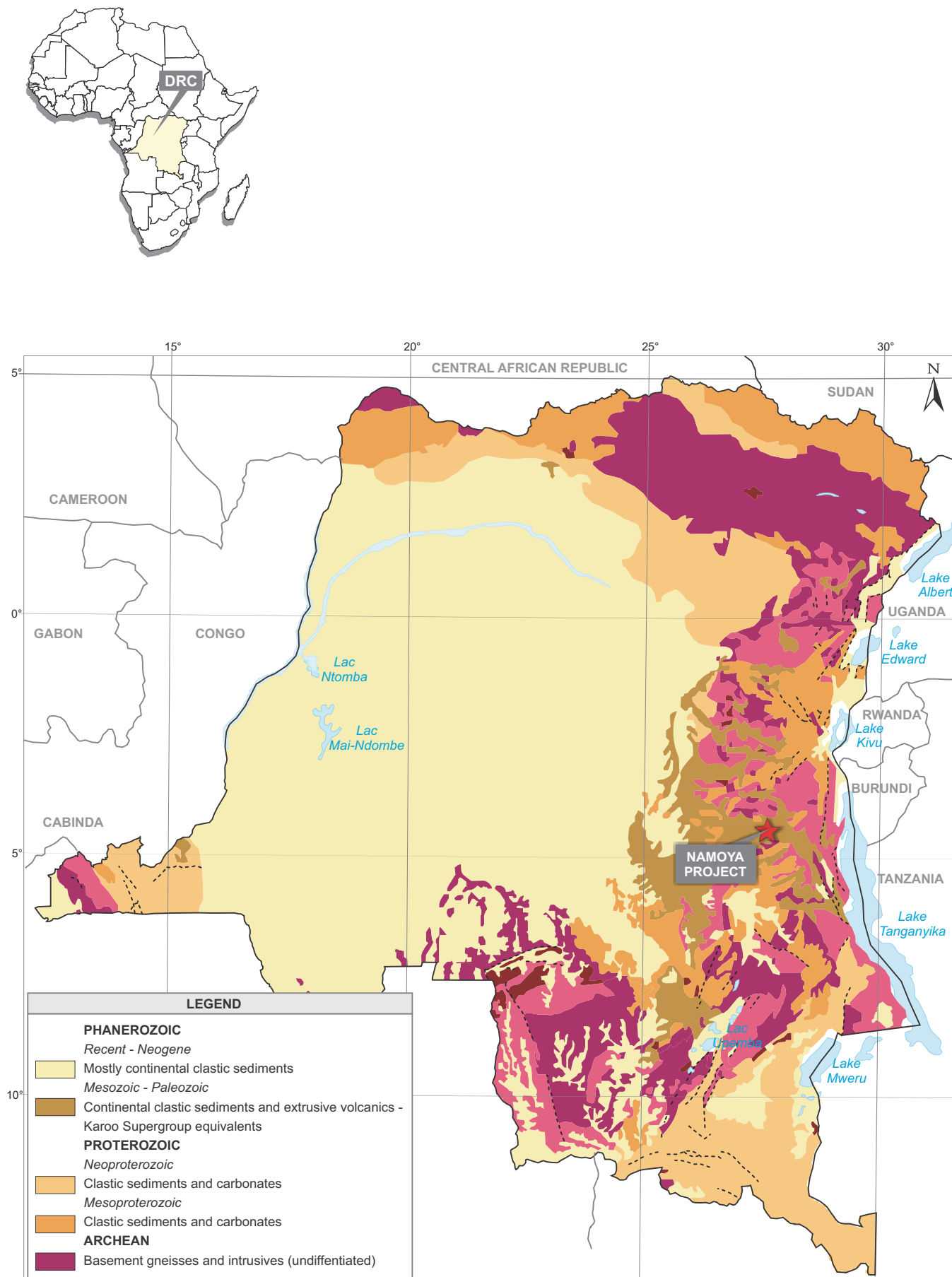
REGIONAL GEOLOGY SHOWING THE KIBARAN MOBILE BELT

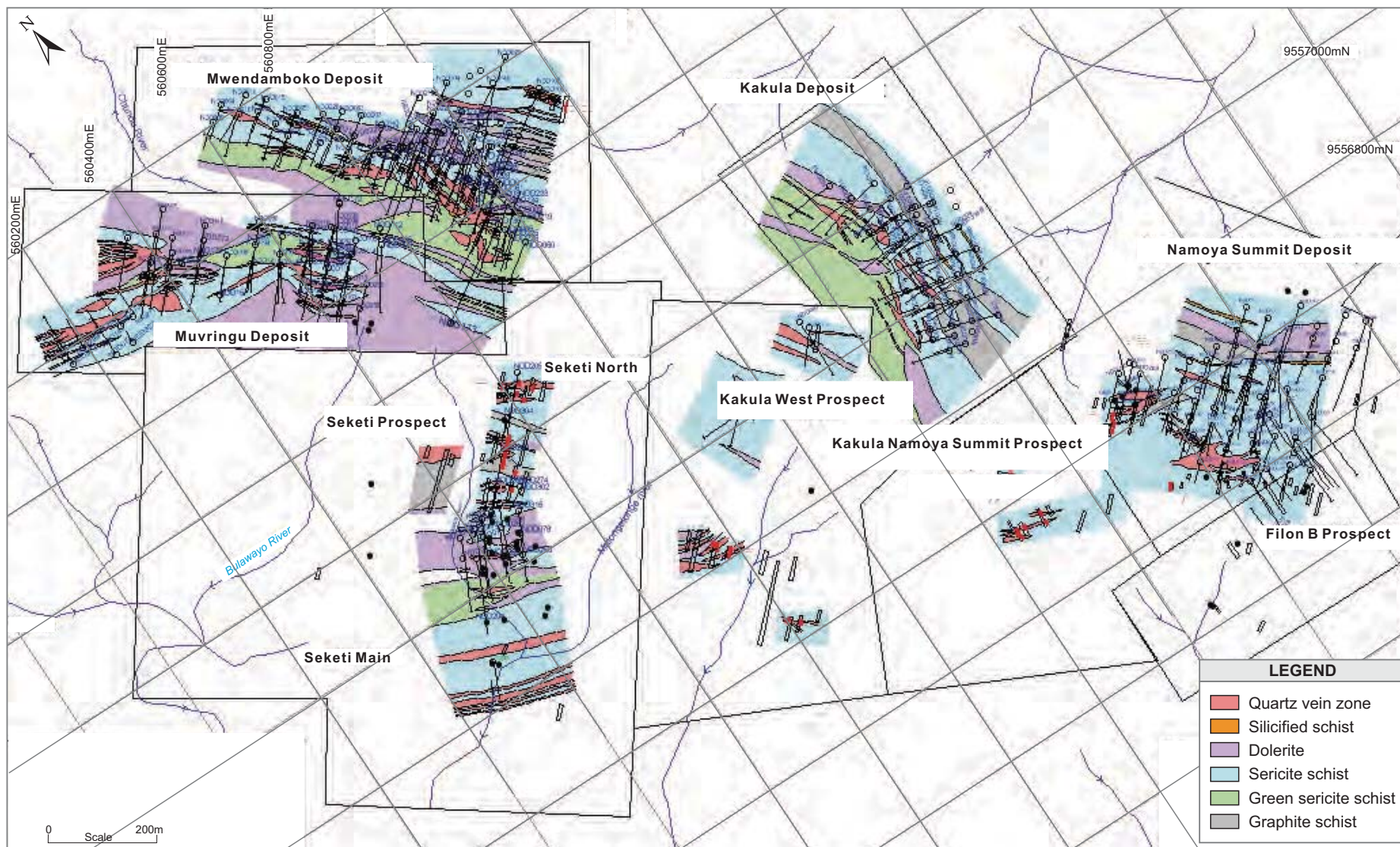


LEGEND

 Lufilian Arc	 Mozambican Belt	 Kibara Belt	 Cratons > 1800Ma
--	---	---	--

REGIONAL GEOLOGY OF THE NAMOYA PROJECT WITHIN THE DRC





Mineralization appears to be draped about the axis of a northwest-southeast ridge. As deformation along the northwest-southeast axis would not have been uniform, branch faults on this axis may be expected. Muviringu may have been a conjugate set of mineralization to Mwendamboko, with mineralization concentrated about a fold axis. However, it may also have been influenced by shearing in a roughly east-west direction causing localized duplexing and transform faulting. Most of the mineralization appears parallel to the main shears and there is little evidence for oblique tension gashes.

The rocks in the southern part of the Namoya area appear to be folded, with fold axes plunging at a shallow to moderate plunge towards the west-northwest and east-southeast. These folds appear to be bounded by large-scale west-northwest and east-southeast trending thrust faults. The folds may represent anticlines and synclines developed in the footwalls and hanging walls of the thrusts during movement.

The strong northwest-southeast structural control at Namoya is not typical of the Pan-African event as it is perpendicular to the KMB trend and probably indicates a reactivation of earlier structures. A multi-phase injection of quartz veins also seems likely with a correlation between vein thickness, density and grade. The main mineralization at Namoya is in quartz stockworks striking northwest-southeast. These auriferous vein systems outcrop at the summits of Mwendamboko, Namoya Summit, Kakula, and Muviringu. Traces of stockwork have also been located on areas along and adjacent to the southeast-northwest Namoya Summit-Mwendamboko mineralized trend. Mwendamboko and Muviringu deposits are the most important, containing 60% of the Namoya total estimated resources.

At Mwendamboko, remobilized gold has been noted in association with galena. A study of lead isotope data was conducted at the Mwendamboko deposit by Prof. F.G. Houtermans of Berne (1956). This study determined an age of 960Ma, for the remobilization phase, contemporaneous with the Pan African D2 reactivation. Tourmaline is often associated with the quartz veins, particularly in the upper levels of Mwendamboko, and in some places appears to dominate the rock. Thus far no granitic body has been documented during exploration works in Namoya, which might have explained the source of tourmaline. However, intersection of quartz porphyry by exploration drill holes on the southern portion of Namoya Summit prospect may suggest presence of a deep seated granitic body

Radiometric dating of tourmaline in hydrothermal auriferous quartz veins of northwest Burundi (Brinckmann et al, 1992) indicated a temporal relationship of the tourmaline with the tin granites of the area. Another possible source of tourmaline is from exhalites associated with submarine processes on the Kibara sediments. No detailed study of the tourmaline has been carried out in the Namoya region to date but, due to its abundance in relation to the high level mineralized quartz veins, such a study could be warranted.

Gold is present both at micro and macro scale, the visible gold reportedly making up the majority of gold mined by artisanal miners at Namoya. Mineralization of the host, greenschist lithologies does not appear to have been adequately tested. Theories relating to the migration of fine gold from weathered quartz stockwork into fractures and fissures in the schist were put forward to account for the weak mineralization in some schist samples. Thus, little thought was given to the possibility of pervasive alteration of the host rocks by the mineralizing fluids. In summary the mineralization events at the Namoya Project appear to be related to:-

- early input of intra-continental basalts and dolerites bringing metals into the system;
- remobilization of metals from this phase by the hydrothermal system associated with tin granites. The important phase relevant to gold mineralization is likely to be a quartz-sulphide-chlorite phase of mineralization pre-dating Sn/W mineralization, hence accounting for the higher temperature of formation of the gold. Such a chalcophile phase would account for some, but probably not all, of the chloritisation. It may be assumed that Namoya is more deeply eroded compared to the primary tin deposits to the north and hence most of the tin/tungsten, iron, and pegmatite zones have been eroded away. This would imply waning of the quartz stockwork at depth or proximity (of approximately less than 1km) to an underlying granite source; and

- remobilization and further concentration of gold in shear zones. This is probably the phase most currently evident and most important at Namoya. The quartz 'stockworks' are probably not true orthogonal features of magmatic hydrothermal origin but a series of irregular sheets, nested vein sets, ladder veins and micro-veinlets characteristic of shearing. This would account for some of the cross-cutting features of the granite system by gold bearing veins.

6.3. Property Geology and Mineralisation (NI 7a, 7b)

Namoya consists of six separate prospects, namely Mwendamboko, Muviringu, Kakula, Namoya Summit, Seketi and Kangurube. In 2012, Namoya was investigating the occurrence of gold at Seketi and Kangurube, which have now been upgraded to deposits. Namoya Mining is currently focussing further investigation on the occurrence of gold at Kakula West, Kakula-Namoya Summit, Kimbala, Matongo and Filon B.

6.3.1. Mwendamboko

The main lithologies of the Mwendamboko and Muviringu deposits are Proterozoic in age, and have undergone low grade greenschist facies metamorphism. These consist of schists of varying compositions, and darker green bands of dolerite. These units are generally steeply dipping towards the northeast and have a general northwest-southeast strike. The geology and gold mineralization map and section for Mwendamboko is provided in Figure 7. The mineralized quartz veins are sub-vertical with numerous pinch and swell features. These stockworks dip steeply to the northeast but the schistosity is sub-vertical. At Mwendamboko and the northeastern part of Muviringu, the stockwork zones are parallel to schistosity and strike northwest-southeast and have a sub-vertical dip.

The width of the mineralized veins varies from less than a metre to more than 20m in places and they occur in lenticular folds, which become compressed at depth and are displaced both vertically and horizontally. Some tourmalinization is associated with the quartz veins in the upper levels and pyrite is the dominant sulphide present in minor quantities. The mineralized zones remain open-ended both along strike to the north and at depth for the southeasterly plunging shoots. The southeasterly plunging shoot at Mwendamboko has been drilled to level 640m relative level (mRL) and remains open. This shoot achieved an intersection of 21.33m at an average grade of 6.56g/t Au.

6.3.2. Muviringu

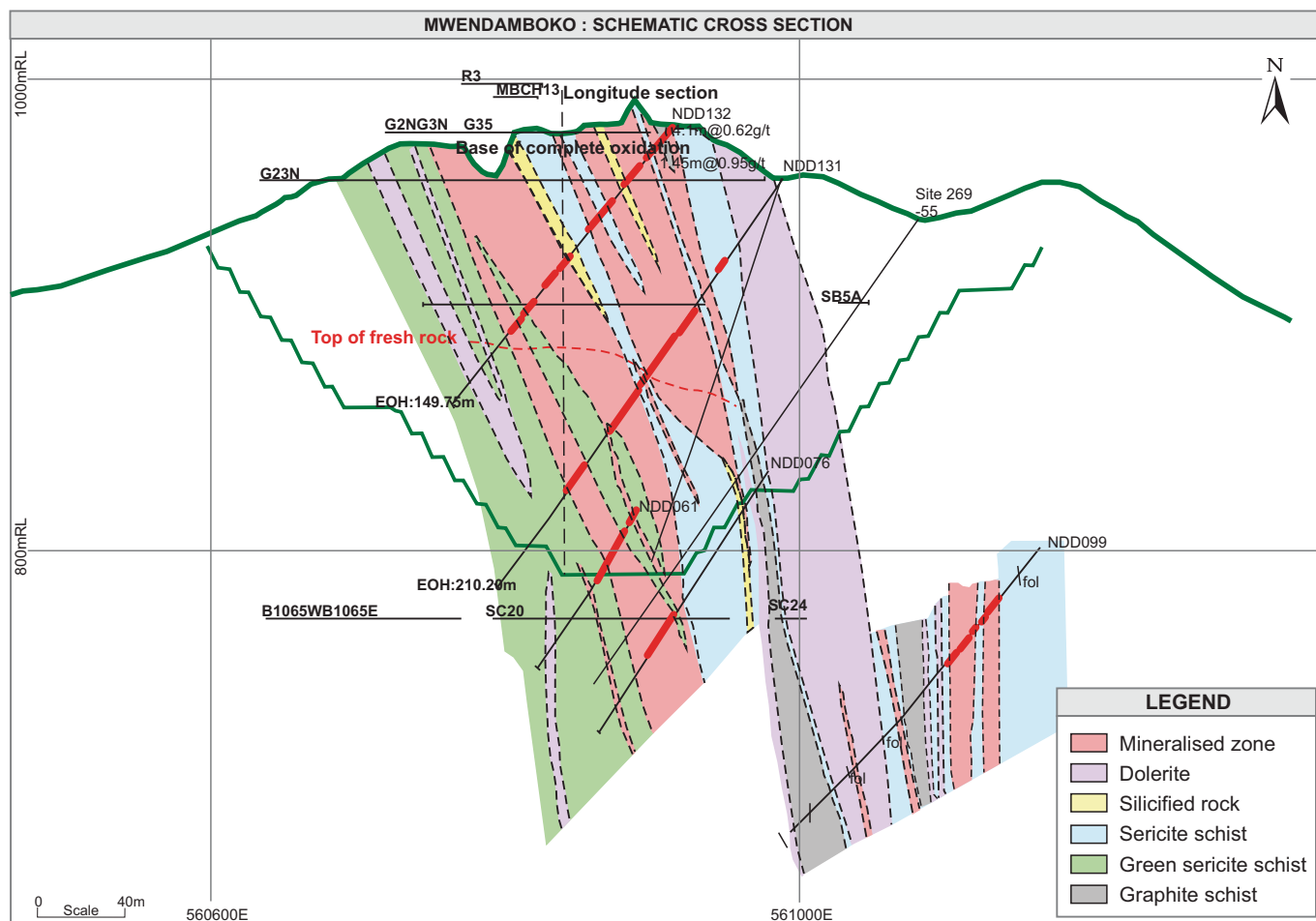
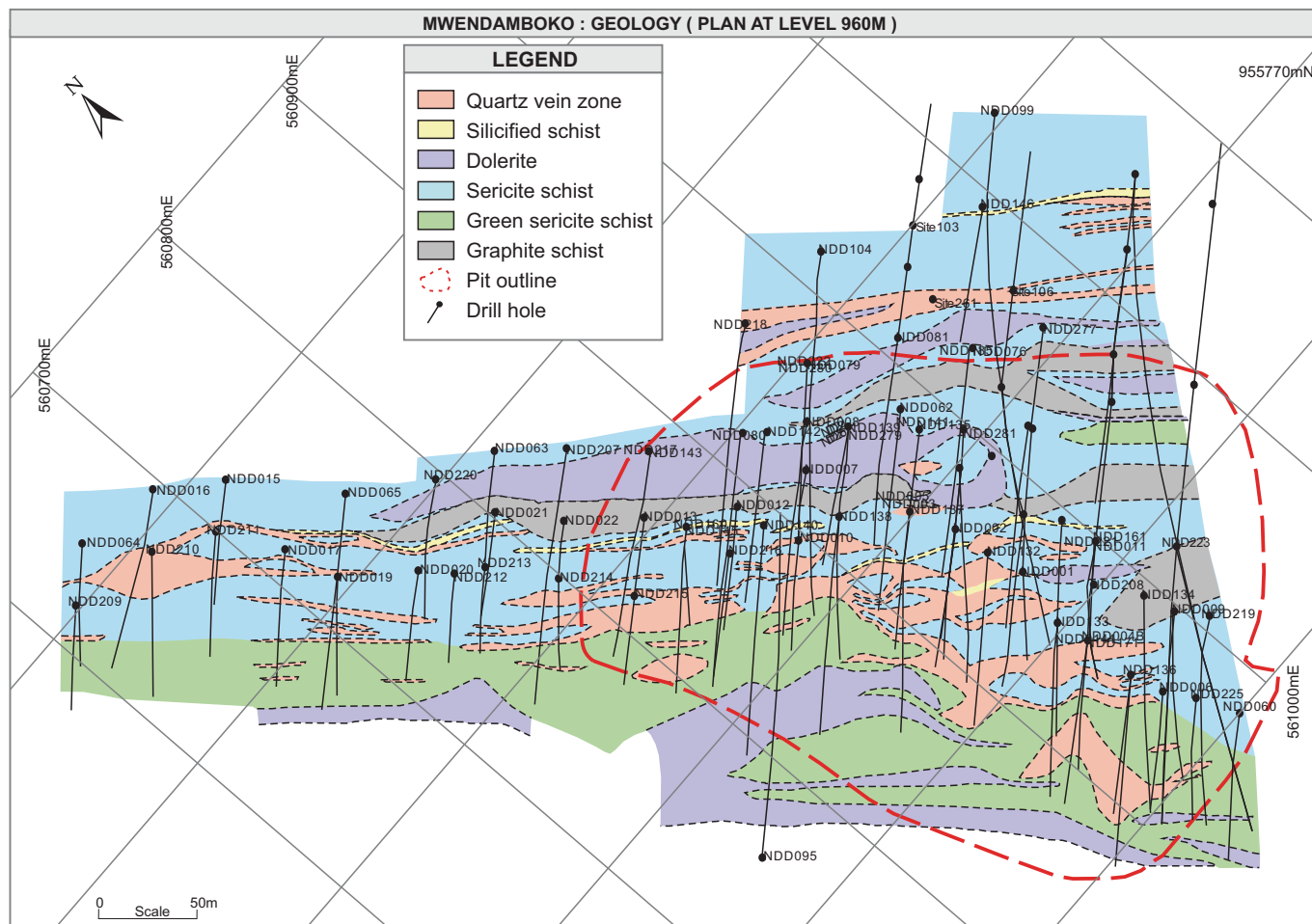
With the exception of a more pronounced pinching and swelling nature of quartz veins, the local geology at Muviringu is identical to Mwendamboko as Muviringu is a conjugate set of mineralization to Mwendamboko. At Muviringu, the stockwork zones transect regional fabric with a northwest orientation and a steep sub-vertical dip to the southwest. The geology of Muviringu is illustrated in Figure 8.

6.3.3. Kakula

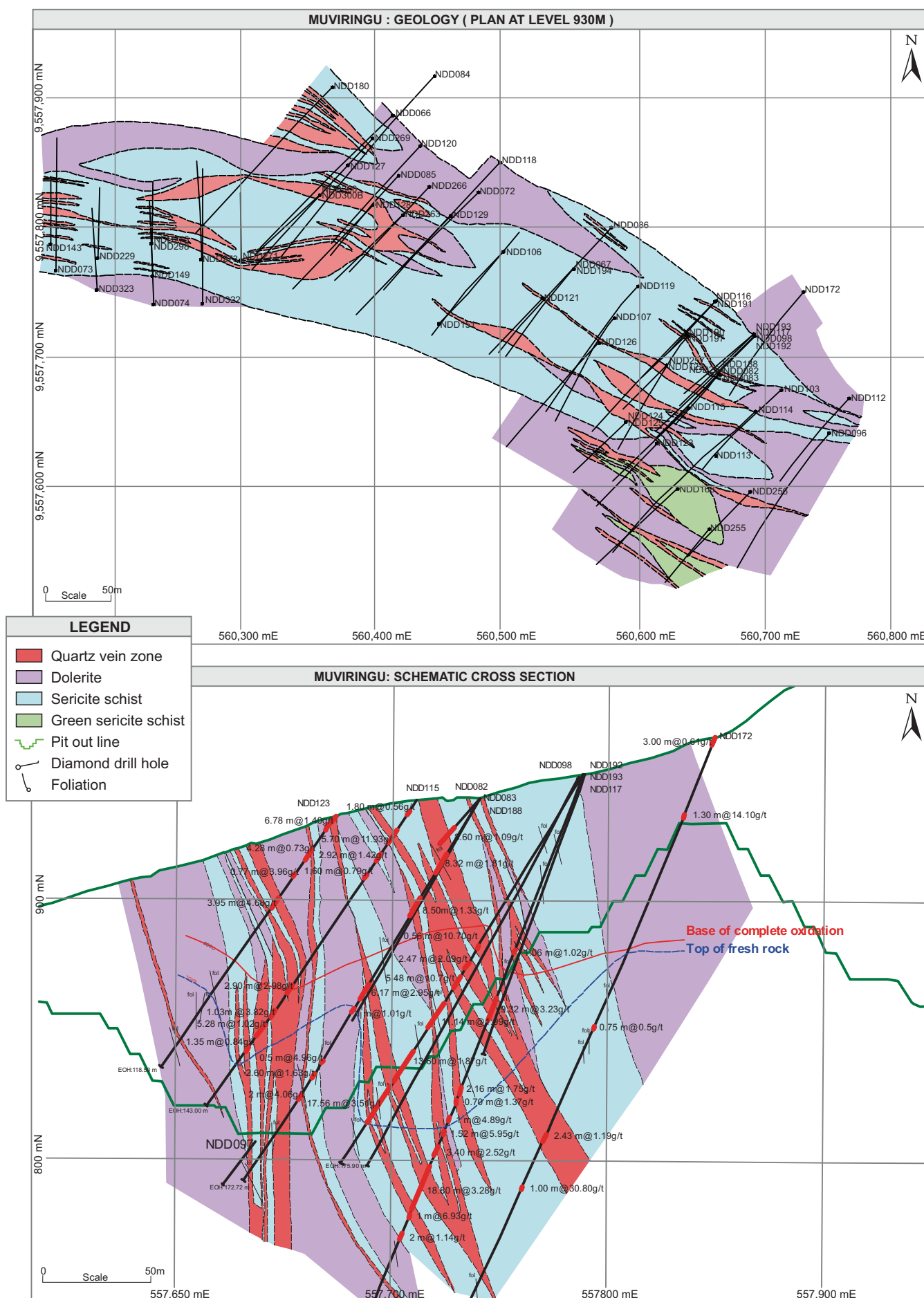
The Kakula deposit is situated approximately 750m southeast along strike from the Mwendamboko deposit and is roughly in the centre of the currently delineated northwest-southeast trending mineralized zone. Kakula is noteworthy, as the mineralized zone is discordant to the regional fabric as opposed to being concordant at Mwendamboko.

The geological information that is available for Kakula reflects similar lithologies and mineralization to those seen at Mwendamboko. It is primarily composed of interbedded light brown sericite schists and green chlorite-sericite schists striking approximately north-northwest and dipping northeast. The mineralization is hosted in a series of quartz veins and stockworks, with an approximate angle of 080° and dip sub-vertically to the northwest. The overall gold grade at Kakula appears to be lower than that of Mwendamboko. Figure 9 illustrates the local geology at Kakula.

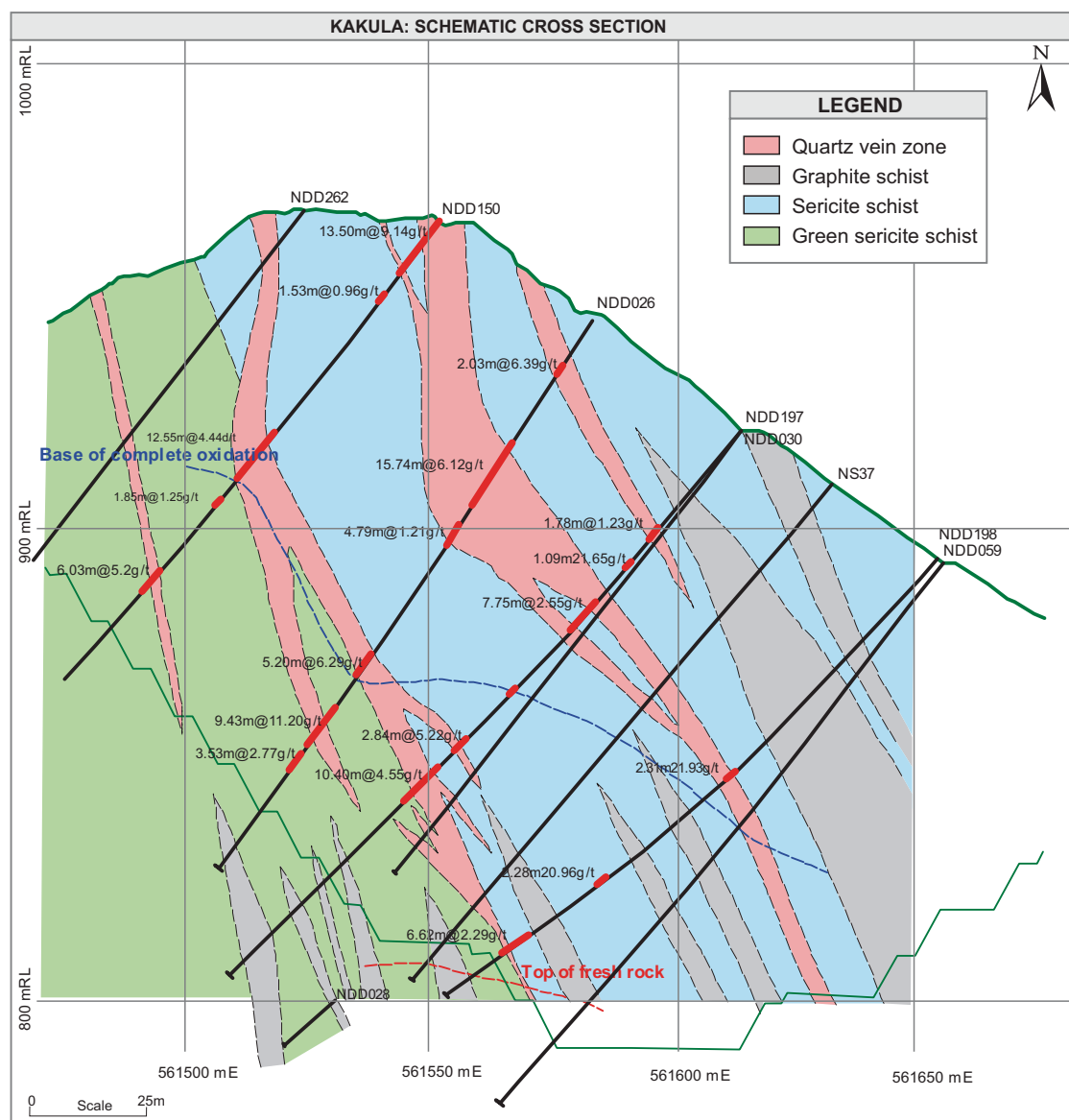
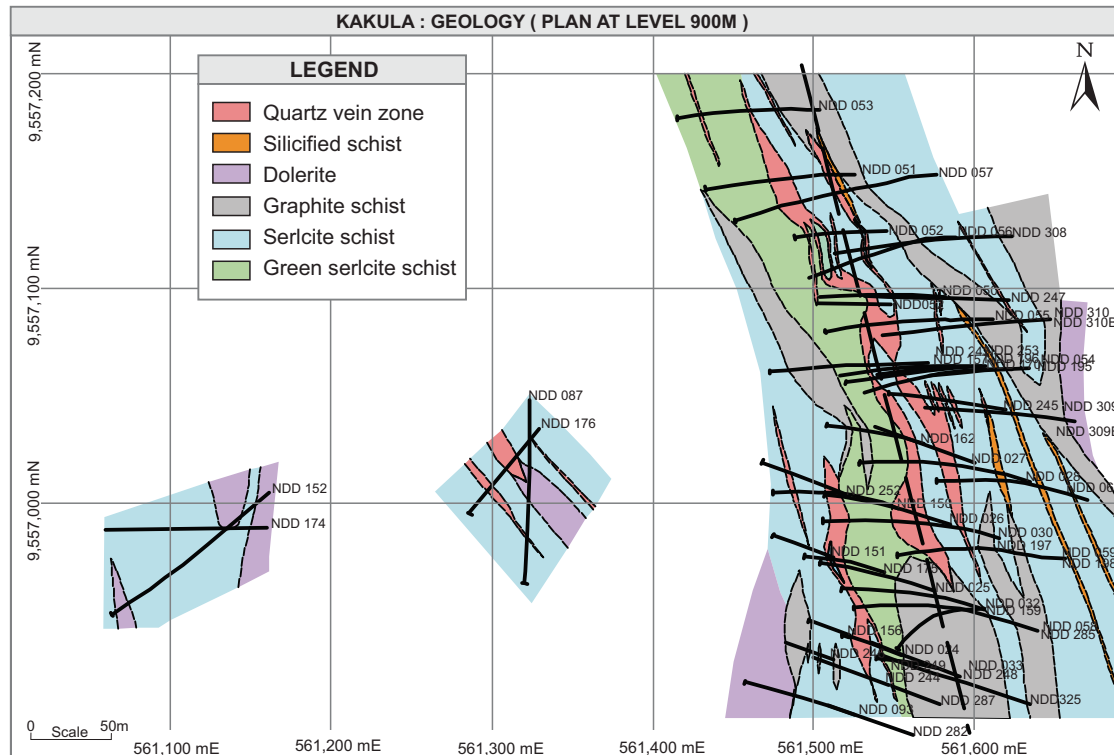
MWENDAMBOKO : GEOLOGY (PLAN AT LEVEL 960M) AND CROSS - SECTION



MUVIRINGU : GEOLOGY (PLAN AT LEVEL 930M) AND CROSS - SECTION



KAKULA : GEOLOGY (PLAN AT LEVEL 900M) AND CROSS - SECTION



6.3.4. Namoya Summit and Filon B

Namoya Summit is located on the southeastern end of the mineralized trend, and has a strike length of approximately 110m. The quartz stockwork zone strikes northwest-southeast, parallel to the foliation in the schists and has a maximum width of about 30m. Like Mwendamboko and Kakula, the mineralization plunges to the southeast, at about 70°. The mineralization occurs within a package of greenish sericite schists, with graphitic schist in the footwall, and sericite schist in the hanging wall. An intrusion of quartz porphyry has been intersected at depth in some drill holes. The intrusion is pre-mineralization, as it contains sporadic, weakly mineralized quartz veins, but it does not form part of the Namoya Summit orebody and is restricted to the footwall. The geology of Namoya Summit is demonstrated in Figure 10.

Filon B is an extension of the Namoya Summit area and is currently under exploration by Namoya but is only considered an occurrence at this stage. The Filon B mineralized vein system appears to run against the trend of the other deposits, trending approximately east-west. It was originally believed to have been a stockwork deposit compressed, due to regional tectonics, into a series of robust quartz veins. It was extremely high grade, often exceeding 1,000g/t Au. Due to its high grades and relative ease of access, Filon B has been extensively mined and has been the main target for artisanal mining since the closure in 1961. Therefore, it can be safely assumed that little or none of the main mineralized body remains in the top 100m to 150m from surface where sample data exists. Dip and strike extensions of this vein system have yet to be fully tested, as has the existence of other similarly trending bodies noted to exist nearby.

The Filon B prospect comprises an approximately east-west trending, high-grade quartz vein system, located to the south of Namoya Summit. The vein was mined by underground methods during colonial times, and has since been the focus of intensive artisanal activity. The workings indicate that the vein was exploited over a strike of about 200m, and for about 80m down dip (that is to 1,144m elevation).

SRK (1999) concluded that all mineralization accessible from the old workings has been mined out. Based on historical records, the exploited resource was estimated at 230,000t at 38.4g/t, for 284,000oz Au. Exceptional intersections of up to 7m at an average grade of 150g/t are recorded.

Possible extensions to the Filon B zone could constitute an important underground resource. The deep weathering profile of Filon B, continuing up to vertical depths of 150m to 200m, could imply favourable metallurgical recoveries for Filon B. The most significant recent intersections of the Filon B are steeply easterly plunging mineralized shoot and include a 32m intersection at a grade of 7.85g/t Au from 40.00m in hole NDD328 and 16m at a grade of 4.83g/t Au from 173.50m in hole NDD203. These results warrant additional exploration work.

6.3.5. Seketi

The Seketi prospect lies 1km west of Kakula. It comprises two zones, with Seketi North lying 175m northeast of the Main Seketi prospect.

The dominant lithological units of Seketi are sericite schist and dolerite. The schistosity fabric generally trends northwest-southeast, that is parallel to the main Namoya-Mwendamboko shear zone and dips to the northeast at an average of 65°. The main alteration types are quartz and pyrite. Quartz occurs as irregular, massive or foliation parallel veins whereas pyrite occurs in disseminated form or boxworks in the upper weathered profiles. For dolerite, carbonate alteration occurs as irregular veins and veinlets and in some places as quartz-carbonate veins. At relatively deeper levels pyrrhotite occurs in blebby style hosted by the dolerite. Thus far, in Namoya it is only the Seketi dolerite that hosts gold mineralized quartz veins. Dolerite sills and dykes in all the other prospects in Namoya are barren.

NAMOYA SUMMIT : GEOLOGY (PLAN AT LEVEL 960M)

NSCH8:3.2m@2.56g/t from 0m
 NSCH9:7.6m@9.77g/t from 0m
 NSCH10:6.2m@3.11g/t from 0m

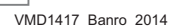
2m@1.54g/t from 2.40m
 NSCH17:2.40m@0.28g/t from 0m

LEGEND

- Mineralised zone
- Silicified rock
- Sericite schist
- Graphite schist

0 Scale 50m

NDD029 NDD031 NDD034 NDD035 NDD036 NDD037 NDD038 NDD039 NDD040 NDD041 NDD042 NDD043 NDD044 NDD045 NDD046 NDD047 NDD048 NDD049 NDD050 NDD051 NDD052 NDD053 NDD054 NDD055 NDD056 NDD057 NDD058 NDD059 NDD060 NDD061 NDD062 NDD063 NDD064 NDD065 NDD066 NDD067 NDD068 NDD069 NDD070 NDD071 NDD072 NDD073 NDD074 NDD075 NDD076 NDD077 NDD078 NDD079 NDD080 NDD081 NDD082 NDD083 NDD084 NDD085 NDD086 NDD087 NDD088 NDD089 NDD090 NDD091 NDD092 NDD093 NDD094 NDD095 NDD096 NDD097 NDD098 NDD099 NDD100 NDD101 NDD102 NDD103 NDD104 NDD105 NDD106 NDD107 NDD108 NDD109 NDD110 NDD111 NDD112 NDD113 NDD114 NDD115 NDD116 NDD117 NDD118 NDD119 NDD120 NDD121 NDD122 NDD123 NDD124 NDD125 NDD126 NDD127 NDD128 NDD129 NDD130 NDD131 NDD132 NDD133 NDD134 NDD135 NDD136 NDD137 NDD138 NDD139 NDD140 NDD141 NDD142 NDD143 NDD144 NDD145 NDD146 NDD147 NDD148 NDD149 NDD150 NDD151 NDD152 NDD153 NDD154 NDD155 NDD156 NDD157 NDD158 NDD159 NDD160 NDD161 NDD162 NDD163 NDD164 NDD165 NDD166 NDD167 NDD168 NDD169 NDD170 NDD171 NDD172 NDD173 NDD174 NDD175 NDD176 NDD177 NDD178 NDD179 NDD180 NDD181 NDD182 NDD183 NDD184 NDD185 NDD186 NDD187 NDD188 NDD189 NDD190 NDD191 NDD192 NDD193 NDD194 NDD195 NDD196 NDD197 NDD198 NDD199 NDD200 NDD201 NDD202 NDD203 NDD204 NDD205 NDD206 NDD207 NDD208 NDD209 NDD210 NDD211 NDD212 NDD213 NDD214 NDD215 NDD216 NDD217 NDD218 NDD219 NDD220 NDD221 NDD222 NDD223 NDD224 NDD225 NDD226 NDD227 NDD228 NDD229 NDD230 NDD231 NDD232 NDD233 NDD234 NDD235 NDD236 NDD237 NDD238 NDD239 NDD240 NDD241 NDD242 NDD243 NDD244 NDD245 NDD246 NDD247 NDD248 NDD249 NDD250 NDD251 NDD252 NDD253 NDD254 NDD255 NDD256 NDD257 NDD258 NDD259 NDD260 NDD261 NDD262 NDD263 NDD264 NDD265 NDD266 NDD267 NDD268 NDD269 NDD270 NDD271 NDD272 NDD273 NDD274 NDD275 NDD276 NDD277 NDD278 NDD279 NDD280 NDD281 NDD282 NDD283 NDD284 NDD285 NDD286 NDD287 NDD288 NDD289 NDD290 NDD291 NDD292 NDD293 NDD294 NDD295 NDD296 NDD297 NDD298 NDD299 NDD300 NDD301 NDD302 NDD303 NDD304 NDD305 NDD306 NDD307 NDD308 NDD309 NDD310 NDD311 NDD312 NDD313 NDD314 NDD315 NDD316 NDD317 NDD318 NDD319 NDD320 NDD321 NDD322 NDD323 NDD324 NDD325 NDD326 NDD327 NDD328 NDD329 NDD330 NDD331 NDD332 NDD333 NDD334 NDD335 NDD336 NDD337 NDD338 NDD339 NDD340 NDD341 NDD342 NDD343 NDD344 NDD345 NDD346 NDD347 NDD348 NDD349 NDD350 NDD351 NDD352 NDD353 NDD354 NDD355 NDD356 NDD357 NDD358 NDD359 NDD360 NDD361 NDD362 NDD363 NDD364 NDD365 NDD366 NDD367 NDD368 NDD369 NDD370 NDD371 NDD372 NDD373 NDD374 NDD375 NDD376 NDD377 NDD378 NDD379 NDD380 NDD381 NDD382 NDD383 NDD384 NDD385 NDD386 NDD387 NDD388 NDD389 NDD390 NDD391 NDD392 NDD393 NDD394 NDD395 NDD396 NDD397 NDD398 NDD399 NDD400 NDD401 NDD402 NDD403 NDD404 NDD405 NDD406 NDD407 NDD408 NDD409 NDD410 NDD411 NDD412 NDD413 NDD414 NDD415 NDD416 NDD417 NDD418 NDD419 NDD420 NDD421 NDD422 NDD423 NDD424 NDD425 NDD426 NDD427 NDD428 NDD429 NDD430 NDD431 NDD432 NDD433 NDD434 NDD435 NDD436 NDD437 NDD438 NDD439 NDD440 NDD441 NDD442 NDD443 NDD444 NDD445 NDD446 NDD447 NDD448 NDD449 NDD450 NDD451 NDD452 NDD453 NDD454 NDD455 NDD456 NDD457 NDD458 NDD459 NDD460 NDD461 NDD462 NDD463 NDD464 NDD465 NDD466 NDD467 NDD468 NDD469 NDD470 NDD471 NDD472 NDD473 NDD474 NDD475 NDD476 NDD477 NDD478 NDD479 NDD480 NDD481 NDD482 NDD483 NDD484 NDD485 NDD486 NDD487 NDD488 NDD489 NDD490 NDD491 NDD492 NDD493 NDD494 NDD495 NDD496 NDD497 NDD498 NDD499 NDD500 NDD501 NDD502 NDD503 NDD504 NDD505 NDD506 NDD507 NDD508 NDD509 NDD510 NDD511 NDD512 NDD513 NDD514 NDD515 NDD516 NDD517 NDD518 NDD519 NDD520 NDD521 NDD522 NDD523 NDD524 NDD525 NDD526 NDD527 NDD528 NDD529 NDD530 NDD531 NDD532 NDD533 NDD534 NDD535 NDD536 NDD537 NDD538 NDD539 NDD540 NDD541 NDD542 NDD543 NDD544 NDD545 NDD546 NDD547 NDD548 NDD549 NDD550 NDD551 NDD552 NDD553 NDD554 NDD555 NDD556 NDD557 NDD558 NDD559 NDD560 NDD561 NDD562 NDD563 NDD564 NDD565 NDD566 NDD567 NDD568 NDD569 NDD570 NDD571 NDD572 NDD573 NDD574 NDD575 NDD576 NDD577 NDD578 NDD579 NDD580 NDD581 NDD582 NDD583 NDD584 NDD585 NDD586 NDD587 NDD588 NDD589 NDD590 NDD591 NDD592 NDD593 NDD594 NDD595 NDD596 NDD597 NDD598 NDD599 NDD600 NDD601 NDD602 NDD603 NDD604 NDD605 NDD606 NDD607 NDD608 NDD609 NDD610 NDD611 NDD612 NDD613 NDD614 NDD615 NDD616 NDD617 NDD618 NDD619 NDD620 NDD621 NDD622 NDD623 NDD624 NDD625 NDD626 NDD627 NDD628 NDD629 NDD630 NDD631 NDD632 NDD633 NDD634 NDD635 NDD636 NDD637 NDD638 NDD639 NDD640 NDD641 NDD642 NDD643 NDD644 NDD645 NDD646 NDD647 NDD648 NDD649 NDD650 NDD651 NDD652 NDD653 NDD654 NDD655 NDD656 NDD657 NDD658 NDD659 NDD660 NDD661 NDD662 NDD663 NDD664 NDD665 NDD666 NDD667 NDD668 NDD669 NDD670 NDD671 NDD672 NDD673 NDD674 NDD675 NDD676 NDD677 NDD678 NDD679 NDD680 NDD681 NDD682 NDD683 NDD684 NDD685 NDD686 NDD687 NDD688 NDD689 NDD690 NDD691 NDD692 NDD693 NDD694 NDD695 NDD696 NDD697 NDD698 NDD699 NDD700 NDD701 NDD702 NDD703 NDD704 NDD705 NDD706 NDD707 NDD708 NDD709 NDD710 NDD711 NDD712 NDD713 NDD714 NDD715 NDD716 NDD717 NDD718 NDD719 NDD720 NDD721 NDD722 NDD723 NDD724 NDD725 NDD726 NDD727 NDD728 NDD729 NDD730 NDD731 NDD732 NDD733 NDD734 NDD735 NDD736 NDD737 NDD738 NDD739 NDD740 NDD741 NDD742 NDD743 NDD744 NDD745 NDD746 NDD747 NDD748 NDD749 NDD750 NDD751 NDD752 NDD753 NDD754 NDD755 NDD756 NDD757 NDD758 NDD759 NDD760 NDD761 NDD762 NDD763 NDD764 NDD765 NDD766 NDD767 NDD768 NDD769 NDD770 NDD771 NDD772 NDD773 NDD774 NDD775 NDD776 NDD777 NDD778 NDD779 NDD780 NDD781 NDD782 NDD783 NDD784 NDD785 NDD786 NDD787



More drilling is required to determine the number of mineralized zones and their correlation and continuity along strike because soil data suggests that mineralization continues over a strike of about 200m. The geology of the Seketi Prospect is illustrated in Figure 11.

6.3.6. Kangurube

The Kangurube Prospect is located 1.5km east of the Namoya Summit Prospect, and was discovered when a soil anomaly of 40ppb to 200ppb was found. The follow-up trench intersected three zones of mineralization associated with quartz veining in sericite schist: The intersections cover 8.00m at a grade of 8.51g/t, 6.60m at a grade of 18.36g/t and 19.60m at a grade of 2.69g/t. Kangurube mineralization strikes approximately north-south, and the prospect appears to be associated with either a possible tensional gash in a parallel structure to the main Namoya shear, or a separate north-south trending structure. The geology of the Kangurube Prospect is demonstrated in Figure 12.

Drilling along strike indicates that the Kangurube mineralized zone may have a limited strike extent. However, additional exploration work is required to ascertain this preliminary observation. Thickening of the regolith on the flanks of the hill has probably suppressed the geochemical response, and given the pinch-and-swell nature of the mineralization at Namoya, the zone may re-continue to the north and south.

7. Deposit Types Item 8

The Namoya Project, even though segmented into separate prospects, boasts one type of gold mineralisation style. The following deposit characteristics have been noted:-

- gold mineralisation hosted within quartz veins and quartz stockworks, striking in a northwest-southeast direction;
- prevalence of tourmaline crystals within the quartz veins;
- deformation structures within the quartz veins, resulting in irregular sheets, nested vein sets, ladder veins and micro-veinlets, characteristic of shearing;
- no granitic intrusions in the immediate area of the Namoya orebody (as a possible source of tourmaline) although quartz porphyry intrusions have been intersected by drill holes at Namoya Summit and Muviringu signifying potential for a deep seated granitic body; and
- sericite/chlorite schists, sometimes with carbonates, indicative of a magmatic and hydrothermal processes.

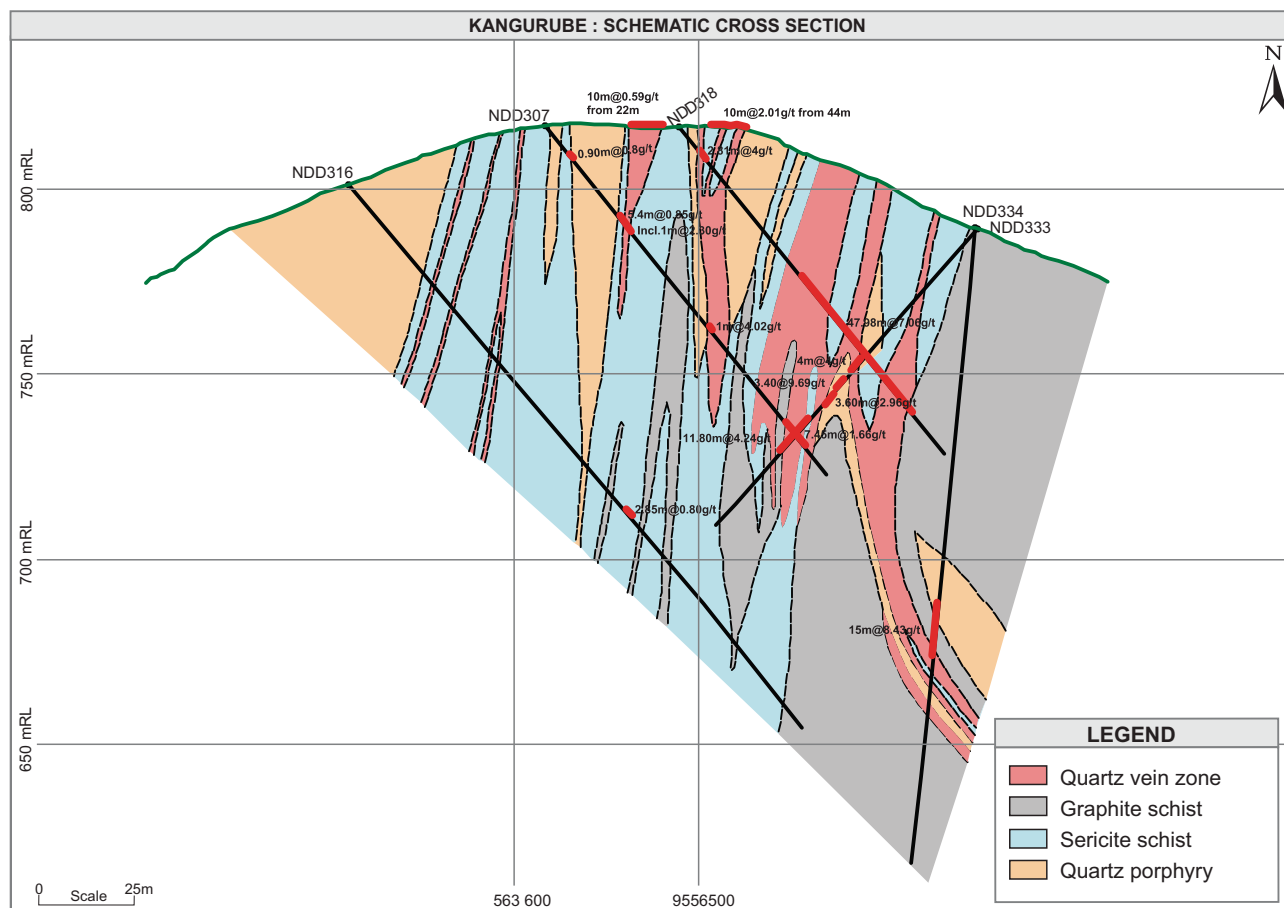
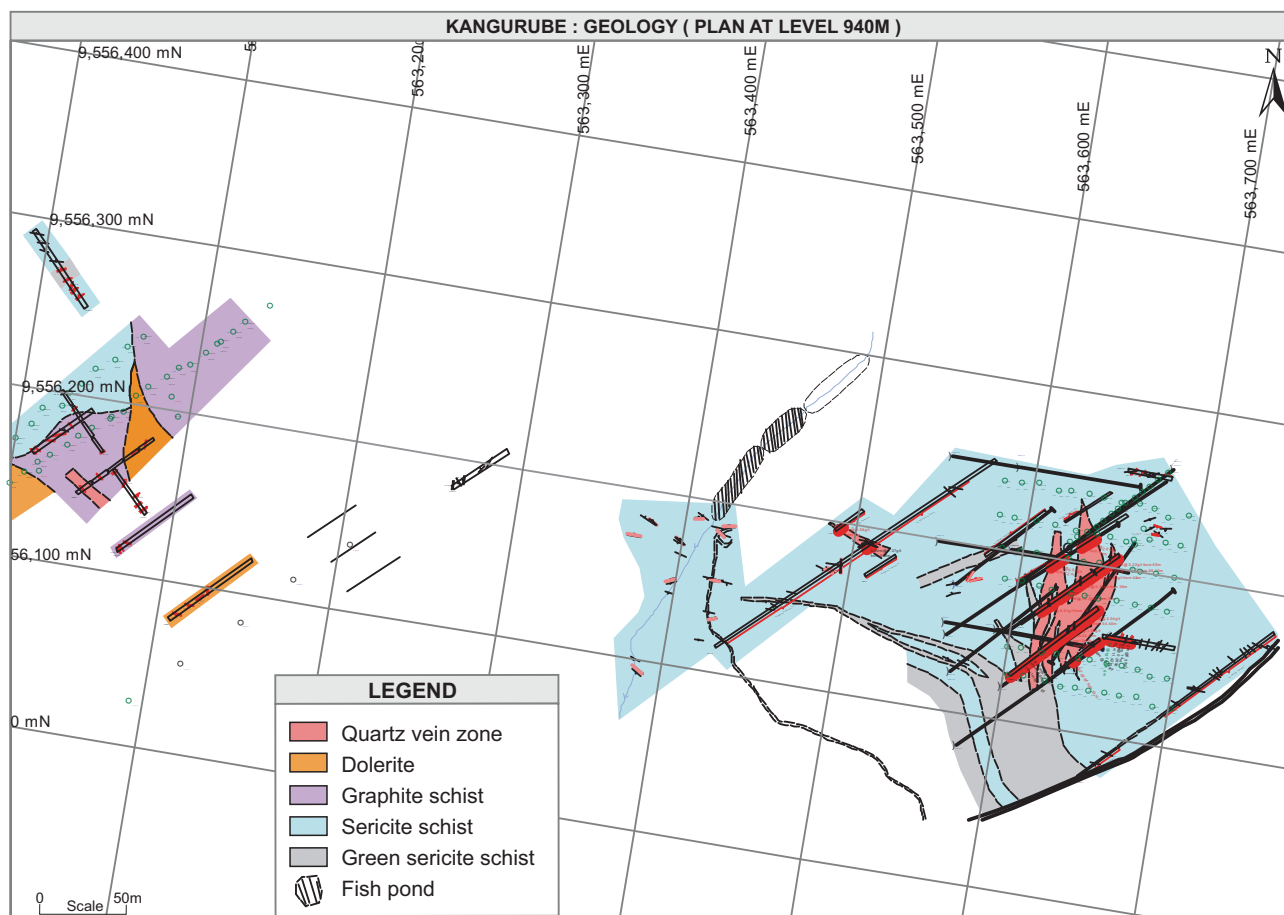
The deposit characteristics are typical of the intrusion-related, tungsten/tin-associated type. This class of magmatic-hydrothermal deposits occurs within magmatic provinces best known for tungsten and/or tin mineralization. This type of deposit contains a metal suite that includes some combination of bismuth, tungsten, arsenic, tin, molybdenum, tellurium and antimony and contrasts with that found in more widely-developed gold-rich porphyry copper deposits. They are located specifically on cratonic margins or within continental collision settings and are related to felsic domes, stocks and plutons of intermediate oxidation state (both magnetite and ilmenite series). The mineralization may occur within the intrusive body itself, and/or more distally (1km to 3km) from the intrusion.

Intrusion related gold deposits occur in a number of forms, including:-

- sheeted quartz veins and veinlets;
- flat quartz veins;
- quartz breccias and stockworks;
- disseminated greisens; and
- dyke/sill hosted veinlets.



KANGURUBE : GEOLOGY (PLAN AT LEVEL 940M) AND CROSS SECTION



8. Exploration Item 9

Historical exploration has taken the form of soil sampling, trenching and adit sampling diamond drilling. Namoya Mining has carried out extensive exploration since 2004 which commenced by regional investigations, including Landsat imagery interpretation, regional mapping and soil sampling, which are discussed in more detail below. Advanced exploration entailed adit and trench mapping and sampling, twinning of historical drill holes and drilling of new exploration holes. This report includes all exploration data collected until 31 December 2012 and this includes:-

- 350 diamond drillholes (including holes drilled specifically for metallurgical testing);
- 2,074 auger drillholes; and
- 15,797 trench and channel samples.

There is a total of 375 new trench and channel samples and 141 new diamond drillholes completed by Namoya between 21 November 2012 and 31 December 2012. Table 5 shows the recent exploration completed by Namoya Mining for the Namoya Project.

Table 5: Summary of Exploration Results

DATE	DIAMOND DRILL HOLES	DRILLING PHASE	AUGER DRILL HOLES	SOIL SAMPLES	STREAM SEDIMENT SAMPLES	TRENCH- ING (km)	REGOLITH SAMPLES	ADIT SAMPLES	ROCK CHIPS
2004	0	-	0	781	0	0	0	221	7
2005	34	1	0	3,400	0	1.71	0	2,367	505
2006	65	1 & 2	0	6,103	0	2.53	0	64	80
2007	23	2	0	0	1,517	1.63	545	14	339
2008	87	2	0	2,467	2	3.06	0	192	63
2009	0	-	696	8,048	90	0.11	134	0	1,339
2010	17	3	1,139	891	99	4.61	165	0	139
2011	69	3	239	0	0	1.13	0	0	0
2012	95	3	37	0	0	0.41	40	0	18
TOTAL	390	3	2,111	21,960	1,708	15	884	2,858	2,490

8.1. Landsat Imagery

A brief study of the Landsat data was conducted by SRK in 1998. Although the scale of the image is too small for detailed deposit scale work, some regional features were noted. The dominant trend throughout most of the region is northeast-southwest, i.e. the KMB trend. This trend is present in the northern part of the image, throughout the Kamituga and Lugushwa Properties.

There is a distinct and notable change in this orientation south of the Simunambi river, where the major structures are oriented in a west northwest-east southeast direction. This orientation is seen over the Namoya Property. Figure 14 displays the regional and local Landsat images with the structural lineaments and faults that were noted during this work.

8.2. Mapping

Regional and deposit scale geological mapping was undertaken in order to gain an understanding of the overall geology of Namoya. Artisanal pits and rock exposures were sampled and mapped.

Regolith mapping and mapping of drainage paths have also been conducted. A total of 2,563 rock chip/channel samples were collected during the period under review. In addition, petrographic studies involving 30 polished sections and 97 thin sections were undertaken. This resulted in the current geological map compiled for Namoya and presented in Figure 6.

8.3. Soil Sampling

Thirteen different grids, namely Namoya, Kangurube, Kibiswa, Musumbukutu, Matongo, Longwe, Lusako, Longwe extension, Kimbala, Nyamele, Isumo, Kabukiti and Yovoti were sampled, as shown in Figure 14, which represents the resultant soil geochemistry map, which allowed for drillhole positions to be planned around the perceived anomalies. Cross-lines were spaced between 80m and 160m intervals and varied in length between 1km and 4km long. Soil geochemical samples are taken at 40m intervals along the cross-lines. Samples were surveyed using differential GPS.

As at September 2010, field work totalling 950.94 line km had been cut and 21,540 soil geochemical samples (including 1,709 ridges and spur samples) collected and sent for analysis. The ridge and spur sampling program was carried out on the Yovoti grid only.

8.4. Trenching and Channelling

Trenching and channelling have been conducted over areas that display anomalous gold values resulting from the regional soil sampling, and also areas already defined by the historical studies and new targets generated by structural studies. Trenches were excavated by hand using picks and shovels until bedrock was intersected generally at depths of 1m to 3m. Channels were cut on exposed bedrock that did not require excavation of the overburden.

Site geologists mapped all the trenches and channels. A total of 13,620.84m of trenches and channels were respectively excavated and cut. The samples were taken with a conventional hammer and chisel after an 8cm to 10cm wide and 5cm deep groove was cut using a motorized rock cutter on the floor of the trench or on the exposed rock. A total of 13,145 trench and channel samples were generated during the period under review.

8.5. Adit Sampling

Adit resampling has been conducted in all accessible historical adits. The main objective of the adit resampling programme was to confirm the tenor of grade and widths of mineralization as indicated in the historical data.

The resampling programme involved the use of a motorised saw, cutting consistent grooves of 10cm in width and 5cm in depth on one side of the adit at waist level. In selective zones, channels were made on either side of the adit walls.

Cutting of a consistently sized groove in adit walls helped to ensure that appropriate volume of material was sampled. A total of 2,769 channel samples were cut from 40% of all historical adits. Geological mapping was, however, carried out in all accessible drives and cross-cuts from the four prospects of Namoya Summit, Kakula, Muviringu and Mwendamboko.

Detailed mapping of structure, alteration and mineralization was carried out in order to gain an understanding of the controls and distribution of mineralization. Statistically there is no apparent bias between historical and recent assays of the re-sampled adits.

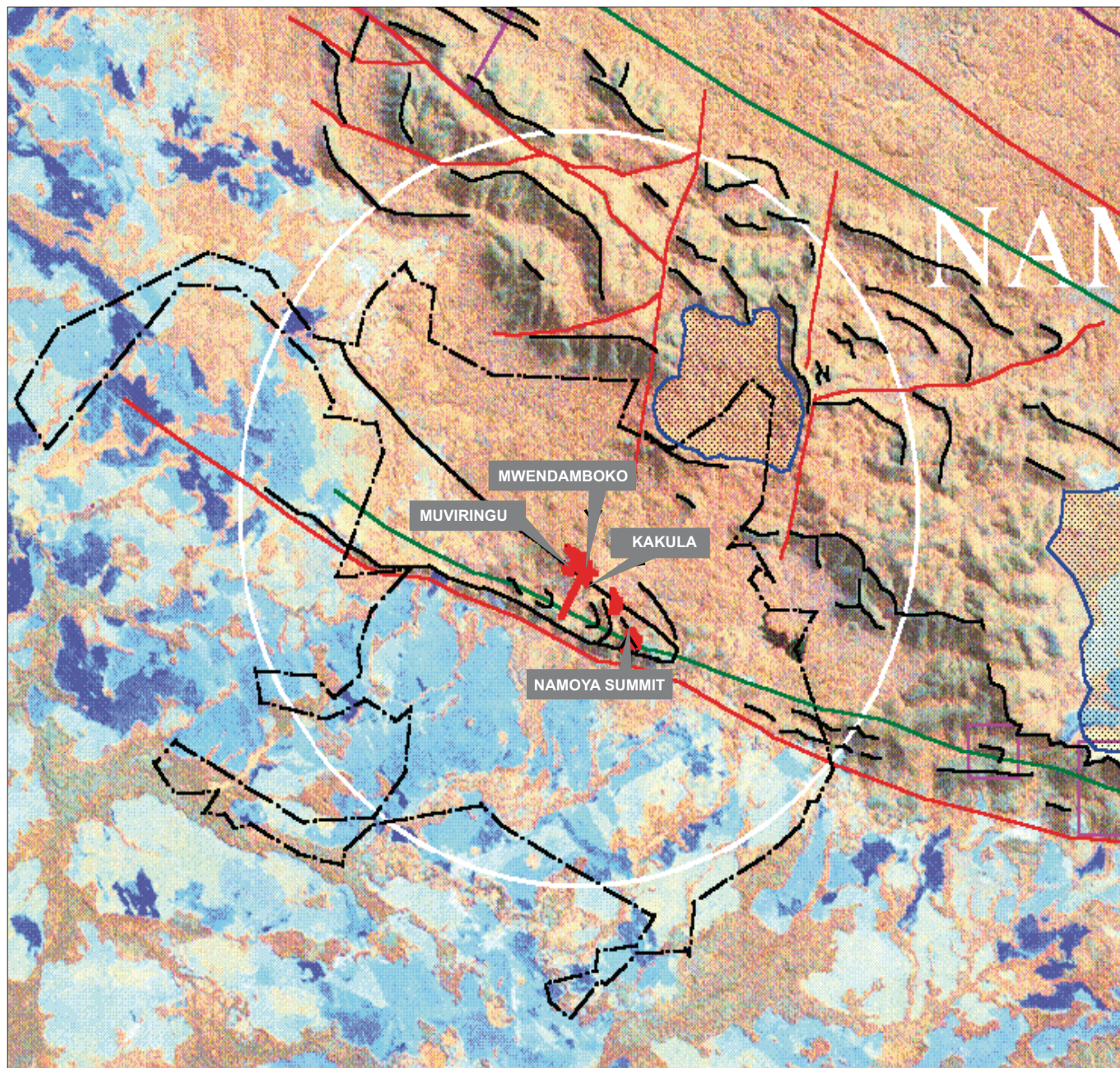
8.6. Remote or Geophysical Exploration

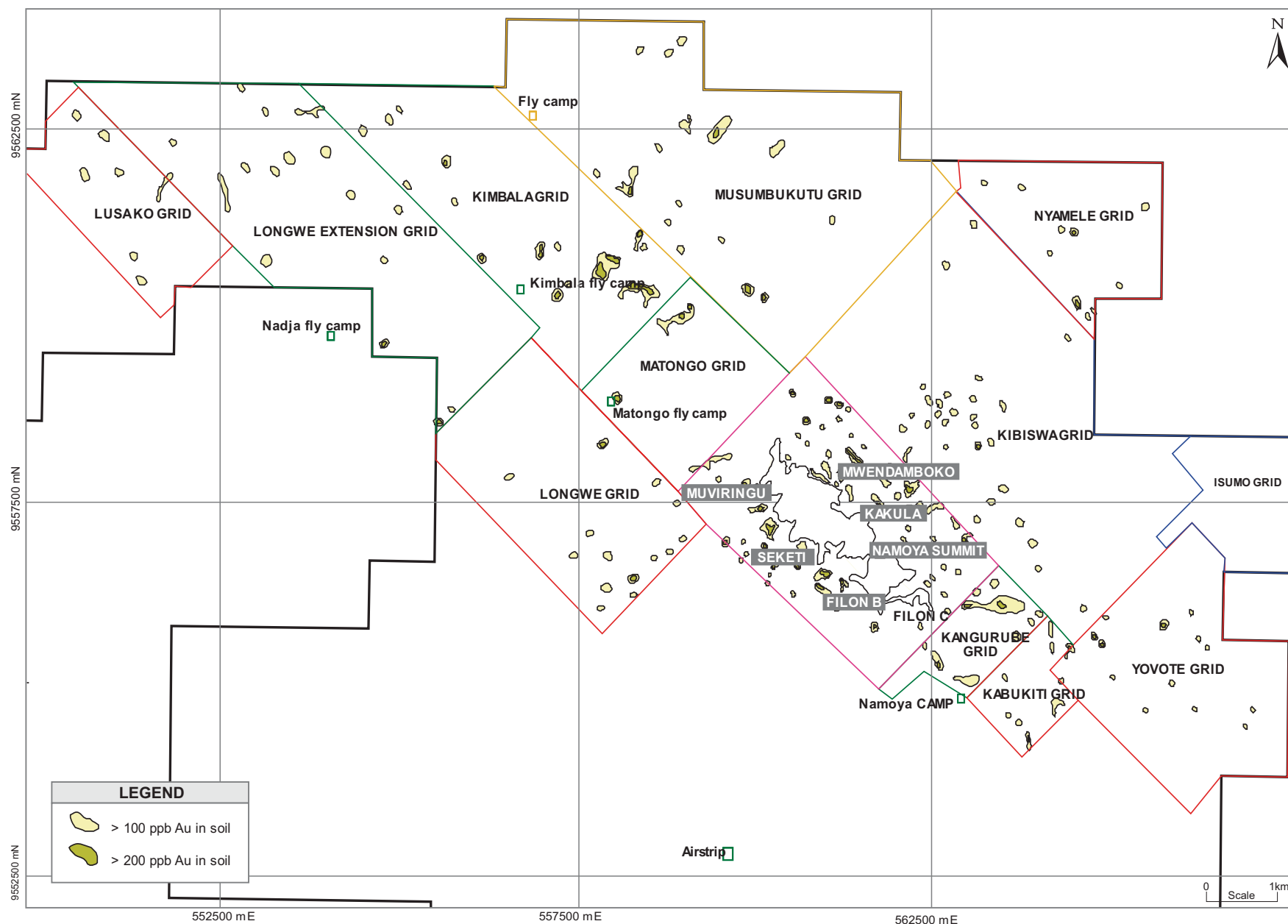
No remote or geophysical exploration has taken place at the Namoya Project.

8.7. Surveying Methods

Surveying is completed by the responsible geologist using Real Time differential GPS equipment and hand held compasses.

THE LANDSAT IMAGE AND INTERPRETATION FOR NAMOYA PROJECT





9. Drilling Item 10

The first phase of the drilling by Namoya Mining commenced in August 2005 and consisted of 70 diamond drill holes totalling 9,442.21m drilled parallel and close to or just below existing adit data. The drilling was designed first to test the accuracy and repeatability of the previous work and ultimately the validity of all the historical data and finally to increase the amount of Indicated Resource in the existing models. This first phase confirmation-drilling programme was carried out on the three principal prospects of Mwendamboko, Kakula and Namoya Summit. Geosearch International Limited, an experienced drilling contract company based in South Africa, carried out the drilling programme on behalf of Namoya Mining using two Longyear 38 rigs.

The drill programme was fully helicopter supported, including rig moves. An A-Star 350 B2 helicopter (owned and operated by Wild Dog Helicopters) was used for the moving of drill rigs and materials from site to site.

All drill holes collars were surveyed with Real Time differential GPS equipment. Drill holes collar azimuths were established at surface by using hand held compasses. Down-hole surveying of drill holes utilised a Reflex Single Shot or Flexit instrument, which measures both azimuth and dip. Core orientation was carried out by the "Spear" method or other gravity-based method such as Ezy Mark system.

As part of the second phase of drilling, 36 diamond drill holes totalling 7,411.53m were completed in May 2007. This phase of drilling was undertaken to follow-up newly identified targets and depth extensions to the known mineralization.

The most recent phase of diamond drilling ended in on 21 November 2012. This latest phase of drilling involved the completion of infill drill holes as well as holes to test the extensions of the mineralized zones. A total of 13 resource holes, equivalent to 1,542.16m were drilled with the objective of converting Inferred and potential Mineral Resources within the optimized pit shells in Mwendamboko, Muviringu, Kakula and Namoya Summit into higher confidence resource categories. In addition, 56 holes representing 6,631.02m were drilled to test the strike and depth continuity of the zones of mineralization interpreted from trenching, auger drilling and rock grab sampling on regional targets like Seketi, Kangurube, Filon B and Namoya Summit Extension. The higher confidence drilling studies were completed in order to meet the requirements of a Feasibility Study.

As at the end of 2012, 353 holes representing 49,944.6m had been completed for the purpose of Mineral Resource estimation and 16 holes representing 1,923.14m for metallurgical studies were completed. Subsequently, 13 of the metallurgical holes representing 1,586.04 m were also sampled and assayed and added to the database used for the resource estimation bringing the total number of holes used in the resource estimation to 366 (51,530.64m). Core recovery averages 88.38% for overall drill core and 82.64% for the mineralized zones only. Most drill holes commence using a PQ diameter, which is reduced to HQ and later NQ depending on the formation being drilled.

Shallow core drilling at Namoya was done by auger drilling. Auger drilling commenced in May 2009. The program was carried out using an Atlas Copco Cobra TT percussion hammer and window sampling tubes. It has a capability of penetrating to depth of 7.5 m into soft regolith and saprolite material. From top to bottom, the various lengths of core sizes are 0.5 m for PQ (9.5 cm diameter), 4.0 m for HQ (7 cm diameter), 2.0 m NQ (5 cm diameter) and 1.0 m BQ (3 cm diameter). Auger core samples on average weigh 2 - 4 kg. Auger holes are terminated after penetrating a minimum of 1 m into the saprolite/saprock.

The first phase of auger core drilling, consisting of 95 holes centred on a 40 x 40m grid, was used to further test the Mwendamboko regolith mineralization to increase the understanding of the regolith, and also acquire more data to enable the regolith resource to be converted into a higher confidence category. By September 2010, a total of 1,710 holes (8,248.72m) had been drilled, generating a total of 7,927 samples. Out of this, a total of 213 auger holes have been drilled on the Mwendamboko-Muviringu regolith. Auger drilling was subsequently extended to the other prospects as a target generation tool.

9.1. Drilling Protocols

9.1.1. Diamond Drilling

It is Namoya Mining's practice that drill hole location, inclination and objective be discussed by the exploration team and recorded by means of a detailed report which includes the projected budget before drilling commences. This report is to be approved and signed off by the Exploration Manager and the Chief Geologist. After set up of the rigs, borehole inclination and azimuth are to be checked by the Senior Project Geologist (or his delegated geologist) before drilling commences.

The core sizes used include PQ (or PQ3, i.e. triple tube), HQ (or HQ3) and NQ (or NQ3). Triple tube drilling is recommended in the oxidized zone (saprolite) and broken or friable fresh rock, for the purpose of maximising core recovery and the joining of core between runs for orientation purposes.

The borehole numbering protocol that is employed encompasses the first letter of the project (i.e. N for Namoya Project) followed by 'DD' which stands for Diamond Drill hole and lastly by the hole number. Therefore, the first hole at any of Namoya prospects will be NDD001. Before drilling commences, drill sites are referred to using the analogy Site 1 or Site 2 according to numerical order.

A register of all holes is kept on site for each project area, with Borehole No., coordinates, azimuth, inclination, planned depth, final depth, date started, date completed, and comments. An updated copy of the register is lodged at the Bukavu office on a monthly basis. The register is kept in both electronic and hardcopy formats. The location of the completed diamond drill holes is illustrated in Figure 15.

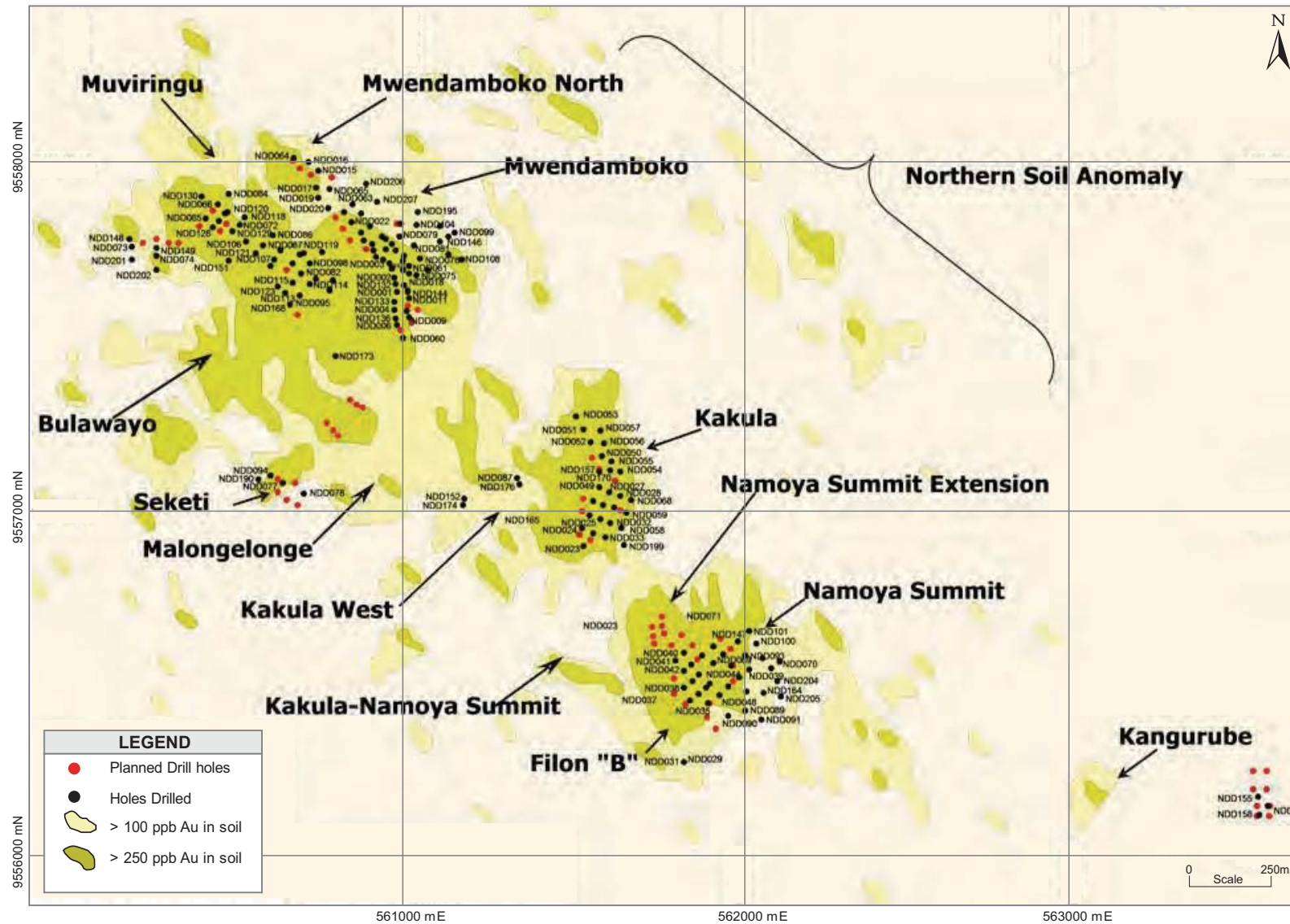
Drill core is orientated and the frequency of orientation surveys is determined by the core quality, a direct consequence of the ground conditions (rock competency, fractures, intrusions, etc.). Orientation is carried out by the 'spear' method, or another gravity-based method such as the Ezy Mark system.

The spear method is used for drill core recovered during the night shift and the Ezy Mark system for the day shift because no geologists are present during the night shift to supervise the accurate application of the Ezy Mark system. The spear method is also preferred over the Ezy Mark system when orientating soft rock. It is also recommended that crayon used in this process be sharpened using a knife instead of a sharpener because the thin, tapering points produced by pencil sharpeners tend to shear off before a reliable mark can be made.

Orientation survey records are compiled by the driller every 3m and this record are kept on a survey Form 3. This form also records the reliability of the survey based on the clarity of the mark for the spear method. The Ezy Mark system is regarded as reliable.

The geologist is responsible for ensuring that sufficient core boxes are available at the drill site. Core is packed by the drilling contractor with plastic blocks showing the depth and placed at the end of each run. The driller's findings are reviewed by the geologist and should there be a discrepancy of 50cm or more, this will be reported to the senior geologist and then both the geologist and driller will measure the stick-up and then the driller must pull the rods out of the hole. The total number of rods multiplied by the length of each rod minus the stick-up will provide the depth of the hole and this should correspond to the depth on the block at the base of the last run.

The core recovered for each run, and the position and amount of any core loss, is measured by the geologist and recorded Form 4. A wooden (or preferably plastic) block, showing the amount of loss, is placed in the appropriate position in the box. It is important that this be done before the core leaves the drill site to minimize inaccuracies. The driller must be immediately informed of any core loss and the recovery records signed off by the driller before the core leaves site.



The Senior Project Geologist will give the drilling supervisor a copy of the recovery data daily and if necessary, any remedial action discussed and implemented. A generalized log (i.e. drill-site summary log) is compiled by the geologist before the core is removed from site. This log must show the depths of the main lithological units and main zones of alteration or mineralization.

The geologist is responsible for safe transport of core from the site to the vehicle. If transport is by road, the core boxes are wired and/or strapped together with an empty tray on top to prevent spillage of core. If transported by helicopter, each core box must be hand-carried with an empty box strapped on top and with padding on top of the core to the pick-up point. At the pick-up point, it is the responsibility of the contractor to ensure that core boxes are stacked inside aluminium crates, and securely strapped together with an empty tray on top.

All core boxes are labelled at the ends, showing the borehole number, box number and the 'from-to' depths in whole metres. Single-shot or multi-shot surveys will be carried out at intervals of 30m in all drill holes by the drilling contractor. For drill holes with very specific targets like infill holes, downhole surveys are conducted every 30m as drilling progresses. For exploratory drill holes in new areas downhole surveys may be conducted on completion of the drill hole at every 30 m. All surveys are to be reviewed by the Senior Project Geologist and the results entered in Form 5. All instruments used are checked on surface for accuracy of inclination and azimuth before drilling commences and the results recorded and filed.

The contractor cases the borehole to the depth at which competent rock is reached and the casing is retrieved on completion of the hole unless otherwise instructed by the Senior Project Geologist. When casing is left in the hole during the progress of a drill hole, the top of the casing is placed 0.5m from the borehole collar and is capped and sealed. When casing is removed, a stand-pipe is placed in the hole at 0.5m from the borehole collar and then capped.

The contractor is expected to operate two twelve-hour shifts per day, 13 days per fortnight. Namoya Mining routinely operates normal day-time shifts for geologists, with a Field Assistant present during the night shift to monitor rig time, frequency of orientation surveys, etc. However, the Geologist allocated to a particular borehole is on call and responsible for the hole, on a 24-hour basis. The Geologist on day shift, or the field assistant on night shift, must record the various drilling activities on Form 6.

9.1.2. Auger Drilling

Operating procedures and care and maintenance for the machines during drilling are supervised by the Chief Geologist on site. Auger drilling utilises an Atlas Copco percussion hammer and window sampling barrels. Augering is a technique used to obtain vertical samples of saprolite or weathered bedrock below overburden. Drill spacing is determined by a number of factors, including, but not limited to:-

- style of mineralisation;
- size of the pre-determined soil anomaly;
- exploration time-frames; and
- exploration budget.

The auger machine has the capability to drill to a maximum depth of 7.5m. Namoya Mining's drilling practice is to drill to a depth of 1m after intersection with the saprolite. This is done to ensure consistency of sampling. Logging is carried out while the core is still in the window sampling barrel. Logging procedures are the same for all types of drilling, and are discussed in the subsequent section. Due to the fact that no structural data can be obtained from the oxidized material, only lithology and alteration will be recorded under geological criteria.

9.2. Core Logging Protocols

Before geological logging commences, core will be marked using a Bottom of Hole Line (with a black marker pen), a Cut Line (a line along which the core is cut during sampling) and Metre Marks (marked on the core at 1m intervals with the relevant metres written on both sides of the line). The core is photographed with a digital camera after marking and before cutting and each photograph will cover one box of core.

The core must be photographed so that metre marks and cut lines are displayed and in a consistent orientation. Core must be wet and shadows and reflected light must be avoided. Each photograph is saved in a digital format using the borehole number, tray and 'from-to' depths as the file name.

Geological logging is carried out using standard forms and codes and discussed in more detail in the following sections. New codes will only be introduced following approval of the Senior Project Geologist, Chief Geologist and Exploration Manager. Forms will either be completed on paper or by means of a palm-top computer. Logging data will be entered into the "Central Database Computer" on a daily basis, and checked by another Geologist. Each paper form will be signed as "Entered" and "Checked" by the individuals concerned.

Final borehole logs will be produced using the Strater programme, in a format which summarizes the geological data recorded on forms 7 to 10, together with all sampling results. These completed logs will be stored both electronically on the central database computer, and as hard copies. When final (electronic and hard-copy) logs have been completed, the data will be signed off by the Senior Project Geologist and Exploration Manager. Changes to the data will only be possible with the authorization of the Chief Geologist and Exploration Manager.

10. Sample Preparation, Analysis and Security Item 11

Sampling has been taking place since November 2004, commencing with rock chip (grab) samples, followed by soil samples, stream samples, channel samples, trench samples and adit samples where warranted and/or accessible. Procedures developed by Namoya Mining for all types of sampling are briefly discussed. These include stream sediment, soil, channel (trenches, adits, outcrops, workings and pits), regolith and drill core sampling.

10.1. Sampling Methods

10.1.1. Soil Sampling Protocols

It is convention to determine a baseline, from which the sampling grid will emanate. Sampling sites are positioned using either a GPS or a compass according to the level of forest cover. The line spacing for soil grids is normally 80m (generally used in defined targets) or 160m (used for regional surveys), with samples taken at 40m intervals along the lines. The average sample depth is 35cm.

Grids should be constructed on a local grid system with the co-ordinates for each sample point reflecting the line number and the distance along the line. All sample points should also have UTM co-ordinates measured by GPS and, where it is not possible a registered surveyor is called in to determine the co-ordinates.

The following procedure is followed during soil sampling:-

- pegs marked with the local grid co-ordinates are placed at every sample point;
- the soil sampling pits are dug to minimum depth of 40cm or 10cm below the base of the organic layer to exclude vegetative matter from samples. Approximately 4kg to 6kg of soil is then taken from the bottom of the hole and placed in a plastic sample bag, together with the sample tag. The bag is sealed with a cable-tie and the sample depth is recorded;

- records are made using Form LR2 for grain size, texture and colour of the sampled soil, lithology, approximate percentage of any contained rock fragments, land use and approximate slope angle and direction (where no reliable topographic data exists);
- soil samples are collected and placed in a plastic sample bag. A wet strength sample tag with a unique sample number is assigned to each sample and placed in the sample bag. In addition, the sample number and grid coordinates of each sample location are scribed on to an aluminium tag. The aluminium tag is placed in the bottom of each sample pit and covered. This is done as grid pegs are often removed by the local inhabitants;
- sample books are designed so that six random numbers (i.e. six pages) per fifty numbers have been removed from the books. This is done to ensure that standards, duplicates and blanks can be inserted and the field geologists do not have to remember to skip numbers while conducting their daily field activities;
- coordinates, depth, colour of soil, horizon, grain size, fragments, slope angle and slope orientation of each sample are recorded at each sample site in the sample book, and transferred to electronic format at base camp;
- statistical analyses are carried out using on the database compiled for soil sampling at Namoya Project to test that samples are of the same population;
- a duplicate sample is collected at every 20th sample site;
- soil samples are shipped to the Banro sample preparation facility in Bukavu, DRC. Each shipment between the field and Bukavu has a covering dispatch form that is filled out in triplicate. Two copies are sent to Bukavu with the samples and one remains in the field at the project site;
- should there be any discrepancy between the sample numbers and/or the number of samples recorded on the sample dispatch sheets and those samples physically received at the Bukavu sample preparation laboratory, the problem is immediately dealt with via HF radio and e-mail communications and the problem rectified. Pulp samples of approximately 150 g each are shipped by DHL in batches to SGS in Mwanza, Tanzania; and
- soil samples are transported directly to the sample preparation lab where they are dried, disaggregated, sieved to -2mm, pulverised and sent for gold analysis by fire assay.

10.1.2. Rock Sampling Protocols

Lithological descriptions of rock encountered during reconnaissance and mapping visits are recorded in form LR3 and include type of exposure, rock name, oxidation, colour, texture or fabric, grain size, alteration style and minerals, using the same codes as for core logging. Sampling data includes the sample number and type (whether the sample comprises a single piece (grab) or is a more representative composite of several pieces (composite grab)). Structural data is recorded separately.

10.1.3. Trench Sampling Protocol

Sampling is carried out on the floor of the trench by cutting an 8 - 10cm wide, 5cm deep channel, preferably with a mechanical rock saw, or otherwise with a hammer and chisel. Sample lengths are determined by the geology and, in this regard, the same principles apply as when sampling diamond drill core. The details of the trench sampling are recorded on Form LR4. This form captures the same lithological and alteration data as for rock sampling, but has additional data fields to allow all samples to be spatially plotted electronically or by hand.

10.1.4. Channel Sampling Protocols

Channel samples are orientated at 90° to the zone of interest so that the total sampling length represents the true thickness. When this is not possible, the mapping should clearly show the relationship between the sampled section and the strike of the zone, so that the sampling data can be recalculated to represent a true thickness. As for trenching, the origin of the channel sample string is the westernmost (or southernmost) point. If the channel is later extended to the west (or south) the measurements become negative. Sampling data are recorded on Form LR4, the same form as for trench and adit sampling.

10.1.5. Adit Sampling Protocols

Channel sampling is carried out on the sidewall of the adit, if the adit is cutting across strike. However, if the adit is parallel to strike (e.g. developed on a bedding-parallel vein) sampling should be taken across the roof of the adit at 5m intervals.

Channels should be 10cm wide and 5cm deep, and are cut with a mechanical rock cutter if available, otherwise by hammer and chisel. If using a hammer and chisel, care must be taken when sampling material of variable hardness, to ensure that representative volumes of hard and soft rock are taken.

The details of the channel samples are recorded on Form LR4, and include sample position, length, number, lithological and alteration data. Sample lengths are determined by the geology and, in this regard, the same principles apply as when sampling diamond drill core. The exact locations of the samples are plotted on the adit map, together with the sample numbers. Statistical analyses are applied to the database to ensure data integrity.

10.1.6. Core Sampling Protocol

All drill core sampling will be carried out at sampling intervals determined by geological features (and not simply on a metre by metre basis) such as contacts, faulting and jointing. In a homogenous rock, the maximum sample interval will be on a metre by metre basis. The minimum sample interval is taken as 0.3m. It is planned that analyses will be carried out using the 50g fire assay. Veins, altered zones, or distinct geological units are sampled so that the contacts are a standard 2cm within the sample boundaries.

The entire length of each drill hole was sampled. Veins, altered zones, or distinct geological units are sampled so that the contacts are a standard 2cm within the sample boundaries. The drill core is usually marked-up by the geologist responsible and split in half using a diamond saw. The samples were cut at site and shipped to the Bukavu, DRC, sample preparation laboratory for processing. The sample pulps were then sent to the SGS laboratory in Mwanza, Tanzania, to be analyzed for gold by 50g fire assay.

10.2. Sample Preparation

Stream sediment samples are collected on lines approximately 200m apart, orientated normally to the direction of the river. Individual samples were collected from surface to a depth of approximately 50cm. The spacing of samples along lines is approximately 20-40m, where possible. Soil sampling lines are spaced at lines 160m apart with samples taken every 40m along the line. Approximately 2kg of soil was taken for each sample to an average depth of 35cm. Soil colour, grain-size, slope, and slope direction were recorded for each sample.

Trenching samples are determined geological features, rather than at a defined interval over a defined length. The minimum sample interval was 0.3m in length with a standard 2cm buffer from the nearest contact with another unit. Samples were taken from geological units such as veins, altered zones and distinct units. Samples were removed using a hammer or a mechanical rock cutter.

Auger core sampling was carried out using a percussion hammer and window sampling tubes. Samples can be taken up to 7.5m depth in surface soil, regolith, and saprolite material but are terminated after penetrating 1m of saprolite. Various core sizes and geological sampling create variation in sample size again; however the average sample size is 2.4kg. Auger samples are collected as whole samples with no splitting and are a minimum of 0.3m and a maximum of 1m. Samples can be logged within the windowed collection tube prior to bagging. Field description, collar information, end of hole, alteration and other details are recorded on logs.

Diamond drill core samples are sampled along the entire length of the core. Core is logged and then split lengthways using a diamond saw on site. Sampling is completed geologically with the same 0.3m to 1m minimum and maximum sample lengths and a 2cm buffer from geological contacts. Veins, altered zones and distinct units are sampled separately.

All field samples are bagged and sealed individually with a cable tie and then grouped in large bags holding up to 30kg of sample. A dispatch form is completed in triplicate and two copies accompany samples to Banro's sample preparation laboratory in Bukavu. Banro, through a DRC subsidiary, runs its own sample preparation facility in Bukavu, DRC using its own full-time employees. ALS Chemex, Johannesburg built and commissioned the sample preparation facility and trained staff for Banro in 2005.

The Bukavu sampling laboratory sorts the samples, blanks are inserted at a frequency of 1 blank in every 50 samples. All samples are dried in an electric oven. All trench and core samples are then crushed to -2mm, 80% passing in a jaw crusher. Particle sizing is checked by conducting a screen test (granulometry test) at a frequency of 1 in every 10 samples crushed. The crushed samples are split using a riffle.

One half of the split sample which is usually up to 1.5kg of the crushed samples pulverized to -75 micron, 90 percent passing. Particle sizing is checked by conducting a wet screen test (granulometry test) at a frequency of 1 in every 10 samples pulverised. Scoops from the resulting pulp samples of approximately 150g are then bagged individually in brown envelopes and labelled. Pulp samples are placed in a box holding 20 pulp samples. Reference materials obtained from Rocklabs, an international reference materials producer in New Zealand which are also in pulverized form are inserted randomly but at a frequency of 4 in every 50 samples outside the sample preparation laboratory. These resulting sample pulps are shipped in batches to the SGS Laboratory in Mwanza, Tanzania (SGS Laboratory) for analysis. Genalysis in Western Australia is the umpire laboratory.

All equipment is cleaned between samples with compressed air and is flushed with barren granite after every tenth sample. Soil samples are prepared independently of trench and core samples to prevent contamination. The procedures are based on ISO 9001-2000 quality assurance requirements.

10.3. Laboratory Analyses

Sample preparation is carried out by a dedicated laboratory based in Bukavu which utilises internal procedures which are on par with international standards. ALS Chemex management were on site to train Banro Group staff and to commission the facility in September 2005. Analysis of samples is currently undertaken by the SGS Laboratory in Mwanza, Tanzania, which serves as the primary analytical laboratory while Genalysis in Western Australia serves as the umpire laboratory. Both SGS and Genalysis are ISO accredited under the South African National Accreditation System (SANAS) with international recognition. The laboratories utilise conventional sample preparation, sample analysis and associated quality control protocols. Venmyn visited the lab and the Qualified Person is satisfied that all procedures followed are on par with international practices. Sampling Protocols discussed in an earlier section address issues of analyses and security as well.

All field samples are delivered to the Banro Group sample preparation facility in Bukavu, DRC. Individual sample bags are sealed with a cable tie and the individual sample bags placed in large white bags that will hold between 20kg and 30kg of sample. Each shipment between the field and Bukavu has a covering dispatch form that is filled out in triplicate. Two copies are sent to Bukavu with the samples and one remains in the field at the project site.

Should there be any discrepancy between the sample numbers and/or the number of samples recorded on the sample sheets and those samples physically received at the Bukavu sample preparation laboratory, the problem is immediately dealt with via HF radio communications and a reconciliation report sent by mail to the Senior Project Geologist. Pulp samples, of approximately 150g, are placed in brown packet envelopes which, in turn, are placed in a rectangular cardboard box that holds approximately 20 pulp samples. These boxes are routinely shipped in batches to either SGS in Mwanza, Tanzania, or Genalysis in Perth, Australia, and SGS, Tarkwa, Ghana, in the case of interlaboratory checks.

The in-house sample preparation facility comprises an electric oven, two jaw crushers, three disc pulverisers and an air compressor system all assembled in 20 foot and 40 foot steel containers. All samples received from the field are sorted and oven dried in steel pans stacked on racks that are clearly labelled to optimise the resident drying time of material in the oven. Using the jaw crushers, all adit, trench and drill core samples are crushed to 80% passing a 2mm screen. The crushed sample is split using a riffle splitter to produce between 800g-1,500g of material, which is pulverised using B2000 Low Chrome Bowls with disc for 90s to 300s depending on the hardness of the sample to 90% passing a 75µm screen. Soil geochemical samples are oven dried and sieved to minus 2mm before being pulverised.

An average of 150g split of the pulp is shipped to the SGS Laboratory in Mwanza, Tanzania, for analysis. An average of 250 samples is prepared each day from the in-house facility. The crusher is thoroughly cleaned in between any two samples. After every 10th sample, the crusher is cleaned (flushed) with barren granite, and the pulveriser is cleaned with similar material between each sample. The cleaning process is enhanced with the use of a compressed air system after each sample. The preparation of soil samples is independently carried out to avoid possible contamination from the higher-grade trench, adit or core samples.

The sample preparation laboratory has organised areas/shelves designed for the storage of coarse and pulp rejects such that the samples can be retrieved in a reasonable amount of time. The sample preparation laboratory's quality assurance procedures are based upon the requirements and procedures of ISO 9001:2000 (quality systems—management requirements). All sections of the laboratory comply with the quality assurance procedures.

Three laboratories have been used for sample assaying since the commencement of exploration in Namoya in November 2004. The initial soil geochemical and trench samples were analysed by SGS in Mwanza, Tanzania while ALS Chemex, Johannesburg, served as the umpire laboratory. Since March 2006, SGS in Mwanza, Tanzania, has been used as the principal analytical laboratory and Genalysis in Perth, Australia, or SGS Tarkwa have acted as the umpire laboratory.

All gold analyses have been carried out using conventional 50g charge fire assay with atomic adsorption spectrography (AAS) finish. The three laboratories involved have carried out the usual internal checks, which in the case of SGS-Mwanza are detailed in the section on quality control.

10.4. Security

Samples, including field sample, pulp samples, and duplicates are stored at the sample preparation laboratory in Bukavu. Reference materials are securely store at QC office which is outside the sample preparation laboratory to ensure their integrity. Security personnel are employed on site. Dispatch forms follow the samples from the field to the laboratory for analysis to verify each step of the process and to ensure that all samples are accounted for.

10.5. QA / QC

10.5.1. Sampling Procedures

Screen test of crushed and pulverized data are undertaken to ensure that the of samples during preparation. A range of reference materials, duplicates and blanks are routinely but randomly inserted into each sample batch. Blanks are inserted at the sample preparation lab. Blanks and duplicates are inserted at a rate of 1 in every 50. Standard reference material is inserted at a rate of 4 in every 50 and is primarily sourced from Rocklabs Limited. Reference materials are provided in standard pulp form and are inserted into the batches with continuous sample numbering.

Selections of sample pulps are dispatched to the umpire Genalysis Laboratory for check assays. Samples are submitted quarterly in batches of 50 to 80 samples including the standard reference material as described. Results are compared to the primary laboratory assay results. The results show good comparability and no significant variation in grades or bias.

Reference material results are assessed statistically and compared to precision control charts. The standard reference material in general is considered to be within the acceptable limits. No analytical bias or control issues are noted from the assay results and results are considered precise. Duplicates show good repeatability, blanks show no contamination.

10.5.2. Laboratory Procedures

Both the primary SGS Laboratory and the umpire Genalysis Laboratory are National Association of Testing Authorities accredited to operate in accordance with ISO/IEC 17025:2005. The laboratories are internationally recognised and use standard preparation, analysis, and quality control procedures.

All gold analyses have been completed using 50g charge fire assay with atomic absorption spectrography finish. SGS assay code FAA505. The laboratories have internal QA/QC checks and procedures to comply with international requirements.

10.5.3. Inter-Laboratory Check Assays

Statistical analyses of samples assayed at both SGS in Mwanza and Genalysis in Perth and later SGS, Tarkwa, Ghana using the same assay methods have been undertaken. These were samples originally assayed by SGS-Mwanza. The pulps from a selection of samples were then dispatched to Genalysis-Perth and later SGS-Tarkwa for check assays by the same method (50g fire assay). The samples were submitted at the end of every quarter in batches of between 70 and 190 samples and with insertion of analytical standards.

Results were compared on the basis of the first assay by each laboratory, and the few repeat determinations by each laboratory were ignored. The Mean Absolute Relative Differences (MARD) of the SGS and Genalysis or SGS and Tarkwa results were calculated. In quarters where there were not enough samples to compare in the low grade range the table is provided for only the >1.0g/t Au range.

10.5.4. Standard Samples

Four analytical reference materials are inserted in a batch of 50 samples. The standard reference material is sourced from Rocklabs Limited, New Zealand, with limited material from Geostats, Australia. The standard reference samples are in pulp form and are supplied in plastic containers of 2.5kg each, of both oxide and sulphide material with variable grade ranges. Thirty variable grade ranges of standards have been inserted in various batches of samples submitted to the analytical laboratory. The standards are randomly inserted but are of the same quantity as the laboratory pulps, making it difficult for them to be detectable by the analytical laboratory. Statistical assessment of the results of the standard reference data using the facilities in the Rocklabs Quality Control package has been completed.

The mean assay values for all standard reference material in relation to their respective reference value are considered to be within acceptable limits. Out of control point reference material are usually re-analysed with the batch of samples. In general, the shape of the various charts and the low coefficient of variation (CoV), suggests that there is no analytical bias or no significant control problems that were encountered during the period and that SGS-Mwanza is producing assays of good quality.

10.5.5. Duplicate Coarse Split

A total of 1,418 crush split (duplicate) included in routine batches were statistically reviewed. A total of 161 (11.35%) of the duplicate split out of the 1,418 return assay values higher than 0.5g/t Au. A correlation graph was generated and it illustrated a very high correlation coefficient. The excellent correlation within the high-grade samples, indicate that there is no significant coarse gold component in the samples

10.5.6. Blank Samples

There were 209 blanks inserted within the period of the third quarter of 2011. They returned a mean value of 0.002g/t and a maximum value of 0.050g/t Au (Figure 19). These are made up of composited barren granite, purchased from ALS Chemex - Mwanza Laboratory, with assay values of less than the 0.01g/t Au. In general, less than 1% of the blanks submitted over the entire period returned values above the upper limit.

In all cases, there was no indication of contamination in the sample preparation procedure as the samples before the failing blanks returned lower values than the blanks. As part of the laboratory procedures, a request is made for three samples on either side (before and after) of the failing blanks to be re-assayed. In all cases, the reassays returned values for the blanks which were within the accepted limit.

11. Data Verification Item 12

Data verification during the drilling and sampling stages is discussed under the protocol sections. Data verification during sample preparation and sample analyses are the responsibility of the respective laboratories. In order to monitor the integrity of the sample preparation and analytical data screen tests of crushed (5%) and pulverized (10%) samples, the particle size and percentage passing of the crushed and pulverized material are monitored.

To provide a measure of accuracy, precision and confidence, a range of international reference materials, duplicates and blanks are routinely (12%) but randomly inserted into each batch of samples. Blank samples are inserted during the main stream crushing and pulverising processes. Blanks are inserted into sample batches at a frequency of one in 50 and a crush duplicate split is also carried out at a frequency of one in 50. Standard reference materials are inserted at a frequency of four in fifty.

11.1. Data Acquisition and Validation

Logging data is entered manually by Namoya Mining from handwritten field logs. The new database will allow direct capture of logging into the database using palm top computers. Assay data is received by Namoya Mining in electronic format and is entered directly into the database. All data is cross referenced and reviewed by Namoya Mining when entered.

Venmyn Deloitte carried out a validation review of the drilling and sampling information during their field inspection in 2011. Venmyn Deloitte carried out a high level validation of the digital information recorded on the log sheets against original handwritten borehole logs and also carried out searches within databases for typing and other errors as well as duplicate records. The data validation review of drilling database yielded results that are within acceptable limits and Venmyn Deloitte is satisfied that the drilling databases are adequate and representative.

Data verification for sampling stages was also carried out. Fire assay analyses are carried out for gold grade analysis. Venmyn Deloitte carried out validation of the QA/QC methods utilised by Namoya Mining and the analytical laboratories. Venmyn Deloitte further reviewed that the laboratory certificates for assays match the figures recorded in the database. Venmyn Deloitte is therefore satisfied that assay data and databases are within the acceptable limits and that the data has undergone appropriate QA/QC procedures.

11.2. Database Management

The exploration and drilling information is stored in two databases created and managed by Namoya Mining. Historical data is stored in a Microsoft Access TM database and current data is stored in Microsoft Excel TM. Plans are in place to migrate the databases into a Century System database. Data verification is handled internally and was reviewed by Venmyn Deloitte, then Venmyn Rand (Pty) Ltd, during their site visit in 2011.

12. Mineral Processing and Metallurgical Testing Item 13

12.1. Nature and Extent of Testwork (NI 13a, 13c)

Several metallurgical testwork programmes have been conducted on the Namoya Project by Namoya Mining with a view to establish the most suitable route to extract gold from the Namoya deposit. These programmes include an initial scoping testwork. Subsequent to that, SENET (South Africa) (SENET) completed a Preliminary Economic Assessment on the Project in 2011 with a specific focus on the heap leach and carbon-in-leach (CIL) process route options. As a result of this study (the 2011 study), the heap leach process was selected as the preferred process route on which a more definitive study (the 2013 Study) was completed by MDM Engineering (MDM) in 2013.

For the purposes of this report, we will report in detail upon the testwork that was conducted during the 2011 and 2013 studies, with more emphasis on the latter.

12.1.1. Initial Scoping Testwork

Several early stage testwork programmes (scoping metallurgical tests) that were conducted culminated in the compilation of a scoping study on the Namoya Project. The testwork, which was conducted by SGS Lakefield Research Africa (SGS) in South Africa, involved assessing the recovery and comminution characteristics of the Namoya samples which comprised oxide, transitional and fresh ore samples. The programme included the determination of:-

- susceptibility of the Namoya ore to gravity separation;
- susceptibility of the Namoya ore to cyanidation separation;
- Bond Ball Work Index;
- Bond Rod Work Index; and
- Abrasion Work Index.

The results of this testwork programme, which are summarised in Table 6, indicated that the Namoya ore samples were amenable to the CIL process route option with little evidence of preg-robbing.

Table 6: Initial Scoping Metallurgical Testwork Results

DESCRIPTION	OXIDE	TRANSITION	FRESH	UNITS
Specific Gravity	2.84	2.84	2.84	t/m ³
Bond Work Index	6.90	10.90	9.70	kWh/t
Rod Work Index	6.90	11.10	9.00	kWh/t
Abrasion Work Index	0.225	0.220	0.201	#
Gravity Recovery	14%	23%	21%	%
Gravity Concentrate Dissolution	98%	98%	95%	%
Gravity Tails Dissolution	97%	94%	93%	%
Overall Recovery	93.60%	93.00%	92.60%	%
Grind	80%	80%	80%	% (-75µm)
Leach Time	24	24	24	hr
Cyanide Consumption	0.33	0.39	0.54	kg/t
CaO Consumption	1.70	1.03	1.50	kg/t

From Table 6, it is evident that:-

- all types of Namoya ore that were tested can be classified as soft-to-medium in the hardness category because the Bond Work Index ranged from 6.9-10.9 and the Rod Work Index ranged from 6.9-11.1;
- the Abrasion Index showed that the three types of ores exhibit moderately soft abrasiveness;
- the three types of ore respond well to gravity followed by cyanidation recovery process route; and

- diagnostic leaching testwork indicated that the three types of ore are amenable to direct cyanidation, with 2% of the gold associated with preg-robbing constituents.

The results from this work enabled the development of the initial process flowsheet for the Namoya deposit. Notwithstanding the above, the initial scoping testwork had the following limitations:-

- heap leaching was not assessed, particularly because the Namoya ore samples were amenable to the CIL process route option with little evidence of preg-robbing;
- variability Bond Work Index, gravity and leach testwork was not performed to establish the variability within the orebody. However, Venmyn Deloitte is of the opinion that this was commensurate with the early stage nature of the testwork; and
- no cyanide destruction testwork was performed to establish the optimum method of removing or reducing the residual cyanide in the tailings slurry. Once again, Venmyn Deloitte is of the opinion that this was commensurate with the early stage nature of the testwork.

12.1.2. The 2011 Study Testwork

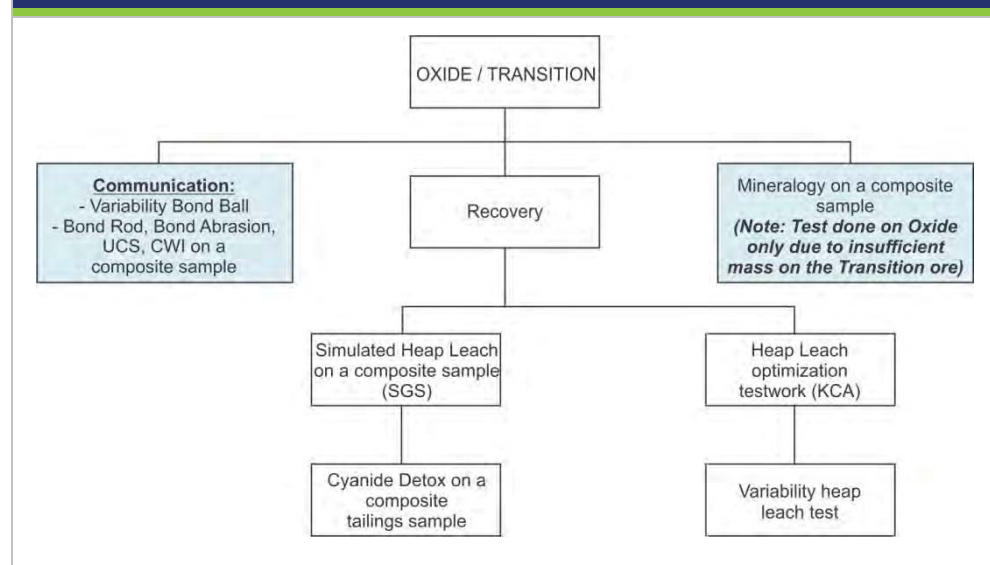
Subsequent to the initial scoping testwork, SENET was commissioned by Banro to perform the following work:-

- assess the amenability of the Namoya ore to heap leaching; and
- determine plant design data for use in equipment selection, sizing and costing.

The testwork that was followed included the following:-

- comminution tests;
- mineralogy testwork;
- compacted permeability testwork;
- agglomeration tests;
- simulated heap leach testwork;
- column tests; and
- cyanide detoxification testwork on the oxide and transition samples.

The testwork was conducted at SGS as well as at Kappes, Cassidy & Associates (KCA) laboratories. Figure 16 summarises the metallurgical testwork programme followed during the 2011 study.

Figure 16: the 2011 Study Stage Metallurgical Testwork

12.1.2.1. SGS - Sample Selection and Preparation

To ensure sufficient representativity, samples for the 2011 Study testwork were selected to cover the entire Namoya deposit along strike and depth. Samples of the oxide and transition zones were sourced from Namoya Summit, Mwendamboko, Kakula, and Muviringu deposits within Namoya.

Four composites were created for the oxide ore and five composites for the transitional material. Sub-samples were extracted for variability CIL, and Bond Work Index testwork. The remaining samples were combined to produce two composites (one oxide and one transition). From the two composites, sub samples were extracted for use in the following testwork:-

- uni-axial compressive strength (UCS);
- Crushing Work Index (CWi);
- Bond Abrasion Work Index;
- Bond Rod Work Index;
- mineralogy;
- simulated heap leach;
- cyanide detoxification; and
- thickening and rheology.

12.1.2.2. SGS - Mineralogy

SGS was commissioned to conduct mineralogical testwork on the oxide composite sample. Such testwork could not be conducted on the transition composite because there was insufficient mass of the sample to enable such work to be performed. The aim of this testwork programme was to:-

- establish the bulk mineralogy of the Namoya oxide and transition ores; and
- identify the gold bearing phases within each zone and provide appropriate commentary on their size, mineral association and liberation characteristics with a view to provide insight into the expected metallurgical behaviour of the ore during processing.

The mineralogy report concluded that:-

- a nugget effect was observed which necessitated several head grade analyses. An average gold grade of 3.49g/t was obtained;
- the heavy liquid separation tests performed indicated that the sample contained a significant proportion of very fine grained gold and 47.15% of the gold reported to the sinks fraction. Gravity concentration tests performed using a Falcon Concentrator produced a concentrate to which 32.95% of the gold reported. This was evidence that a fair amount of gold is liberated and/or associated with heavy minerals;
- the sample contained very low amounts of carbon, making preg-robing unlikely during cyanidation;
- screen analysis showed the presence of relatively coarse-grained gold;
- the oxide ore is primarily composed of quartz, K-feldspar, albite, muscovite/illite, goethite, and tourmaline and possibly trace amounts of scorodite;
- a search for trace minerals showed that 62% of the gold in the sample is relatively large grained which are well liberated. The finer, liberated and locked grains accounted for 35% of the gold;
- 87% of the gold is exposed and amenable to cyanidation; and
- approximately 13% of the gold is locked in gangue material which is porous thereby exposing the gold to cyanidation.

12.1.2.3. **SGS - Head Grade Assay**

The oxide variability samples showed that the head grades ranged from 0.71-4.25g/t Au, a range within which the declared mining schedule grade of 2.04g/t falls. The composite of the five variability samples had a head grade of 2.31g/t Au.

The transition variability samples showed that the head grades ranged from 2.44-5.36g/t Au. The declared mining grade of 2.26g/t Au falls outside of this range. However, the head grade of the composite gave a head grade of 1.52g/t, which is lower than the declared mining schedule head grade.

The silver, sulphide, antimony and base metal content in all cases was noted to be low, which is beneficial as this means the leaching kinetics, carbon loadings, elution and electrowinning efficiencies will not be affected negatively.

12.1.2.4. **SGS - Communion Testwork**

The Bond Ball Work Indices for the oxide and transition material ranged from 5-8.7kWh/t and this indicates little variability in the ore characteristics and grinding energy required.

The RWi:BW_i for the oxide sample ranged from 1.05-1.82. The top end of this range is well above 1.25 (a ratio, above which, problems can be expected with regards critical size build-up or top end competency in an autogenous (AG) mill).

Abrasion tests on both the oxide and transition material showed low to medium abrasiveness and there would be therefore no expectations of very high consumption of grinding media or excessive crusher/mill liner wear.

12.1.2.5. **SGS - Simulated Heap Leach Testwork**

SGS conducted bottle roll tests on the oxide and transition samples on the following size fractions:-

- -6mm;
- -10mm; and
- -15mm.

The results indicated that:-

- for the oxide material, crushing to a finer size liberated more gold and exposed it to cyanide dissolution. This is due to the fact that, after 7 days of leaching, ~89% gold dissolution had occurred on the -6mm sample whilst ~73% gold dissolution had taken place on the -15mm sample; and
- for the transition material, dissolution rates were not sensitive to the crush size because, after 7 days of leaching, ~82% gold dissolution had taken place in the -6mm size fraction whilst ~81% gold dissolution had taken place in the -15mm size fraction.

The results from this testwork process provided a basis for further optimisation tests that were conducted by KCA. This testwork included the following:-

- head grade analysis;
- comminution testwork;
- agglomeration and percolation testwork;
- compacted permeability testwork;
- simulated heap leach testwork; and
- column tests.

12.1.2.6. **KCA - Sample Selection and Preparation**

A total of 14 oxide samples were taken from the Mwendamboko, Kakula and Muviringu areas and composited for testwork at KCA. In addition, 13 transition samples were collected from the Namoya Summit, Kakula and Mwendamboko areas and composited ahead of testwork at KCA.

12.1.2.7. **KCA - Head Grade Analysis**

Head grade analysis of the two composite samples showed that the oxide sample had a head grade of 2.76g/t whilst the transition sample had a head grade of 3.75g/t but both samples had a high arsenic content. The major gangue minerals were found to be silica and alumina.

12.1.2.8. **KCA - Bottle Roll Leach Testwork**

Bottle roll leach tests were performed on 3 grind sizes to establish the maximum achievable recovery by size. For the oxide sample, the gold dissolution rates ranged from 80-98% whilst for the transition sample, the dissolution rates ranged from 53-98% (increasing with size). The full results are shown in Table 7:-

Table 7: KCA Bottle Leach Testwork Results

SAMPLE	GRIND SIZE (mm)	GOLD DISSOLUTION (%)	DAYS	NaCN CONCENTRATION (kg/t)
Oxide	-25	80%	5	0.51
	-9.5	81%	5	0.54
	-0.075	98%	4	0.56
Transition	-25	65%	8	0.44
	-9.5	53%	8	0.59
	-0.075	98%	4	0.34

It is worth noting that there was an observed variance in the calculated head grade in the transition ore, indicative of granular or coarse gold. This could be the reason why the gold dissolution rate was observed to be lower at coarser grinds for the same sample.

12.1.2.9. KCA - Agglomeration and Percolation Testwork

Agglomeration and percolation testwork on grind sizes of -9.5mm and -25mm were performed at cement additions of 0, 2, 4 and 10kg/t. Results indicated that a cement addition rate of 2kg/t will be sufficient for ore agglomeration.

12.1.2.10. KCA - Compacted Permeability Testwork

Compacted permeability testwork was undertaken on both the oxide and transition ore samples with the intention of simulating the heap leach percolation rate at the bottom of the heap under the compressive load of the respective total dump height under the following conditions:-

- varied compaction loading at equivalent heights of 20, 40 and 60m of overall heap height;
- varied grind sizes (-25mm and -9.5mm); and
- varied cement addition levels.

The conclusions of this testwork programme are summarised in Table 8:-

Table 8: KCA - Compacted Permeability Testwork Results

SAMPLE	CONCLUSION
Oxide	The -9.5mm fraction with no cement addition passed marginally at an effective heap height of 40m but failed at a heap height of 60m.
	The -9.5mm fraction, agglomerated with 2kg/t cement, passed at effective heights of 20m and 40m but passed marginally at an effective dump height of 60m.
	The -25mm fraction agglomerated with 2kg/t (Portland Type II cement) passed at all effective heights tested.
Transition	The -9.5mm fraction with no cement addition passed marginally at an effective heap height of 40m but failed at a heap height of 20m.
	The -9.5mm fraction, agglomerated with 3kg/t cement, passed at effective heights of 20m and 40m but failed at an effective dump height of 60m.
	The -25mm fraction agglomerated with 3kg/t (Portland Type II cement) passed at effective heights of 40m and 60m but failed at an effective height of 100m.

12.1.2.11. KCA - Heap Leach Recovery Testwork

Following heap leach testwork carried out by SGS, samples were sent to KCA for a more detailed analysis of this recovery route. At KCA, column tests were performed on the oxide and transition samples at two grind sizes of -9.5mm and -25mm. The oxide sample was agglomerated with cement addition of 2kg/t whilst the transition sample was agglomerated with cement addition of 3kg/t.

For both samples, the pregnant leach solution from the discharge column was contacted with activated carbon and the gold recovered onto the carbon (with time) was recorded. The following observations (as shown in Table 9) were noted:-

Table 9: KCA Heap Leach Recovery Testwork Results

SAMPLE	CONCLUSION
Oxide	The recovery curve plateaus after 112 days of leaching.
	89% and 87% gold recovery to activated carbon was achieved after 112 days for the -9.5mm and -25mm size fractions, respectively.
	The rate of gold recovery was good for the oxide sample, thereby confirming the SGS results. Within the first week, gold recovery was 60% and 58% for the -9.5mm and -25mm size fractions, respectively.
	Over a 112 day leach period, cyanide consumption was 1.32kg/t and 1.06kg/t for the -9.5mm and -25mm size fractions, respectively.
	At a cement addition rate of 2kg/t, 14% and 8.1% slump was recorded for the -9.5mm and -25mm size fractions, respectively.
	The cement addition rate of 2kg/t was sufficient to supply the required pH and no lime addition was necessary.
Transition	The recovery curve plateaus after 167 days of leaching.
	87% and 71% gold recovery to activated carbon was achieved after 167 days for the -9.5mm and -25mm size fractions, respectively.
	The column tests indicated that within the -25mm to -9.5mm size range, gold recovery is dependent on grind size.
	Over a 167 day leach period, cyanide consumption was 1.59kg/t and 1.84kg/t for the -9.5mm and -25mm size fractions, respectively.
	At a cement addition rate of 3kg/t, 1.3% and 2.7% slump was recorded for the -9.5mm and -25mm size fractions, respectively.
	The cement addition rate of 3kg/t was sufficient to supply the required pH and no lime addition was necessary.

12.1.2.12. KCA - Heap Leach Variability Testwork

Heap leach variability tests were performed on the oxide and transition ores and on investigation of the results, it was established that the columns were prematurely terminated as leaching was still in progress.

12.1.2.13. Conclusion on the 2011 Study Testwork

The following conclusions were drawn from the 2011 Study testwork undertaken at Namoya:-

- the Namoya oxide and transition ores are classified as soft to medium in terms of hardness and as low to medium in terms of abrasiveness;
- mineralogy tests on the oxide ore indicated that 87% of the gold is exposed and is amenable to cyanide leaching;
- no mineralogy tests were performed on the transition ore by SGS due to insufficient mass;
- column tests on the Namoya oxide ore demonstrated good gold recoveries via heap leaching as 89% and 87% gold recovery to activated carbon was achieved after 112 days for the -9.5mm and -25mm size fractions, respectively. The corresponding cyanide consumption was 1.32kg/t and 1.06kg/t for the -9.5mm and -25mm size fractions, respectively;
- column tests on the Namoya transition ore demonstrated good gold recoveries via heap leaching for the -9.5mm size fraction which had a gold recovery of 87% over 167 days. The -25mm size fraction of the same ore returned a gold recovery of 71% over 167 days. The corresponding cyanide consumption was 1.59kg/t and 1.84kg/t for the -9.5mm and -25mm size fractions, respectively;

- given the foregoing, a grind size of 9.5mm was selected as the optimum grind size; and
- a cyanide addition rate of 0.56kg/t was calculated as the optimum plant operating cyanide addition rate.

12.1.3. The 2013 Study Testwork on Transitional Ore

Given the results from the scoping testwork and the 2011 Study testwork, which confirmed the amenability of the Namoya ore to both heap leaching and CIL process routes, a decision was made by Namoya Mining to pursue the heap leaching process route in the 2013 Study. The selection of only one method for investigation and detailed engineering at this stage is consistent with the generally accepted norms with regard to the stage of the Project, only one chosen option is selected and the engineering studies are performed upon it.

During September 2011, MDM was commissioned by Namoya Mining to perform a detailed design and construction of a heap leach plant to process the Namoya ore. In discharging their duties, MDM reviewed the previous scoping and the 2011 Study testwork results. Whilst MDM did not dispute the KCA results (part of the 2011 Study stage testwork), they did make observations regarding schist in the ore which is considered sticky in nature when processed through a conventional crushing plant. As a remedial measure, MDM recommended that a wet crushing plant be used to ensure that the sticky ore would not cause chokes and reduce process throughput, whilst at the same time allowing gravity recovery methods to be used on the fines.

To test this proposition, new transition samples were collected from Namoya Summit, Kakula and Mwendamboko areas, employing standard sampling procedures and the samples were sent to SGS to conduct additional tests. The stated objectives of this testwork programme were to:-

- confirm compressive strength, bond crushability and abrasive indices;
- determine the gold content of the ore and particle size distribution (PSD) of the ore previously crushed to 10mm (instead of 9.5mm - MDM considered a grind size of 10mm to be consistent with industry standard);
- identify possible gravity recovery achievable on the -2mm fraction;
- establish the gold recoverable from the -150µm removed from the gravity tailings by using the CIL process;
- establish the permeability of re-composited crusher fines without agglomeration;
- identify the pressurised permeability of re-composited heap leach feed;
- identify the settling characteristics of the gravity tailings fines fraction;
- perform leach tests on the gravity tailings fines component; and
- use the results from these procedures as a basis to prepare an updated process flow diagram (PFD), process selection and a forecast of recoveries.

Each of the three samples were split into two as follows:-

- one sample for the determination of crusher indices; and
- one sample for crushing down to -10mm in preparation for subsequent tests.

The testwork PFD is shown in Figure 17.

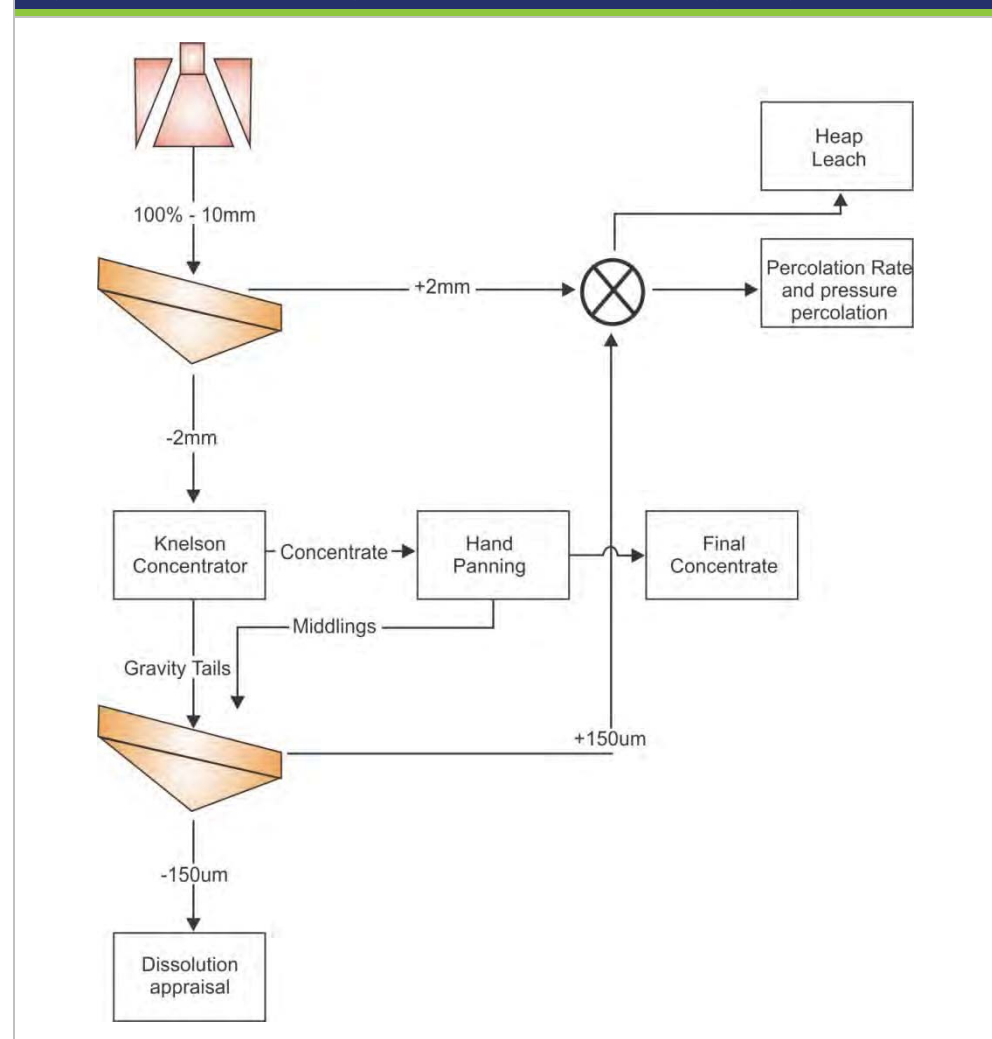
Bond crusher, UCS and abrasion indices were determined according to standard laboratory procedures. The results are shown in Table 10.

Table 10: Laboratory Test Results - Determination of Ore Crusher Indices

CHARACTERISTIC	NAMOYA	KAKULA	MWENDAMBOKO	DESIGN BASIS	UNITS
Head Grade	3.50	4.12	2.02	2.50	g/t
Specific Gravity	2.65	2.66	2.69	2.54	t/m ³
Bond Crushability	5.5±1	6.4±2.7	6±1.5		kWh/t
Bond Crushability (maximum)	8.17	14.10	8.60		kWh/t
UCS	81.30	123.90	193.90		Mpa
Abrasion Index	0.26	0.31	0.33		

The results show that the ore has a high compressive strength but an overall low crushing work index which is possibly a result of the hard quartzitic matrix in the ore.

In the determination of gold deportment, a representative sample, weighing 10kg, was taken from each of the crushed ore type and full mass screen analysis was conducted. The mass fractions generated from the analysis were weighed and submitted for gold fire assay.

Figure 17: Process Flow Diagram for the Definitive Feasibility Study Testwork

Another large sample of crushed ore was screened at 2mm to generate a -2mm size fraction for gravity separation tests. The results of gold deportment determinations are shown in Table 11.

Table 11: Laboratory Test Results - Gold Department

CHARACTERISTIC	NAMOYA	KAKULA	MWENDAMBOKO	DESIGN BASIS
Mass Distribution (-2mm)	51.52%	33.76%	40.15%	41.81%
Mass Distribution (-150µm)	14.15%	7.51%	9.85%	10.50%
Gold Department (-2mm)	47.19%	26.18%	55.26%	42.88%
Gold Department (-150µm)	14.36%	7.26%	20.84%	

The gold department tests indicate relatively linear characteristics relative to particle size. The results also indicate that the crusher product (-10mm fraction) had an average of ~42% of the mass in the -2mm fraction which will report to the gravity separation area, carrying along with it ~43% of the gold.

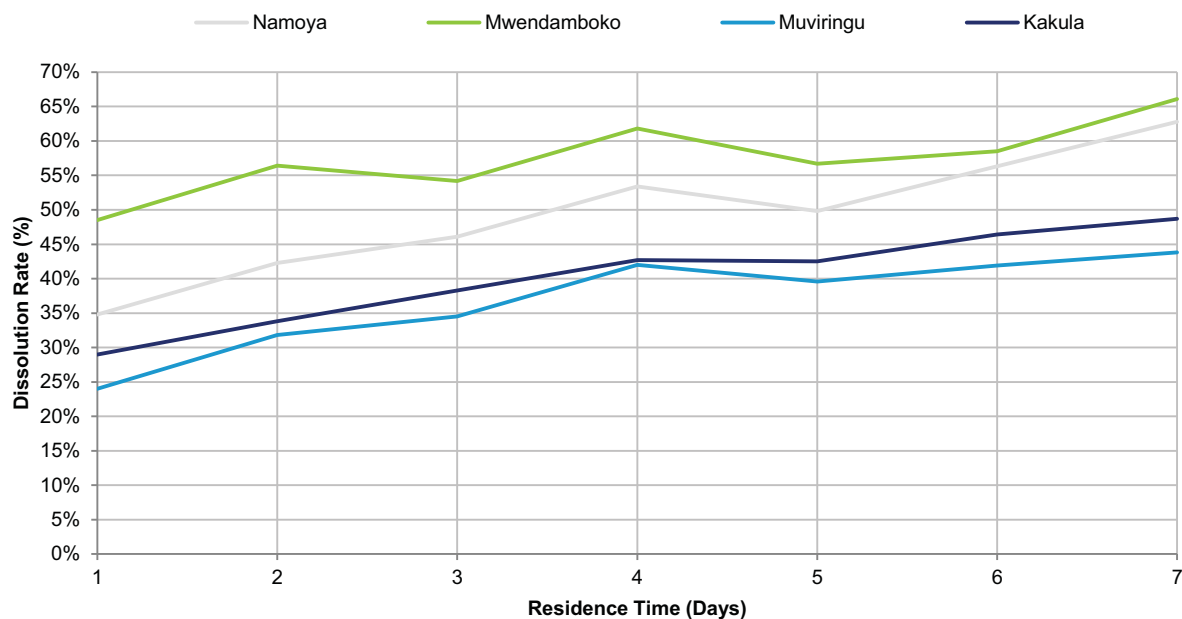
12.1.3.1. Simulated Heap Leach

A 2kg sample of 100% passing 10mm of each sample from Mwendamboko, Namoya, Kakula and Muviringu was weighed into a 5 litre plastic bottle and combined with water to form a slurry at 50% solids wt/wt. The slurry was preconditioned for an hour prior to leaching using bottle roll set up with sodium cyanide added at a rate of 1kg/t. The bottle roll leaching was conducted for 1minute interval every hour.

A 50ml solution was sampled at 2hours, 4hours and 8hours, thereafter the solution was sampled every 24hours until the termination of the leaching after 7 days.

At every sampling interval, the solution was titrated to establish residual cyanide and adjusted to maintain 1,000ppm free cyanide. The pH was monitored and adjusted and dissolved oxygen also measured. The solution samples from every interval were analysed for gold. Upon termination of the leach, the slurries were filtered, washed and dried. Both the filtrates and the residues were analysed for gold.

The simulated heap leach results are presented in Figure 18.

Figure 18: Simulated Heap Leach Results

Mwendamboko transitional ore showed the highest reagent consumption with 0.39kg/t cyanide and 0.37kg/t lime consumed. The minimal cyanide consumption was returned by Namoya Transitional ore with consumption of 0.24kg/t whilst the minimal lime consumption was displayed by Kakula with consumption of 0.19kg/t. Muviringu transitional ore displayed the minimal dissolution at 43.3%.

Figure 18 shows the dissolution characteristics for all four samples over the leach duration. Mwendamboko returned good leaching kinetics. This is displayed by its high degree of dissolution increment over the entire leach duration.

All four samples display a slight decrease in dissolution after 120hours following which the dissolution increases again and this unexpected behaviour may be attributed to analytical inaccuracy. In comparison to the rest of the samples, Muviringu displayed poor leaching kinetics.

12.1.3.2. Gravity Separation

For this testwork, five samples of -2mm material from Namoya Summit and Mwendamboko, each weighing 10kg, were taken. In addition, only three samples of -2mm material from Kakula, each weighing 10kg, were taken because of insufficient amount of material. These samples were subjected to Knelson gravity concentration testwork as follows:-

- batch gravity concentration testwork using a Knelson centrifugal concentrator to establish amenability to gravity recovery;
- upgrade (redress) the concentrate by hand panning to produce the final concentrate; and
- assay the final concentrate, middlings and tailings streams for gold.

The results are shown in Table 12.

Table 12: Laboratory Test Results - Gravity Recovery Testwork

CHARACTERISTIC	NAMOYA	KAKULA	MWENDAMBOKO	DESIGN BASIS
Mass Pull	0.16%	0.17%	0.13%	
Gold Recovery	15.87%	25.64%	29.50%	22.50%

Gravity tailings samples (including redress tailings) were screened at 150µm. The resulting -150µm fraction was subjected to fines leach and the +150µm was re-composited with the -10+2mm material generated earlier for heap leach testwork.

The gravity test results showed variable gold recoveries in a hand panned laboratory concentrate resulting in a gravity recovery of ~16-30% for the three ore types (at an average of ~23%).

12.1.3.3. Thickening

Samples of the gravity tailings stream (-150µm) were tested for flocculant amenability and dosing calculations together with the corresponding settling and rise rate determination. The results are shown in Table 13.

Table 13: Laboratory Test Results - Thickener Tests

CHARACTERISTIC	NAMOYA	KAKULA	MWENDAMBOKO	DESIGN BASIS	UNITS
Flocculant Dosage	100	100	100		g/t
Settled Density	37%	48.70%	42.90%	40%	% solids wt/wt
Rise Rate	7.70	19.20	11.90		m/h
Settling Rate	12.60	58.50	36.00		t/m ² /day

Flocculation tests indicated that an M333 flocculant could achieve good settling results at a high flocculant addition of 100g/t with reasonable rise and settling rates. The indicated settling density is, however, low at ~37-47% solids wt/wt, which is less than the desirable 50% solids wt/wt. Plant design has, however, been based on a settling density of 40% solids wt/wt for CIL feed.

12.1.3.4. Preg-Robbing and Dissolution Appraisal

The gravity fines samples were also subjected to various bottle roll tests to establish leach recovery and differential recovery between conventional cyanide leach versus leach with carbon.

The gravity tails were screened at 150µm and batch dissolution tests were carried out on the +150µm and -150µm fraction. The objective of the tests was to determine whether the ore contains preg-robbing mineral constituents and the effect of particle size. Slurry with solids concentration of 50% wt/wt was prepared in 2.5l unstoppered glass bottles using 500g of solids. An initial slurry pH was recorded for each sample and a 100g/l solution of lime was added to maintain the pH to values within the range of 10.5-11.5. The preconditioning period was 1 hour. After preconditioning, cyanide was added at 2kg/t and 20g/l activated carbon was added on the CIL tests. The leach time was 48 hours.

On completion of the leach, the slurries were filtered, washed and dried and for the CIL tests, the carbon was removed from the slurries prior to filtration. The filtrates were titrated using silver nitrate and oxalic acid to establish cyanide and lime consumptions, following which they were analysed for gold. The final residues were oven-dried and assayed for gold (via fire-assay with Atomic Absorption (AA) finish.). The carbons were oven-dried and assayed for gold (via fire-assay gravimetric finish).

The results showed excellent recoveries of more than 93% on the -150µm fraction. The results also showed poor recoveries on the +150µm fraction (61-91%) and this was attributed to the coarser grind. A slight preg-robbing effect of 0.9-2.6% was identified in recovery and so, the CIL process was chosen as the process to use for the -150µm gravity tails.

12.1.3.5. Percolation Tests

The -10+2mm and the +150µm gravity tails were combined to form feed material for the percolation rate testwork. The testwork was conducted using 150mm diameter columns filled up to a height of 1m. The objectives of the testwork were to determine the permeability of the ore bed and its amenability to solution percolation at a range of irrigation rates. This would give an indication of whether ponding would occur during heap leaching on a large scale operation. The testwork was conducted at ten different irrigation water flow rates ranging from 10-100l/h/m², in 10l/h/m² increments.

The testwork concluded that there was no pond formation throughout the duration of the test and that the samples tested showed that the ore is permeable under the irrigation rates used in the testwork.

12.1.3.6. Pressure Percolation Tests

The purpose of this testwork programme was to simulate the actual heap leaching operation. The testwork assists in determining whether the ponding will occur as a result of the pressure exerted on the bottom part of the heap as a result of its height.

The 220mm diameter test vessel was loaded with 10kg of -10+2mm and +150µm samples. Each sample was tested at pressures varying from 2.7MPa to 16MPa and solution flow rate of 10l/h/m².

The testwork indicated that a heap height of 69.5m is achievable without ponding.

12.1.3.7. Column Heap Leach Trial

Column heap leach trial tests were performed on the -10+2mm and +150µm material. The sample was loaded into a 2m tall column with a diameter of 200mm. In order to retain the ore charge within the column, the lower end of the column was fitted with a horizontal PVC screen.

The column heap leach tests on each of the two samples (Namoya / Mwendamboko composite and Kakula) were conducted using the cyanide concentration of 250ppm. The cyanide solution was fed to the column using a peristaltic pump set at a flow rate of 10l/h/m². The pregnant leach solution exiting the column was collected twice a week. The volume and pH of the solution were measured and a 100ml sample was then analysed for gold. The remaining solution was placed in a bottle and carbon was added into the solution and bottle rolled for 24hours. After 24hours, the carbon was separated from the solution and the barren solution was recycled back to the columns at the corrected pH and cyanide level.

At the end of the testwork, the pump was stopped and the column was allowed to drain for two days. Water was pumped through the column at the set flow rate of 10l/h/m² for four days to remove any residual solubilised gold. The column was allowed to drain for two days, and the residues removed in three sections (top, middle and bottom) and dried. From each section, a sub-sample was removed and the three sub-samples were blended together to make up a sample for screening analysis. The remainder of the residues for each section were each crushed to 100% passing 1.7mm, pulverised and assayed for gold in triplicate.

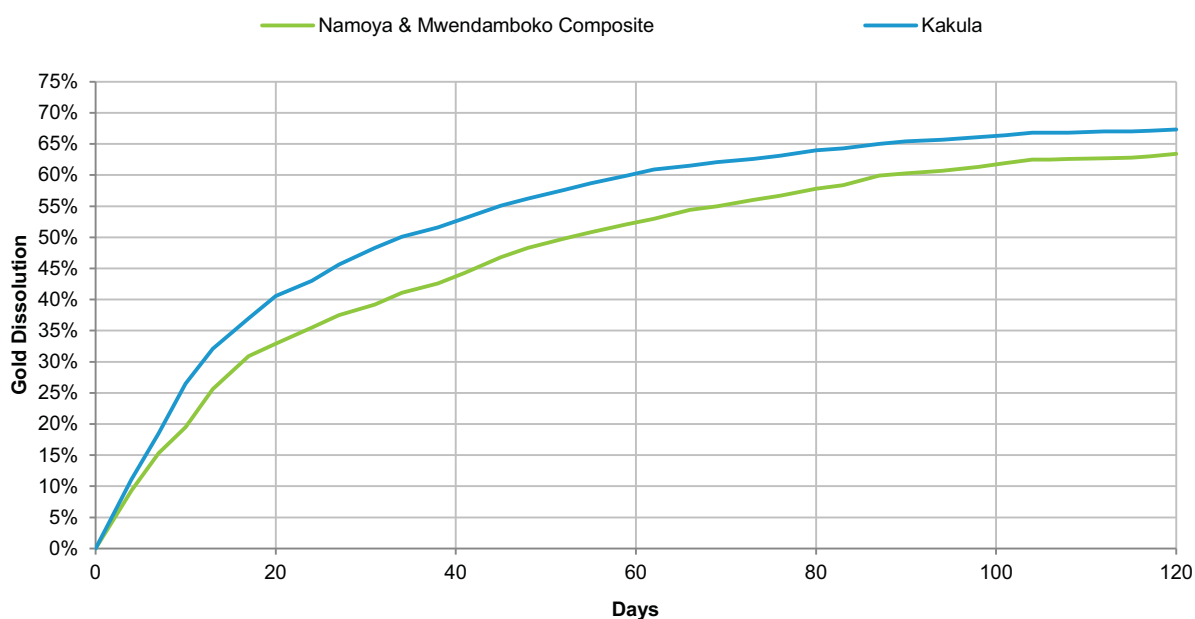
The results of the testwork are shown in Figure 19.

12.1.3.8. Conclusions on the 2013 Study Testwork Programme

The 2013 Study testwork programme served to provide a sound platform on which to conduct plant designs. Important parameters such as heap height, recoveries from the various size fractions and settling rates were learned from the testwork.

12.2. Basis of Recovery Estimates (NI 13b)

The gold recovery estimates have been based on the comprehensive metallurgical testwork carried out to-date and the accompanying mass balances. Venmyn Deloitte has reviewed the testwork programme in detail and is satisfied that the testwork was extensive and complete to the extent that the results obtained therefrom are suitable for use in process plant design.

Figure 19: Simulated Heap Leach Results

12.3. Representativity of Test Samples (NI 13c)

Venmyn Deloitte has reviewed the location of the samples used in the various testwork programmes and is satisfied with regards their representativity. We therefore conclude that the samples are representative of the orebody and the results obtained from the testwork on these samples can be relied upon for use in process plant design.

12.4. Potential Economic Extraction Risk Factors (NI 13d)

No potential extraction risk factors were identified in our review that would pose a significant risk to the project. The effect of preg-robbing has been sufficiently investigated and quantified and is not considered a risk factor to the project. In addition, the process route selected (heap leach with gravity recovery) has also been extensively tested and no risks were found.

12.5. Concluding Opinion on Testwork

The various testwork programmes that have been conducted on Namoya have been reviewed by Venmyn Deloitte and where necessary, discussions with MDM were held to gain a deeper understanding of the pertinent aspects of the testwork. In our review, we have considered all material issues and we conclude that the testwork is extensive and the results thereof are suitable for use in process plant design and construction.

13. Mineral Resource Estimates Item 14

This report undertook validation of the current database used for Mineral Resource estimation by Namoya Mining, review of suitable modelling assumptions, validation of the Datamine™ model for each prospect, a geostatistical analysis on the final model, an analysis of the grade-tonnage curve and review of Namoya Mining's estimates of the gold Mineral Resources and Mineral Reserves for the Namoya Project.

The orebody modelling and Mineral Resource estimates have been conducted by Namoya's Qualified Person, Mr. Dan Bansah (member of Australasian Institute of Mining and Metallurgy (AusIMM)). The Mineral Resource estimation process, including the orebody model, and geostatistics have been independently reviewed by Venmyn Deloitte. Venmyn Deloitte has not carried out any portion of the orebody modelling or Mineral Resource estimate. Venmyn Deloitte has reviewed the modelling and estimation process and is satisfied that it is conducted with suitable methods and experience to afford the declaration of NI43-101 Mineral Resources.

The modelling was carried out using three dimensional (3D) wireframe models of mineralisation, carried out in Datamine Studio 3™ software (Datamine). The model was created using both historical and recent drill holes and exploration results. All parameters were estimated using Ordinary Kriging. Estimation was carried out into 10m by 10m by 5m blocks. This model is kept at Namoya and copies were also sent to the office in Bukavu. The parameters modelled and results obtained are discussed in the sections to follow. The data density and quality relating to the model is sufficient in quantity and quality for the derivation and classification of Mineral Resources. The orebody wireframes for the various zones is illustrated in Figure 20.

13.1. Orebody Modelling and Results

An orebody model is created for each of the six prospects, namely Mwendamboko, Muviringu, Kakula, Namoya Summit & Filon B, Seketi, and Kangurube. In each of these, mineralization is split into zones. The wireframe model was developed using a gold cut-off grade of 0.4g/t to determine the orebody boundaries. The wireframe uses samples composited to 2m to reduce variability, even though the dominant sample length is 1m.

13.1.1. Source Data Validation

Borehole data are captured electronically in Microsoft Excel™, imported into Datamine and desurveyed to combine position, grade and descriptive data into the master file of drillhole traces. Error-checking is performed in Datamine at the time of data import and desurveying and errors are corrected at source. Venmyn Deloitte reviewed that the Datamine master drillhole file correctly represents the data.

13.1.2. Wireframe and Block Model Methodology Verification

Structural interpretation of geological features and geological zones is conducted by Namoya's resource geologist in 3D in Datamine. This is performed by interpreting different zones of interest such as mineralised zones from the imported 3D drillhole information. Zones are manually drawn by string construction in planar and cross-sectional views and wireframes and/or surfaces created from these strings.

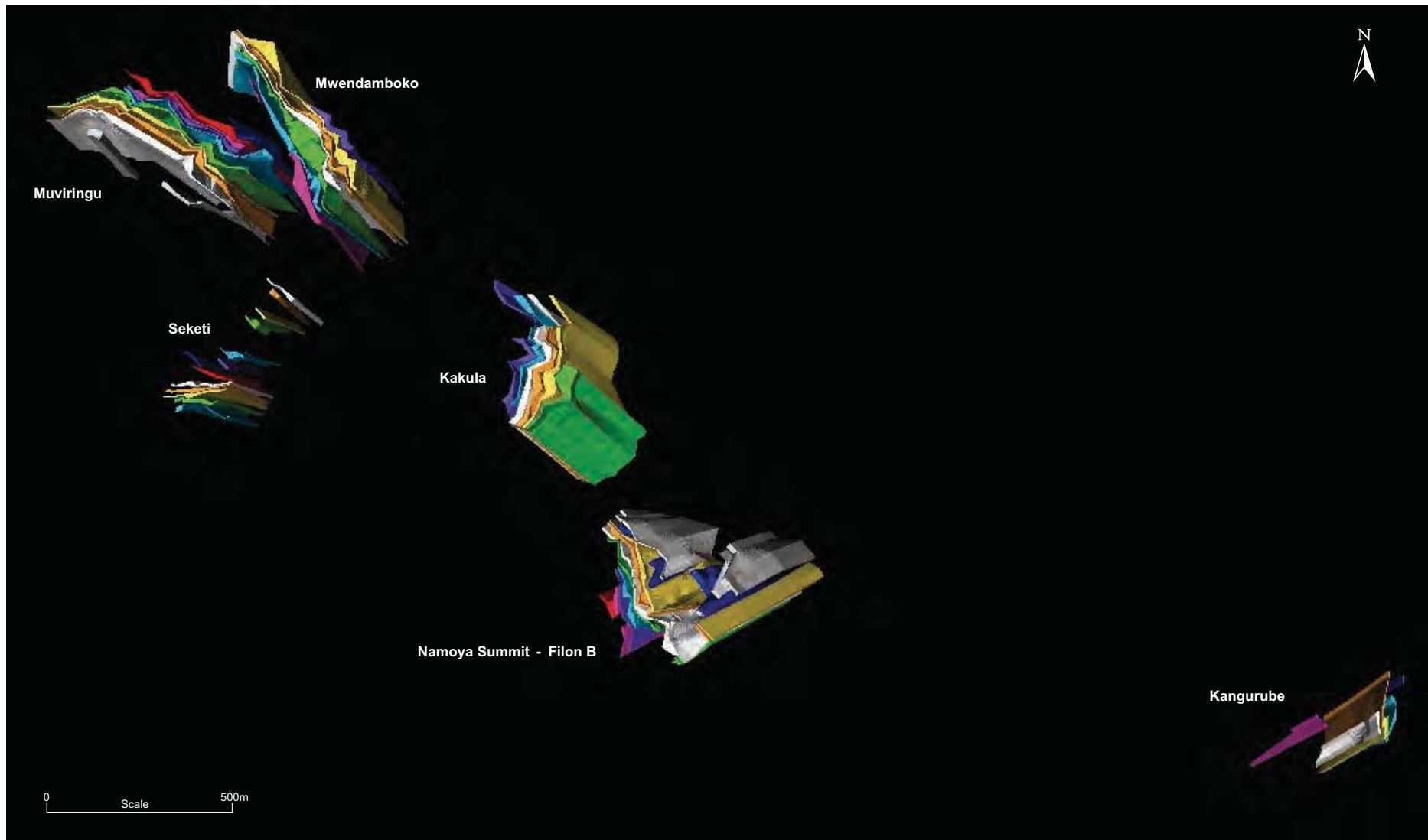
Block modelling is performed by populating and interpolating closed wireframes with adequately sized blocks based on the sample spacing of drillholes, sample support and mine configuration. In this case, the model has been constructed based on mineralization interpreted with a 0.4g/t sample cut-off. A model is created for each of the six prospects. The model has been segregated into zones, with segregation based on reef occurrence. The wireframes are illustrated in Figure 20. The primary block dimensions are 10m by 10m in the strike and dip directions and by 5m in the vertical. Boundaries are sub-blocked to improve the geometrical representation.

The statistical variation of each of the zones has been assessed to determine the domain characteristics. A single semi-variogram was generated for each of the six prospects.

13.1.3. Estimation Parameters Validation

Statistical and geo-statistical investigations on the data were performed by Namoya's project geologist. The grade model was interpolated from sample data located within the 0.3g/t gold cut-off grade, using ordinary kriging based on Datamine's dynamic anisotropy option. A minimum of 5 samples and a maximum of 40 samples were used with grade capped at 40g/t. Mwendamboko has a higher grade cap of 50g/t as a result of higher grade mineralisation found in core samples. Capping excluded less than 1% of the composited samples.

The search ellipse dimensions were estimated for each prospect and the dip and dip direction calculated from the wireframes and interpolated into individual blocks using Datamine's Estima process.



Grade interpolation is carried out separately for each zone and the dynamic anisotropy is used to ensure that search distances are controlled by orientation. The axes of search volume and grade are interpolated primarily into the parent cell.

The modified database was then evaluated by constructing experimental variograms for gold from which a dynamic anisotropic gold variogram was modelled for each of the six prospects. Dimensions of the modelled range resulted in the ellipsoids as detailed in Table 14. The ellipsoids used are illustrated in Figure 21.

Table 14: Ellipsoid Dimensions for each Prospect

PROSPECT	FIELD	MINIMUM	MAXIMUM	RANGE
Mwendamboko	X	560,597.7	561,076.3	479
	Y	557,436.9	558,033.1	596
	Z	665.5	1,005.9	340
Muviringu	X	560,118.6	560,777.3	659
	Y	557,523.1	557,906.9	384
	Z	653.5	955.9	302
Kakula	X	561,402.9	561,727.3	324
	Y	556,856.9	557,303.1	446
	Z	641.0	973.4	332
Namoya Summit	X	561,697.0	562,132.2	435
	Y	556,321.6	556,715.4	394
	Z	630.5	986.5	356
Seketi	X	560,521.1	560,868.5	347
	Y	556,983.1	557,335.6	353
	Z	551.0	881.1	330
Kangurube	X	563,423.1	563,709.7	287
	Y	556,081.9	556,304.4	223
	Z	528.5	819.3	291

13.1.4. Input Parameters

13.1.4.1. Volume

The volumes were estimated in Datamine using the surface DTM and the limits of the wireframes built for each prospect. Volumes for each block based on the dimensions of the X;Y;Z; axes are calculated for each block by the software.

13.1.4.2. Density

Density measurements were undertaken on core samples as part of the laboratory testwork. Relative densities are obtained in Datamine from log files. The density measurements are then used to generate the oxide, transition and fresh surfaces. The density factors applied to each material type is detailed in Table 15.

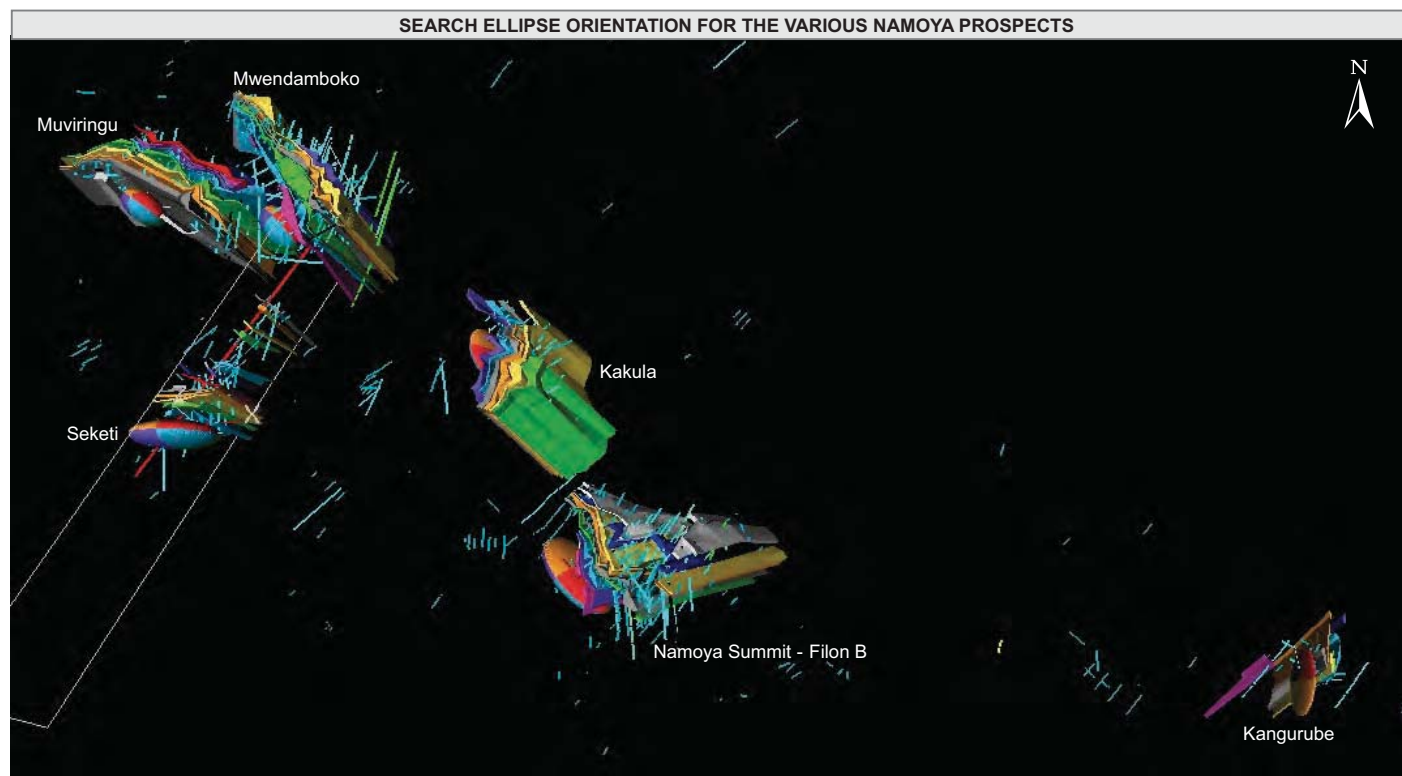
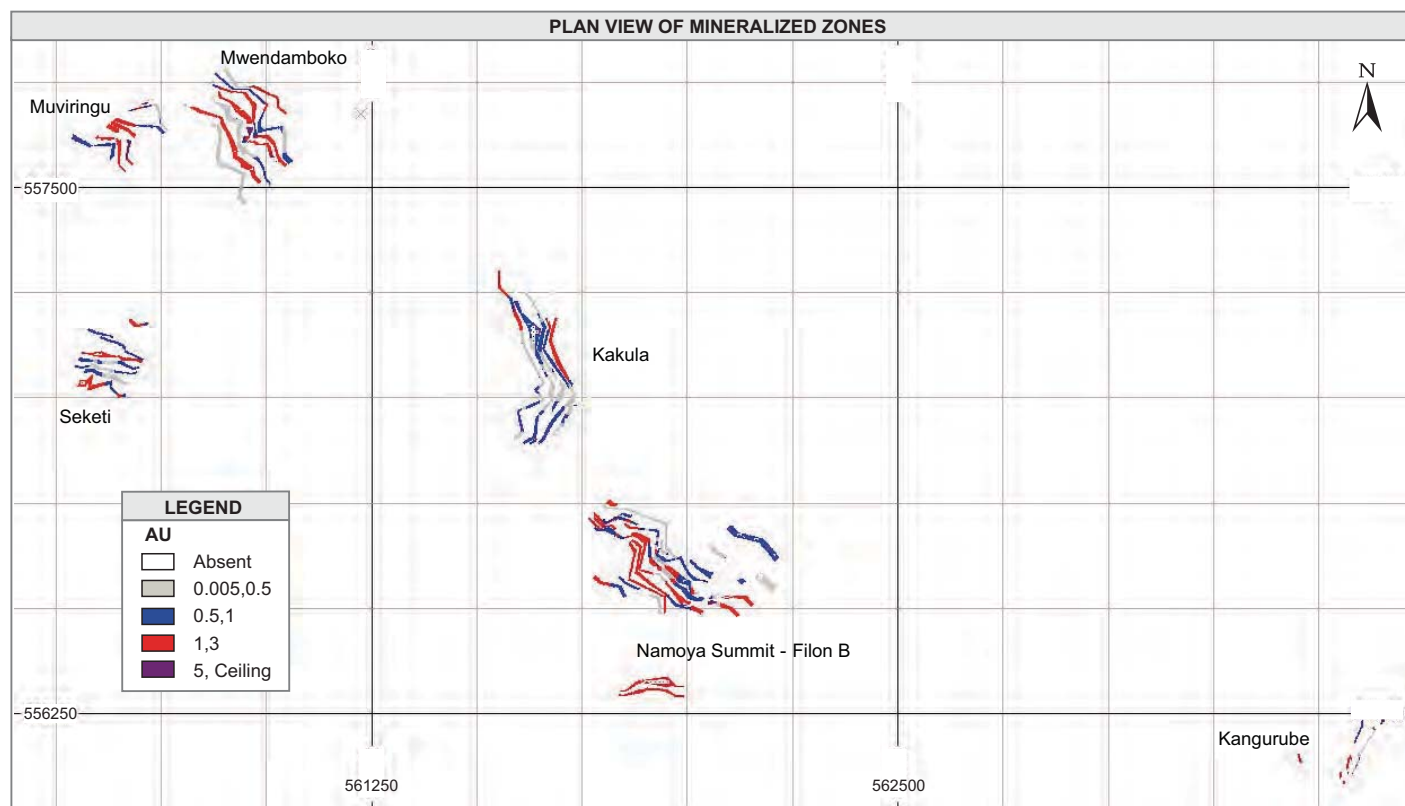
Table 15: Density Factors for each Material Type

MATERIAL TYPE	DENSITY
Oxide	2.46
Transition	2.55
Fresh	2.76

13.1.4.3. Tonnage

The tonnage was estimated from the volume multiplied by the average density for each of the six prospects.

NAMOYA OREBODY MODELLING



13.1.4.4. Grade

Grade interpolation into the empty block model was conducted using ordinary kriging for gold, based on the results of samples from the laboratory. Three search ellipses were used for the population of each mine block, according to the respective number of samples from which to draw from.

13.2. Mineral Resource Classification and Estimation

13.2.1. Key Assumptions

The mineral resource occurs over a length of 830km east to west and 2,420km north to south. The mineral resource occurs from surface and the model has been constrained at a depth of 500m below the surface.

13.2.2. Resource Classification

Resources have been classified into Measured, Indicated and Inferred. Where closely spaced sampling data, within one Variogram range search ellipsoid, supported by positive kriging efficiency, Measured and Indicated Resources are declared. Areas beyond the Indicated Resource limit, but where there is geological continuity, supported by wider spaced drilling data, Inferred Resources are declared. Inferred Resources were limited to an optimised pit shell at USD1,600/oz. Regolith is classified as Indicated Resources due to the closely spaced auger drilling on surface. This has been modelled as a separate zone.

13.2.3. Previous Mineral Resource Estimate

Namoya Mining declared Mineral Resources for the Namoya Project with an effective date of 31st December 2012. This Mineral Resource estimate was reviewed by Venmyn Deloitte and is summarised in Table 16 and Table 17.

Table 16: Previous Measured and Indicated Mineral Resource estimate as at 31st December 2012

CATEGORY	MINERAL RESOURCES		
	Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)
Measured	24.58	1.96	1.55
Indicated	6.36	1.52	0.31
TOTAL	30.94	1.87	1.86

At a cut-off grade of 0.4g/t
At a gold price of USD2,000/oz

Table 17: Previous Inferred Mineral Resource estimate as at 31st December 2012

CATEGORY	MINERAL RESOURCES		
	Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)
Inferred	6.64	1.59	0.34
TOTAL	6.64	1.59	0.34

At a cut-off grade of 0.4g/t
At a gold price of USD2,000/oz

13.2.4. Difference between Previous and Current

This resource estimate was carried out based on a total of 295 boreholes yielding 43,765 samples and 3,465m of auger drilling. Namoya was at an exploration stage and no Mineral Resources had been declared for the Kangurube and Seketi, which were still exploration targets at the time of the 2012 estimate. Mineral Resources were for the Mwendamboko, Kakula, Namoya Summit and Muviringu Prospects. The current estimates included a mineral reserve estimate and additional resources estimated at two new prospects,

13.2.5. Current Resource Statement

The current NI43-101 compliant Mineral Resource Statement, dated 31st December 2013, has been prepared by Namoya and independently reviewed by Venmyn Deloitte. The current Namoya Mineral Resource Statement is presented in Table 18 and Table 19. Mineral Resources are inclusive of Mineral Reserves. The location of the resources in relation to each target is illustrated by Figure 22 to Figure 27.

Table 18: Measured and Indicated Mineral Resource Estimate estimated by Namoya Mining as at 31st December 2013

PROSPECT	MATERIAL	MEASURED MINERAL RESOURCES			INDICATED MINERAL RESOURCES		
		Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)	Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)
Mwendamboko	Regolith				0.28	2.24	0.02
	Oxide	2.76	2.25	0.20	0.72	1.82	0.04
	Transition	2.94	2.37	0.22	0.09	0.99	0.00
	Fresh	2.92	2.51	0.24	0.37	2.28	0.03
Mwendamboko SubTotal		8.61	2.38	0.66	1.46	1.96	0.09
Muviringu	Oxide	0.80	1.21	0.03	0.50	1.41	0.02
	Transition	1.17	1.15	0.04	0.70	1.29	0.03
	Fresh	2.20	2.11	0.15	1.26	1.85	0.07
Muviringu SubTotal		4.16	1.67	0.22	2.45	1.60	0.13
Kakula	Oxide	2.84	1.65	0.15	0.40	0.99	0.01
	Transition	1.62	1.76	0.09	0.47	1.44	0.02
	Fresh	0.18	1.52	0.01	0.54	1.55	0.03
Kakula SubTotal		4.64	1.68	0.25	1.40	1.35	0.06
Namoya Summit	Oxide	3.08	1.86	0.18	0.17	0.83	0.00
	Transition	1.58	1.92	0.10	0.14	1.16	0.01
	Fresh	0.97	1.82	0.06	0.03	1.37	0.00
Namoya Summit SubTotal		5.62	1.87	0.34	0.33	1.01	0.01
Seketi	Oxide	0.01	0.93	0.00	0.01	1.85	0.00
	Transition	0.13	1.29	0.01	0.03	1.57	0.00
	Fresh	0.34	1.38	0.02	0.30	1.88	0.02
Seketi SubTotal		0.48	1.35	0.02	0.34	1.85	0.02
Kangurube	Oxide	0.18	2.54	0.01	0.05	2.12	0.00
	Transition	0.03	1.81	0.00	0.00	3.95	0.00
	Fresh	0.02	2.44	0.00	0.00	4.24	0.00
Kangurubi SubTotal		0.23	2.45	0.02	0.05	2.36	0.00
TOTAL		23.75	1.98	1.51	6.03	1.62	0.31

At a cut-off grade of 0.4g/t

At a gold price of USD1,600/oz

Estimated to a maximum depth of 375m

Table 19: Inferred Mineral Resource Estimate estimated by Namoya Mining as at 31st December 2013

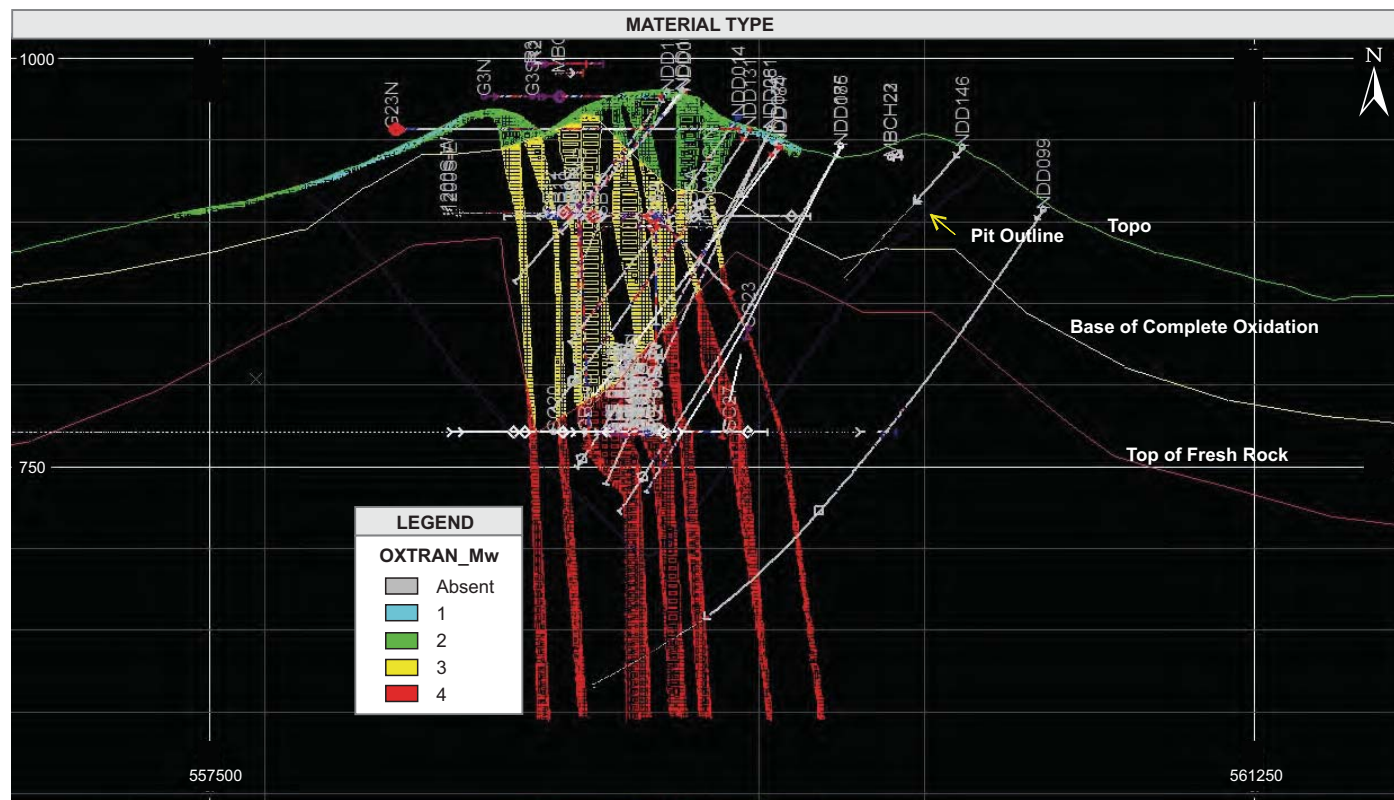
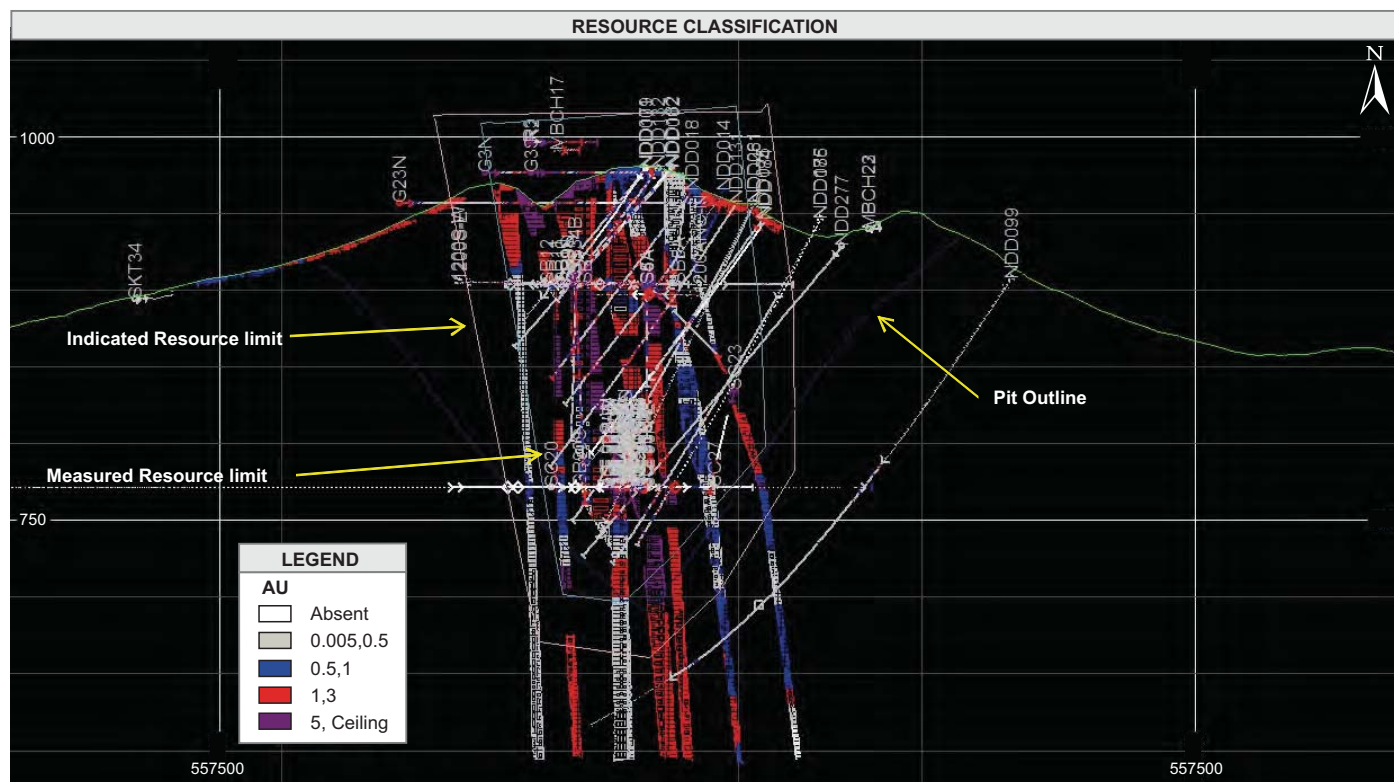
PROSPECT	MATERIAL	INFERRED MINERAL RESOURCES		
		Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)
Mwendamboko	Oxide	0.00	0.66	0.00
	Transition	0.00	0.59	0.00
	Fresh	0.05	1.69	0.00
Mwendamboko SubTotal		0.05	1.67	0.00
Muviringu	Oxide	0.51	1.13	0.02
	Transition	0.88	1.37	0.04
	Fresh	2.77	1.72	0.15
Muviringu SubTotal		4.16	1.57	0.21
Kakula	Oxide	0.09	0.75	0.00
	Transition	0.12	0.84	0.00
	Fresh	0.70	1.40	0.03
Kakula SubTotal		0.90	1.27	0.04
Namoya Summit	Oxide	0.52	1.16	0.02
	Transition	0.48	2.81	0.04
	Fresh	0.09	3.91	0.01
Namoya Summit SubTotal		1.10	2.13	0.07
Seketi	Oxide	0.15	1.08	0.01
	Transition	0.08	1.00	0.00
	Fresh	0.04	1.35	0.00
Seketi SubTotal		0.28	1.09	0.01
Kangurube	Oxide	0.02	3.29	0.00
	Transition	0.01	4.10	0.00
	Fresh	0.00	7.63	0.00
Kangurubi SubTotal		0.03	3.95	0.00
TOTAL		6.52	1.61	0.34

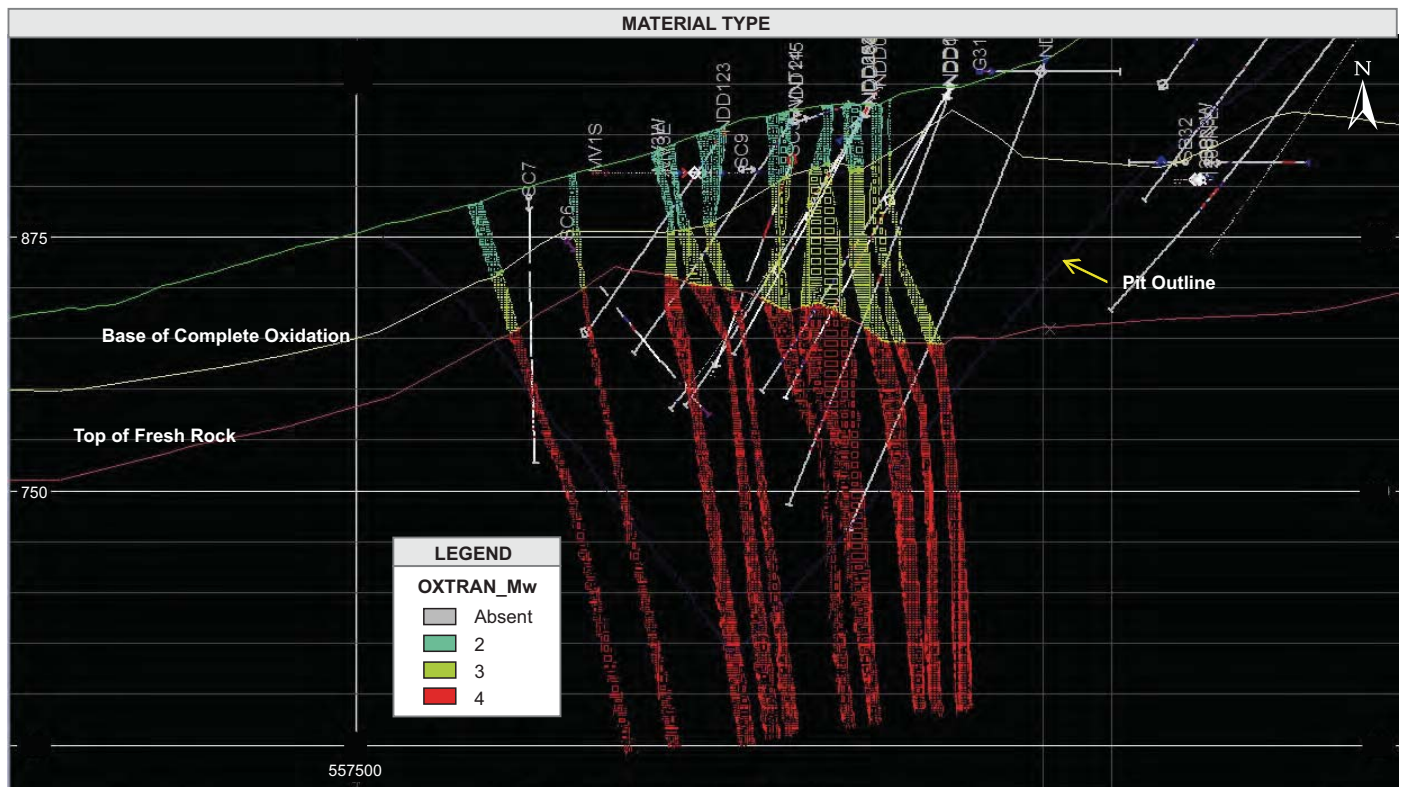
At a cut-off grade of 0.4g/t

At a gold price of USD1,600/oz

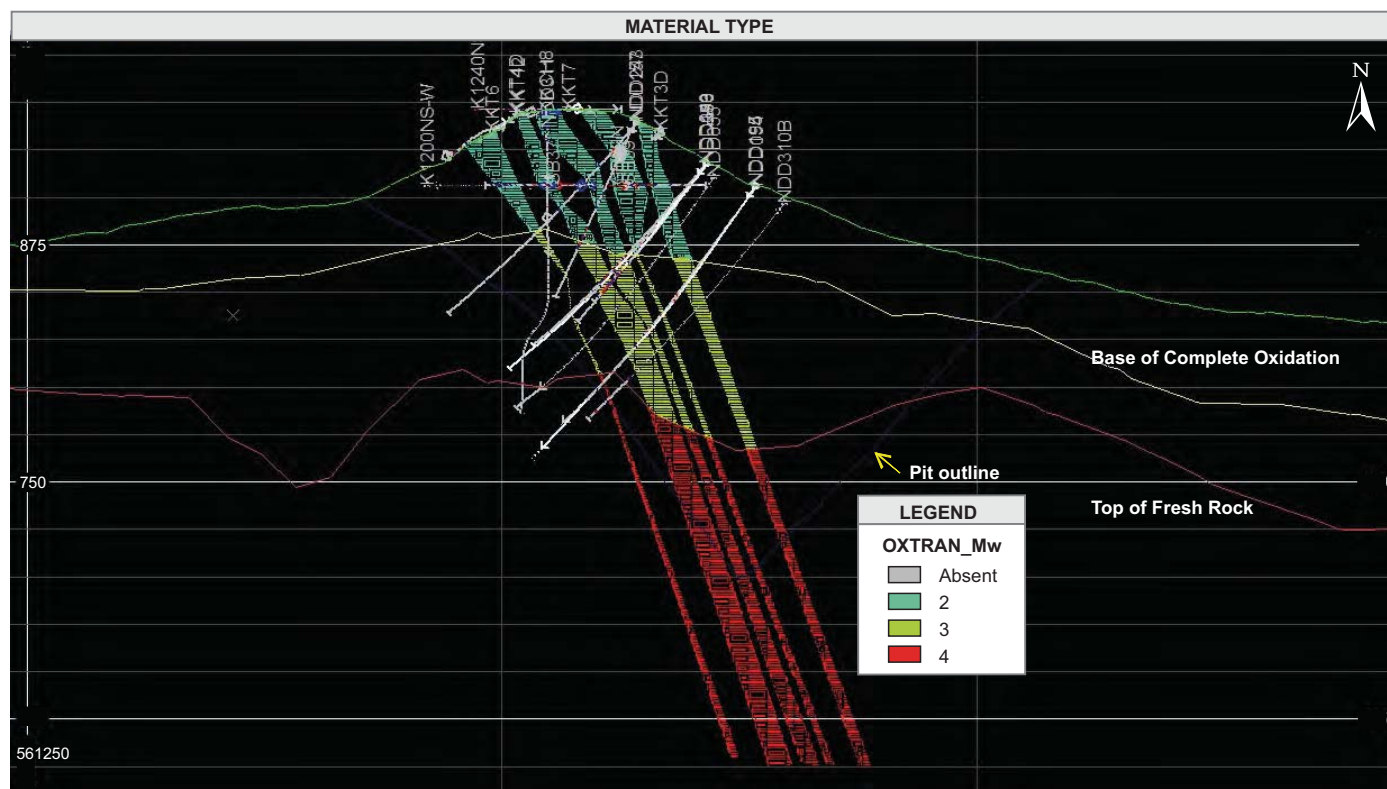
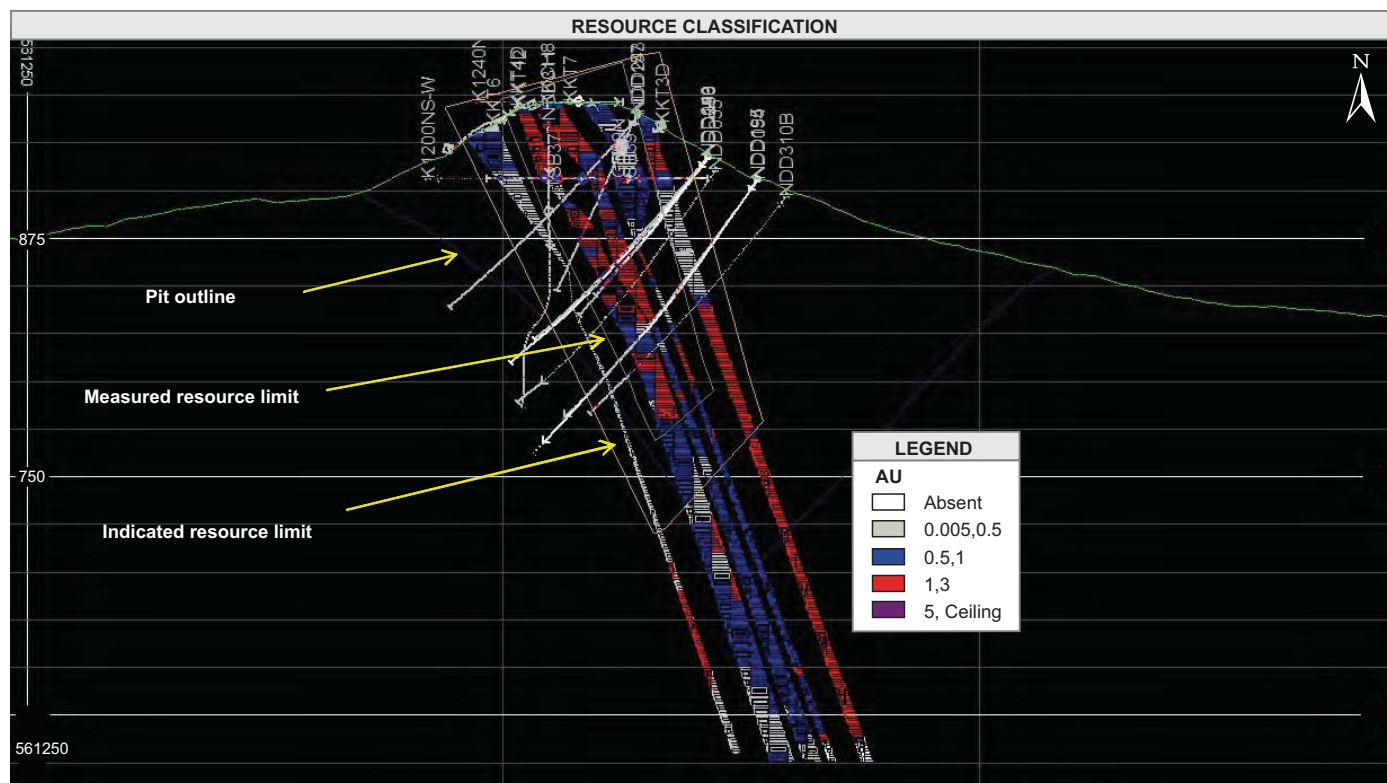
Estimated to a maximum depth of 375m

MWENDAMBOKO MINERAL RESOURCES

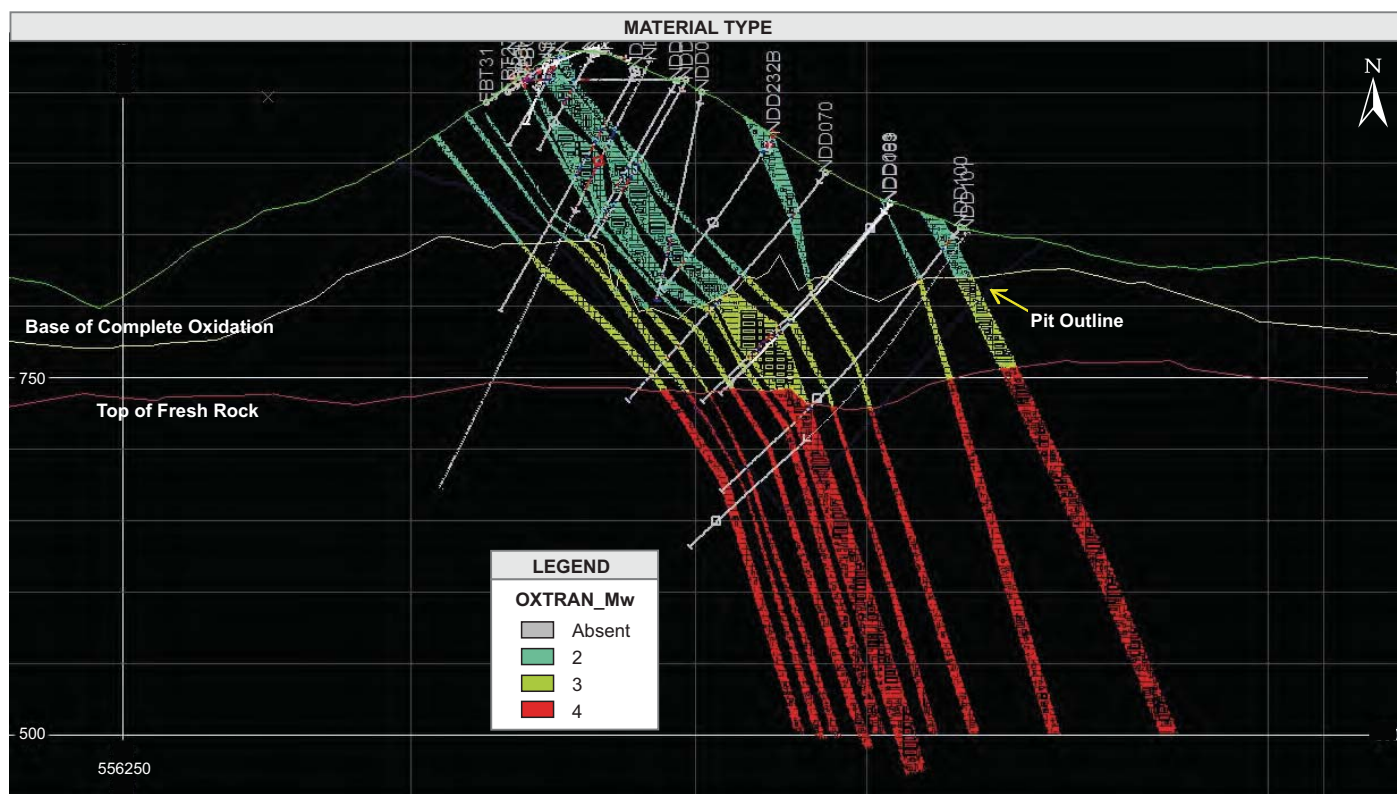
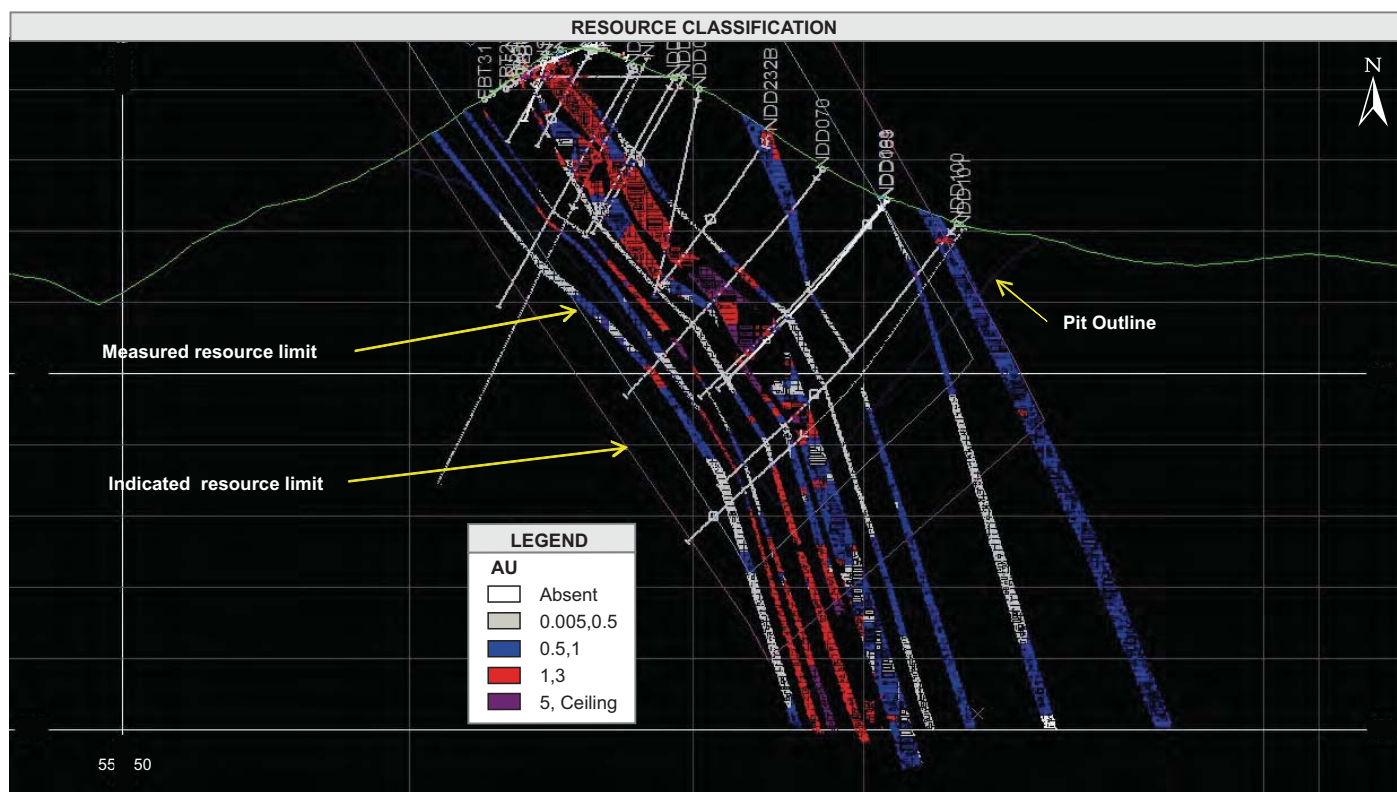




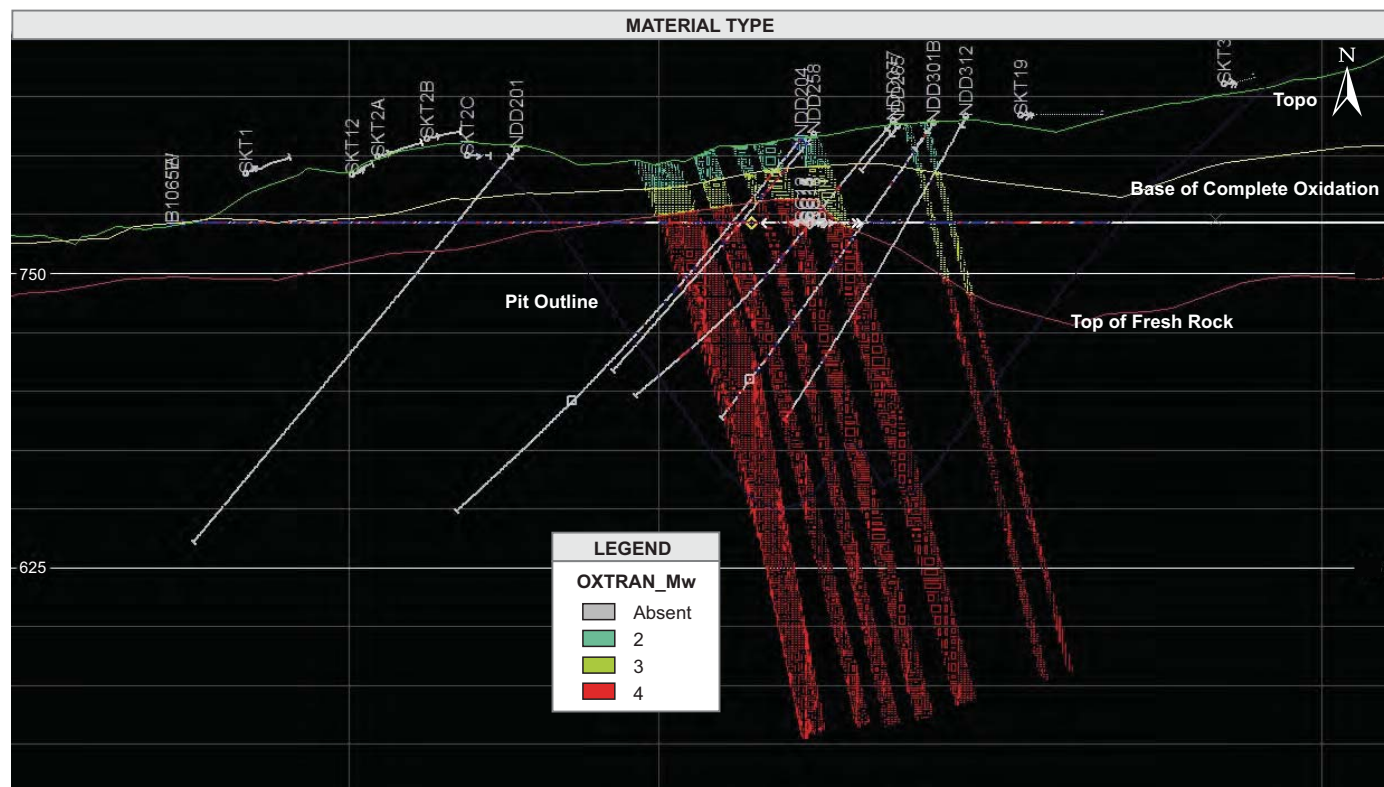
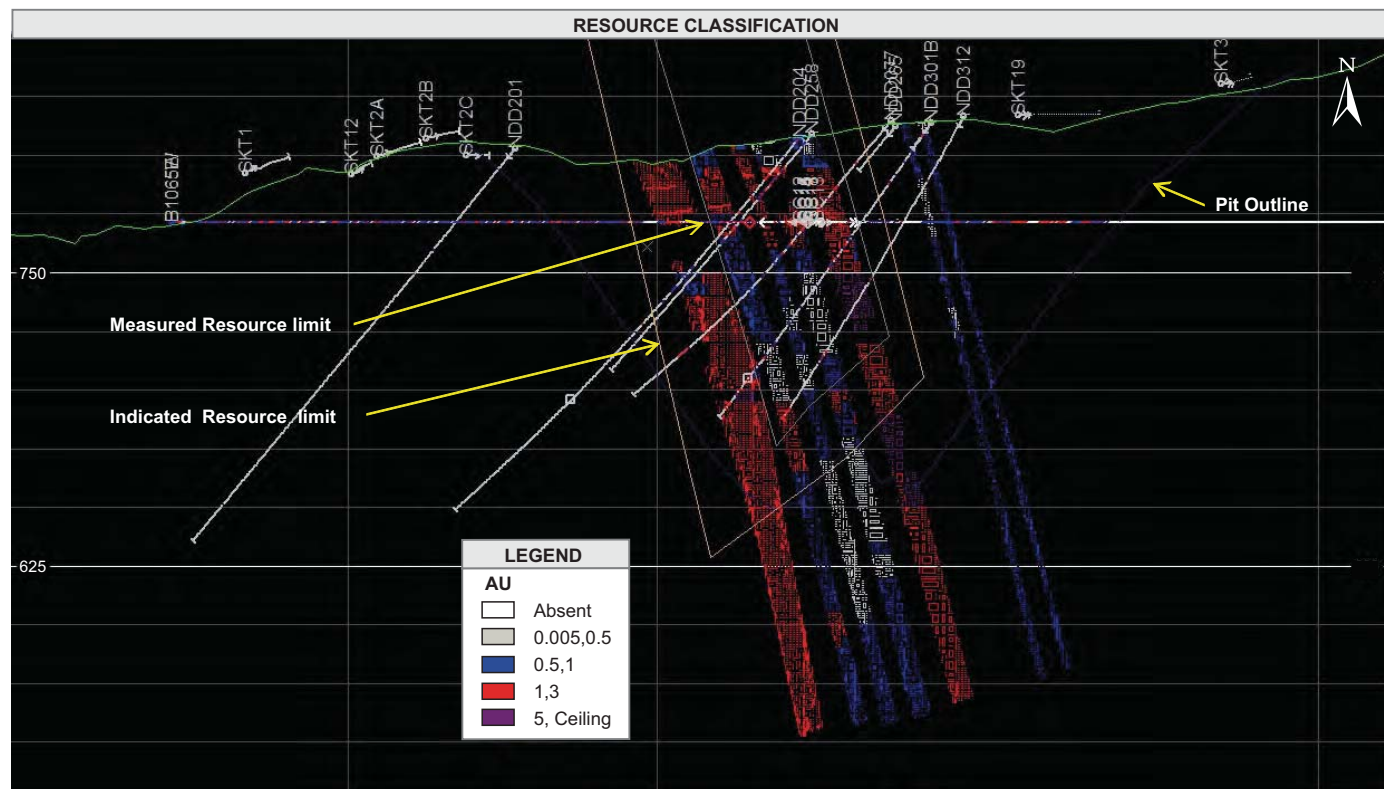
KAKULA MINERAL RESOURCES



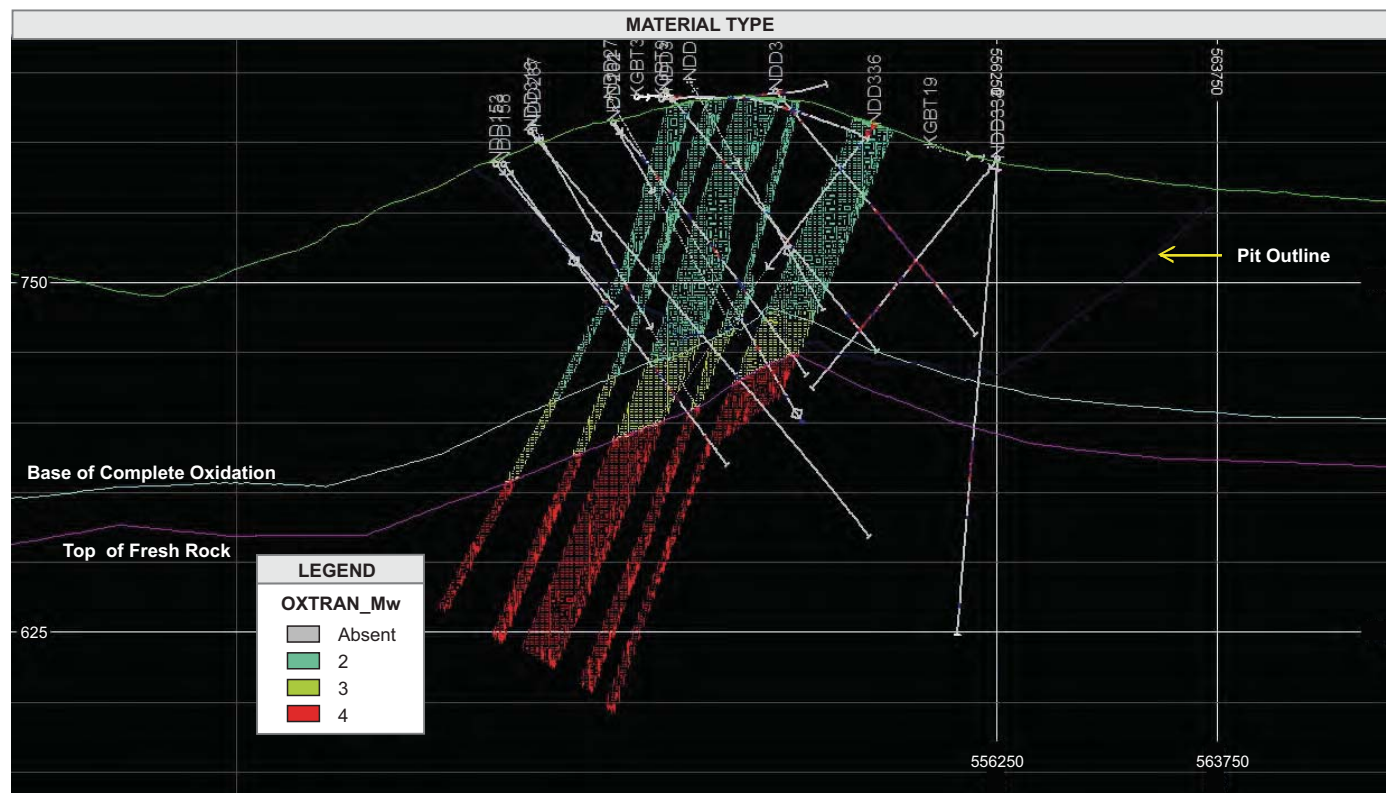
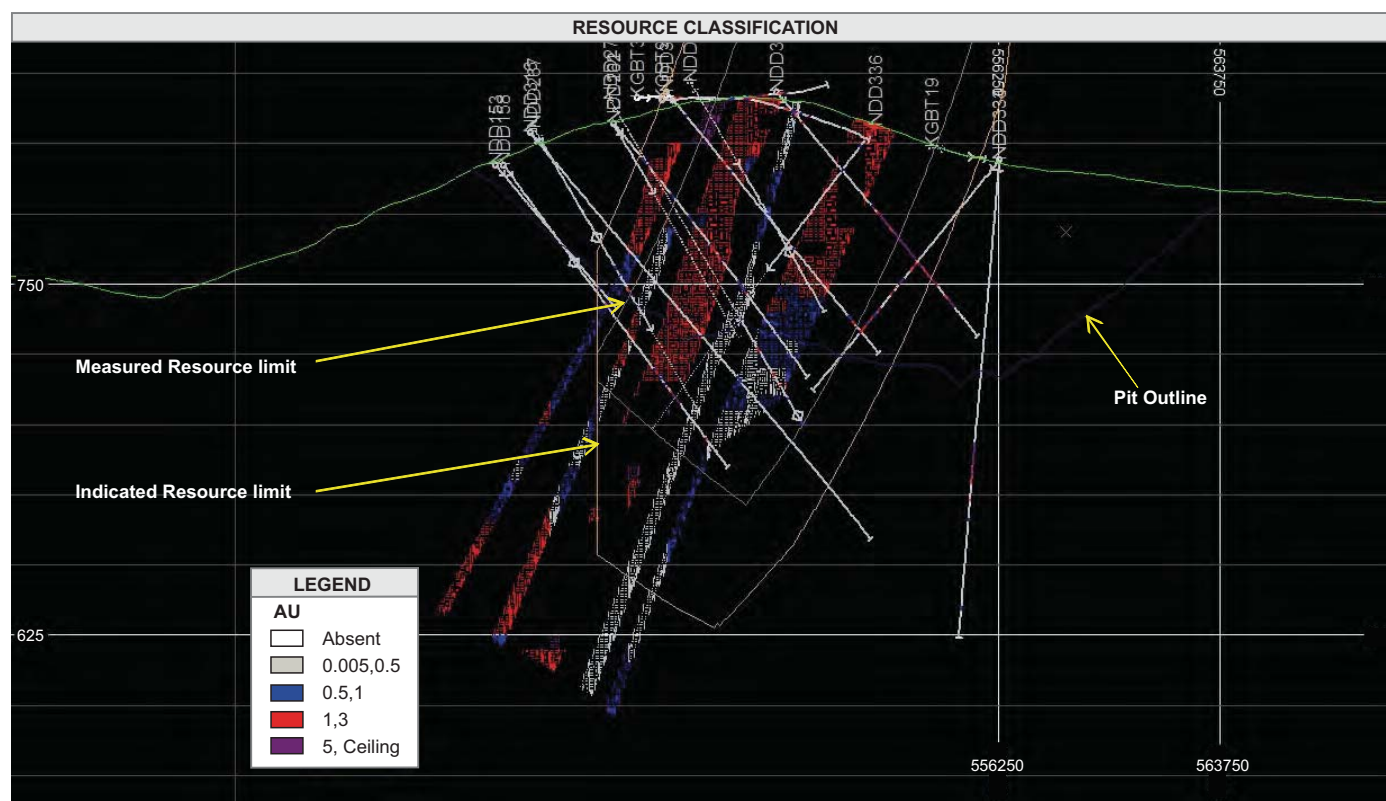
NAMOYA SUMMIT MINERAL RESOURCES



SEKETI MINERAL RESOURCES



KANGURUBE MINERAL RESOURCES



14. Mineral Reserve Estimates Item 15

The Mineral Resource model is converted to a Mineral Reserve model by applying mining dilution, a recovery factor, zero-out grades for blocks in the Inferred Resource category and cost adjustment factors. The subject of this report is the six open pits.

The Namoya deposit consists of a series of folded lenticular zones of mineralisation, exposed to surface or subsurface. The mine plan is for a series of open pits, one at each identified prospect. The various pit depths are given in Table 20.

Table 20: Planned Pit Depths

PIT	MINIMUM ELEVATION (m)	MAXIMUM ELEVATION (m)	PIT DEPTH (m)
Kakula	780	928	148
Kangrube	730	806	76
Muviringu	790	970	180
Mwendamboko	710	991	281
Namoya Summit	740	934	194
Seketi	740	844	104

14.1. Method of Delineating the Mineral Reserve

Outlines of ore zones were created on the base of 3D orebody block model based on the samples that inform the wireframes. The block model was created after the wireframe model and the inner space of wireframe model is filled with cells (blocks). The primary block size is 10m x 10m x 5m, based on the orebody model with primary attributes of insitu tonnages, insitu grade, specific gravity, fill volume, rock type and resource classification.

Mine planning is based on 3D block models of in-situ mineralization, with allowances made for minimum mining widths, dilution and ore loss appropriate to the mining method being considered. Dilution is included in Mineral Reserve block models to reflect planned and unplanned dilution which are likely to occur during mining. For this reason, no further dilution is applied in the optimisation software. Based on the steeply dipping nature of the orebody, size of equipment to be used in mining and the ground fragmentation methods under consideration, mining dilution is assumed to be 5% of the insitu ore tonnage at a grade 0g/t. Cost Adjustment Factors are applied to the resource model to address increase in mining and processing costs with increasing depth.

Geotechnical zones are also applied to categorize the deposit into different geotechnical regions dependent on rock type (oxide, transition and fresh). These attributes are utilised by the optimisation software in conjunction with slope profiles in generating structure arcs for slopes modelling during the pit optimisation process.

Resource model tonnages are grouped into ore, rejected ore (mineralized waste) and pure waste. The grouping is based on a comparison between the recoverable grade of the material and the marginal cut-off grade, where material with recoverable grade equal or above the marginal cut-off are termed ore, below the marginal cut-off but greater than 0g/t are termed rejected ore (mineralized waste) and 0g/t is termed pure waste.

14.2. Historical Mineral Reserve Statement

No Mineral Reserves have been estimated for the Namoya Project prior to this estimation.

14.3. Current Mineral Reserve Statement

The Mineral Reserve estimate has been conducted under the supervision of Namoya's Qualified Person, Mr. Dan Bansah (member of Australasian Institute of Mining and Metallurgy (AusIMM)). The Mineral Reserve estimation process has been independently reviewed by Venmyn Deloitte. Venmyn Deloitte has not carried out any portion of the Mineral Reserve estimate. Venmyn Deloitte has reviewed the estimation process and is satisfied that it is conducted with suitable methods and experience to afford the declaration of NI 43-101 Mineral Reserves.

14.3.1. Modifying Factors

Whittle software is used to optimize the open pit based on the block model origin, slope profiles, metal price, rock types, processing method, mining dilution, mining recovery, processing recovery, mining cost, processing cost, waste rehabilitation cost and selling cost. The optimisation logic applied is based on block value, which is the method of ore selection. Input of a range of revenue factors provides a series of nested pits as a result of optimization, out of which the optimal shell is selected, based on highest cashflow within the stipulated metal price.

Table 21: Mineral Reserve Estimate estimated by Namoya Mining as at 31st December 2013

PROSPECT	MATERIAL	PROVEN MINERAL RESERVES			PROBABLE MINERAL RESERVES		
		Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)	Tonnes (Mt)	Average Grade (g/t)	Gold Content (Moz)
Mwendamboko	Oxide Stockpile	1.96	2.50	0.16	-	-	-
	Oxide	1.15	1.63	0.06	0.04	0.87	0.00
	Transition	3.02	2.04	0.20	0	0.63	0.00
	Fresh	3.60	1.99	0.23	0.18	1.68	0.01
Mwendamboko SubTotal		9.73	2.06	0.65	0.22	1.54	0.01
Muviringu	Oxide	0.91	1.05	0.03	0.20	1.29	0.01
	Transition	0.70	0.96	0.02	0.20	1.61	0.01
	Fresh	0.80	2.09	0.05	0.06	2.25	0.00
Muviringu SubTotal		2.41	1.37	0.11	0.46	1.56	0.02
Kakula	Oxide	3.09	1.42	0.14	0.33	0.94	0.01
	Transition	1.45	1.72	0.08	0.13	1.59	0.01
	Fresh	0.03	1.86	0.00	-	-	0.00
Kakula SubTotal		4.57	1.52	0.22	0.46	1.12	0.02
Namoya Summit	Oxide	3.42	1.66	0.18	0.10	0.74	0.00
	Transition	1.55	1.71	0.09	0.02	0.63	0.00
	Fresh	0.01	0.69	0.00	-	0.00	0.00
Namoya Summit SubTotal		4.98	1.68	0.27	0.13	0.72	0.00
Seketi	Oxide	0.03	1.13	0.00	0.00	1.63	0.00
	Transition	0.16	1.30	0.01	0.00	0.75	0.00
	Fresh	0.27	1.20	0.01	0.01	0.72	0.00
Seketi SubTotal		0.45	1.23	0.02	0.01	0.97	0.00
Kangurube	Oxide	0.22	2.20	0.02	0.02	2.52	0.00
	Transition	0.03	2.38	0.00	-	0.00	0.00
	Fresh	0.00	2.98	0.00	-	0.00	0.00
Kangurube SubTotal		0.26	2.24	0.02	0.02	2.52	0.00
Oxide Stockpile		0.23	2.80	0.02	-	-	-
Oxide		10.55	1.68	0.57	0.70	1.07	0.02
Transition		6.90	1.77	0.39	0.36	1.54	0.02
Fresh		4.71	1.96	0.30	0.26	1.78	0.01
TOTAL		22.39	1.78	1.28	1.31	1.34	0.06

At a cut-off grade of 0.45g/t

At a gold price of USD1,200/oz

Estimated to a maximum depth of 281m

Cut-off grades were determined based on the premise that grade control cost and mining costs attributable to mining and hauling the material to the waste dump is a sunk cost. Material is hauled to the process plant where the overhaul cost, processing costs, operating overheads and selling costs are breakeven. The cost of rehandle has been excluded because it is assumed that all ore shall be mined to mill, however the cost of rehandle is included in the production profile for the cashflow. The cut-off grade is calculated as 0.45g/t. Evaluation of mineralized blocks to determine their destination using cut-off grade is based on the recoverable grades of the blocks. Recoverable grades are those grades to be obtained after processing and are derived by applying appropriate dissolution to the mined grade of the material.

Pit designs have been produced to confirm the mineability of the deposits using the Whittle optimal pit shells as guide. Care was taken to keep designed strip ratios within the optimal shell strip ratios and series of options were reviewed regarding the optimal positioning of ramps.

The LoM Plan (Mining Schedule) has been based on processing plant capacity of 2Mtpa. From the third year of operation, the plant capacity increases to 2.6Mtpa. The mining schedule reflects a review of a number of scheduling options with the focus on mining relatively lower cost pits in the initial years of mining, necessitating the adoption of an optimal mining sequence. This ensures that mining commence in pushbacks with high cashflow in the early years of mining. The LoM schedule covers a period of 10 years, with average mined tonnages of 14.9Mtpa over the Life of Mine and strip ratio of 4.07.

Low grade ore shall be stockpiled during the active mining period and processed when required to meet the plant throughput requirements during the active mining operational periods or after mining operations if it is economically viable at the time.

A cut-off grade strategy is used in the LoM Schedule such that reserves cut-off grade defines the ore/waste segregation and a mining cut-off is used to selectively give preferential treatment to high grade plant feed.

Material between the reserves cut-off and mining cut-off are stockpiled as low grade ore. In determining mining cut-off grades, the reserve cut-off grade is increased iteratively until the full mining capacity is reached while meeting plant processing capacity. This process ensures ore of relatively lower grades are filtered out as low grade ore and the higher grades are sent for processing on a just-in-time base.

The key technical assumptions used to determine the Namoya Mineral Reserve are tabulated in Table 22.

Table 22: Key Technical Assumptions

PARAMETER	ASSUMPTION
Gold price	USD1,200/oz
Mining costs	USD3.85/t mined
Processing costs	USD11.38/t processed
General and Administration costs	USD5.89/t processed
Royalties and Selling costs	USD33.05/oz
Mining dilution	5% at 0g/t
Reserves cut-off grade	0.45g/t
Mining recovery	95%
Pit slopes	40° to 50°
Metallurgical recovery	Oxides- 88% Transition- 84% Fresh- 80%

15. Mining Methods Item 16

Mining operations are based on conventional drill and blast, load and haul mining techniques. Ore is drilled and blasted, and loaded by hydraulic excavators in backhoe configuration, with off-highway dump trucks. Articulated dump trucks are being used for material haulage for the first year of operations, and will be replaced with 100t dump trucks in the second year of operation. Excess RoM is stockpiled on the ROM pad, with low grade ore sent to the low grade stockpile, located approximately 400m from the RoM pad. Stockpiled RoM ore is sorted under a stockpile grade control management scheme, with stockpile reclaim undertaken by a front end loader, and then fed to the crusher as required. Waste material mined is hauled to close-by waste dumps.

Namoya Mining performs all mining operations including:-

- site preparation;
- haul road construction;

- excavation and haulage of run-of-mine (RoM) to heap leach pad and waste rock to the waste rock dump;
- oversize material breakage;
- maintenance of mining fleet and equipment;
- mine planning and scheduling;
- grade control; and
- performance monitoring.

15.1. Site Preparation

Site preparation describes the preparation undertaken for all areas affected by mining activities. Site preparation included the building the RoM pad and low grade stockpiles, building haul roads, vegetation clearing, tree grubbing and topsoil stripping.

Haul roads were constructed by Namoya Mining personnel, allowing access between the pits, RoM pad, low grade stockpile, mine laydown area and workshops and waste dumps covering all the work activities associated with the mine operations. A separate access road has been built to the explosives magazine. Haul roads have been designed to a width of 22 m inclusive of safety berms and water drainage controls.

Vegetation clearing, tree grubbing and topsoil stripping has been undertaken in conformity to the 'minimum ground disturbance' rule. Therefore all areas are prepared for activity as and when mining is required in that area. This has eliminated unnecessary disturbance of vegetation. Stripping of topsoil is undertaken to depths of 200 mm at the pits, ore stockpiles and waste dumps. Topsoil is stockpiled at designated areas close to the pits, ore stockpiles and waste dumps for future rehabilitation works.

15.2. Drill and Blast

Ground is blasted before loading and hauling, and blast designs are managed by the technical personnel of Namoya.

Supply of bulk explosives and accessories is managed by a contractor. The contractor is responsible for managing the explosives magazine, transportation of bulk explosives raw material, as well as accessories to site magazine, transportation of bulk explosives and accessories from magazine to pits and loading drilled holes with explosives under the supervision of the Namoya Drill and Blast Team. The charging of drill holes, and eventual firing, is conducted by personnel of Namoya. The areas are inspected for misfires and declared safe before loading and hauling resumes. Raw materials, such as ammonium nitrate and fuel oil used in the explosive manufacturing process are transported to site by road, and stored in silos at the explosives magazine until required in the mining pits.

Two drill rigs are used for production drilling during the first year of mining. The design plan is such that the number of drill rigs increases over the life of mine to meet drilling requirements per the mining schedule. Estimating the number of drill rigs required has been based on the life of mine schedule, drill pattern design, drill penetration rates, drill rig availabilities and use of rig availabilities. Average powder factor estimated over the life of mine is 0.50 kg/bcm, with powder factors for oxide, transition and fresh rock being 0.36 kg/bcm, 0.54 kg/bcm and 0.85 kg/bcm respectively. Table 23 summarizes parameters used for the drill and blast design.

Table 23: Parameters used for the Drill and Blast Design

DESIGN PARAMETER		VALUE
PARAMETER	SUB-PARAMETER	
Burden	Oxide Rock	3.9m
	Transition Rock	3.3m
	Fresh Rock	2.7m
Spacing	Oxide Rock	4.2m
	Transition Rock	3.6m
	Fresh Rock	3.0m
Subdrill	Oxide Rock	0.5m
	Transition Rock	0.8m
	Fresh Rock	1.0m
Bench Height		5m
Blasthole diameter		102mm
Final Stemming Height		2.5m

15.3. Load and Haul

Loading and hauling activities commence in the first year of operations with two hydraulic excavators of backhoe configuration of 4.4 m³ bucket size each. The loading capacity will be increased from 2 to 4 following the inclusion of 2 additional hydraulic excavators of backhoe configuration of 3.8 m³ bucket size. Haulage has been carried out initially with articulated dump trucks with rated payload of 37 tonnes. In the second year of operation, the articulated dump trucks will be replaced with 95 tonne off-highway dump trucks.

A mining bench of 5 m high has been selected due to the size of equipment to be used and the need to minimize excessive ground movement during blasting. Excavating and loading of the 5 m blasted bench is carried out in two flitches, with each flitch 2.5 m high. Mining geologists are utilized in the pit to closely monitor selective mining of ore to minimize dilution and to control destination of material mined either to RoM pad, low grade stockpile or waste dump using cut-off grades as provided by the mine planning team. The services of other support sections are also utilized, including survey for pit floor pickups and setting outs, dewatering and geotech for mapping and pit wall monitoring.

Ancillary equipment, in addition to the main mining fleet, is used to support mining operations. Ancillary equipment includes the mine units which are not directly responsible for production, but are used to support the major production units, and provide safe and clean working areas.

Pit supervisors ensure that the mining fleet are effectively utilized for optimal production.

Namoya utilizes waste dumps as designated areas for deposition of waste material mined from the pits. The location of the waste dumps have been chosen and designed as close as possible to the mining pits, while adhering to geotechnical and environmental standards. Dump face tipping is utilized as far as practicably possible; with the dump construction gradually extending outwards. The waste dump development has been in alignment with good geotechnical design, including deposition over a large dumping face and careful placement of rocky material into the base areas of new waste dumps and on the edges of final dump lifts. Parameters used in the design of the waste dumps are: -

- dump face angle of 35°;
- batter angle (rehabilitation) of 25°;
- berm width of 21m;
- lift height of 15m;
- average dump height of 60m; and
- average standoff distance from Pit of 350m.

15.4. Mining Work Schedule

Mining activities are scheduled in accordance with a 7-day, 2-shift daily for a 365-day operation. Ore will be preferentially mined on day shift due to higher visibility and to allow for greater supervision. To facilitate this, a three crew system is adopted for all direct operations personnel, thus, a shift on day-shift, another on night-shift and a roster off-shift. The operating time per shift is the actual time during the shift that the equipment is productively working, which is equal to the total mechanically available time, less all scheduled and unscheduled delays.

The effect of weather on mining operations has been factored into the determination of effective working time. Effective working hours have further been reduced to reflect rainfall and other weather delays. Estimation of rainfall delays were performed using first principles, with 4-year rainfall average value recorded within the area.

The current mining work schedule is presented in Table 24.

Table 24: Namoya Mining Work Schedule

ACTIVITY	SCHEDULED TIME	UNITS
Shift Change	90	Minutes per day
Chop time/ Break	90	Minutes per day
Blasting	45	Minutes per day
Working Period	20	Hours per day
Shift Duration	10	Hours per shift
Number of shifts	730	Shifts per year
Working time	7,391	Hours per year
Weather delays	669	Hours per year
Effective working period	6,722	Hours per year

15.5. Manpower

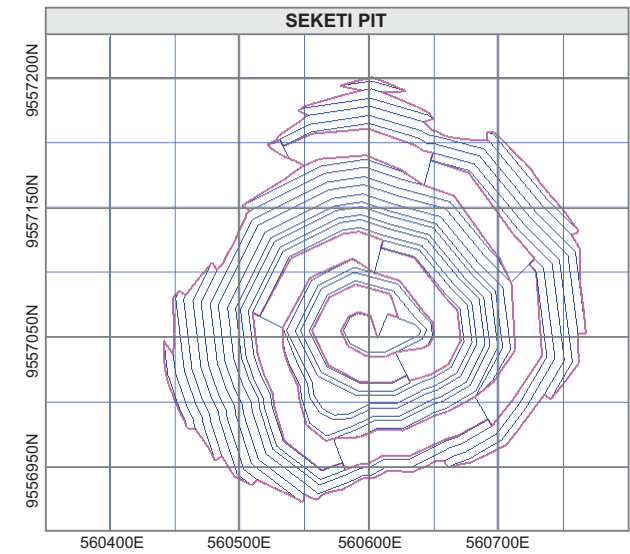
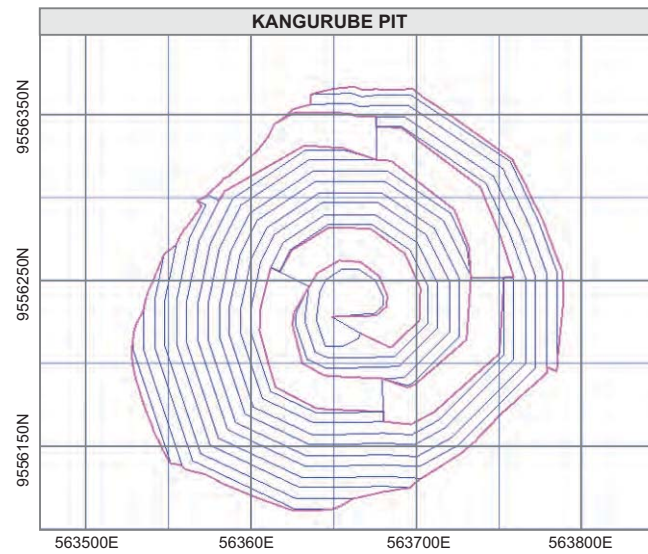
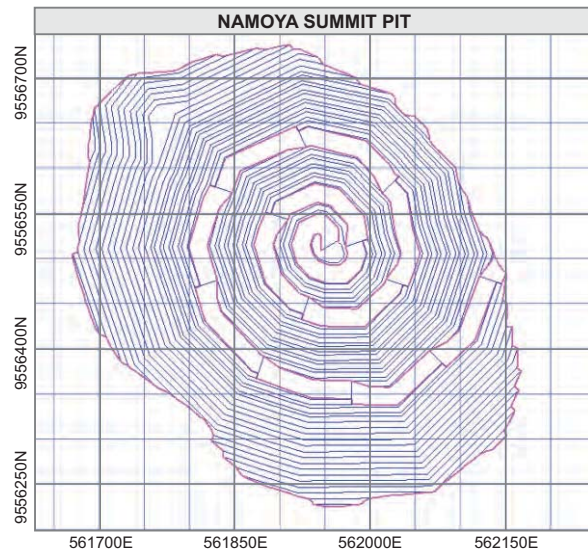
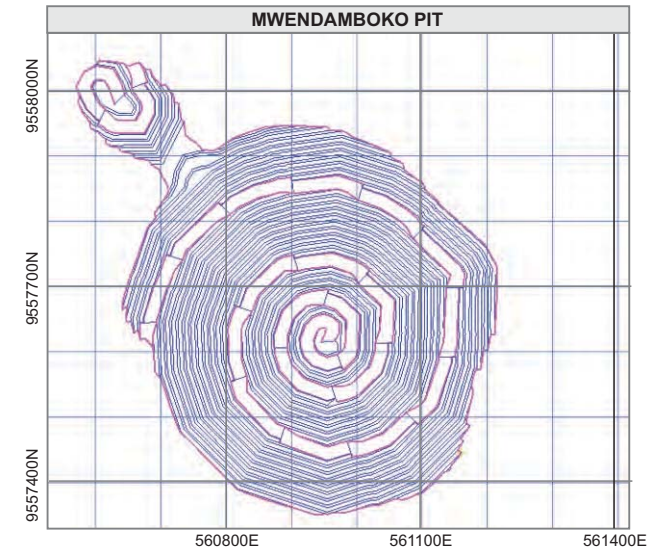
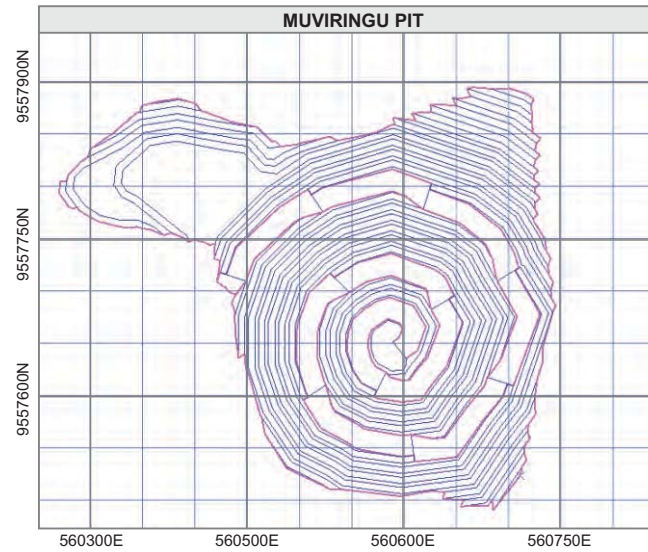
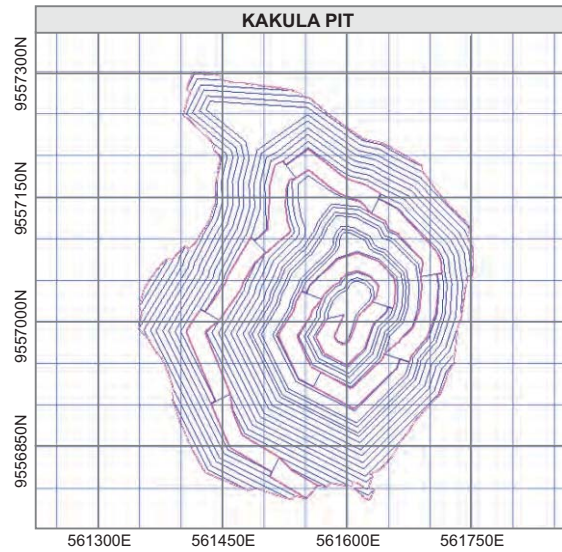
The operations personnel include all paid staff working with Namoya Mining. The manpower account provide in Table 25 includes the labour requirement for the various departments over the life of mine. Services required on short term or temporal basis may be sourced from contractors or local hire companies.

Significant training will be required for the national labour due to technical skills shortages. Accordingly, numerous experienced expatriate staff will be used during operations, most notably for the higher level supervisory staff. Further experts will also be used to train the local workforce on technical and maintenance skills.

Table 25: Operations Labour Requirement

REQUIREMENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Mineral Resources Management	52	64	64	64	64	64	64	52	10	10
Mining	192	213	222	204	207	207	207	180	20	20
Mobile Fleet Maintenance	38	46	46	46	46	46	46	36	20	20
Processing	196	196	196	196	196	196	196	196	196	196
Plant Maintenance	86	86	86	86	86	86	86	86	86	86
Human Resources	14	14	14	14	14	14	14	14	10	10
Finance	77	77	77	77	77	77	77	77	60	60
Civil Engineering	36	18	18	9	9	9	9			
Sustainability	23	23	23	23	23	23	23	23	23	23
Security	278	278	278	278	278	278	278	278	278	278
Total	940	1,015	1,024	997	1,000	1,000	1,000	942	703	703

PIT DESIGNS FOR THE NAMOYA PROJECT



15.6. Pit Design

Conventional open-pit shovel-and-truck methods are used to exploit the Namoya deposit. Detailed and practical pit designs have been produced to confirm the mineability of the deposits using the optimal pit shells as guide. Strip ratios have been designed to ensure that optimal shell strip ratios are obtained. Numerous designs were considered regarding the optimal positioning of ramps. Figure 30 illustrates the pit designs for the various pits at Namoya.

Table 26: Namoya Pit Design Parameters

PIT DESIGN PARAMETER	SPECIFICATION
Minimum Mining Width	30m
Bench Face Angle – Oxide	55°
Bench Face Angle – Transition	70°
Bench Face Angle – Sulphides	75°
Berm width	6m
Inter-Berm Height	10m
Ramp Width	22m
Ramp Gradient	1:10

15.7. Production Rates

A mining schedule has been developed based on Processing Plant capacity of 2 Mtpa. From the third year of operation, the plant capacity will be increased to 2.6 Mtpa. The mining schedule reflects a review of various scheduling options. The schedule focuses mining the relatively lower cost pits in the initial years of mining, incorporating an optimal mining sequence. This ensures that mining commence in pushbacks with high cashflow in the early years of mining.

The LoM schedule covers a period of 10 years, with average mined tonnages of 14.9 Mtpa over the life of mine, and strip ratio of 4.07. Low grade ore is stockpiled during the active mining period and processed when required to meet the plant throughput requirements during the active mining operational periods, or after mining operations if it is economically viable at the time. This processing profile commenced with an opening balance as at the 2013 year end of 230kt of ore at an average grade of 2.80g/t.

A cut-off grade strategy is used in the LoM Schedule, such that reserve cut-off grade defines the ore / waste segregation. A mining cut-off is used to provide preferential treatment to high grade plant feed. Material between the reserve cut-off and mining cut-off are stockpiled as low grade ore. In determining mining cut-off grades, the reserve cut-off grade is increased iteratively until the full mining capacity is reached, while meeting plant processing capacity for the period. This process ensures ore of relatively lower grades are filtered out as low grade ore and the higher grades are sent for processing as required.

15.8. Mining Equipment

Mine equipment requirements have been estimated based on the following:-

- annual production schedule;
- mine work schedule; and
- equipment shift production estimates.

Objectives taken into consideration during the selection process for equipment included the following:-

- mining equipment is consistent with the size of the operation;
- mining equipment is able to construct additional roads and upgrade the existing ones as needed;
- mining equipment is able to perform mining and hauling duties of both the RoM and the waste rock;

- mining equipment is able to re-handle ore from the RoM stockpile;
- mining equipment is able to maintain the entire mine working areas, in-pit haul roads, waste storage areas, stockpiles, satellite stockpiles, and external roads; and
- mining equipment is able to build and maintain in-pit and on-dump drainage structures.

The equipment requirements are listed in Table 27.

Table 27: Equipment Requirements

CLASS	TYPE	CAPACITY	UNIT	YEAR							
				1	2	3	4	5	6	7	8
Major	Hydraulic Excavator (Backhoe)	6	m ³	2	2	2	3	3	3	2	
	Rear Dump Haul Truck	100	t	4	4	5	7	8	8	6	
	Wheel Loader	6	m ³	1	1	1	1	1	1	1	
	Track Bulldozer	30	t	2	2	2	2	2	2	2	
	Wheel Bulldozer	40	t	1	1	1	1	1	1	1	
	Motor Grader	20	t	1	1	1	1	1	1	1	
	Water Bowser	50	t	2	2	2	2	2	2	2	
Minor	Hydraulic Excavator	2	m ³	1	1	1	1	1	1	1	
	Tractor and Trailer			1	1	1	1	1	1	1	
	Light Towers			6	6	6	6	6	6	6	
	Fuel Bowser			1	1	1	1	1	1	1	
	Lubricant truck			1	1	1	1	1	1	1	
	Twin Cab Pickup Trucks			2	2	2	2	2	2	2	
	Single Cab Pickup Trucks			4	4	4	4	4	4	4	
	Lowbed Trailer and Engine			1	1	1	1	1	1	1	
	Rough terrain Crane			1	1	1	1	1	1	1	
	Road Wagon			2	2	2	2	2	2	2	
	Site Bus			2	2	2	2	2	2	2	
	Site Vehicle with Hiab Crane			1	1	1	1	1	1	1	
	Articulated Dump Trucks			14	3	3	3	3	3	3	
Other	Soil Compactor			1	1	1	1	1	1	1	
	Drill Rig			2	3	3	3	4	4	6	4
	Diesel Truck			1	2	2	2	2	2	2	1
	Bulldozer			4	5	5	5	5	5	5	5
	Hydraulic Excavator			3	5	5	5	5	5	5	2
	Motor Grader			2	3	3	3	3	3	3	3
	Wheel Loader			1	1	1	1	1	1	1	1
	Water Truck			2	2	2	2	2	2	2	2
	Service Truck			1	1	1	1	1	1	1	1
	Lighting Plant			8	10	10	10	10	10	10	8
	Dewatering Pump			2	2	2	4	5	5	5	5
	TLB			1	1	1	1	1	1	1	1

Table 28: Life of Mine Production Profile

PARAMETER	UNIT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	TOTAL
MINING												
RoM Mined	g/t	1,644,690	2,000,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	-	-	19,254,476
Grade Mined	g/t	2.52	2.27	1.81	1.75	1.77	1.52	1.96	2.39			1.97
Low Grade Mined	Tonnes	64,463	1,386,499	1,096,585	321,342	293,989	520,611	-	523,534	-	-	4,217,022
Grade Mined	g/t	0.87	0.81	0.75	0.63	0.58	0.59	-	0.71			0.73
Total Ore Mined	Tonnes	1,792,153	3,386,499	3,696,585	2,931,342	2,893,989	3,120,611	2,600,000	3,113,319	-	-	23,471,498
Grade Mined	g/t	2.46	1.68	1.49	1.62	1.65	1.37	1.96	2.10	-	-	1.74
Waste Mined	Tonnes	4,210,817	13,502,498	12,193,139	12,342,518	15,000,000	13,526,753	15,950,000	7,759,669	-	-	95,485,394
Total Material Mined	Tonnes	5,939,970	16,888,997	15,889,724	16,273,860	17,893,989	16,647,364	18,550,000	10,872,989	-	-	118,956,892
Strip Ratio	t/t	2.44	3.99	3.30	4.55	5.28	4.33	6.13	2.49	-	-	4.07
PROCESSING												
Plant Feed	Tonnes	1,878,057	2,000,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	1,624,420	23,702,277
Head Grade	g/t	2.57	2.27	1.81	1.75	1.77	1.52	1.96	2.38	0.73	0.73	1.75
Recovery	%	81.00	86.47	87.77	85.88	85.46	84.67	81.64	80.25	85.85	85.85	84.48
Recovered Gold	oz	125,614	126,435	132,649	125,455	126,561	107,796	133,806	159,827	52,239	32,638	1,123,019

Table 29: Mining Production schedule by Pit

PARAMETER	UNIT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	TOTAL
KAKULA PIT												
Ore Mined	Tonnes	-	1,085,068	2,327,217	1,614,546	-	-	-	-	-	-	5,026,931
Grade Mined	g/t	-	1.59	1.28	1.71	-	-	-	-	-	-	1.49
Waste Mined	Tonnes		673,582	6,025,396	4,447,292							11,146,270
Total Material Mined	Tonnes		1,758,750	8,352,613	6,061,838	-	-	-	-	-	-	16,173,201
Strip Ratio	t/t		0.62	2.59	2.75	-	-	-	-	-	-	2.22
MUVIRINGU PIT												
Ore Mined	Tonnes						2,142,729	726,889	-	--	-	2,869,618
Grade Mined	g/t						1.16	2.10				1.40
Waste Mined	Tonnes						6,349,109	495,549				6,844,657
Total Material Mined	Tonnes						8,491,838	1,222,437				9,714,276
Strip Ratio	t/t						2.96	0.68				2.39
MWENDAMBOKO PIT												
Ore Mined	Tonnes	1,729,153	2,301,332	-	-	205,846	967,430	1,873,111	2,643,991	-	-	9,720,863
Grade Mined	g/t	2.46	1.72	-	-	1.29	1.83	1.91	2.26			2.04
Waste Mined	Tonnes	4,210,817	18,828,916			4,236,423	7,177,644	15,454,451	5,321,426			49,229,678
Total Material Mined	Tonnes	5,939,970	15,130,248	-	-	4,442,269	8,145,074	17,327,563	7,965,417	-	-	58,950,541
Strip Ratio	t/t	2.44	5.57	-	-	20.58	7.42	8.25	2.01			5.06

PARAMETER	UNIT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	TOTAL
NAMOYA SUMMIT PIT												
Ore Mined	Tonnes	-	-	1,369,368	1,316,796	2,407,554	10,451	-	-	-	-	5,104,168
Grade Mined	g/t-	-		1.86	1.61	1.61	1.82					1.65
Waste Mined	Tonnes			6,1667,743	7,542,029	7,542,029	-					22,604,999
Total Material Mined	Tonnes			7,537,111	10,212,022	9,949,583	10,451					27,709,167
Strip Ratio	t/t			4.50	36.76	3.13						4.43
KANGURUBE PIT												
Ore Mined	Tonnes	-	-	-	--	280,589						280,589
Grade Mined	g/t					2.26						2.26
Waste Mined	Tonnes					3,221,547						3,221,547
Total Material Mined	Tonnes					3,502,137						3,502,137
Strip Ratio	t/t					11.48						11.48
SEKETI PIT												
Ore Mined	Tonnes	-	-	-	-	-	-	-	469,328	-	-	469,328
Grade Mined	g/t	-	-	-	-	-	-	-	1.22	-	-	1.22
Waste Mined	Tonnes	-	-	-	-	-	-	-	2,438,243	-	-	2,438,243
Total Material Mined	Tonnes	-	-	-	-	-	-	-	2,907,571	-	-	2,907,571
Strip Ratio	t/t	-	-	-	-	-	-	-	5.20	-	-	5.20

16. Recovery Methods Item 17

In 2011, MDM was commissioned by Banro to undertake a detailed design and construction of a heap leach plant with a nameplate capacity of 2Mtpa feed and this work is summarised in the section that follow. The process design basis is shown in Table 30.

Table 30: Namoya Process Plant Design Basis

DESCRIPTION	VALUE	UNIT	SOURCE
Annual Feed Throughput	2.00	Mtpa	Design Basis
Installed Modules	1.00	#	Design Basis
Monthly Feed Throughput	0.17	ktpm	Calculated
Operating Days	365	Days per year	Standard
Maintenance Days	8	hours per week	Standard
Crusher Utilisation	62%	%	Standard
Operating Hours	5,015	hours per year	Calculated
Plant Throughput	8,961	ktpd	Calculated
Plant Throughput	399	tph	Calculated
Plant Throughput	400	tph	Design Basis
Primary Crusher Feed Throughput	500	tph	Design Basis
Gravity Recovery	23%	%	Testwork
Heap Leach Pad Feedrate	400	tph	Design Basis
Ore Density	2.54	t/m ³	Calculated
Ore Heap Density	1.52	t/m ³	Calculated
Leaching Recovery	80%	%	Testwork
Leaching Time	150	days	Design Basis
Leach Phase Fraction	33%	%	Design Basis
Leach Recovery (Phase 1)	60%	%	Design Basis
Leaching Time (Phase 1)	50	days	Design Basis
Testwork Compressed Permeability	50	l/m ² /h	Testwork
Leach Wash Rate (Phase 1)	10	l/m ² /h	Testwork
LOM Reserves	17	Mt	Design Basis
LOM	7.83	year	Calculated

16.1. Process Description and Plant Design (NI 17a, NI 17b)

The proposed Namoya process plant makes use of a hybrid leach design in which a heap leach operation works in conjunction with a gravity gold recovery operation and a CIL plant. The PFD for the Namoya process plant is shown in Figure 29.

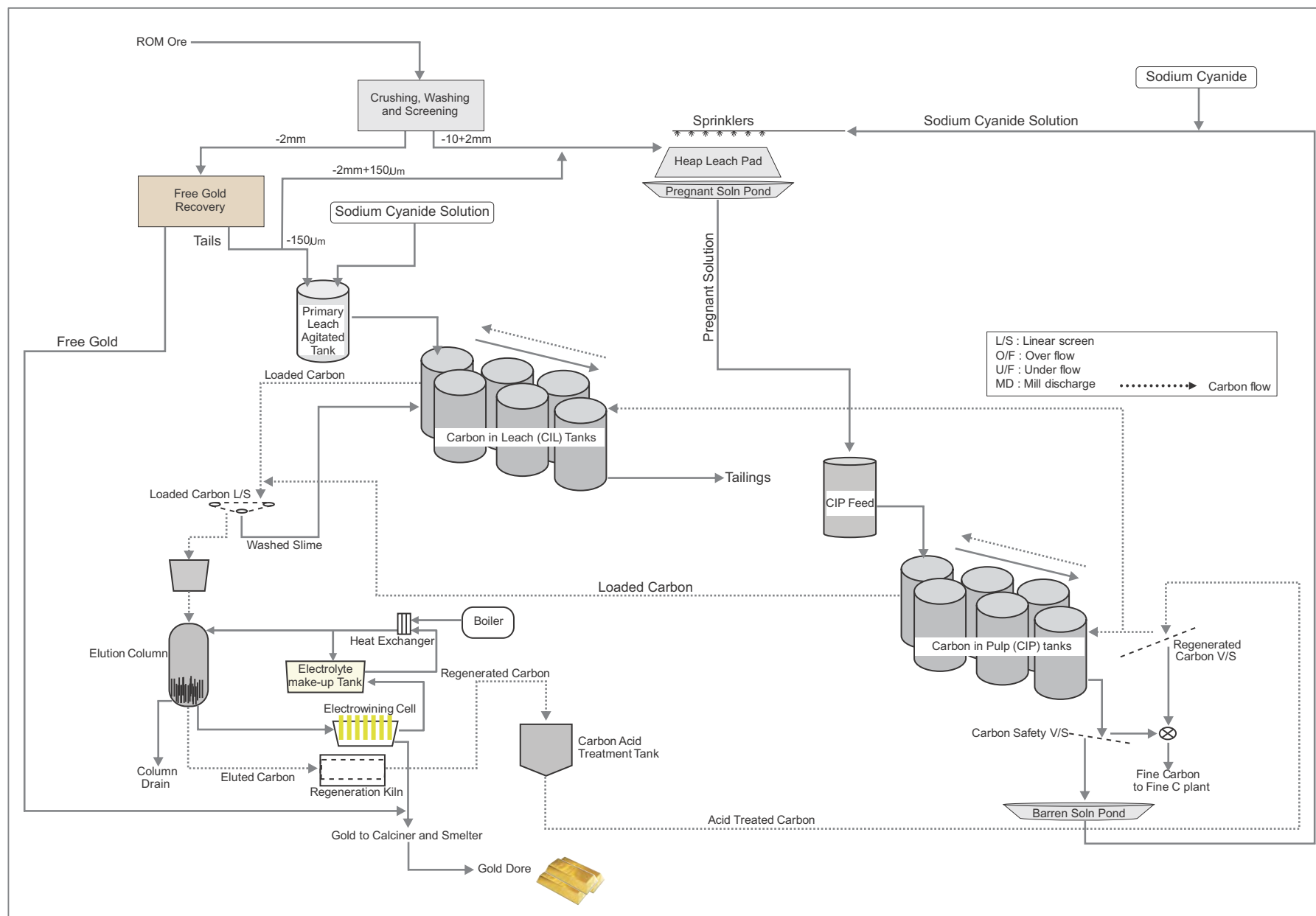
16.1.1. Primary Crushing

ROM, delivered by 40t trucks, is deposited into a tipping bin fitted with an 800mm static grizzly to prevent oversize material from entering the system. A rock breaker has been installed to ensure that all +800mm feed ore is broken to -800mm size, in line with process specifications. From the tipping bin, the ore is fed onto a 150mm vibrating grizzly using an apron feeder from which the -800+150mm material is deposited into a jaw crusher, which reduces the -800+150mm material to a topsize of 210mm. The resulting -210mm material from the jaw crusher, together with the -150mm from the vibrating grizzly, is conveyed along a 1.5km conveyor belt to the secondary crushing plant.

16.1.2. Secondary and Tertiary Crushing

The -210mm material from the primary crushing plant is deposited onto the primary crushing stockpile whose residence time is 12 hours. The stockpile serves to provide backup plant feed against conveyor length surge and maintenance requirements of the primary crusher. The stockpile has two sets of reciprocating plate feeders (2 running, 2 on standby) which are designed to handle wet clay material as well as assist prevention of “rat holing” in the stockpile.

A TYPICAL PROCESS FLOW DIAGRAM FOR GOLD EXTRACTION



Ore is withdrawn from the primary crushing stockpile and fed into a rotary scrubber in order to remove clays from the ore. The scrubber is fitted with a 40mm trommel discharge screen which allows for the oversize material (-210+40mm) to report to the secondary cone crusher which reduces feed to 100% passing 40mm. The undersize material from the scrubber (-40mm) reports to a 2mm vibrating screen from where the -2mm material is fed to the gravity section whilst the -40+2mm material is fed to the tertiary crushing circuit.

The tertiary crushing circuit crushes material from the secondary crushers as well as the -40+2mm material from the scrubber to 100% passing 10mm. The crushed ore is discharged onto a double deck screen with a top screen cutting at 10mm and the bottom screen cutting at 2mm. The oversize fraction from the top deck (-40+10mm) is returned to the tertiary crusher. The bottom deck oversize fraction (-10+2mm) reports to the heap leach pad whilst the bottom deck undersize (-2mm) reports to the gravity recovery section.

16.1.3. Gravity Recovery Section

The objective of the gravity recovery section is to recover gravity-recoverable gold from the -2mm size fraction. Feed material is pumped from the secondary and crushing circuit to a dewatering cyclone. The cyclone underflow then reports to one of two Knelson concentrators. The resulting concentrate reports to the gold room whilst the gravity tailings report to a desliming cyclone cutting at 150µm. The cyclone underflow (-2mm+150µm) gravitates to a dewatering screen from where the coarse (oversize) fraction reports to the heap leach pad. The -150µm fraction from the desliming cyclone, together with the undersize from the dewatering cyclone, report to a vibrating trash screen cutting at 800µm. The screen underflow is fed to a thickener feed tank where flocculant is added. The resulting mixture is then discharged into a 23m diameter thickener. The thickener underflow is collected and pumped to the CIL section.

16.1.4. Heap Leaching

Material is fed onto the heap leach in a controlled manner through the use of a crusher product stockpile. Vibrating feeders are used to withdraw material from this stockpile onto a conveyor belt which feeds the stockpile through the use of a grasshopper stacking system. Unslaked lime is added onto the conveyor belt and deposited onto the heap leach pad together with the ore.

The heap leach pad, measuring 600m x 800m, is designed on a 150 day leaching cycle. The pad consists of a series of cells that are irrigated with cyanide solution. As the solution passes through the heap, it dissolves gold into a cyanide complex which continues to drain, by gravity, through the heap for collection.

The heap leach pad has been designed to have three main solution ponds (barren solution, intermediate solution and pregnant solution). The barren solution pond holds barren cyanide which is then irrigated onto the heap. Because of the high rainfall in the project area, a wobbler solution irrigation system is used to assist with evaporation of excess solution in the system.

The barren solution, after percolating through the cells, will pass through a sand trap into the intermediate solution pond. From the intermediate solution pond, the solution is pumped over a more recent heap to maximise gold dissolution. This solution is then collected into the pregnant solution pond from where it is pumped to the carbon-in-solution (CIS) columns for carbon loading.

16.1.5. Carbon-in-Solution

Pregnant solution is fed into the CIS columns. The columns, which are designed for a flow rate of 200m³/hr, admit regenerated carbon through the top which gravitates to the bottom, loading gold onto its matrix in the process. Carbon moves through a series of CIS tanks in a countercurrent arrangement to the solution which gradually becomes barren as it moves downstream whilst the carbon loads more and more gold as it moves upstream. Loaded carbon is collected from the first tank and reports to the elution wash system whilst barren solution is collected from the last tank of the system and reports to the barren solution pond.

16.1.6. Carbon-in-Leach

The CIL process consists of two tanks and is designed to leach the fine slurry for gold and load it onto the carbon. This system is essentially similar to the CIS system, with the main difference being that, in the CIL process, leaching takes place in the same vessels as carbon loading. The loaded carbon is collected and passed through a screen. The undersize from the screen is returned to the system whilst the oversize is collected and fed to the acid wash section. The tailings slurry exiting the CIL system is also passed over a screen from where the underflow reports to the tailings storage facility.

16.1.7. Acid Wash

Loaded carbon is received from either the CIS carbon transfer or from the CIL loaded carbon screen and soaked for 1 hour in dilute (3%) acid. This process ensures the removal of inorganic salts containing calcium, iron and nickel. After the soak process, the residual acid is drained back to the acid make-up tank and a wash water cycle takes place with the intention of removing any residual acid in the loaded carbon. Washed loaded carbon then gravitates to the elution column for gold recovery.

16.1.8. Elution

The elution circuit is based on the Zadra elution principle and operates at a temperature of 125°C. A higher temperature ensures a faster and more efficient stripping process of gold into solution. Acid washed carbon is fed into the elution column. The process commences with a pre-heating step during which eluent (cyanide and caustic) are heated to a temperature of 110°C for two hours. The heated eluent is passed through a primary heat exchanger before being admitted into the elution column. The next step, which occurs at a temperature of 125°C for 15 hours, is a hot wash step during which the eluent is admitted into the elution column to strip gold from the carbon into solution, creating an eluate. The third step of the process involves cooling the eluate to 90°C. Once this temperature is achieved, the eluate is pumped to the electrowinning section. The barren carbon is quenched and transferred to the carbon regeneration circuit.

16.1.9. Electrowinning

During this process, the eluate emanating from the elution step is introduced into two electrowinning cells and a current is passed through the solution. During this process, gold ions dissolved in solution will precipitate onto the cathodes as a sludge leaving behind a barren solution that gravitates back elution circuit for reuse. After every two weeks, a cell is taken offline and the cathode removed and washed into the sludge tank filter. The filtered sludge then reports to the gold room for smelting.

16.1.10. Gold Room

The filtered sludge is fed into a calcining oven for further drying and oxidation of inherent metals. The dried sludge is then mixed with borax and fed into a diesel-operated furnace for smelting. The molten metal is poured into bullion moulds and cooled to produce a gold doré which is then dispatched to refineries for the production of high purity gold metal.

16.2. Process Requirements (NI 17c)

In order for the process to work within the design and regulatory limits, certain services have to be made available. Sufficient work has been conducted to define these process requirements with a high level of confidence and these are described below.

16.2.1. Detoxification and Tailings Storage

The tailings generated are treated through a cyanide detoxification plant in order to reduce the cyanide level from ~100ppm to 10ppm prior to disposal. In the detoxification process, copper sulphate and hydrogen peroxide are added to the tailings slurry in agitated tanks for a period of ~2 hours.

The detoxified tailings are then discharged to the tailings storage facility where they are decanted from 2-3 open discharge ports from a total of 30 available ports. The tailings dam is based on a self-built day/night wall construction with penstock and return water dam.

The return water dam has two pumps for return water to the thickener process water tank mounted on a pontoon.

16.2.2. Raw Water

Raw water is supplied from the borehole sunk at the mine to feed a raw water pond. Water for firefighting will also be supplied by the boreholes. Raw water is used by all major reagent make-up facilities.

16.2.3. Process Water

The main source of process water is the thickener overflow and the return dam water. This water is used for crushing and grinding, gravity recovery, pre-leach thickener and in the gold room.

Screen spray water is prepared by filtering process water. This water is also used by gravity concentrator as flushing water. Spray water is used at various points in the process plant including linear screens at the pre-leach thickener, loaded carbon screen and carbon quench screen. Gravity fluidisation water is also supplied from the spray water tank.

16.2.4. Potable Water

A water treatment plant is available for the treatment of raw water to generate potable water. Potable water is stored in dedicated tanks from where it is pumped to various safety shower areas as well as to the flocculant make-up area and other areas requiring gland service water. Potable water for use in elution is retreated to remove magnesium and calcium.

16.2.5. Cyanide Make-up

A cyanide make-up plant is available to make-up the cyanide required for the heap leach and CIL operations. The plant will have 1t bulk bags for cyanide make-up from which it is discharged into make-up tanks to a concentration of 25% wt/wt prior to storage, ready for use.

16.2.6. Other Process Requirements

Other process requirements that have been designed are as follows:-

- slaked lime make-up facilities;
- caustic make-up area;
- flocculant make-up area;
- copper sulphate make-up facilities;
- hydrogen peroxide;
- anti-scalant;
- diesel;
- air services; and
- emergency ponds.

16.3. Concluding Opinion on Recovery Methods

The process route for Namoya is based on conventional methods of gold processing. In addition, the design has been founded on sound and extensive metallurgical testwork which has been reviewed extensively by Venmyn Deloitte. The results of the testwork have been found to have been fully incorporated into the plant design, thereby raising the level of confidence in the plant design. Venmyn Deloitte is therefore satisfied that the plant design has been conducted according to industry best practice.

17. Project Infrastructure Item 18

This section describes the services provided in the mining lease area, including road networks, power, water, waste, and accommodation. A plan view of the infrastructure for Namoya is illustrated in Figure 30. Infrastructure and development are illustrated in Figure 31.

17.1. Road Network

Provision has been made to upgrade 350km of road between Baraka and Namoya to ensure a reasonable standard of logistics access to Namoya Mine.

Provision has been made to upgrade or, where necessary, newly construct 8m wide gravel main access roads as well as plant site roads and where necessary, vertical and/or horizontal re-alignment of the road surface will be carried out. In addition, rehabilitation and/or addition of pipe and concrete culvert structures will be carried out including replacement of all major river crossings with flat deck structures. Additional water management drainage structures and berms will be constructed to suit the topography as well as road conditions.

Additional secondary roads will be constructed for minor traffic and interconnections, which will approximate to 40% of the annual major construction programme. Minor haul roads will be approximately 10m wide.

17.2. Security

The mine lease area is not secured with a security fence and entrance into the area is through a single control point located the main road. A 2.1m high-security-specification fence secures the plant site and the associated infrastructure. Entrance into the process area is through a 25m² main entrance gatehouse. Allowance has been made for two 12m² satellite within the process plant area. The gatehouse and guardhouses are monitored by a central 120m² security office located within the office complex area. High risk areas have additional camera surveillance.

17.3. Power

A total installed capacity of 4.5MW is generated on-site by three 1MW high-speed diesel generators (totalling 3MW); and 5 three 0.5MW high-speed generators as spinning reserve (for peak demand and back-up) (providing a total of 1.5MW). In addition, the smaller generators have the capacity to provide the additional power required to start the tertiary cone crusher motors (the biggest in the plant) at a time when the rest of the plant is operational.

17.4. Water

A raw water dam has been constructed in the adjacent river and accumulates rainfall from the applicable catchment area. A borehole supplements the dam water and provides the accommodation camp with water.

Potable water is provided through borehole supplies, which is treated by a raw water treatment facility located in the plant area. Raw water from the borehole is stored in a raw water tank prior to treatment, following which treated water is distributed to all applicable buildings and offices.

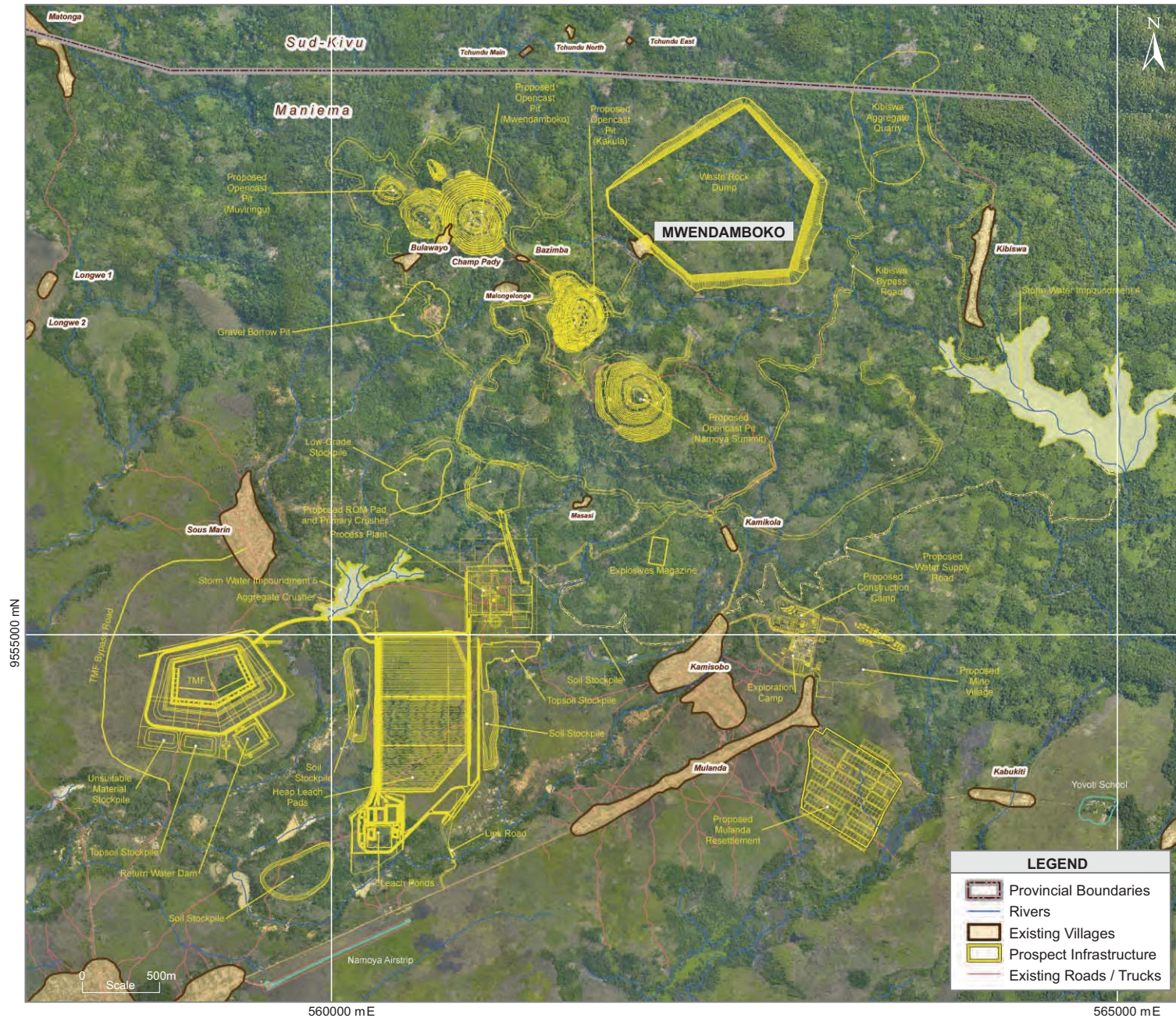
Fire water will be stored in a large tank adjacent to the fuel farm in the process plant area. From this location it will be pumped to hydrants in the plant, with remote areas being serviced by a fire truck.

17.5. Communication

The process plant, mining area and accommodation camps will be serviced by a satellite communication system (VSAT). Office buildings and management accommodation will also be serviced by a local area network.

On site radio communications will employ both VHF and HF frequencies with dedicated wavebands to avoid interference with existing networks. Work is currently in progress to develop mobile phone communications to a point where they will be usable at all areas of the mine. Two relay stations have been selected on the Baraka to Namoya route and masts will be erected on these hilltops.

PROJECT INFRASTRUCTURE AND MINE LAYOUT



MWENDAMBOKO PIT



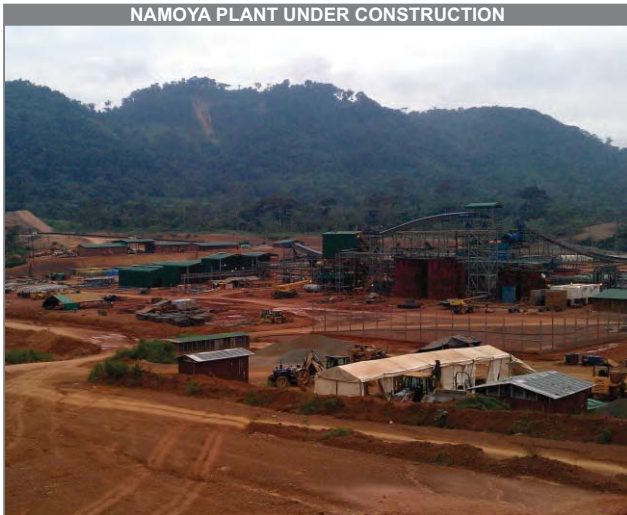
NAMOYA CONSTRUCTION



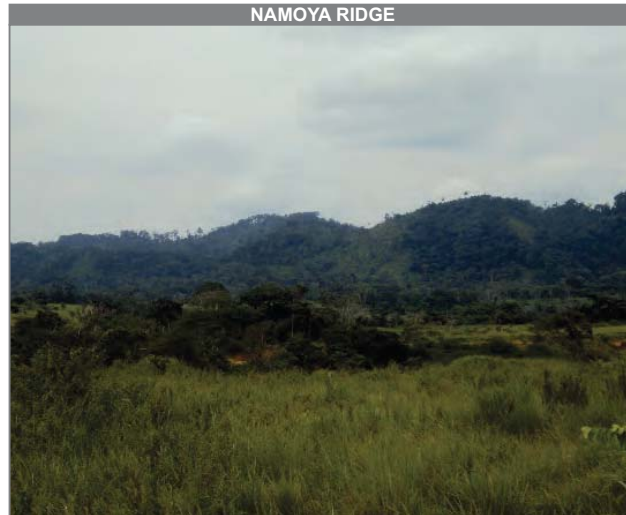
NAMOYA DEVELOPMENT



NAMOYA PLANT UNDER CONSTRUCTION



NAMOYA RIDGE



NAMOYA TAILINGS



17.6. Accommodation

17.6.1. Permanent Mine Village

A permanent mine village will be erected on the hillside to the East of the mining lease area. This site overlooks the Namoya plains. 25 semi-detached bachelor units, each comprising of two dwellings with lounge, bedroom kitchen and bathroom, will be constructed on the access road on the south side of the hill.

A recreation club will be erected with outside entertainment area and swimming pool. The clubhouse will be equipped with a full kitchen, dining room, bar area and washroom facilities. Adjacent to this area will be a five room guest house, with a kitchen area, lounge and enclosed veranda. There will be a fully equipped gymnasium and laundry facilities at the village. This village will accommodate senior management and supervision employed for the operation phase of the mine.

17.6.2. Operations Village

A village designed to accommodate 300 employees has been constructed on the open area to the North of the exploration camp, and houses all operational staff on the mine who qualify for mine housing.

Units for senior staff are located at the top of the hill, and consist of five single rooms with a common integral ablution facility. The open area below the hill has 20 dormitory units, each catering for two rooms housing 6 employees each. These units have an integral shared ablution facility. Open thatched entertainment areas with sports fields are included in the village.

17.6.3. Construction Camp

Adjacent to the operations village an area has been allocated to 200 tents to cover accommodation of the construction personnel. These will be serviced by stand-alone ablution facilities.

17.6.4. Police and Security Accommodation

To the South East side of the exploration camp a police station with 4 offices and a control room have been constructed. Associated infrastructure with the police station includes a small kitchen and dining room and three accommodation dormitories. Both units have integral shared ablution facilities. Accommodation has also been provided on site for security staff on the West side of the exploration camp. Dog kennels and a dog run are included.

17.6.5. Infrastructure

Additional infrastructure allowances include a sewage collection and removal system, and fuel and lubricant storage and distribution. Buildings on-site will include:-

- Plant workshops;
- Plant warehouse;
- Administration;
- Metallurgical facilities;
- Clinic;
- Motor Control Centers and Substation;
- Site mess facility;
- Laboratory;
- Ablution facilities; and
- Training offices.

17.6.6. Main Accommodation Block

The office block has been constructed to the east of the operations village and construction camp. This block includes 12 offices, a board room and a kitchenette, and accommodates all community services personnel. A dining hall is on site, and is fully equipped kitchen and cold storage units, designed to feed up to 400 employees.

The mine clinic comprises a reception area, a consulting room, a theatre, a pharmacy and a laboratory. It also houses a small ward for three beds and a single bed ICU unit. A small prefabricated laundry unit is also included.

A temporary fuel depot construction generators and a small civil testing laboratory has been placed adjacent to the boundary fence on the east of the accommodation.

17.7. Mining Infrastructure

17.7.1. Mining Maintenance Workshop and Maintenance Facilities

The maintenance area will consist of three areas:-

- heavy equipment workshop;
- auxiliary equipment workshop, and
- Refuelling Centre.

A purpose-built building of 540m² will consist of a five bay configuration, each of 9m wide by 12m long. Three bays (two will be fitted with inspection pits) will be for servicing of the major mobile equipment, such as the haul trucks, wheel loader and dozer. The remaining two bays will be utilized for dozer track repairs and a combination of machine shop and management offices. One central electric overhead crane capable of lifting 16 tonnes will be installed to traverse the five working bays. A 100mm thick concrete slab will be built under the workshop, with a further 30m extension of a 150mm thick concrete slab beyond the doors. Additionally, an auxiliary equipment workshop exists in close proximity to the main workshop, consisting of a purpose built building of 300m², providing four separate working areas for repair work to light vehicles, tyre handling, drill sharpening and an electrical workshop.

The main stores and spares distribution center is located within the processing plant area. A separate contained area inside the warehouse will be dedicated for storage of special lubricants and greases. In addition, a designated caged area has been demarcated for flammable products such as solvents and paints.

17.7.2. Explosives Storage

The bulk explosives facility is located away from the mining facilities, at a location to the Northeast and outside of the 500m blast boundary behind the pits and close to the waste dumps. Raw materials, such as ammonium nitrate, fuel oil and primary explosives used in the explosive manufacturing process are brought to site by road, and stored in silos at an explosives facility site until required.

A detonator magazine and small industrial explosive magazine exist as separate units situated within close proximity of the main magazine complex, but all within an enclosed security fencing.

17.8. Administration and Plant Infrastructure

17.8.1. Mining and Administration Offices

A purpose built mining office complex, of approximately 600 m², provides offices for the mine management, technicians and support services. The mining offices are open plan and allow for eleven work stations, including geology, mine planning and survey. The complex also includes a lunch room, training room and meeting room. The helipad is located in close proximity to these offices.

17.8.2. Dispatch Offices

Dispatch offices, located at the pit, similar to mining offices, cater for the shift personnel involved in the operational control of the mining operations on a shift to shift basis.

17.8.3. Mine Stores

The mine store is a steel structure, with a mezzanine floor on one side, and offices on the adjacent wall. There is lay-down area on both sides of the stores area. The mine store is serviced by a weighbridge, and receipt and dispatch office.

17.8.4. Fuel Farm and Power Generation

The fuel farm and the main power generators are located on the plant boundary fence to the North side of the stores and engineering workshops.

17.8.5. Access Control Building

All process plant personnel will be accessing the plant via the Plant Access control building. The building will have 2 x security offices, a store and a control room from where access to the plant is controlled. Cameras will also be monitored in the Control room. Workers will enter through the turn styles to get access in and out of the Plant site.

17.8.6. Plant Offices

Two office blocks have been erected for plant supervisory personnel. The first office block has 5 offices for plant management, a board room and the main plant control room. The second office has 5 offices for the plant supervisors.

17.8.7. Plant Laboratory

The plant laboratory is designed to accommodate the necessary testing of materials for the operation. The laboratory consists of a sample preparation area, fire assay laboratory, wet laboratory, balance room and store. The laboratory is used for grade control and plant optimization, and also facilitates bullion testing prior to dispatch. All laboratory civil construction works have been completed. Installation of gas and air piping system is ongoing.

17.9. Waste Disposal and Sewerage

Solid waste generated from the mine plant site, including ancillary buildings, is primarily domestic and industrial non-hazardous waste. A comprehensive waste management plan is being developed for the project. Solid waste includes:-

- refuse from construction (scrap wood, metal, concrete, etc);
- refuse from the mine (empty drums, packing materials, etc); and
- general domestic garbage from the offices and ancillary buildings (paper, refuse food, etc).

Construction debris, inert waste and used tyres are placed in designated cells and covered within the waste rock dumps. Solid domestic and industrial waste from the mine plant facilities are recycled and reused in an approved manner, where feasible. Other solid waste is placed in waste receptacles.

The installation of the plant sewerage farm has been cancelled due to the safety hazard to install the sewerage pipeline. The excavations exceed 5m deep, with side walls collapsing. To do the excavations according to safety standards is just not practical, time consuming and very costly. The design has thus been changed to septic tanks that will feed into French drains on the Plant site.

17.10. Relocation

To accommodate all displaced local residents, resettlement village of approximately 207 dwellings with schools and churches have been built.

18. Environmental Studies, Permitting, and Social or Community Impact Item 20

Namoya Mining undertook a Preliminary Assessment of the Namoya gold deposit in 2007, which included the data collection and reporting for the biophysical and social environment baseline studies. These studies were undertaken as part of an Environmental and Social Impact Assessment (ESIA) process. A stakeholder engagement process was managed and conducted by SRK Consulting South Africa Limited (SRK) from November 2007 to June 2008 as part of the original ESIA process. As part of this process, authorities and interested and affected parties (IAPs) were given the opportunity to attend public meetings and focussed meetings, submit questions and comments to the project team, and review project-related documentation. During this process draft versions of the Stakeholder Engagement Plan, Social Baseline Report, Community Development Plan, and Resettlement Action Plan were compiled.

The ESIA process was halted by Namoya Mining due to funding difficulties arising from the global economic crisis. Subsequently, Namoya Mining had appointed SLR Consulting, an independent environmental consultancy based in South Africa, to complete the ESIA and associated studies and permitting applications, for the Namoya Gold Mining Project. All previously undertaken specialist studies, inclusive of all public consultation processes, and associated outcomes have been included and addressed in the SLR Africa ESIA report.

18.1. Scope of the Review

The following scope and objectives have been defined in accordance with the requirements of NI43-101 for the status of environmental studies and permitting requirements, and potential social and/or community impacts arising from the proposed Namoya Project:-

- undertake a high level review of all environmental studies, permitting, and social and/or community impact and subsequent management planning;
- review the social and environmental impact assessment process undertaken for the project;
- review the proposed mine closure objectives and financial provision;
- review the compliance with legislative and regulatory environmental requirements taking into account the potential for future external funding, and thus being mindful of international Best Practice Guidelines (BPG) such as those as defined by the International Finance Corporation (IFC) and supported by the Equator Principles Financial Institutions (EPFI);
- the identification and discussion of potential high risk environmental and social issues from a review of the available information; and
- review all community programmes and strategies (inclusive of grievance mechanisms, potential relocation action plans, development plans, etc).

18.2. Assumptions and Limitations

The following assumptions and limitations apply herewith:-

- information contained in this section of the report will be sourced from information and data supplied by third parties that is assumed to be complete, valid and true;
- this section of the report is based on information available at the time; and
- where reference is made to legislation or other statutory provisions in this report, the original legislation or other statutory provisions will always take precedence and the reader is directed to revert to the original legislation or statutes.

18.3. Legislative Framework and Standards

The DRC Government has a developed legal framework within which mining, environmental and social aspects are managed. Inclusive within the framework are international treaties and protocols, and national acts, regulations, standards, and guidelines which address international, national, provincial and local management areas. Governmental legislative framework requires that an ESIA process, with associated specialist studies be undertaken as a precursor for granting authorisation for the proposed Namoya Project. The key in-country statutory legislation pertaining to the Namoya Gold Mining Project is the Mining Code (Law No 007/2002 of July 11, 2002) and the Mining Regulations (Decree No 038/2003 of March 2003), which implement the provisions of the Code. The Mining Code specifies the need for an Environmental Impact Study (EIS), Mitigation and Rehabilitation Plan (MRP) and an Environmental Mitigation and Management Plan for the Project (EMPP).

Statutory legislation and requirements relevant to the project include:-

- the Constitution Of The Democratic Republic Of The Congo (2005);
- the Mining Code (Law No. 007/2002) and Mining Regulations (Decree No 038/2003); and
- the Environmental Protection Act (Law No. 11/009).

Regulations pertaining to the environmental and social requirements for mining activities are established in the Mining Regulations Decree No. 038/2003 of 26 March 2003. These Regulations establish the requirements for the contents of EIA and EMPP reports. Annexures contained within the Regulations with particular focus on environmental areas are as follows:-

- Annex II: Financial surety for rehabilitation;
- Annex III: Environmental Code of Conduct for Prospectors;
- Annex VII: Mitigation and Rehabilitation Plan (MRP);
- Annex VIII: Guidelines for preparing an MRP;
- Annex IX: Guidelines for preparing an EIS and EMPP;
- Annex X: Closure measures;
- Annex XII: Classification of mining wastes and their characteristics (standards for effluents);
- Annex XII: Sensitive environments; and
- Annex XIII: Method for the measurement of noise

Additional applicable mining sectoral requirements as defined by various Acts, Regulations and National planning documentation are listed in Table 31 below.

Table 31: Additional Applicable Mining Sectoral Requirements

SECTOR	ACT, REGULATION, BY-LAW OR DOCUMENT
Water Resources	Forest Code (Law 011 2002 of 29 August 2002)
Water Resources	Decree of 6 May 1952 on lakes and river water administration
	Regulation No52/443 of 21 December 1952
	Regulation on lake and watercourse contamination and pollution of 1st July 1914
Air quality and Pollution Management	Regulation no 69-041 of 22 August 1969

SECTOR	ACT, REGULATION, BY-LAW OR DOCUMENT
Waste	Regulation 79-244 of 16 October 1997 (Amended 1995 and 1996)
	Decree No 002 of 18 March 1997
	Memorandum of Understanding between the States of the sub-region of the Congo Basin (Cameroon, CAR, DRC, Congo, Gabon, Equatorial Guinea) July 1997

18.4. International Regulatory Framework

18.4.1. Equator Principles And World Bank Group Requirements

The Equator Principles are a set of voluntary guidelines which a number of financial institutions have adopted with the intention of creating an industry standard for assessing and managing environmental and social issues in the project finance sector. These institutions are collectively known as Equator Principles Financial Institutions (EPFI). The Equator Principles are based on the policies and guidelines of the International Finance Corporation (IFC) which is the private sector development arm of the World Bank. The EPFIs have committed to not providing loans to “projects where the borrower will not or is unable to comply with their respective social and environmental policies and procedures that implement the Equator Principles”.

The Environmental and Social Impact Assessment report (ESIAR) compiled by SLR Consulting details that the Namoya Project has been previously, and is currently, privately funded. The ESIAR forms an integral component of the study, and is the point of reference from the management of environmental and social aspects and impacts. As such, the ESIAR report and its associated specialist studies have considered and implemented the requirements affiliated with the requirements of the Equator Principles and ratified EFPIs. The ten Principles are broadly defined below.

18.4.1.1. Principle 1: Review and Categorisation

Principle 1 provides that when a project is proposed for financing, the relevant Equator Principles Financial Institution (“EPFI”) shall, as part of its internal social and environmental review and due diligence, categorise such projects based on the magnitude of their potential impacts and risks in accordance with the environmental and social screening criteria of the IFC.

Proposed projects may be categorized as one of the following:

- Category A: Projects with potential significant adverse social or environmental impacts that are diverse, irreversible or unprecedented;
- Category B: Projects with potential limited adverse social or environmental impacts that are few in number, generally site specific, largely irreversible and readily addressed through mitigation measures;
- Category C: Projects with minimal or no social or environmental impacts.

In consideration of the above IFC Equator Principle categories, the Namoya Project is classified as a Category A project. Thus, the associated requirements to ensure compliance with the Equator Principles are the following:-

- compliance with all requirements relevant to Category A projects as stipulated by Principles 2 to 10;
- establishment of an Environmental and Social Management Plan;

- establishment of a prior consultation, disclosure and community engagement programme for affected communities - additionally, to ensure that consultation, disclosure and community engagement continues throughout construction and operation of the project, a grievance mechanism must be established to address and resolve community concerns and complaints (refer to Principle 6); and
- an independent review of all Category A projects is required by the Equator Principles.

18.4.1.2. Principle 2: Social and Environmental Assessment

As per principle 2, for each project assessed as being either Category A or Category B, the Project Proponent shall conduct a Social and Environmental Assessment ("Assessment") process to address, as appropriate and to the EPFI's satisfaction, the relevant social and environmental impacts and risks of the proposed project. The Assessment should also propose mitigation and management measures relevant and appropriate to the nature and scale of the proposed project.

18.4.1.3. Principle 3: Applicable Social and Environmental Standards

Principle 3 requires that, during the compilation of the ESIA, applicable IFC Performance Standards and Industry Specific EHS Guidelines ("EHS Guidelines") be identified and their requirements incorporated into the final ESIA and project design.

The relevant World Bank Guidelines contained in the Pollution Prevention and Abatement Handbook (PPAH, 1998) are:-

- Base Metal and Iron Ore Mining;
- General Environmental Guidelines
- The relevant IFC Guidelines, (www.ifc.org/enviro) which include:-
 - Environment;
 - Hazardous Materials Management;
 - Waste Management Facilities;
 - Wastewater reuse;
 - Occupational Health and Safety; and
 - Mining.

18.4.1.4. Principle 4: Action Plan and Management System

A Management Plan and Action Plan (AP) which addresses the relevant findings from the ESIA shall be drawn up and shall describe the actions needed to implement mitigation measures, corrective actions and monitoring measures necessary to manage the impacts and risks identified in the ESIA. An Environmental and Social Management Plan (ESMP) will address the management of the impacts, risks and corrective actions required to comply with the host country social and environmental laws and regulations and requirements of the applicable Performance Standards and EHS Guidelines.

18.4.1.5. **Principle 5: Consultation and Disclosure**

Consultation with interested and affected parties (I&AP) should undertake in a structured and culturally appropriate manner. The public participation process will ensure that project I&APs are provided free, prior and informed consultation and will facilitate their informed participation as a means to establish, whether a project has adequately incorporated affected communities concerns. In order to establish this, ESIA documentation and AP, or non-technical summaries thereof, will be made available to the public by the developer for a reasonable period in the relevant local language and in a culturally appropriate manner. The results of the public participation process will be documented: including and actions agreed resulting from the consultations. Disclosure will occur early in the ESIA process, before project construction commences and on an on-going basis.

18.4.1.6. **Principle 6: Grievance Mechanism**

To ensure that consultation, disclosure and community engagement continues throughout construction and operation of the project, the developer will establish a grievance mechanism as part of the Environmental and Social Management Plan which will be scaled to the risks and adverse impacts of the project. This will allow the developer to receive and facilitate resolution of concerns and grievances about the projects social and environmental performance raised by individuals or groups among project-affected communities.

The developer will inform the affected communities about the mechanism in the course of its community engagement process and ensure that the mechanism addresses concerns promptly and transparently, in a culturally appropriate manner and is readily accessible to all segments of the affected communities.

18.4.1.7. **Principle 7: Independent Review**

The MP, ESIA, AP and consultation process documentation should be reviewed by an independent social or environmental expert not directly associated with the developer.

18.4.1.8. **Principle 8: Covenant**

The following covenants must be included in the financing documentation:-

- to comply with all relevant host country social and environmental laws, regulations and permits in all material respects;
- to comply with the AP (where applicable) during construction and operation of the project in all material respects;
- to provide periodic reports to the EFPI;
- document compliance with the AP;
- provide representation of compliance with relevant local, state and host country social and environmental laws, regulations and permits; and
- to decommission the facility, where applicable and appropriate, in accordance with an agreed decommissioning plan.

18.4.1.9. Principle 9: Independent Monitoring and Reporting

To ensure on-going monitoring and reporting over the life of the loan, EPFIs will require the appointment of an independent environmental and or social expert, or require that the borrower retain qualified and experienced external experts to verify its monitoring information which would be shared with the EPFIs.

18.4.1.10. Principle 10: EPFI Reporting

Each EPFI adopting the Equator Principles commits to report publicly at least annually about its Equator Principles implementation process and experience, taking into account appropriate confidentiality considerations.

18.4.2. International Finance Corporation (IFC) Best Practice Guidelines (BPG)

The standards to which EFPI impact assessments and management plans are to be conducted and implemented are governed by the IFC Policies and Performance Standards, and the relevant Industry-specific Environmental Health and Safety Guidelines (EHS), which are updated on a regular basis.

The International Finance Corporation (IFC) BPG series forms part of the IFC's established risk management system, known as the Sustainability Framework (SF).

These principles embody socially and environmentally responsible standards of practice, and are informed by recognised and progressive international best practice principles and practices. The IFC has a total of eight Performance Standards (PS).

Performance Standard One is applicable to all projects which have environmental and social risks and impacts. The particular objectives, aspects and requirements of PS One are defined in the project concept phase. PS One provides the platform from which the remaining seven PS are applied to projects. Performance Standard Two through Eight establish objectives and requirements to avoid, minimize, and where residual impacts remain, to compensate/offset for risks and impacts to workers, affected communities, and the environment.

Table 32: IFC Performance Standards

PERFORMANCE STANDARD	SUBJECT MATTER	DESCRIPTION
1	Assessment and Management of Environmental and Social Risks and Impacts:	Requires the development of an Environmental and Social Management System (ESMS) to address the management and mitigation of risks and impacts identified, and corrective actions required. The ESMS entails a methodological approach to managing environmental and social risks and impacts in a structured way on an on-going basis. A good ESMS appropriate to the nature and scale of the project promotes sound and sustainable environmental and social performance.
2	Labour and Working Conditions	Requires the implementation of human resources policies and procedures relevant to the size and workforce of the client, and is consistent with the requirements of the Performance Standards. The pursuit of economic growth through employment creation and income generation should be accompanied by protection of the fundamental rights of workers.
3	Resource Efficiency and Pollution Prevention	Generally requires the application of technically and financially feasible resource efficiency and pollution prevention principles and techniques to avoid or minimise adverse impacts on human health and the environment. Reference should be made to the EHS guidelines or other internationally recognised sources during the evaluation and selection process.
4	Community Health, Safety, and Security	Requires identification of risks and impacts to the health and safety of Affected Communities and the proposal of mitigation measures commensurate with magnitude and nature.

PERFORMANCE STANDARD	SUBJECT MATTER	DESCRIPTION
5	Land Acquisition and Involuntary Resettlement	Requires consideration of alternative project designs to minimise or avoid physical or economic displacement and to balance environmental, social, and financial costs and benefits. Compensation for loss of assets will be provided in the event that displacement cannot be avoided.
6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Consideration of direct and indirect impacts on biodiversity and ecosystem services and identification of any significant residual impacts is required. A practice of adaptive management should be adopted to ensure that mitigation and management measures are implemented in response to changing conditions and monitoring during the project life-cycle.
7	Indigenous Peoples	Identification of Indigenous Peoples that could be affected by the project is required. Adverse impacts are to be avoided where possible, with minimisation, restoration, and/or compensation being provided when avoidance is not possible. An engagement process with Affected Communities is required as per Performance Standard 1.
8	Cultural Heritage	The client is required to comply with applicable legislation regarding the protection of cultural heritage, including implementation of the host country's obligations under the Convention Concerning the Protection of the World Cultural and Natural Heritage. Internationally recognised methods for the protection, field study, and documentation of cultural heritage are to be implemented.

18.5. International Agreements and Conventions

The DRC is signatory to various international agreements and conventions concerning both environmental and social management and protection. Key international agreements are summarised in Table 33 below.

Table 33: International Agreements and Conventions Ratified by the DRC

SECTOR	CONVENTION
Climate Change and/or Air Quality Management	United Nations Framework Convention on Climate Change (UNFCCC), 1994
	Kyoto Protocol, 1997
	Vienna Convention for the Protection of the Ozone Layer, 1985
	Montreal Protocol on Substances that Deplete the Ozone Layer, 1989
Protection and Management of Biodiversity and Protected Areas	Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar/Wetlands Convention), 1971
	Convention on the International Trade of Endangered Species of Wild Fauna and Flora (CITES), 1973
	United Nations Convention on Biological Diversity, 1992 (UNCBD)
	Cartagena Protocol on Biosafety (CPB)
	United Nations Convention to Combat Desertification, 1994 (UNCCD)
	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
	Rotterdam Convention on the Prior Informed Consent Procedure on Certain Hazardous Chemicals and Pesticides in International Trade (1998) (joint interim secretariat FAQ)
	Stockholm Convention on Persistent Organic Pollutants
	United Nations Forum on Forests (UNFF)
	Treaty on Central African Forests Commission, 2004
	Algiers convention
	The Washington Convention on International Trade in Endangered species of Wild Fauna and Flora

SECTOR	CONVENTION
	Bonn Convention on Migratory Species
Protection and management of Cultural Heritage	UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, 1970
	UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972 (World Heritage Convention)
Protection and management of Human Rights	International convention on the Prevention and Punishment of the Crime of Genocide
	International Convention on the Elimination of All Forms of Racial Discrimination (ICERD)
	International Covenant on Civil and Political Rights
	International Covenant on Economic, Social and Cultural Rights
	International Convention on the Elimination of All Forms of Discrimination Against Women
	Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment
	Convention on the Rights of the Child

18.6. Summary of the Environmental Studies Undertaken (NI 20a i)

18.6.1. Environmental and Social Impact Assessment (ESIA)

SLR Africa have compiled an ESIA and associated studies for the Namoya Gold Mining Project.

The document presents the project plan as defined by Namoya Mining, results of specialist work undertaken for the project, identifies and assesses potential impacts on the receiving environment in both the unmitigated and mitigated scenarios, including cumulative impacts, and identifies measures together with monitoring programmes to monitor and mitigate potential impacts.

Annex IX of the Mining Regulations provides detailed guidelines and requirements for the preparation of an Environmental Impact Statement (EIS). The applicant for a Mining Licence must compile the EIS and EMPP according to the form and content defined in the Mining Regulations and the annexes to the Regulations. The EIS must include the following specialist studies, programmes and plans:-

- A detailed description of the project, inclusive of:-
 - the Nature and extent of the mineral deposit;
 - the mining methods, volumes expected, quantities of overburden to be removed, location of ore stockpile sites, explosives to be used, blasting details, mining equipment schedules;
 - associated site clearance works, including removal of vegetation, cut and fill, blasting, schedule of equipment etc.;
 - proposed methods of mineral treatment and processing, including the basic processing method, location of the plant(s), types of equipment and plant to be used, chemical agents, hydrocarbons and lubricants, all emissions and effluents, solid and liquid waste disposal, etc.;
 - proposed mine dewatering programme, including nature and number of pumps, volumes to be pumped, quality of the water to be pumped from underground, and possible utilisation of pumped water and the discharge of such water;
 -

- proposed effluent treatment programme, including volumes, sources and description of the effluent discharge sites, whether into natural watercourses (aquatic environment) or constructed effluent dams or evaporation ponds;
 - estimated water consumption: all points of demand, volumes, sources of freshwater, recycling opportunities, clean storm water runoff management, as well as a water demand management plan aimed at reducing the amount of freshwater consumed and maximising the amount of recycling and reuse of water on the mine;
 - a plan showing the location of all mine infrastructure, such as the process plant, ore stockpile sites, conveyors, compressors, smoke stacks, water treatment plants, workshops and garages, storage areas for chemicals and explosives, all pipelines, power lines, substations, mine haul roads and mineral transfer routes, waste disposal sites, storm water management systems, sewerage pipes and treatment plant, tailings and slimes dams, final effluent treatment and disposal infrastructure, and all underground structures; and
 - the geochemistry of the ore and waste products, especially those that contain sulphides and other acid-producing minerals.
- a detailed environmental description of the mining rights area and surroundings. Where possible, the ESIA is mandated to incorporate existing plans and information. Where there is insufficient data, new studies must be undertaken, referencing methodologies as described in the Regulations and Annex IX of the Mining Code. Environmental studies must be inclusive of the following:-
 - topography, geology and soil utilisation;
 - climate and air quality;
 - water resources;
 - hydrogeology, including modelling of contaminants and flows;
 - terrestrial fauna and birds, including habitat on site and migration patterns;
 - vegetation mapping with identification of different ecosystems and of rare and protected species; and
 - identification of sensitive environments on and adjacent to the site
 - socio-economic studies undertaken and associated descriptions must be inclusive of the following:-
 - identification of all settlements on and around the site, including the local government authorities;
 - sources of income of the local communities;
 - demographic profile of all affected parties;
 - current levels and sectors of employment; and
 - tracks and paths used by the local communities through the mining area.
 - impact assessment scope and methodology for the ESIA is illustrated in Annex IX of the Mining Code. The Mining Code requires that each impact must be evaluated in terms of:-

- the intensity and scale of the impact, based on the degree of environmental perturbation, environmental sensitivity, vulnerability, uniqueness or rarity of the component being affected;
- the spatial extent of the impact;
- the duration of the impact and its reversibility;
- the frequency of the impact and its probability of occurrence;
- the level of uncertainty or confidence in the prediction;
- benefits for the affected parties and risks to the safety and wellbeing of these communities; and
- the cumulative effects of the proposed development and others in the vicinity (Walmsley, 2012)

The ESIA compiled for the proposed Namoya Project included an appropriate set of specialist studies covering the social, economic and biophysical aspects of the project, as per the legislative in-country requirements. Various alternatives have been assessed during the ESIA process, inclusive of project location/alternative site, mining method, processing method, location of project surface infrastructure, and project services.

Namoya Mining has undertaken an extensive public participation process for the Namoya Project, with the stakeholder engagement process managed and conducted by SRK from November 2007 to June 2008. In this regard, a Stakeholder Engagement Plan (SEP) was compiled in 2008 by SRK. Prior to the formalisation of stakeholder engagement activities and the involvement of SRK in developing a formal stakeholder engagement plan, Namoya Mining engaged informally with various stakeholders. Following the involvement with SRK, more formal engagement activities took place with authorities and local communities through communication structures which were implemented to facilitate the process.

Key stakeholders who have been identified and engaged are inclusive of the following:-

- the local communities (directly and indirectly affected, women, farmers) living within the exploitation permit area, these include Kamikola, Kimbaseke, Mulanda, Sous Marin, Champ Paddy, Kamikola, and Mwendamboko;
- an artisanal miners organisation who operate within the project site;
- the DRC government agencies at provincial and local level; and
- local village chiefs.

A Resettlement Action Plan (RAP) has been developed for the affected communities, with the concurrent establishment of two representative working groups, constituting of various government institutions and community representatives. These two bodies form the basis of the communication structures used to disseminate information about the project and resettlement requirements to the local communities.

Issues that were raised by authorities and IAPs during stakeholder engagement processes include community health concerns surrounding the impact of cyanide and other noxious materials used by the project, the impact of explosive detonation on people's emotional wellbeing as well as questions about medical services made available by the project. There was substantial focus from communities regarding the potential location for the resettlement village. Alternatives suggested include various potential locations and requirements for the resettlement village, with requests of the option of cash compensation instead of resettlement. The relocation of communities requires substantial engagement with the identified I&APs. The community has now been resettled once all issues were addressed.

There has been extensive consultation which included relevant stakeholders and affected communities from the initiation of engagement. It is also evident that, in general, comments and concerns raised by stakeholders have been given consideration and are addressed in the revised EMPP. Based on a review of the documentation provided, it is evident that Namoya has taken appropriate steps to address all aspects as applicable with in-country legislative requirements, and also of international BPG.

The ESIA impact calculation methodology is in accordance with the requirements as stipulated by the Mining Code, and is inclusive of cumulative impacts, degree of loss of irreplaceable resources and reversibility of impacts for each of the identified impacts. Additionally, the ESIA provides an adequate description of potential impacts associated with the project activities and categorised pre- and post-mitigation significance.

The Environmental Management Plan of the Project (EMPP) and the Mitigation and Rehabilitation Plan (MRP) compiled for the Namoya Project illustrates the management commitments that Namoya Mining will implement to mitigate negative impacts and enhance positive impacts identified in the impact assessment phase. The ESIA, through the documented mitigation and rehabilitation measures programme, commits Namoya Mining to maintain compliance to international and in-country practice requirements. These commitments are legally binding, and will require monitoring to a) ensure that they are being implemented and b) that they are effective in mitigating potential impacts on the environment, socio-economic conditions of third parties and heritage/cultural aspects. This will be done through regular internal auditing by mine personnel. It is recommended that external, independent audits are performed to ensure the continuation of adherence to both commitments as per the ESIA, and various legislative and BPG requirements.

Significant Impacts identified which require monitoring programmes include:-

- hazardous excavations and structures;
- erosion and slope stability;
- physical destruction and general disturbance of terrestrial and aquatic biodiversity
- pollution of surface water resources;
- contamination of groundwater;
- dewatering impacts on third party users
- increase in air pollution;
- increase in noise levels;
- blasting hazards; and
- social and health-related changes.

The ESIA commits to the submission of annual environmental reports to the Directorate for the Protection of the Mining Environment (DPEM) within 100 days of the 1 year anniversary of the approved ESIA report. Included within the report will be an assessment of general compliance and effectiveness of the ESIA and EMPP, together with monitoring results and reports.

The ESIA additionally commits to an ESIA and EMPP performance audit by a government accredited bureau at a minimum of every 2 years. Compliance with applicable legislation and the conditions of the ESIA, EMPP and mining permit will be subject of the external audit.

An ESIA/EMPP review will be submitted every five years to the DPEM, or in accordance with the following conditions/activities:-

- renewal of the mining permits;
- when major changes in mining activities justify its review; and

- when an inspection or audit report demonstrates that the rehabilitation and mitigation measures presented are no longer applicable as prescribed and there is a major negative impact on the environment.

The EMP includes an environmental awareness plan and training, Emergency Response Plan, and various implementation plans, as required by the Best Practice. Although broad at this stage of project development, the principles and objectives of the action plans are generally well conceived and comply with international standards of best practice.

18.6.2. Environmental Management System

Environmental Management systems (EMS), if implemented and maintained properly, serve as highly effective tools for management of environmental impacts. Namoya Project is currently developing an EMS to identify, report, investigate, address and close out environmental incidents; however this is not yet in place. This EMS has not been reviewed by Venmyn Deloitte.

18.7. Potential environmental issues (NI 20a ii)

The findings of the ESIA undertaken for Namoya have indicated that the potential exists for significant negative impacts to occur (in the unmitigated scenario in particular) on the bio-physical, cultural and socio-economic environments both on the project site and in the surrounding area. With mitigation some of the identified potential impacts can be prevented or reduced to acceptable levels. There are, however, impacts which will require on-going monitoring to ensure that the recommended mitigation measures are implemented and that they are effective in mitigating the impacts to acceptable levels. In this regard, key negative impacts that require close attention include the loss of access to artisanal mining areas, loss of soil resources and land capability through pollution, general disturbance to terrestrial biodiversity and impacts on aquatic biodiversity, safety-related impacts associated with blasting activities and road traffic and social issues associated with impacts on health and the influx of people into the exploitation permit area.

Of particular significance of the ESIA is that of the potential cumulative effects of noise, air quality and water-related impacts as a result of the project, and the resulting impact upon the nearby Sous Marin village. SLR Africa has recommended that Namoya Mining continue to engage with the local communities, and in particular Sous Marin, through the established communication structures to address any community concerns as they are raised through the implementation of the recommended mitigation measures, as well as any other additional measures which may be required. These requirements, and associated grievance management mechanisms, need to be continually addressed and developed throughout the life of the project.

18.8. Requirements and plans for waste and tailings disposal (NI 20b)

18.8.1. Operations

All of the waste material from the pit excavation area will be hauled to the waste rock stockpile, which is planned to be located north east of the open pits.

The design parameters for the waste rock stockpile include side slopes of 35 degrees, a maximum height of 15m and a berm width of 21m (including a battering berm width of 10m). No lining for the waste rock stockpile is proposed. Where possible, the excavated pits will be backfilled so as to limit potential impacts in terms of safety hazards, visual receptors and biodiversity, as well as minimise transport costs associated with the transportation of the waste rock and reduce the footprint of the final waste rock stockpile. In the areas where backfilling will be possible, on completion of the backfilling of the mined out areas the area will be profiled in such a manner that steep slopes are avoided to assist with re-vegetation and reduce risk of erosion and covered, where possible, with soils or soil forming materials.

The tailings from the CIL plant will be pumped to the tailings management facility (TMF). The intention is to design the TMF to accommodate the current project with the possibility of expansion for a potential second phase of the project.

SLR Africa has committed to comply with current DRC legislation requirements for TMF design, as outlined in Appendix XIV of the Mining Regulations. Specific reference has been made to:-

- TMF side slope stability in terms of prescribed seismic coefficients and factors of safety that are required for different seismic areas.
- the flood sizes that must be adopted for design purposes.
- design crest widths for a TMF depending on its height.

The TMF is based on a containment wall construction with penstock and a return water dam. The return water dam will have two pumps for pumping water back to the CIL plant for reuse within the plant circuit.

18.8.2. Post mine closure

Namoya Mining has committed to, following closure of operations, that waste and tailings disposal infrastructure will be decommissioned and rehabilitated in a manner that does not present a long term safety and/or stability risk. All mineralised waste facilities, open pits and stockpiles will be closed in a manner to ensure that stability and related safety risks to third parties and animals are addressed. These issues will be monitored according to a schedule that is deemed relevant to the type of facility by a professional engineer. Furthermore, these structures will be rehabilitated and closed in a manner that they present land forms that have similar safety attributes to the natural land forms in the area. The particular frequency and methods for monitoring have not been specified in detail.

As per the recommendations of the stormwater management plant, pollution control dams for the 'very dirty catchments' will be sized to contain runoff generated by the catchment during a 1:100 year 24 hour duration event, as well as a wet month's rainfall. An incident management system, including procedures and training, for dealing with incidents, has been described in principle, but not in detail. This will need to be further developed in the feasibility phase of the proposed Namoya Project, prior to the commencement of any mining activities.

The designs of any permanent and potentially polluting structures (inclusive of the tailings dam) will take account of the requirements for long term soil pollution prevention, land function and confirmatory monitoring. Major spillage incidents will be handled in accordance with the Namoya Mining emergency response procedure. Major spillage incidents will be reported to and appropriate remedial measures will be implemented in consultation with the relevant regulatory authorities.

18.9. Site monitoring plans (NI 20b)

18.9.1. Operations

The EMPP includes provision for monitoring of identified significant environmental and social aspects during construction and operational phases including:-

- hazardous excavations and structures;
- erosion and slope stability;
- physical destruction and general disturbance of terrestrial and aquatic biodiversity
- pollution of surface water resources;
- contamination of groundwater;
- dewatering impacts on third party users
- increase in air pollution;
- increase in noise levels;
- blasting hazards; and

- social and health-related changes.

The EMP makes provision for internal and external auditing. In terms of internal review there is provision for an EMS working group, management & review meetings and annual internal audits, with a defined structure for implementation on a day to day basis on-site, and roles and responsibilities.

18.9.2. Post Mine Closure

The EMPP includes provision for monitoring of identified significant environmental and social aspects during closure and post closure phases including:-

- management and monitoring of hazardous excavations and infrastructure;
- management and monitoring of loss of soil resources and land capability through pollution;
- management and monitoring of loss of soil resources and land capability through physical disturbance;
- management and monitoring of physical destruction of biodiversity;
- management and monitoring of general disturbance of biodiversity;
- management and monitoring of aquatic biodiversity;
- management and monitoring of pollution of water resources;
- management and monitoring of alteration of drainage lines;
- management and monitoring of contamination of groundwater;
- management and monitoring of lowering of groundwater level;
- management and monitoring of noise;
- management and monitoring of air quality;
- management and monitoring of visual impacts;
- management and monitoring of economic impact;
- management and monitoring of potential loss of or reduced access to agricultural land;
- management and monitoring of potential loss of access to artisanal mining areas;
- management and monitoring of potential health impacts; and
- management and monitoring of potential loss of income and decline in local economy at closure.

18.10. Water Management Plan (NI 20b)

18.10.1. Operations

Monitoring of surface water quality will take place bi-annually (one wetter season round and one drier season round) throughout the LoM of the Namoya Project.

The DRC Mining Code establishes three key management principles that will influence project planning and development:-

- Encouragement of the reduction of fresh water use for mining activities through re-use, reduced process water demands, and elimination of water in certain parts of the process;
- Encouragement of the storage and treatment of wastewaters so as to minimise any water pollution risk, that no stream can be used for partial or total wastewater treatment purposes, and that no wastewater dilution is allowed; and

- Encouragement of the separation of wastewaters or contaminated waters, particularly with respect to segregating the drainage from risk zones, and those potentially contaminated waters be treated before being discharged at a discharge point.

SLR Africa has prepared a storm water management plan for the Namoya Project using, the International Finance Corporation (IFC) guidelines and the South African regulations contained in Government Notice 704, as specific guidelines on the management of stormwater are not available within the DRC. The following principles have been incorporated into the SWMP:-

- stormwater will be separated from process and sanitary wastewater streams in order to reduce the volume of wastewater to be treated prior to discharge;
- surface runoff from process areas or potential sources of contamination will be prevented. Where this approach is not practical, runoff from process and storage areas will be segregated from potentially less contaminated runoff;
- runoff from areas without potential sources of contamination will be minimized and peak discharge rates reduced;
- where stormwater treatment is deemed necessary to protect the quality of receiving water bodies, priority will be given to managing and treating the first flush of stormwater runoff where the majority of potential contaminants tend to be present;
- when water quality criteria allow, stormwater will be managed as a resource, either for groundwater recharge or for meeting water needs at the facility;
- oil water separators and grease traps will be installed and maintained as appropriate at refuelling facilities, workshops, parking areas, fuel storage and containment areas; and
- sludge from stormwater catchments or collection and treatment systems may contain elevated levels of pollutants and will be disposed in compliance with local regulatory requirements, in the absence of which disposal has to be consistent with protection of public health and safety, and conservation and long term sustainability of water and land.

Additional SWMP aspects included for consideration are:-

- sediment control measures;
- clean and dirty water classification system;
- inclusion of various stormwater management principles; and
- a site-wide water balance.

The ESIA commits the Namoya Project to updating the site-wide water balance on a monthly basis from recorded flow measurements and production figures by an appropriately qualified person. The water balance will be used to check on an on-going basis that the capacity of the pollution control dams and stormwater impoundments is adequate. The water balance model will also be updated every 2 years to take account of the monitoring data and any significant changes in the water circuit.

18.10.2. Post mine closure

Monitoring of surface water quality will take place bi-annually (one wetter season round and one drier season round) for 2 years following closure. Furthermore, any other discharges from the mining operation will be monitored in accordance to the relevant DRC Mining Effluent Standards, and WHO Drinking-Water Guidelines. Future water quality monitoring will be compared against the baseline water quality (as detailed in the specialist studies undertaken as part of the ESIA) and where any parameters show an exceedance of the standards or an increasing trend above the baseline, which may be attributable to mining, a review of site activities will be undertaken to identify the source of pollution and remedial measures should be implemented to ensure that impacts are minimised.

18.11. Project Permitting Requirements (NI20c i)

The amended EPA does not specify the nature or terminology of the environmental authorisations that may be issued in terms of the EPA or associated decrees (Walmsley, 2012).

In terms of the Mining Code, a Prospecting Certificate is required for all prospecting for minerals in the DRC. According to Article 20 of the Mining Code, the holder of a Prospecting Certificate is required to comply with all applicable regulations on the protection of the environment. Article 5 of the Mining Code specifies that exploration in the DRC may be undertaken by any applicant, under the condition that there is a valid Mining or Quarry Exploitation Licence, granted by the relevant government entity.

Licenses are granted subject to the presentation of completed environmental and social studies, inclusive of an environmental plan (comprising an EIS and EMPP/MRP).

There are specific areas within the DRC which have been identified as environmentally sensitive, and in which the Minister has prohibited exploration and mining activities.

The environmental quality standards applicable to mining operations are provided in Annex IX of the Mining Code, together with details on monitoring frequency, monitoring locations, calculations and measurement techniques.

The environmental licensing procedural framework is currently illustrated within the Mining Code. With the exception of the temporary exploitation of quarries, all mining operations require an EIS and an EMPP to be approved before operations can commence, in accordance with the provisions of Chapter V of the Mining Regulations.

The EIS and the EMPP must be submitted in conjunction with the mining right application, and is approved by the competent authority as a condition of granting the mining right.

18.12. Status of permit applications (NI 20 c ii)

As Namoya is operating under an inherited Mining Permit, Namoya is not in a position to apply for permits. The ESIA/ESMP is considered as an addendum to the Environmental Adjustment Plan (or say EIE) that was already submitted with the government. Namoya has a mining permit/license to operate. It has updated its Environmental Adjustment Plan and has completed all the social studies relevant for resettlement and community development.

18.13. Requirements for post-performance or reclamation bonds (NI 20c iii)

Annex II of the Decree No. 038/2003 of 26 March 2003 establish the requirements for financial surety for rehabilitation.

The calculation of the financial closure liability associated with the Namoya Project at Life of Mine (LOM), has been based on the 2002 DRC Mining Convention and related Annexes to the Mining Regulations as well as practices commonly used in the gold mining industry, which included:-

- A review DRC legislation (Mining Regulations and Annexes - for instance Annex II - Financial Security for Rehab; Annex X - Closure measures for sites of Operations; Annex VIII - Guidelines for the compilation of the Mitigation and Rehabilitation Plan);
- Identification of the on-site areas concerned by rehabilitation from the LOM Plan;

- Determination of the closure components associated with the mine;
- Identification of the potential areas of disturbance; and
- Determination of the unit rates for the associated closure components.

The closure liability for the Namoya Project has been estimated by Namoya Mining as USD15,905,840 based on the requirements of the DRC Mining Convention and related Annexes of the Mining Regulations.

Unit costs used in the calculation of the closure liabilities were based on the Company's historical costs incurred to date as well as budgeted costs for similar activities including equipment usage unit costs. Based on the above, the Company generally applied unit costs on a 'per hectare' basis or 'per m²' basis. The Company also factored into its costs the labour and earthworks equipment required to facilitate the rehabilitation of the areas listed in Section 18.16.1.

It should be noted that actual closure costs at the Namoya Project may differ depending on additional variables which may arise at the time of mine closure, such as contractor availability for demolition projects at the time they are conducted.

Namoya Mining will follow Best Practice and conduct an annual update of closure costs.

18.14. Potential social or community related requirements and plans for the project (NI 20d i)

18.14.1. Community Economic Management

The following commitments have been made for the management of changes in community economic conditions:-

- develop and implement a fair and transparent human rights policy which specifically addresses labour, working condition and recruitment principles, which complies with DRC law, IFC PS 2: Labour and Working Conditions, and ILO ;
- communicate the human rights policy widely and appropriately. Ensure support for the policy with local stakeholders;
- establish and maintain an employment committee;
- ensure contractors abide by the labour and recruitment policy. Attempt comparable employment conditions for Namoya employees and contractor employees;
- ensure training and development of employees is taking place;
- prioritise households directly affected by loss of livelihood assets and resettlement for employment (This is currently being done). With respect to artisanal miners, Namoya Mining must ensure that on-going support and capacity building is provided for the project affected artisanal miners. In this regard, such interventions can be directed at the provincial mining officials responsible for organising and overseeing the artisanal mining cooperative at Matete, where the artisanal miners have been relocated;
- provide opportunities for meaningful employment and promotion for women and vulnerable groups (a list of which should be prepared as part of the implementation of the RAP);
- develop and implement a capacity-building programme to increase the local pool of skilled labour;
- develop a working relationship with local trade unions;
- provide assistance (community workshops/training) with household budgeting and sustainable investment to enhance the positive effect of earning an income, establishment of bank accounts and depositing wages into these accounts, the encouragement of women to co-manage household budgets;

- development and implementation of an expatriate replacement plan (where expatriate employees are gradually replaced by local people);
- facilitate a safe and secure environment to enhance economic enterprises to invest in the area, optimising local small business development;
- develop and operationalize a local procurement policy and communicate to all local stakeholders;
- conduct a skills audit in terms of local business/ technical –artisanal skills;
- develop a register of existing small enterprises as part of the implementation of the RAP (in terms of businesses that will need to be resettled);
- encourage and build capacity in local enterprises to become suppliers to Namoya Mine;
- provide a business skills training programmes;
- establish a fund for small business development prioritising women and vulnerable groups;
- collaborate with local NGOs and CSOs in terms of training and capacity building (this is currently taking place);
- optimise skills and knowledge transfer to the community;
- cast technical, work related safety measures within broader safety principles in the health and safety training workshops;
- include community representatives in health and safety workshops;
- encourage employees to transfer health and safety measures acquired at the training to their everyday lives;
- run health and safety workshops in schools and with women groups;
- display health and safety materials (appropriate posters) used at the Project site in public places;
- implement HIV/AIDS awareness programmes in community; and
- improvement of the infrastructure and social services for the mining operation, the RAP (see Appendix I) and the Community Development Plan, all of which include building of roads, clinics and schools by Namoya Mining, and which are based on thorough needs assessment will have positive impacts on the local community's access to social infrastructure and services.

18.14.2. Establishment of a Community Relations Department

The Community Relations Department will be established with the purpose of monitoring potential problems and address them timeously through a dedicated community structure. Data from stakeholder engagement and the grievance mechanism will be regularly consulted to monitor problems. The effectiveness of social impact management measures will be monitored via the following mechanisms:-

- the Resettlement Working Group;
- the Community Resettlement Forum;
- the Banro Foundation Community Committee;
- collaboration with local security forces;
- collaboration and interaction with NGOs;
- a grievance mechanism; and
- regular contact with traditional leaders of all local communities.

18.14.3. Community Health Monitoring Plan

The proposed community health monitoring plan (HMP) will monitor potential health issues resulting from project-related activities and address them timeously through the implementation of health mitigation and management programs. The HMP has been structured to include a broad set of cross-sectional and longitudinal key health performance indicators to support the monitoring and evaluation of potential health impacts. This monitoring needs to be linked to specific interventions and local development initiatives included as part of the Community Development Plan.

18.14.4. Management plan - resettlement of communities

Namoya Mining has committed to the following management plans focusing on community resettlement:-

- affected social infrastructure will be identified as well as their service area (as per the updated RAP);
- lost social infrastructure will be replaced in appropriate locations (where the original users have access to them);
- routes used by affected people to social resources will be assessed and alternative routes, fulfilling the functions lost, will be created (e.g. TMF bypass road); and
- women will be consulted in terms of safety of the new routes.

A strategy to monitor the impacts of altered access routes on the use of social infrastructure will be developed using indicators of the census conducted in terms of the updated RAP.

18.15. Status of any Negotiations or Agreements with Local Communities (NI 20d ii)

18.15.1. Community Relocation Action Plan

During the original stakeholder engagement process conducted by SRK in 2008, a census and assets inventory was conducted to facilitate resettlement planning, implementation and monitoring. Following the recommencement of the project, the Namoya Community Relations department employed the same census team to update the collected statistical information for the affected populations

The Relocation Action Plan (RAP) compiled for the Namoya Project outlines the procedure which was followed for the resettlement planning process at Namoya, including the selection of the resettlement site. The selection of the proposed resettlement site was discussed at various meetings during the original stakeholder consultation process held in 2008. The process for the final selection of resettlement site was as follows:-

- presentation to communities of the alternative resettlement sites, and initial discussion of their acceptability;
- further discussion with Social Repositioning Working Group (SRWG);
- pre-selection of best candidate sites;
- visits to pre-selected resettlement sites with the SRWG;
- selection of preferred sites in collaboration with the SRWG; and
- confirmation by Namoya Mining that no gold reserves coincide with the preferred sites.

It was initially proposed that two sites, one rural site, located to the south-west of the mine site (Sous Marin), and a more formal urban site, located within the vicinity of Kimbaseke (located outside of the exploitation permit area), be established. Subsequently, the Chef De Secteur decided that all resettlement should be within the town on Kimbaseke. This was vigorously opposed by members of the Community Social Repositioning Forum (CSRF) who preferred that the rural/urban options be retained. At CSRF meetings held in 2011, the issue was explored further, where the Chef de Secteur still advocated the Kimbaseke option. However, the “Mulanda Village extension” option was ultimately chosen by the CSRF membership as the preferred resettlement site.

Following the completion of the updated census, the resettlement village was constructed. The construction of the resettlement village was completed in March 2013. Some of the affected parties have been resettled in line with the RAP.

In terms of the DRC Mining Code, people who will lose their assets and/or land as a result of the project should be compensated for the loss of assets and use of the agricultural land at their value plus 50%. However cash-only compensation is considered a risk in terms of IFC Performance Standard 5. As such, Namoya Mining has the legal (if risky) option to make use of cash payment for structures in addition to, or in lieu of, resettlement packages. As outlined in the RAP, the resettlement package will include a number of additional benefits that are not represented in the cash compensation package.

These additional, non-monetary benefits are intended to mitigate resettlement risks recognised under IFC Performance Standard 5 but not DRC law. Furthermore, as part of the resettlement planning process, a compensation sub-committee of the Community Social Repositioning Forum was established in August 2011 (under the chairmanship of the Chef de Secteur). The sub-committee drew up a detailed set of cash compensation rates covering all commodities and events which would likely require cash compensation.

18.16. Mine closure

(Item 20 d e)

18.16.1. Requirements

Annex VII and X of the Decree No. 038/2003 of 26 March 2003 establish the requirements for mitigation and rehabilitation planning, and closure measures for proposed mining projects.

The current areas of disturbance at the Namoya Project which will be considered for closure and rehabilitation are as follows:

- tailings management facility (TMF)
- process plant;
- pilot crusher;
- camps:-
 - construction camp;
 - exploration camp;
- heap leach pads;
- heap leach ponds;
- topsoil;
- stockpiles; and
- pits.

18.16.2. Closure Programme

The Company is committed to adhering to in-country legislative requirements for closure, and also details particular closure objectives for various site aspects.

Aspects considered within the closure cost estimate compiled by the Company include:-

- Rehabilitation of Pits, stockpiles areas;
- Demolition of pilot crushers;
- Rehabilitation of TMF, waste dump, heap leach pads, ponds;
- Demolition of Explosive Magazine;
- Rehabilitation/demolition of Camps (Exploration and Development); and
- Process Plant Site - dismantling /demolition of steel buildings and structures.

Maintenance and aftercare is planned for approximately 2 years after mine production ceases, and covers:-

- annually fertilising of rehabilitated areas; and
- monitoring of surface and subsurface water quality surface.

18.16.3. Costing

The financial requirements calculated for the decommissioning, closure and post-closure rehabilitation of the Namoya Project site have been detailed in section 18.13.

19. Capital and Operating Costs Item 21

The Namoya Project capital and operational expenditures are summarised in Table 34 and Table 35.

Table 34: Summary Capex for the Namoya Project

CAPITAL EXPENDITURE		TOTAL LOM	YEAR 1	YEAR 2	YEAR 3
Ongoing Capex	(USDm)	(43.93)	(4.20)	(5.41)	(5.27)
New Capital	(USDm)	(17.63)	(5.79)	(4.32)	(6.56)
Sustaining Capital (Pad Expansions, Tailings Dam Lifts)	(USDm)	(6.87)	(0.54)	(0.58)	(0.75)
Total	(USDm)	(68.43)	(10.54)	(10.32)	(12.59)
Average Capex per Oz	(USD)	(60.93)			

Table 35 : Summary Opex for the Namoya Project

OPERATING EXPENDITURE		TOTAL LOM	YEAR 1	YEAR 2	YEAR 3
Mining Costs	(USDm)	(440.64)	(25.38)	(70.22)	(57.02)
Processing Costs	(USDm)	(253.25)	(28.21)	(22.76)	(29.59)
General and Administration	(USDm)	(148.66)	(26.39)	(11.20)	(14.57)
Sales	(USDm)	(36.06)	(4.08)	(4.05)	(4.25)
Total	(USDm)	(878.60)	(138.65)	(142.21)	(149.59)
Average Opex per Oz	(USD)	(782.29)	(669.14)	(856.08)	(794.84)

20. Economic Analysis Item 22

The Economic Analysis of the Namoya Project was undertaken utilising the Market Approach and Discounted Cash Flow (DCF) methodologies in review of management's analysis. The Economic Analysis was based on the results of the studies completed by the contributing specialist consultants with the aim of determining the validity of management's estimated value of the Namoya Project. The Valuation Model under review was sourced from Namoya Mining's management.

20.1. Discounted Cash Flow Economic Analysis

To this end, Venmyn Deloitte assessed assumptions and technical parameters used by management and prepared a discounted cash flow (DCF) model accordingly. The economic and technical input parameters used in the DCF models are summarised in Table 36 and Table 37, respectively. The Capex and Opex for the mining and processing is summarised in Table 38 and Table 39.

Table 36: Economic Input Parameters for the Namoya Project Economic Analysis

Description	Unit	Constant	Year 1	Year 2	Year 3
Tax Rate	%				
Discount Rate	%	10			
Gold Price*	USD/Oz	-	1,200	1,200	1,200
Processing Limit*	Tonnes	-	1,878,057	2,000,000	2,600,000

*Constant at last given amount
Source: Namoya Management

Table 37: Technical Input Parameters for the Namoya Project Economic Analysis

DESCRIPTION	UNIT	TOTAL
MINING		
High Grade ROM	Tonnes	19,254,476
Grade Mined	g/t	1.97
Low Grade ROM	Tonnes	4,217,022
Grade Mined	g/t	0.73
Total Ore Mined	Tonnes	23,471,498
Grade Mined	g/t	1.74
Waste Mined	Tonnes	95,485,394
Total Material Mined	Tonnes	118,956,892
Strip Ratio	t/t	4.07
PROCESSING		
Plant Feed	Tonnes	23,702,477
Head Grade	g/t	1.75
Recovery	%	84%
Recovered Gold	Oz	1,123,019

Table 38: Capital Expenditure for Mining and Processing

CAPITAL EXPENDITURE			Year 1	Year 2	Year 3
		LOM			
Ongoing Capex	(USDm)	(43.93)	(4.20)	(5.41)	(5.27)
New Capital	(USDm)	(17.63)	(5.79)	(4.32)	(6.56)
Sustaining Capital (Pad Expansions, Tailings Dam Lifts)	(USDm)	(6.87)	(0.54)	(0.58)	(0.75)
Total	(USDm)	(68.43)	(10.54)	(10.32)	(12.59)
Average Capex per Oz	(USD)	(60.93)			

Source: Namoya Mining 2013

The Namoya Project is exempt from corporate tax with respect to the currently defined LoM. The processing limit is determined by a ramp up that reaches maximum capacity at 2.6 million tonnes. The discounted cash flow model assumed no inflation on unit costs and increases and decreases were applied where material changes were evident. The gold price was set at USD1,200/Oz throughout the project lifetime. No contingencies or allowances were made in the DCF models.

Table 39: Operating Expenditure for Mining and Processing

Description	Unit	Year 1	Year 2	Year 3	Year 4
MINING COSTS					
Ore mining	USD/Tonne	4.06	4.06	3.45	3.45
Waste mining	USD/Tonne	3.72	3.72	3.16	3.16
Grade Control	USD/Tonne	0.24	0.13	0.13	0.13
Rehab mining waste dumps	USD/Tonne	0.3	0.3	0.3	0.3
PROCESSING COSTS					
Plant	USD/Tonne	6.82	3.99	3.99	3.99
Power	USD/Tonne	4.82	5.42	5.42	4.07
Engineering & Maintenance	USD/Tonne	3.01	1.61	1.61	1.61
Plant Assay	USD/Tonne	0.36	0.36	0.36	0.36
GENERAL AND ADMINISTRATION					
Infrastructure, Overheads and Sundries	USD/Tonne	14.05	5.60	5.60	5.60
SALES					
Refinery and Shipment	USD/Tonne	3.44	3.44	3.44	3.44
Government Royalty	USD/Tonne	11.63	11.16	11.16	11.16
Management Fee (Toronto)	USD/Tonne	5.98	5.98	5.98	5.98
Management Fee (Banro Congo Mining)	USD/Tonne	11.48	11.48	11.48	11.48
Total					
Average Opex per Oz	(USD)	(669.14)	(856.08)	(794.84)	

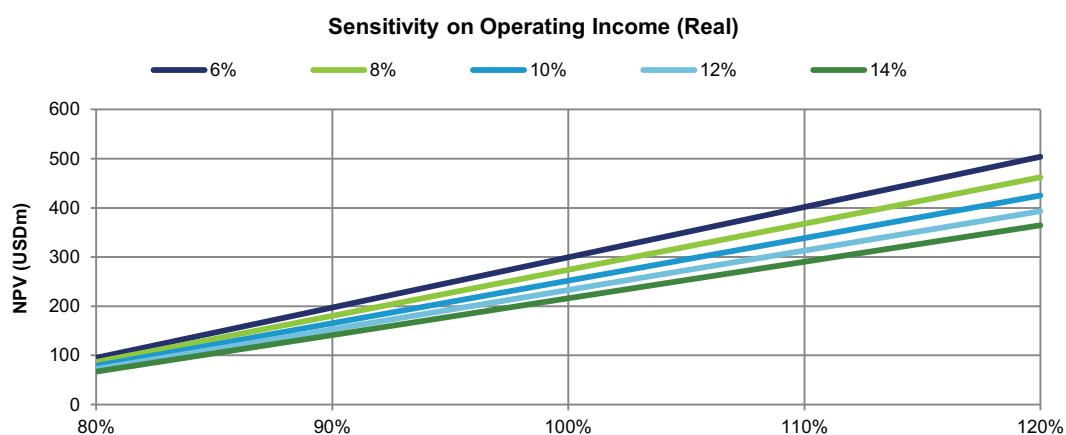
*Constant at last given amount

The production schedule took into account that both higher grades and lower grades of ore will be mined and processed at different stages over the project lifetime. The feed to the processing plant will be determined by the processing limit where the higher grade ore will be processed first and any excess ore stockpiled. All the higher grade ore is expected to be processed by Year 8 at which stage the lower grade stockpile will form part of the feed to the processing plant. By Year 9 solely the lower grade ore will be processed and is expected to be finished by Year 10. The total expected recovered gold over the project lifetime amounts to approximately 1,123,019Oz.

The Economic Analysis at a real 10% discount rate and at a constant gold price of USD1,200/Oz resulted in a Net Present Value of USD252m. Figure 32, Figure 33 and Figure 34 illustrate the sensitivity of the NPV to changes in the discount rate and the operating income, operating expenditure and capital expenditure.

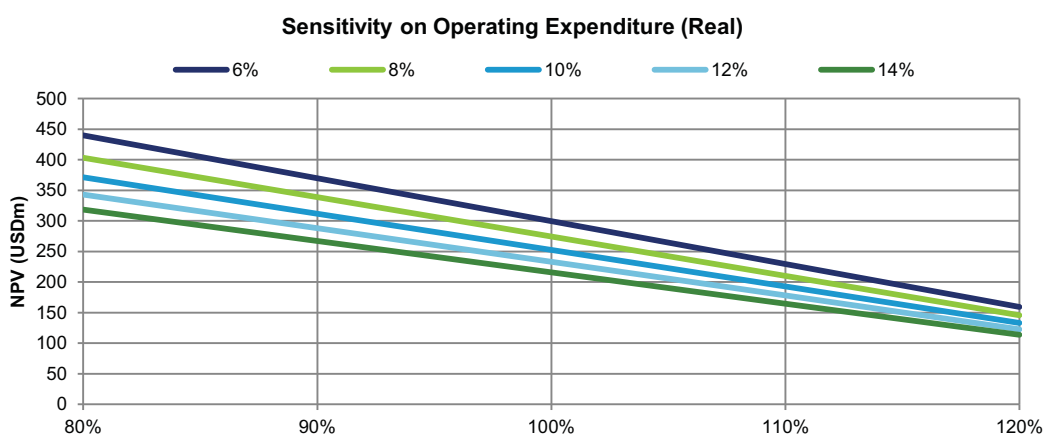
The most sensitive cost parameter is the Opex which still delivers a positive NPV at a 120% of expected Opex and a 14% discount rate. The Opex is most sensitive to plant and power costs. The total Opex per ounce is USD782 which is USD418 less than a gold price of USD1,200 while the total cost per ounce amounts to USD843.

The operating income is most sensitive to the gold price. Namoya Mining's management's gold price estimation is fair and conservative at USD1,200 as the three year moving average currently stands at USD1,552/oz.

Figure 32: Operating Income Sensitivity

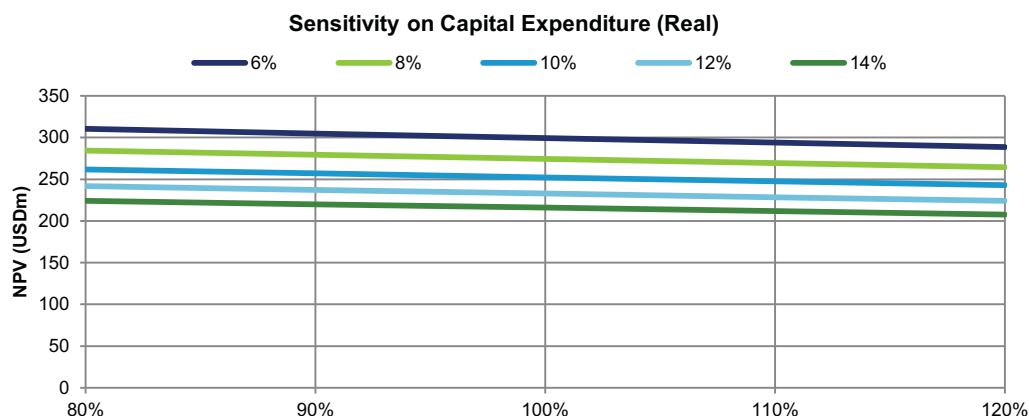
NPV SENSITIVITY TO REVENUE AND DISCOUNT RATE						
	80%	90%	100%	110%	120%	
6%	95.29	197.39	299.48	401.58	503.67	
8%	86.59	180.43	274.27	368.11	461.95	
10%	79.09	165.66	252.24	338.81	425.39	
12%	72.59	152.74	232.90	313.06	393.21	
14%	66.93	141.39	215.86	290.32	364.78	

Source : Venmyn Deloitte 2014

Figure 33: Operating Expenditure Sensitivity

NPV SENSITIVITY TO OPEX AND DISCOUNT RATE						
	80%	90%	100%	110%	120%	
6%	439.66	369.57	299.48	229.39	159.31	
8%	403.18	338.73	274.27	209.81	145.36	
10%	371.22	311.73	252.24	192.75	133.25	
12%	343.09	287.99	232.90	177.81	122.71	
14%	318.22	267.04	215.86	164.67	113.49	

Source : Venmyn Deloitte 2014

Figure 34: Capital Expenditure Sensitivity

NPV SENSITIVITY TO CAPEX AND DISCOUNT RATE					
	80%	90%	100%	110%	120%
6%	310.28	304.88	299.48	294.08	288.68
8%	284.32	279.29	274.27	269.24	264.22
10%	261.62	256.93	252.24	247.54	242.85
12%	241.69	237.30	232.90	228.50	224.11
14%	224.12	219.99	215.86	211.73	207.59

Source : Venmyn Deloitte 2014

20.2. Summary of the Namoya Project Economic Analysis

The DCF model indicates that the Namoya Mining Project has positive NPVs ranging from USD208 at a discount rate of 15% to USD313 at 5%. Venmyn Deloitte is of the opinion that the value estimated by management is reasonable and the technical and economic input parameters are appropriate.

21. Adjacent Properties Item 23

There are no adjacent mineral properties surrounding the Namoya Project, largely due to its remote location and pristine tropical forest environment. Banro's other Projects, including Twangiza, Lugushwa and Kamituga are similar projects currently in existence near the Namoya Project. All occur within the Twangiza-Namoya gold belt. Their locality can be seen in Figure 3. Twangiza is an operating mine, located approximately 45km south southwest of Bukavu. Twangiza began production in October 2011 and is planned to have a capacity of 1.7Mt per annum, producing up to 120,000oz of gold per year. The Life of Mine is estimated to be seven to eight years. The Lugushwa and Kamituga Projects are still in an exploration phase.

22. Other Relevant Data and Information Item 24

22.1. DRC Country Profile

22.1.1. Political and Economic Climate

The Republic of the Congo gained independence from Belgium in 1960 and, after gaining power, Colonel Joseph Mobutu Sese Seko renamed the country Zaire. He was overthrown by Laurent Kabila in 1997 that appointed himself president and changed the country's name to the DRC. A civil war commenced in 1998.

Laurent Kabila was assassinated in January 2001 and was succeeded by his son Joseph Kabila, as Chief of State and Head of Government. Joseph Kabila negotiated with rebel leaders to establish a transitional government in 2003. On July 2006 the first multi-party elections were held in the country since its independence, and the second was held on 28 November 2011.

From that time the country has been relatively peaceful. Unrest is still a problem since the recent elections, but it has quieted down after the late official election results in January 2012, declaring Joseph Kabila president for another term. The main area of unrest related to the election is still in the capital. The other areas of unrest are to the north and east of the country, where rebel soldiers still have a foothold.

It is not clear as to the extent of the recent conflict areas, but there is a strong likelihood that it has affected the southern areas of the North Kivu Province. The primary security risks facing the region are:-

- continued disarmament of armed groups in the North Kivu and Ituri Provinces and the extension of state authority to all areas of the DRC; and
- a possible North Kivu rebellion or the final disarmament of the Democratic Forces for the Liberation of Rwanda (FDLR), an organisation which was associated with the 1994 genocide in Rwanda.

Since peace was re-established in 2003 the DRC has seen the return of international investment, particularly in the minerals industry. According to the CIA World Fact Book, exports of minerals have increased and the GDP has been boosted. The GDP was estimated to be USD25.19bn in 2011, an increase from the estimated USD23.66bn in 2010. The real GDP growth rate was 6.5% in 2011.

Exports were estimated to be USD10.93bn in 2011, with earnings derived predominately from diamonds, copper, coffee and sugar. The country has seen significant improvements in the inflation rate compared to their war-ridden periods; it was recorded at 17% in 2011, down from the 23.1% in 2010.

22.1.2. Minerals Industry

The DRC played a globally significant role in the world's production of cobalt and diamonds in the past. In 2007, the country's share of the world's cobalt production amounted to 36%; industrial diamond, 31%; and gem-quality diamond, 6%. Congo (Kinshasa) accounted for about 49% of the world's cobalt reserves. Copper and crude petroleum production also played a significant role in the domestic economy (Olson, 2008a, b; Shedd, 2008). The mining and mineral processing sector accounted for 13.2% of the GDP in 2006 (the latest year for which data were available); and the manufacturing sector, 4.5%. An estimated 700,000 artisanal miners were involved in diamond production; and employment in diamond trading amounted to about 100,000 (International Monetary Fund, 2005 and 2007).

La Générale des Carrières et des Mines (Gécamines), which was a State-owned company, produced cobalt and copper; other cobalt and copper mining companies were privately owned. The cement producers Cimenterie de Lukala and Interlacs were privately owned. The Government held an 80% share in the large-scale diamond producer Société Minière de Bakwanga (MIBA). Artisanal and small-scale miners accounted for most Congolese output of diamond, gold, niobium (columbium), tantalum, tin, and tungsten. Artisanal and small-scale miners also played a significant role in the country's cobalt mine production.

In 2007, the production of niobium (columbium) in Congo (Kinshasa) increased by an estimated 133%; tantalum, by an estimated 129%; tin, by an estimated 89%; silver, by 13%; refined cobalt, by 10%; zinc, by 10%; and copper, by an estimated 10%. Refined copper production was restarted in 2007. Cobalt mine production declined by an estimated 7% and diamond mining by an estimated 5%.

22.1.3. Minerals Industry Policy

A mining royalty of 4% on sales, less sales transport and related costs, is payable to the government for diamonds. Customs duties on the import of equipment are 2% for the exploration permit holders and 5% for the exploitation permit holders. Fuel, lubricants and mining consumables are taxed at 3% for both permits. There is no export duty on marketable products. The DRC company tax rate is 30%, and the withholding tax on dividends is set at 10%.

Licence Types in the DRC

LICENCE TYPE	INITIAL PERIOD (Yrs)	TOTAL RENEWAL PERIOD (Yrs)	RIGHT
Exploration Permit (PR)	4 (Precious stones) 5 (Other minerals)	2 x 2 (Precious stones) 2 x 5 (Other minerals)	Exclusive real right to carry out mineral exploration for a specific mineral, including taking of samples for analysis and industrial assay. Exclusive right to obtain an Exploitation Permit. Area must be <400km ² . Must prove financial capacity of ten times surface rights fees and complete an environmental Plan for Mitigation and Rehabilitation (PAR).
Exploitation Permit (PE)	30	15 x several times	Exclusive real right to carry out exploration, development, construction and exploitation works for a specific mineral. This includes the right to conduct mining operations, process and sell the mineral extracted. Area must be <400km ² . The applicant must submit a feasibility study and technical framework for the development, construction and exploitation of the mine. An Environmental Impact study (EIE) and Environmental Management Programme (PGEP) must also be submitted. Transfer of 5% of shares to government at no charge.
Exploitation Permit for Small Mines (PEPM)	<=10 (Can be >10 with ministerial consent)	10 x several times	As for PE, but a PEPM holder has the right to transform it to a PE if the technical conditions of exploitation are justified.

With the assistance of the World Bank, the New Mining Code (NMC) was passed in July 2002 and, together with it, a companion document of regulations was released. The NMC governs the prospecting, exploration, exploitation, processing, transportation and sale of mineral commodities. All rights to minerals are vested in the State, and the State is responsible for the promotion and regulation of developments in the sector.

The type, duration and special requirements of the various licences issued by the Mining Registry is summarised in Table 24. Licences are only granted through an agent domiciled in the DRC or through a tender process in the case of “valuable known mineral deposits”.

22.1.4. Physiography and Climate of the DRC

The DRC is largely land locked and has political borders with nine African States and 37km of coastline in the west. The country rises from the coastal regions to a low-lying central basin, surrounded by mountain belts in the south and east, the highest point of which is Peak Margherita on Mont Ngaliema (former Mount Stanley) in the Ruwenzori range at 5,110m above mean sea level (amsl).

The DRC is dominated by hot humid conditions in the equatorial Congo River basin with a wet season from April to October and a dry season December to February. The southern mountain regions are cooler and drier and the eastern mountain belt is cooler but wetter. South of the Equator the wet season occurs from November to March and the dry season from April to October (World Fact Book).

22.1.5. Political Risk

The DRC is considered a high economic and political risk country, according to AON which assesses political and economic risk for countries on an annual basis. This is attributed largely to the on-going political unrest and violence in the North Kivu Province. Other factors include poor governance, corruption, poverty, lack of skilled labour, and a lack of foreign investment.

22.2. Gold Market Review Item 19

22.2.1. Demand

Gold demand in 2012 showed a year-on-year decrease in volume terms from 4,582t to 4,405t but this translated into a year-on-year increase in value terms, due to the increase in the gold price, which led to demand increasing in value terms from USD231,522 to USD236,393. This demand was derived from the various uses of gold, as shown in Figure 35, although the volume that was used in these various uses altered significantly on a year-on-year basis (World Gold Council, 2013a).

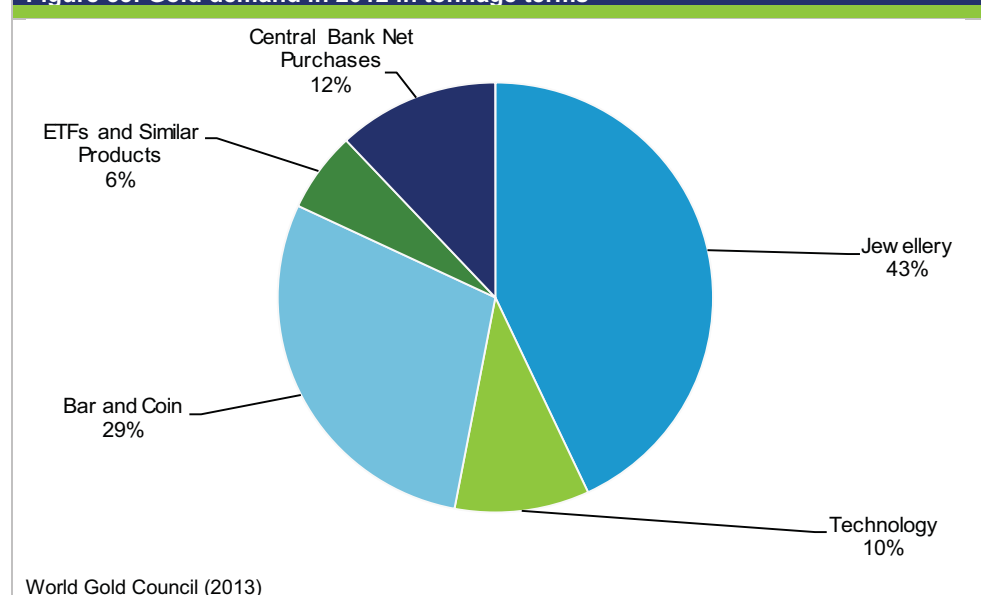
While jewellery continued to be the most important end use for gold, making up 43% of demand, the percentage of gold that is used in jewellery has been reducing, with the five-year average for jewellery demand as a percentage of total demand standing at 49% between 2008 and 2012. The tonnage of gold used in jewellery fell from 1,972.1t to 1,908.1t between 2011 and 2012. This was largely due to a drop in demand for gold jewellery in India – this trend, in the first half of the year, that stemmed from increased import duties and a rise in the local price of gold, among other factors, reverses itself to some extent in the second half of the year, when jewellery demand from India increased.

The yellow metal's use in technology applications, including in dentistry and electronics, was largely unchanged in value terms between 2011 and 2012 but there was a noticeable reduction in the tonnages used for industrial applications, with volumes falling from 452.9t to 428.2t. Gold's use in electronics was influenced by lower demand for personal computers and ultrabooks (low-mass notebooks that omit some laptop features but retain battery life) and the substitution of gold bonding wire (used in semi-conductors) by wire containing alternative metals (World Gold Council, 2013a).

There was also a reduction in volume and value terms of gold used for investment purposes, with gold demand decreasing from 1,700.4t to 1,534.6t in tonnage terms between 2011 and 2012 and decreasing from USD85,916m to USD82,342m in value terms over the same period. Investment demand in tonnage terms was different for institutional and retail investors, however, with a drop in demand for bars and coins and an increase in demand for Exchange Traded Funds (ETFs) and other similar products (World Gold Council, 2013a).

Contrary to the trend of demand from various end-use sectors decreasing in tonnage terms, Central Bank purchases increased in tonnage and value terms between 2011 and 2012. Russia, Brazil, Paraguay, Venezuela, Mexico, Iraq and South Korea were among the net purchasers of gold, while only Germany was a net seller of gold for the minting of commemorative gold coins. Central Bank purchases increased from 456.8t to 534.6t between 2011 and 2012 (World Gold Council, 2013a).

Figure 35: Gold demand in 2012 in tonnage terms



Consumer demand in the first three quarters of 2013 has been significant and is higher than consumer demand for the same period for the previous four years. Much of this demand has come from Middle Eastern and Asian consumers, even while Indian demand has fallen as a result of regulatory interventions from government (World Gold Council, 2013b).

ETFs, however, had not performed well in the first three quarters of 2013 as a result of a policy change in the US away from economic stimulus due to an improvement in the US economy. Consumer demand made up for this fall off in demand for ETFs.

22.2.2. Supply

Historically, supplies of gold have come from mine production, recycling and from sales of Central Bank gold.

Australia, South Africa, Russia, Chile, the United States and Indonesia each have above 3,000t of gold reserves, with a combined 55% of global reserves, according to the USGS (George, 2013; Table 40). Of the African countries, South Africa has the second-largest number of global reserve tonnages, while Ghana ranks 11th in global gold reserve tonnages. Countries such as Mali, Tanzania, the Democratic Republic of Congo, Zimbabwe and Mozambique are among the African countries which are included in the 'other countries' classification provided by the USGS – indicating that they are not among the top 14 countries in terms of gold reserves.

Table 40: Estimated Global Gold Reserves in 2012

COUNTRY	RESERVES (t)
Australia	7,400
South Africa	6,000
Russia	5,000
Chile	3,900
United States	3,000
Indonesia	3,000
Brazil	2,600
Peru	2,200
China	1,900
Uzbekistan	1,700
Ghana	1,600
Mexico	1,400
Papua New Guinea	1,200
Canada	920
Other countries	10,000
WORLD	51,820

Source: George (2013)

The USGS estimates that total world gold production was 2,659t in 2012 (Table 41), while the World Gold Council estimates this a bit higher, at 2,847.7t (George, 2013; World Gold Council, 2013a). The World Gold Council further indicates that mine production grew by only 0.4% in 2012, and that planned and unplanned production delays as well as labour unrest in South Africa were among the factors that were responsible for these low growth levels.

While mine production edged up slightly, recycling's contribution to global supply decreased, and was 2.6%, or 42.9t, less in 2012 than in 2011 (World Gold Council, 2013a). The other source of gold traditionally, i.e. Central Banks, was not a contributor of gold supply, and was a net purchaser of gold in 2012.

For the first three quarters of 2013, there were lower levels of supply than for the same period in 2012. While mine production showed an increase for the first quarters of 2012, recycling decreased as a result of a smaller amount of available old gold and lower gold prices, as well as a more positive market sentiment that reduced the volume of recycled gold from traditional sources and especially from the US (World Gold Council, 2013b).

Table 41: Estimated Global Gold Production for 2011 and 2012

COUNTRY	MINE PRODUCTION (t)	
	2011	2012e
China	362	370
Australia	258	250
United States	234	230
Russia	200	205
South Africa	181	170
Peru	164	165
Canada	97	102
Indonesia	96	95
Uzbekistan	91	90
Ghana	80	89
Mexico	84	87
Papua New Guinea	66	60
Brazil	62	56
Chile	45	45
Other countries	640	645
WORLD	2,660	2,659

Source: George (2013)
e=estimate

22.2.3. Gold Price Trend

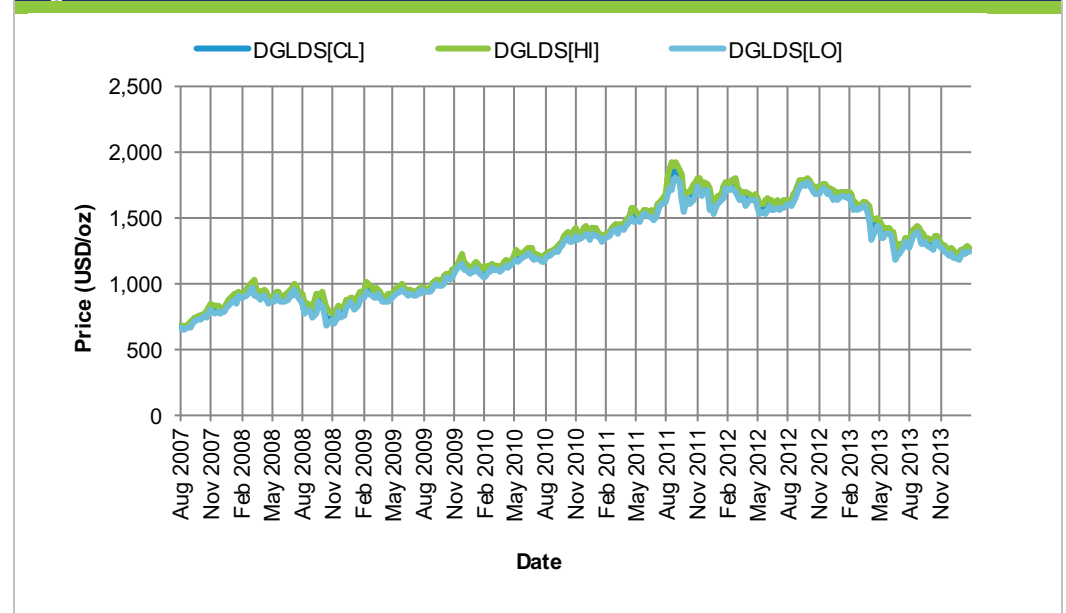
The gold price has shown a downward trend in the last few years, with a pronounced downward trend in the last year. This can be seen in Figure 36, which illustrates the gold price's performance over a six year period.

22.2.4. Gold Market Outlook

Analysts are divided as to whether there will be a continued downward trend in the gold price or whether this trend will be reversed in 2014 and the years to come.

Those that suggest a gloomy outlook for the metal believe that the US's economic policy will result in investors moving away from gold (Greve, 2014). They also suggest that the dropping gold price has resulted in a negative momentum that will continue for at least the next six months (Topf, 2013).

Those with a more positive gold outlook primarily point to strong demand from China as well as the lower supply figures that are being seen as key factors which suggest that the gold price will start to rise (Topf, 2013).

Figure 36: Gold Price

Source: INet Bridge

23. Interpretation and Conclusions Item 25

Venmyn Deloitte concludes that Namoya Mining is a gold exploration and mining company located in the DRC. Their asset is an operating gold mine in the Maniema Province of the DRC. Namoya Mining's project has been demonstrated to be technically prospective for gold due to historical mining activities, locality in a prospective area, detailed recent exploration and the declaration of Mineral Resource and Mineral Reserves for the Project.

The closure liability for the Namoya Project has been estimated by the Company as USD15,905,840 based on the requirements of the DRC Mining Code and related Annexes of the Mining Regulations. It should also be noted that actual closure costs at the Namoya Project may differ depending on additional variables which may arise at the time of mine closure, such as contractor availability for demolition projects at the time they are conducted.

The economic analysis has been undertaken and signed off by Namoya Mining for the Namoya Project and independently reviewed by Venmyn Deloitte. The Discount Cashflow model indicates that the Namoya Project has positive NPVs ranging from USD208 at a discount rate of 15% to USD313 at 5%. Venmyn Deloitte is of the opinion that the value estimated by management is reasonable and the technical and economic input parameters are appropriate.

24. Recommendations Item 26

It is recommended that studies be conducted on the use of a Fleet Management System (FMS) to optimize the entire loading and hauling operation specifically as the number of active mining areas increase with increased mining fleet.

25. Date and Signature

Yours faithfully,



ANDREW NEIL CLAY

M.Sc. (Geol.), M.Sc. (Min.Eng.), Dip.Bus.Man.,

Pr.Sci.Nat., MSAIMM, FAusIMM, ,

FGSSA, MAIMA, MSPE, IoD.

MANAGING DIRECTOR, VENMYN DELOITTE

QUALIFIED PERSON

Effective Date of the Report: 31st December 2013

Date of Signing Report: 12th May 2014

Appendix 1: References Item 27

AUTHOR	DATE	TITLE	SOURCE
Bavier, J	2013	Randgold to step up exploration as gold price slides	www.guardian.co.uk
Bromby, R	2013	The Pulse: Chinese clean out gold stocks; Uranium “never looked better”; Scandium scramble	www.proedgewire.com
Deutsche Welle	2013	Gold price continues global freefall	www.dw.de
George, M.W.	2013	Gold, Mineral Commodity Summaries	USGS
Greve, N	2014	No price recovery expected for gold in 2014	www.miningweekly.co.za
INet Bridge	2014	Gold Price	INet Bridge
Lines, T	2013	The gold price fall is a bad omen	www.guardian.co.uk
McKay, D	2012	The golden doldrums	www.miningmx.com
McKay, D	2013	SA shares may restate reserves after gold ‘hit’	www.miningmx.com
Reuters	2011	SAfrica slips to fourth in world gold production	www.reuters.com
Street, L, Palmberg, J, Artigas, JC, Ong, E, Grubb, M	2012	Gold Demand Trends –Full year 2011	World Gold Council
Topf, A	2013	Gold Outlook: Will Gold Bounce Back in 2014?	http://goldinvestingnews.com
World Gold Council	2013a	Gold Demand Trends – Full year 2012	World Gold Council
World Gold Council	2013b	Gold Demand Trends – Third quarter 2013	World Gold Council

Appendix 2: Qualified Person's Certificates

Name of Staff: Andrew Neil Clay
Position: Managing Director, Minerals Industry Advisor, Qualified Person and Qualified Valuator
Name of Firm: Venmyn Deloitte, a subsidiary of Deloitte Consulting South Africa (Pty) Ltd
Address: Building 33, First Floor, The Woodlands Office Park, 20 Woodlands Drive, Woodmead
Profession: Geologist
Date of Birth: 16 April 1955
Years with Firm/Entity: 27
Nationality: British

CERTIFICATE OF QUALIFIED PERSON

I, Andrew Neil Clay, do hereby certify that:-

1. I am the Managing Director of Venmyn Deloitte (Pty) Ltd
2. I am a graduate in Geology and a Bachelor of Science from University College Cardiff in 1976.;
3. I am a member/fellow of the following professional associations:-

Membership in Professional Societies:

CLASS	PROFESSIONAL SOCIETY	YEAR OF REGISTRATION
Member	Canadian Institute of Mining, Metallurgy and Petroleum	2006
Advisor	JSE Limited Listings Advisory Committee	2005
Advisor	JSE Issuer Services	2008
Member	JSE Issuer Mining Sub-committee	2009
Associate Member	American Association of Petroleum Geologists	2005
Member	South African Institute of Directors	2004
Fellow	Geological Society of South Africa	2003
Member	American Institute of Mineral Appraisers	2002
Member	South African Institute of Mining and Metallurgy	1998
Fellow	Australasian Institute of Mining and Metallurgy	1994
Member	Natural Scientist Institute of South Africa	1988
Member	Investment Analysts Society of South Africa	1990
Member	Society of Petroleum Engineers	2009
Member	Project Management Institute	2011
Expert	Hong Kong Stock Exchange	2012

Involvement in Code Writing:

POSITION	PROFESSIONAL CODE	DATE OF INVOLVEMENT
Chairman	South African Oil & Gas Committee (SSC)	2011 - present
Member	South African (SAICA) extractive industries deliberations	2003 - present
Member	International Minerals Valuation Code (IMVAL)	2012 – present
Representative	Investment Analysts Society on the SSC (IAS)	2009 - present
Initiator	SAMREC / IAS Award	2002 - present
Advisor	JSE Listing Requirements (Section 3 On-going obligations)	2002 - present
Working Group Member	SAMREC Code (Oil & Gas)	2005 - present
Working Group Member	SAMVAL Code	2001 – present
Working Group Member	SAMREC Code (Re-write Sections 1 – 5)	2005 - present
Working Group Member	SAMREC Code (Re-write)	2003 - present
Working Group Member	SAMREC Code (First Version)	1996 - 2001

Mr Clay currently has a special interest in incorporating oil and gas reporting procedures into the general application of mineral asset valuation.

Involvement in Fund Management:

POSITION	FUND	DATE OF INVOLVEMENT
Member of Investment & Audit Committee	New Africa Mining Fund (NAMF)	2007 - present
Director	Strategic African Mineral Investment Fund (SAMI)	2008 - present

Fairness Opinions:

YEAR	CLIENT	SECURITIES EXCHANGE JURISDICTION	TRANSACTION TYPE	IMPLIED VALUE (USDm)	DESCRIPTION
2013	Platinum Australia	ASX	Scheme of arrangement	50	Independent Technical Expert Report
2011	Optimum Coal	JSE	The specific offer of ZAR38.00 in cash per ordinary share by an external party		Independent Professional Expert Report
2011	Chrometco	JSE	Acquisition of an Interest in Line-Chem	66.6	Independent Professional Expert Report
2011	Wesizwe	JSE	Financing Solution for the Development of Wesizwe's Project 2	227	Independent Professional Expert Report
2010	Sylvania	ASX	Issuing new ordinary shares	34	Independent Professional Expert Report
2009	Chrometco	JSE	Acquisition of interest	8.3	Independent Professional Expert Report
2009	Metorex	JSE	Disposal of 6.3% interest	5.7	Independent Professional Expert Report
2009	Braemore Resources	JSE	Acquisition of interest	36.3	Independent Professional Expert Report
2007	Diamondcore/BRC	JSE	Acquisition	50	Independent F&R for Diamondcore
2006	LionOre International	TSX	Acquisition notification documentation.	650	Independent Technical and Valuation Fatal Flaws Report and F&R opinion for the Board of LionOre. Not published as an F&R.
2005	Diamond Core	JSE	Category I Merger	10.0	Independent CPR on the mineral assets of Samadi Resources SA (Pty) Ltd and Diamond Core Resources Limited.
2005	LionOre International	TSX	Acquisition notification documentation.	110.0	Tati Nickel Review of Mineral Resources.
2005	Aquarius	JSE	26% BEE	150.0	Independent Techno-Economic Valuation and Fair and Reasonable Opinion on the PIC, IDC, DBSA 26% Empowerment Transaction. Documents waived for the secondary listing.
2004	Barplats	JSE	Offer to Barplats Minorities	60.0	Offer by Platinum Consortium to take out Implats. The SRP insisted our report be prepared in full. In the end Investec wrote the Fair and Reasonable but was fully reliant upon the Venmyn work as demonstrated in the circular.
2004	Zimplats	ASX	Collapse of the Makwiro Structure for shares to Implats.	38.0	Fair Value calculation in a corporate restructure.
2003	Amplats	JSE	Acquisition price calculation for Unki Platinum.	Confidential	Preparation of an Independent Techno-Economic Valuation Report and Fair and Reasonable Opinion. Document not used as the transaction became immaterial for reporting purposes.
2003	Aquarius Platinum (South Africa) (Pty) Ltd	ASX	Opinion on the value of a Refinery Agreement.	10.0	Fair & Reasonable Opinions for Aquarius Platinum for the Impala Refinery Commitments.

YEAR	CLIENT	SECURITIES EXCHANGE JURISDICTION	TRANSACTION TYPE	IMPLIED VALUE (USDm)	DESCRIPTION
2002	Consolidated African Mines Limited.	JSE	CAM acquired 40% of the Letseng diamond mine for CAM shares.	10.0	Preparation of an Independent Techno-Economic Valuation Report and Fair and Reasonable Opinion. Document used in full.
2002	Zimplats	ASX	Implats acquired a controlling interest in Zimplats by acquiring Aurion Gold shares.	50.0	Preparation of an Independent Techno-Economic Valuation Report and Fair and Reasonable Opinion. Document used in full.
2002	Aquarius	ASX	Aquarius acquires 65% in ZCE Platinum Limited.	50.0	Preparation of an Independent Techno-Economic Valuation Report and Fair and Reasonable Opinion. Document used in full.
2000	DiamondWorks	TSX	Lyndhurst a South African Company takes control of Canadian junior Diamondworks.	20.0	Preparation of an Independent Techno-Economic Valuation Report and Fair and Reasonable Opinion. Document used in full and special representation required in Toronto to explain the transaction and the assets.
1999	New Mining Corporation	JSE	Listing and acquisition documentation.	50.0	Complicated transaction and full Independent Techno-Economic Valuation prepared with Fair and Reasonable Opinion included in our report. This satisfied the JSE and the SRP.
1996	West Witwatersrand Gold Holdings Limited	JSE	Section 440k Offer	20.0	Independent Competent Persons Report on the Offer by Durban Deep to West Wits under Section 440k. Document included in circulars to both shareholders. Our Fair and Reasonable Opinion was specifically requested by the SRP.

4. I have practiced my profession continuously since graduation. My relevant experience for the purpose of the technical report (the Technical Report) dated effective 31st December 2013 and entitled "Independent National Instrument 43-101 Technical Report on the Namoya Gold Project, Maniema Province, Democratic Republic of the Congo" prepared for Namoya Mining SARL is:-

Detailed Tasks Assigned:

YEAR	CLIENT	COMMODITY	DOCUMENTATION
2013	Busitema / Greenstone Mining	Gold	Resource Review
2013	Sylvania Grasvally	Chrome	Valuation
2013	Resource Generation	Coal	Technical Review
2013	Great Western Minerals Steenkampskraal	Rare Earths	PFS
2013	Taung Gold / Ncondezi	Gold	Technical Review
2013	Xceed / Keaton Energy	Coal	Resource Review
2013	Rand Refinery / Deloitte Audit	Gold	Audit
2013	TRX Buckreef Remodelling	Gold	3D Model
2013	Bauba	Chrome	Valuation
2013	Memor	Chrome	Cash Flow
2013	Forrest Oil	Oil and Gas	Valuation
2013	Glencor Xstrata	Ferrochrome	Audit
2013	Eureka	Gold	Technical Statement
2013	Aura	Coal	Exploration
2013	Nkwe	PGE	Technical Review
2013	Lesego Broadtec Beijing	PGE	Due Diligence
2013	Zyl Sentula	Coal	Valuation
2013	Samancor CITIC	Chrome	Valuation
2013	Jubilee Platinum	Platinum	Valuation
2013	Gold One Tulo Gold	Gold	Valuation
2013	Eureka Delta Gold	Gold	Technical Statement
2013	Exarro	Iron	Valuation
2013	Deloitte Grindrod	Manganese	Audit
2013	Aquarius	PGE	Review
2012	Banro Lugushwa	Gold	Technical Review
2012	Araxa	Rare Earths	NI 43-101
2012	Bauba	Platinum	Technical and Economic Assessment
2012	IFC Mining		Technical and Economic Assessment
2012	Central Rand Gold	Gold	CPR
2012	Lanxess	Chrome	Technical and Economic Assessment

YEAR	CLIENT	COMMODITY	DOCUMENTATION
2012	Loncor Ngayu	Gold	Mineral Resource Valuation
2012	Loncor Makapela/Mangajuripa	Gold	Mineral Resource Valuation
2012	Pering Listing Hong Kong	Zinc Lead / Base metals	CPR
2012	Stonebridge Hanieal Mozambique	Gold	Corporate Advice and Project setup
2012	Stonebridge Zim Gold	Gold	Corporate Advice and Project setup
2012	Terra Nova Manica Investment	Gold	Technical and Corporate Valuation
2012	PSIL Arbitration		Expert Witness
2012	AngloCoal	Coal	Valuation
2012	Virgil Mining	Gold	Technical Report
2012	Sikhuliso Harmony Dumps	Gold	Corporate Transaction Advice
2012	Smart Carbon Combrink Coal	Coal	Technical Report and Valuation
2012	Optimum Coal	Coal	Independent Opinion
2012	Wits Gold	Gold	CPR and Valuation
2012	Pan African Resources	Gold	CPR and Valuation
2012	Banro	Gold	Technical Report and Valuation
2012	Harmony Evander	Gold	Full CPR and Valuation
2012	Boynton	PGM	Pre-feasibility Study
2012	Sudor Coal	Coal	Valuation
2012	NMIC	Gold	Technical Report and Valuation
2011	SSC Mandarin	Gold	Independent Corporate and Technical Advisor
2011	Harmony	Gold	CPR
2011	Afrisam	Cement	Independent Valuation
2011	Chromex	Chrome	Hong Kong Listing
2011	Banro	Gold	Independent Technical Statement
2011	Xceed Capital	Coal	Independent Valuation Statement
2011	Chrometco	Chrome	Independent Valuation
2011	Scinta	Coal	Independent Technical Statement and Valuation
2011	Seque Manganese	Manganese	Prospectivity and Scoping Study
2011	Sable	PGE	Prospectivity and Drilling Density CP
2011	Taung	Gold	Hong Kong Listing
2011	Maghreb Minerals	Zinc	CPR
2011	Veremo	Iron	Updated Technical Statement on Veremo
2011	Smart Carbon	Coal	Strategic Advisor
2011	Sephaku	Cement	Technical and Economic Documentation
2011	Axmin	Gold	Technical and Economic Documentation
2011	Absa Vanadium	Vanadium	Vanadium Project Valuation
2011	BCL Dumps	Nickel	Scoping Study
2011	AMRT	Copper/Gold	Scoping Study
2011	Jindal Mining	Coal	Techno-Economic Statement on the Mbili Coal Project
2011	Essar RioZim	Various	Corporate Transaction
2011	SEW Trident	Coal	Transaction and Valuation Planning
2011	PSIL	Uranium	Strategic Valuation
2011	Kibo Mining	Gold/Various	Tanzanian Assets
2011	Moabsvelden Coal	Coal	Technical and Valuation Work
2011	Wesizwe	PGE	Fairness Opinion
2010	Namane	Coal	Technical Assessment
2010	Bauba Platinum	Platinum	Independent Strategic Technical Advisor
2010	Evraz Mapochs		Independent Valuation
2010	African Copper	Copper	Independent Mass Balance and Orebody Fatal Flaws Assessment
2010	Advanced Mineral Recovery Technologies	Gold	Independent Sampling and Mass Balance Report
2010	Xstrata Coal	Coal	Independent Valuation Certificate
2010	Sephaku	Cement	Independent Technical Review
2010	White Water Resources	Gold	Independent Competent Persons' Report
2010	White Water Resources	Gold	Independent Technical Statement
2010	Platmin	Platinum	Independent Techno-Economic Reports and Valuation
2010	West Wits Mining	Gold	Independent Prospectivity Review
2010	SSC Mandarin	Gold	Independent Corporate and Technical Review
2010	Ultra Tech	Cement	Independent Techno-Economic Statements
2010	Taung	Gold	Independent Technical Review
2010	Taung	Gold	Independent Valuation Statement
2010	Sylvania	PGMs	Independent Technical and Valuation Experts Report
2010	Mzuri Capital	Gold	Independent AIM Compliant Competent Person's Report
2010	Kalagadi	Manganese	Independent High Level Techno-Economic Review
2010	Lesego	Platinum	Independent Techno-Economic Valuation Report
2010	Lesego	Platinum	Independent Executive Summary
2010	G&B Resources	Li	Independent Prospectivity Review
2010	Miranda	Coal	Independent Technical Resource and Valuation Statement
2010	Loncor	Gold	Independent Techno-Economic Valuation Report
2010	Gentor Resources	Copper	Independent Techno-Economic Report

YEAR	CLIENT	COMMODITY	DOCUMENTATION
2010	ETA Star	Coal	Independent Valuation Report
2010	AfriSam	Cement	Independent Technical Review
2010	Buildmax	Cement	Independent Short-Form Competent Report
2010	Anglo Platinum	Platinum	Independent Valuation of the PGM Assets
2010	Nyota Minerals	Gold	Independent Inferred Resource Estimate
2010	Absolute Holdings	Platinum	Independent Competent Persons' Report
2010	AfriSam	Cement	Independent Technical Review
2010	African Copper	Copper	Mass Balance and Orebody Fatal Flaws Assessment
2010	Ruukki	Platinum	Short-Form Techno-Economic Statements
2010	Umbono Capital	PGMs	Independent Competent Persons' Report
2010	Anglo Platinum	PGMs	Independent Mineral Asset Valuation
2010	Zambia Copper Investments	Copper	Mineral Asset Valuation
2010	White Water Resources	Gold	Short-Form Valuation Statements
2010	Central African Gold	Gold	NI 43 – 101 Technical Report
2010	Platmin	Platinum	Updated NI 43 – 101 Technical Report
2009	G & B Resources	Uranium	Independent Competent Persons' Report
2009	Kalagadi	Manganese	Independent Techno-Economic Review
2009	Sephaku Cement	Cement	Independent Competent Persons' Report
2009	Metorex	Gold	Independent Fairness Opinion
2009	Kivu Resources	Pegmatites	Independent prefeasibility study
2009	Kalagadi Manganese	Manganese	Independent Tehno-Economic Review
2009	Taung Gold	Gold	Independent Competent Person's Report
2009	Sylvania Resources	Platinum	Independent Technical and Valuation Expert's Report
2009	Ernst & Young Jordan	Gold	Independent Valuation Report on mineral assets of a Gold Mining Concession in Ethiopia
2009	Dwyka Resources	Gold	Independent Technical Statement on Tulu Kapi Gold Project
2009	G & B African Resources	Pot Ash	Independent Prospectivity Review
2009	Central African Gold	Gold	Information Memorandum in the form of NI 43-101 Compliant Technical Statement
2009	Braemore Resources	Platinum	Fairness Opinion
2009	New Dawn	Gold	Independent Technical Statement
2009	Investec	Cement	Independent Technical Review of CILU Cement assets
2009	IBI	Iron ore	Independent Technical Resource Statement
2009	Chrometco	Chrome	Fairness Opinion
2009	Rand Uranium	Uranium	Mineral Resource Review and Modelling
2008	Signet Mining	Coal	Independent valuation of coal assets
2008	Lesego Platinum	PGMs	Independent Competent Person's Report for JSE Listing
2008	Norilsk Nickel	Nickel	Review of business strategy
2008	Minero Group	Zinc/Lead	Review of business strategy and Competent Person's Report
2008	Paramount Mining	Diamonds	Independent Technical Statements
2008	Anglo Platinum	PGMs	Independent Technical Report and valuation
2008	Demindex	Diamonds	Review of business strategy and Technical Advice
2008	Investec	Cement	Due Diligence and valuation of Cilu Cement
2008	DGI	Copper/Cobalt	Independent Technical Statements
2008	Abalengani	Platinum	Review of plant and valuation
2008	Absolute Holdings		Quarry valuation
2008	Metorex	Copper/Cobalt	Fairness Opinion
2008	Investec	Cement	Due diligence on Sephaku assets
2008	Kivu Resources	Tantalite	Tantalite strategic planning and valuation
2008	Tantilite Resources	Tantalite	Independent Technical Report
2008	DGI	Copper/Cobalt	Independent Technical Statement and valuation
2008	Uramin	Uranium,	Resource Review and Technical Statements
2008	Harmony Gold Mining	Au, Uranium	Independent Technical Statements and Strategic business plan
2008	Harmony Gold	Uranium	Cooke Dump Resource and Finacial Valuation
2008	Harmony Gold	Au Uranium	Resevre and Resource Audit for the group
2008	Nkwe Platinum	PGMs	Independent Technical Statement and Competent Person's Report
2008	Highveld Steel & Vanadium Corporation	Steel, Vanadium	Independent Resource and Reserve planning
2008	African Minerals	Diamonds	Independent Technical Statements
2008	Continental Coal	Coal	Independent Technical Report
2008	Industrial Base Metals	Base Metals	Base Metal Refinery Audit
2007	Crushco	Industrial Minerals	Independent valuation
2007	Kimberley Consolidated Mining	Diamonds	Independent valuation
2007	LionOre Mining	Nickel. PGMs	Technical and economic valuation
2007	PBS Group	PGMs	Project review
2007	Western Areas	Au	Independent valuation
2007	Harmony Gold Mining	Au. Uranium	Independent scoping and valuation
2007	Great Basin Gold	Au	Independent valuation for BEE transaction
2007	BRC/Diamondcore Resources	Diamonds	Valuation and Opinion provider

YEAR	CLIENT	COMMODITY	DOCUMENTATION
2007	Urals Investors	Diamonds Au. PGMs and Oil and Gas	Independent Transaction Report
2007	Energem	Diamonds	Independent Technical Statement for Koidu
2007	Xstrata	Cr	Independent CGT and Valuation advice
2007	PWC Magnetite Mine Review	Magnetite	Independent Mineral Resource Review and Valuation for apportionment calculations
2007	Magnum Resources	Ta	Independent Mineral Resource Review
2007	Gaanahoek Coal Deposit	Coal	Prospectivity Review
2007	DRDGold	Au	Emperor Gold Mines independent forensic review
2007	Kimberley Diamonds Corporation	Diamonds	Independent Listings Documentation
2007	Rockwell	Diamonds	Transhex Transaction Documentation
2007	Rockwell	Diamonds	Independent Mineral Resource Review
2007	Caledonia Mining	Au	Independent Disposal Documentation Eersteling
2007	Caledonia Mining	Au	Independent Disposal Documentation Barbrook
2007	Adsani Tantalite Refinery	Ta	Independent Technical Report
2006	LionOre	Ni Base Metals	Independent Valuation of Falconbridge International and Nikkelverk Refinery
2006	LionOre/BCL	Ni Base Metals	Independent Technical and Economic Valuation
2006	Vanamin	V	Independent Report for disposal
2006	Kurils Islands	Au	Independent Technical Report NI43-101
2006	Mgart Armenia	Au	Independent Assessment and Valuation for AIM
2006	Zimbabwe Mining Bill	All	Preparation of industry submission to government
2006	Energem	Oil & Gas	Preparation of National Instrument Compliance
2006	Ncondedzi Coal	Coal	Technical & Corporate Listing Documentation
2006	Metallon International - Armenia	Gold & Base Metals	Prospectivity & Exploration Programme Preparation
2006	Hood Tantalite	Tantalite	Independent Techno Economic Valuation Report
2005	Letseng	Diamonds	Independent Competent Person's Report for disposal
2005	Zimplats Tenements	Platinum Metals Group	Independent Competent Person's Report for disposal
2005	DRD	Gold	Fair & Reasonable
2005	ARM Madikwa	Platinum Metals Group	Independent Valuation for Impairment Calculation
2005	Harmony Competitions Tribunal	Gold	Independent Expert Witness
2005	Ecca Holdings	Bentonite	Independent Industry Review
2005	Harmony Randfontein 4 Shaft	Gold	Independent Valuation
2005	Gallery Gold	Gold	Independent Competent Person's Report for disposal
2005	Stuart Coal	Coal	Independent Competent Person's Report for disposal
2005	Elementis Chrome	Chrome	Independent Industry Review
2005	Diamond Core	Diamonds	Independent Competent Person's Report
2005	Diamond Core	Diamonds	Fair & Reasonable Statement
2005	Kensington Resources	Diamonds	Independent Inspection & Certification of Laboratory
2005	Bayer Valuation	Chrome	Independent Valuation for Economic Empowerment Transaction
2005	Pangea Diamonds	Diamonds	Independent Competent Person's Report
2005	LionOre International	Nickel	Tati Nickel Review of Mineral Resources.
	Aquarius PSA2		Independent Competent Person's Report
2005	Aquarius	Platinum	Marikana Mineral Resources Review.
2005	LionOre International	Nickel	Nkomati Due Diligence and Transaction Value Calculations.
2005	LionOre International	Nickel	World Nickel market study for group corporate work.
2004	Avgold Limited	Gold	Fair & Reasonable Opinion on the Methodologies applied and Values attributed to the Mineral Assets of ET Cons
2004	Aquarius	Platinum	Update of Independent Valuation of Mimosa
2004	Aquarius	Platinum	Independent Techno-Economic Report and Fair and Reasonable Opinion tot the PIC, DBSA and IDC on the 26% BEE Transaction for AQPSA – Document waived by the JSE.
2004	Mimosa Mining Company	Platinum	Mineral Resource and Ore Reserve Review
2004	Zimplats	Platinum	Zimplats Makwiro Valuation and Corporate Restructuring
2004	Assmang	Manganese	CGT Valuation
2004	Aquarius	Platinum	CGT Valuation
2004	Sishen South	Iron	CGT Valuation
2003	Unki Platinum Project	Platinum	CGT Valuation
2003	Hernic Ferrochrome (Pty) Ltd, Itochu Corporation	Chromite	Independent valuation of the Stellite Chromite Mine Joint Venture.
2003	African Diamond Holdings (Pty) Ltd	Diamonds	Independent techno-economic due diligence and valuation of African Diamond Holdings marine diamond concessions and diamond cutting operation in Walvis Bay, Namibia.
2003	Unki Platinum Project, Zimbabwe	Platinum	Techno-Economic Valuation Report & Fair & Reasonable Opinion
2003	Transvaal Ferrochrome Ltd	Ferrochrome	Independent Competent Person's Report and Valuation as a bankable Document for Australian Stock Exchange

YEAR	CLIENT	COMMODITY	DOCUMENTATION
2003	Aquarius Platinum (SA) (Pty) Ltd	Platinum	Independent Competent Person's Report and Valuation for the Everest South Project
2002	Zimbabwe Platinum Mines Ltd	Platinum	Independent valuation of Zimplats relative to the value of the Impala Platinum Ltd/AurionGold Ltd transaction.
2002	Mitsubishi Corporation	Ferrochrome	Expansion Report and Valuation on Hernic Ferrochrome (Pty) Ltd.
2002	Aquarius Platinum Ltd	Platinum	Acquisition Report on ZCE Platinum Ltd including the due diligence and valuation of Mimosa Mine in Zimbabwe.
2002	Freddev	Gold	Valuation of Mineral Rights & Royalties
2002	Barnex	Gold	Valuation of Mineral Rights & Royalties
2002	Western Areas	Gold	WA4 Project : Valuation of Mineral Rights & Royalty Agreement
2002	Mitsubishi	Ferrochrome	Expansion report and valuation
2002	Aquarius	Platinum	Acquisition Report
2001	Northam	Platinum	Valuation
2001	Mitsubishi Corporation	Ferrochrome	Due Diligence, Valuation and Acquisition Report
2001	Amcol Due Diligence	Bentonite	Independent due diligence and valuation on G&W
2001	Zimplats Impala Raising	Platinum	Circular to shareholders valuation report
2000	African Minerals	Varied	Independent competent person's report
2000	Barnato Exploration Limited	Varied	Competent person's report
2000	Durban Deep	Gold	Independent valuation report
2000	Iscor Limited	Varied	Independent valuation of exploration assets
1999	Harmony Gold Mining Co Ltd	Gold	Harmony / Kalgold / West Rand Cons
1999	Leighton Contractors	Tin	Pre-feasibility study Pemali Tin (Indonesia)
1999	Mitsubishi	Ferro-Chrome	Techno-economic valuation of Hernic Chrome
1998	Barnex Ltd	Wits Gold	Due diligence
1998	Camco	Diamonds	Independent Competent Person's Report and valuation
1998	Crown Mines and DRD	Wits Gold	Valuation
1998	Egyptian Government	Phosphate	Due diligence and valuation
1998	Great Fitzroy Mines	Copper	Competent Person's Report and Valuation
1998	Iscor Mining	Greenstone Gold	Due diligence and valuation
1998	JCI Ltd	Wits Gold	Competent Person's Report
1998	Randgold & Exploration Co Ltd	Gold	Competent Person's Report
1998	Western Areas	Wits Gold	Competent Person's Report
1997	CBR Mining	Coal	Due diligence
1997	Durban Roodepoort Deep Ltd	Wits Gold	Competent Person's Report
1997	G&W Base	Bentonite	Due diligence
1997	JCI Ltd	Wits Gold	Competent Person's Report
1997	Opaline Gold	Greenstone Gold	Competent Person's Report
1997	Penumbra	Coal	Due diligence
1997	Randgold & Exploration Co Ltd	Greenstone Gold	Competent Person's Report
1997	Rondebult Colliery	Coal	Due diligence
1996	African Mining Corporation*	Alluvial Gold	Project valuation
1996	Australian Platinum Mines NL	Platinum	Due diligence
1996	Benoni Gold Holdings Ltd	Wits Gold	Competent Person's Report
1996	Consolidated Metallurgical Industries	Ferrochrome	Competent Person's Report and valuation
1996	Durban Roodepoort Deep Ltd	Wits Gold	Competent Person's Report
1996	Harmony Gold Mining Co Ltd	Wits Gold	Competent Person's Report
1996	JCI Ltd	Wits Gold	Valuation
1996	Rand Leases Properties Ltd	Wits Gold	Competent Person's Report and valuation
1996	Randgold & Exploration Co Ltd	Wits Gold	Due diligence
1995	African Mines Limited*	Greenstone Gold	Project valuation
1995	Barney-Seidle Arbitration	Granite	Project valuation arbitration
1995	Mopet Oil*	Oil and Gas	Market analysis facilitator
1995	Randgold & Exploration Co Ltd	Wits Gold	Competent Person's Report and valuation
1995	Randgold Durban Deep	Wits Gold	Competent Person's Report and valuation
1995	Randgold Harmony Unisel Merger	Wits Gold	Competent Person's Report and valuation
1994	Aurora Exploration	Varied - Industrials	Competent Person's Report and valuation
1994	Consolidated Mining Corp	Wits Gold	Due diligence and valuation
1994	CRA (Australia)	Iron Ore	Due diligence
1994	Durban Roodepoort Deep Ltd	Wits Gold	Competent Person's Report and valuation
1994	Ghana Gold Mines*	Greenstone Gold	Due diligence and valuation
1994	Gold Fields of SA Ltd	Wits Gold	Competent Person's Report and valuation
1994	Hernic Chrome	Ferro-Chrome	Valuation and Strategic Analysis
1994	Inca	Magnesium	Due diligence and valuation
1994	Mitsubishi	Ferrochrome	Due diligence and valuation
1994	Namco*	Diamonds	Competent Person's Report and valuation
1994	Randgold & Exploration Co Ltd	Wits Gold	Due diligence
1993	Namibia Oil & Gas licence applications	Oil & Gas	Working with Paul Blair licence applications
1993	Atomic Energy Commission	Uranium	Strategic Analysis
1993	Eskom	Base metals	Strategic Analysis

YEAR	CLIENT	COMMODITY	DOCUMENTATION
1993	JCI	Wits Gold	Financial Planning Analysis (Rehabilitation)
1993	Lonrho	Platinum	Financial Planning Analysis (Rehabilitation)
1993	Rand Mines Properties	Varied	Mineral rights evaluation
1992	Barbrook Gold Mines	Greenstone Gold	Ore resource modelling and mine valuation
1992	Rand Merchant Bank	Copper	Ore resource modelling and project valuation
1992	Rembrandt	Platinum	Mine valuation (Northam Platinum)
1992	West Rand Cons	Wits Gold	Ore resource modeling and mine valuation
1991	Rand Merchant Bank	Wits Gold	Ore reserve evaluation (Westonaria Gold Mine)
1991	Rembrandt (Gold Fields of SA)	Varied	Due diligence, valuation and strategic analysis
1991	Standard Merchant Bank	Greenstone Gold	Due diligence and valuation (Eersteling Gold Mine)
1990	Sequence Oil and Gas	Oil & Gas	Due Diligence Report
1990	Atomic Energy Corporation	Nuclear Fuels	Strategic analysis
1990	Consolidated Mining Corp	Wits Gold	Due diligence and valuation
1990	Eskom	Copper/Zinc	Strategic Market Analysis (Toll Smelter potential)
1990	Freddies Minerals	Feldspar - Industrials	Due diligence
1990	Industrial Machinery Supplies	Coal	Strategic analysis and valuation (Bricketting plant)
1990	Knights Gold Mine	Wits Gold	Competent Person's Report
1990	Rand Merchant Bank	Diamonds	Due diligence and valuation (Alluvial Mine)
1990	Corex	Oil & Gas	Evaluation of prospectivity
1990	Rand Merchant Bank	Lead/Zinc	Due diligence and valuation (Miranda Mine)
1990	Rand Mines	Varied	Corporate Strategic Analysis
1990	Rhogold	Wits Gold	Ore resource modeling
1990	Rice Rinaldi	Coal	Due diligence and valuation
1990	Sub Nigel Gold Mine	Wits Gold	Due diligence and valuation
1990	Zaaiplaats Tin Mine	Tin	Due diligence and valuation
1989	Avontuur Diamond Mines	Diamonds	Due diligence and valuation
1989	Granite Consolidated Mining	Granite	Due diligence and valuation
1989	Osprey Gold Mine	Greenstone Gold	Due diligence and valuation
1989	Rand Leases Gold Mine	Wits Gold	Ore resource modeling
1989	Rand Merchant Bank*	Varied	Mineral portfolio analysis (Swanson Rights)
1989	Rhovan	Vanadium	Competent Person's Report and valuation
1989	Vanamin Severrin Mining	Vanadium	Due diligence and valuation
1989	Zimco	Andalusite	Competent Person's Report and valuation
1988	Mullet Slate	Slate	Due diligence and valuation
1988	Rand Merchant Bank	Wits Gold	Risk assessment analysis (Peritus Exploration)
1988	Wit Nigel Gold Mine	Wits Gold	Ore resource modelling

Key Qualifications:

Mr Clay has been a serving professional in the minerals industry since 1977 when he undertook field mapping and a professional apprenticeship within the Rhodesian Geological Survey. This was at a time when fieldwork and practical application of geological principals was still fundamental to the development of geology as a science. Following this, Mr Clay has dedicated his career to the commercial incorporation of first principles scientific process to the description, reporting and valuation of mineral assets.

Having worked for a number of years with mining companies, both underground and in corporate, Mr Clay became a founding member of Venmyn in 1988. At this time the company was closely associated with Rand Merchant Bank. This relationship enabled him to pursue the process of linking technical and financial valuation. Since that time Mr Clay has been involved in growing Venmyn and is presently the Managing Director and major shareholder.

He has been involved in developing a style of reporting at Venmyn which has become internationally recognised as compliant shorter form reporting. The emphasis of the work is on concise and graphical reporting, bullet points and descriptive graphics for ease of presentation and shareholder appreciation.

He has been involved in the writing of numerous codes the South African Code for the Reporting of Mineral Resources and Reserves (SAMREC Code) and is currently on the committee writing the South African Code for the Valuation of mineral projects (SAMVAL Code). He is presently involved in the oil and gas industry where his expertise in valuation is being used to determine the relationship between the reporting methodologies in this industry relative to the rest of the mineral industry.

Mr Clay's key areas of expertise lie in the detailed financial valuation of mineral and mining projects using discounted cash flow models. In this regard he has undertaken over 25 valuations for eight different commodities over the last four years. Details of the valuations and other assignments are tabled above. These valuations have been used in listing and merger documentation both in local and international stock exchanges and for the private use of the companies concerned.

Education:

DEGREE/DIPLOMA	FIELD	INSTITUTION	YEAR
B. Sc Hons.	Geology	University College Cardiff	1976
M. Sc. Econ. Geol.	Economic Geology (awarded Corstorphine Medal for Best M.Sc. Thesis)	University of the Witwatersrand	1981
GDE	Graduate Diploma in Mining Engineering	University of the Witwatersrand	1986
M. Sc.	Mining Engineering	University of the Witwatersrand	1988
Dip. Bus. M.	Diploma in Business Management	Damelin College	1983
Tax Mgmt	Tax Management and Planning	University of the Witwatersrand	1988

Employment Record:

POSITION	COMPANY	JOB DESCRIPTION	DURATION
Managing Director	Venmyn Deloitte	- Mr Clay serves as the Managing Director of Venmyn Deloitte and is responsible for the company's strategic process as well as finances, budgeting and operations; - Venmyn operates as a subsidiary of Deloitte Consulting, serving as a techno-economic consultancy for the resources industry on a world wide basis; - Mr Clay has been a key member of the SAMREC Working Group, responsible for compiling the SAMREC Code; - Served on the JSE/SAMREC working committee for the development of the JSE Section 12 requirements; - Serves on the Readers Panel for the JSE; - Mr Clay is director of the advisory business and provides hands-on services to all the company's major clients; - His expertise in financial valuation is particularly appropriate for ensuring market to market presentation of both the technical and financial issues of resources projects; - Course leader for the Witwatersrand University and Continuing Education programme on Compliance in the Minerals Industry; and - Mr Clay has a special interest in the proposed International Accounting Standards "IAS" Extractive Industries rules for determining NAV and NPV calculations in the minerals industry.	2012 present -
Managing Director and Founding partner	Venmyn Rand (Pty) Ltd	- Mr Clay serves as the Managing Director of Venmyn and is responsible for the company's strategic process as well as finances, budgeting and operations; - Venmyn operates as a techno-economic consultancy for the resources industry on a world wide basis; - Mr Clay has been a key member of the SAMREC Working Group, responsible for compiling the SAMREC Code; - Served on the JSE/SAMREC working committee for the development of the JSE Section 12 requirements; - Serves on the Readers Panel for the JSE; - Mr Clay is director of the advisory business and provides hands-on services to all the company's major clients; - His expertise in financial valuation is particularly appropriate for ensuring market to market presentation of both the technical and financial issues of resources projects; - Course leader for the Witwatersrand University and Continuing Education programme on Compliance in the Minerals Industry; and - Mr Clay has a special interest in the proposed International Accounting Standards "IAS" Extractive Industries rules for determining NAV and NPV calculations in the minerals industry.	1997 - 2012
General Manager	RMB Resources Rand Merchant Bank	- Continuing business functions detailed below; - Also valuing, managing and marketing investment projects of the Resources division including deal structuring and corporate finance.	1996 – 1997
Managing Director and founding partner	Venmyn Rand (Pty) Ltd	Techno-economic evaluation of a wide range of mineral resource projects using cashflow, market capitalisation, option pricing and other comparative methods.	1987 – 1996
Senior Geologist	Rand Mines Ltd	- Resident senior gold mine geologist responsible for the development and implementation of modern computerised ore reserve evaluation techniques at Harmony Gold Mine and Durban Roodepoort Deep Gold Mine. - Transferred to head office where he was responsible for all gold mine ore reserve valuation functions. This computer work involved the development and planning of very large databases for orebody modelling.	1981 – 1988
Senior Geologist	Zimro (Pty) Ltd (Industrial Minerals Division)	Market development and application of a wide range of industrial and base minerals.	1979 – 1981

POSITION	COMPANY	JOB DESCRIPTION	DURATION
Geologist	of AAC) Geological Survey of Zimbabwe	- Mapped a 100 km² area of granite-greenstone terrain and assisted in the compilation of a Bulletin over the area. - Assisted the small mining sector with geological advice on gold, copper, gemstones and industrial minerals.	1975 – 1979

5. I have visited the project site on the 9th June 2011;
6. I have read the definition of “Qualified Person” as set out in National Instrument 43-101 (“NI 43-101”) and certify that I fulfil the requirements to be a “Qualified Person” for the purposes of NI 43-101;
7. I have had no prior involvement with the properties that are the subject of the Technical Report;
8. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form;
9. I am responsible for the entire Technical Report;
10. At the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading;
11. I am independent of the issuer as described in section 1.5 of NI 43-101; and
12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated the 12th day of May 2014 at Johannesburg, South Africa.



Full name of staff member: Andrew Neil Clay

Appendix 3: Glossary

TERM	EXPLANATION
ALS Chemex	ALS Chemex Labs, Ltd. provides assaying and analytical testing services for mining and mineral exploration companies in Canada and internationally
Aplites	A fine-grained, light-colored granitic rock consisting primarily of orthoclase and quartz.
Archaen	A geologic eon before the Proterozoic and Paleoproterozoic, before 2.5 Ga
Anatexis	A high-temperature process of metamorphism by which plutonic rock in the lowest levels of the crust is melted and regenerated as a magma.
Arkose	Coarse sandstone that has formed by the disintegration of granite without appreciable decomposition. It thus consists primarily of quartz and feldspar grains. In the absence of stratification, arkose may bear superficial resemblance to granite, and it sometimes has been described as reconstituted granite, or granite wash. Like the granite from which it was formed, arkose is pink or gray.
Arsenopyrite	An iron arsenic sulfide (FeAsS) mineral. It is a hard (Mohs 5.5-6) metallic, opaque, steel grey to silver white mineral with a relatively high specific gravity of 6.1.
Assay laboratory	A facility in which the proportions of metal in ores or concentrates are determined using analytical techniques.
Auriferous	Gold bearing
Azimuth	The horizontal angular distance from a reference direction, usually the northern point of the horizon, to the point where a vertical circle through a celestial body intersects the horizon, usually measured clockwise
Chalcopyrite	A copper iron sulfide mineral that crystallizes in the tetragonal system. It has the chemical composition CuFeS ₂ .
Cobelmin	Compagnie Zairoise d'Enterprises Minières
Collectivité	Local Authority
Conglomerate	Lithified sedimentary rock consisting of rounded fragments larger than 0.08 in. (2 mm) in diameter. It is commonly contrasted with breccia. Conglomerates are usually subdivided according to the average size of their constituent materials into pebble (fine), cobble (medium), and boulder (coarse).
Craton	An old and stable part of the continental lithosphere, normally older than 2Ga
Dip	The angle that a structural surface, i.e. a bedding or fault plane, makes with the horizontal measured perpendicular to the strike of the structure.
Disaggregated	To divide into constituent parts
Disseminated greisens	A widely dispersed highly altered granitic rock or pegmatite
Eburnean Orogeny	A Palaeoproterozoic (2.1-1.8 Ga) transpression tectonic event that resulted in the amalgamation of the Zimbabwe, Tanzania and Congo cratons.
Elutriation	Also known as air classification, is a process for separating lighter particles from heavier ones using a vertically-directed stream of gas or liquid (usually upwards). This method is profoundly used for particles with size (>1µm)
En-echelon	closely-spaced, parallel or sub-parallel, overlapping or step-like minor structural features in rock (faults, tension fractures), which lie <i>oblique</i> to the overall structural trend
Exploration	Prospecting, sampling, mapping, diamond drilling and other work involved in the search for mineralisation.
Faulting	The process of fracturing that produces a displacement.
Feasibility study	A definitive engineering estimate of all costs, revenues, equipment requirements and production levels likely to be achieved if a mine is developed. The study is used to define the economic viability of a project and to support the search for project financing.
Footwall	The underlying side of a fault, orebody or stope.
Gécamines	La Générale des Carrières et des Mines, a state-owned mining company in DRC
Grade	The relative quality or percentage of ore metal content.
Greenstone belt	Zones of variably metamorphosed mafic to ultramafic volcanic sequences with associated sedimentary rocks that occur within Archaean and Proterozoic cratons between granite and gneiss bodies.
Groundwater	Water found beneath the surface of the land.
Hydrological	Pertaining to water either above or below the surface.
Hydrothermal	Using a combination of water and heat
In situ	In place, i.e. within unbroken rock.
Inselberg	An isolated mountain or hill rising abruptly from its surrounding.
Internal standard	Internal laboratory sample for which the metal content is known.
Kibaran belt	An intracontinental mobile belt situated between the Congo Craton in the west and the Tanzanian Craton in the east. It is made up of metasediments and volcanics dating from 1,400-950Ma.
Kriging	A mathematical estimation technique based on geostatistics and used for modelling ore bodies.
Log-normal	probability distribution of a random variable whose logarithm is normally distributed
Mesoproterozoic	An era in the earth's geological history spanning 1600 to 1000Ma
Metallurgy	In the context of this document, the science of extracting metals from ores and preparing them for sale.
Metallurgical recovery	Proportion of metal in mill feed which is recovered by a metallurgical process or processes
Metasediments	Sediment or sedimentary rock that shows evidence of having been subjected to metamorphism
Milling/mill	The comminution of the ore, although the term has come to cover the broad range of machinery inside the treatment plant where the mineral is separated from the ore.
Mineable	That portion of a resource for which extraction is technically and economically feasible.
Mineralisation	The presence of a target mineral in a mass of host rock.
Mineralised area	Any mass of host rock in which minerals of potential commercial value occur.
Mine Recovery Factor (MRF)	This factor reflects the difference between the in situ ore reserve grades (or contained metal) and the grade (or contained metal) at the front of the concentrator plant and accounts for losses of metal during the mining process.
Mobile Belt	An elongate, narrow region of crust experiencing or has experienced tectonic activity, normally between

TERM	EXPLANATION
	two colliding continents
Net Present Value (NPV)	The NPV is the present value of future cash flows calculated from an escalated and inflated free cash flow of the operations. This is discounted back at inflation and then further discounted at a project risk rate. The NPV can be of cash flows before or after tax, or based upon full shareholders returns net of withholding taxes.
Ore	A mixture of valuable and worthless minerals from which at least one of the minerals can be mined and processed at an economic profit.
Orebody	A continuous well defined mass of material of sufficient ore content to make extraction economically feasible.
Orogeny	A mountain or mountain building event in geological history
Pan-African event	A geological orogenic event related to the formation of the supercontinents Gondwana during the Neoproterozoic (1000- 542Ma)
Porphyritic	Containing relatively large isolated crystals in a mass of fine texture
Phyllite	A type of foliated metamorphic rock primarily composed of quartz, sericite mica, and chlorite; the rock represents a gradation in the degree of metamorphism between slate and mica schist
Precambrian	A major interval of geologic time between about 540 million years (Ma) and 3.8 billion years (Ga) ago, comprising the Archean and Proterozoic eons and encompassing most of Earth history.
Proterozoic	A geological eon aged 2.5Ga to 542Ma representing a period before the first abundant complex life on Earth. It is divided into 3 eras, namely Palaeoproterozoic (2.5Ga-1.6Ga), Mesoproterozoic (1.6Ga-1.0Ga) and Neoproterozoic (1.0Ga-542Ma).
Pyrite	An iron sulfide with the formula FeS ₂ . This mineral's metallic luster and pale-to-normal, brass-yellow hue have earned it the nickname fool's gold due to its resemblance to gold.
Quartzophyllades	A historical term used mainly in Belgium to describe silty slates
Refining	The final purification process of a metal or mineral.
Regolith	A layer of loose, heterogeneous material covering solid rock. It includes dust, soil, broken rock, and other related materials and is present on Earth's surface.
Rehabilitation	The process of restoring mined land to a condition approximating to a greater or lesser degree its original state. Reclamation standards are determined by the South African Department of Mineral and Energy Affairs and address ground and surface water, topsoil, final slope gradients, waste handling and re-vegetation issues.
Run-of-Mine (ROM)	This is ore extracted from the mine and which has sufficient metal content to justify processing. This figure includes dilution.
Sampling	Taking small pieces of rock at intervals along exposed mineralization for assay (to determine the mineral content).
Schist	Constitute a group of medium-grade metamorphic rocks, chiefly notable for the preponderance of lamellar minerals such as micas, chlorite, talc, hornblende, graphite, and others
Schistosity	A sheared fabric in the rock
Semi-variogram	The variance of the difference between field values at two locations across realizations of the field
Sericite	Fine grained mica, similar to muscovite, illite, or paragonite
Slimes	The fraction of tailings discharged from a processing plant after the valuable minerals have been recovered.
Smelting	The extraction of metal from ore by heating.
Specific gravity	Measure of quantity of mass per unit of volume, density.
Spot price	The current price of a metal for immediate delivery.
Stratigraphic	A term describing the sequence in time of bedded rocks which can be correlated between different localities.
Strike length	Horizontal distance along the direction that a structural surface takes as it intersects the horizontal.
Stockpile	A store of unprocessed ore or marginal grade material.
Stockworks	A complex system of structurally controlled or randomly oriented veins. Stockworks are common in many ore deposit types and especially notable in greisens
Stope	Excavation within the orebody where the main production takes place.
Syn-formal	Formed at the same time
Tailings	Finely ground rock from which valuable minerals have been extracted by milling.
Tailings dam	Dams or dumps created from waste material from processed ore after the economically recoverable metal has been extracted.
Tonnage	Quantities where the ton is an appropriate unit of measure. Typically used to measure reserves of metal-bearing material in-situ or quantities of ore and waste material mined, transported or milled.
Total tonnes mined	Total number of tonnes of ore and waste which is extracted from the mine.
Waste rock	Rock with an insufficient metal content to justify processing.
Working costs	Working costs represent:-
Yield/Recovered grade	a) production costs directly associated with the processing of metal; and
Zaire	b) selling, administration and general charges related to the operation.
	The actual grade of ore realised after the mining and treatment process.
	Old name for the Democratic Republic of Congo before 1997

Appendix 4: Abbreviations

TERM	EXPLANATION
AAPG	American Association of Petroleum Geologists
AER	Annual Environmental Report
Amsl	Above Mean Sea Level
AMRI	African Mineral Resources Inc.
AON	A provider of risk management, insurance broking and human resource solutions
ASAIMM	Associate of the South African Institute for Mining & Metallurgy
Au	Gold
Banro	Banro Corporation
Banro Congo	Banro Congo Mining Sarl
BBBEE	Broad-Based Black Economic Empowerment
BIF	Banded Iron Formation
Bn	Billion
BRGM	Bureau du Recherches Géologiques et Minières
CAMI	Cadasterie Miniere
CDT	Authorization de Commencement des Travaux, which is a permit authorizing the PR holder to carry out exploration work
CEMC	Congo Environmental and Mining Consultants
CIA	Central Intelligence Agency
CIL	Carbon -in- leach
CIMMP	Canadian Institute of Mining, Metallurgy and Petroleum
CIMVAL	Canadian Institute of Mining, Metallurgy and Petroleum on Valuation of Mineral Properties
CIP	Carbon- in- pulp
CoV	Coefficient of variation
DCF	Discounted cash flow.
DGPS	Differential Global Positioning System
DHL	Dalsey, Hillblom and Lynn (founders of DHL Worldwide Express)
DRC	Democratic Republic of the Congo
EC	Certificat d'Exploitation
EIA	Environmental Impact Assessment
EIS	Environmental Impact study
EL	Exploitation Licence
EMPP	Environmental Management Plan of the Project
EOH	End Of Hole
ETF	Exchange-traded fund
FAusIMM	Fellow of the Australasian Institute of Mining and Metallurgy
FDLR	Democratic Forces for the Liberation of Rwanda
FGSSA	Fellow of the Geological Society of South Africa
FSAIMM	Fellow of the South African Institute for Mining & Metallurgy
Ga	<i>Giga annum</i> (Billion years)
GDP	Gross Domestic Product
GIL	Geosearch International Limited
GPS	Global Positioning System
GSSA	Geological Society of South Africa
g/t	Grams per ton
HF Radio	High Frequency Radio
IOD	Institute of Directors of South Africa
km	Kilometre
km ²	Square kilometre
KBM	Kibaren Mobile Belt
Koz	Kilo ounce
LoM	Life of Mine
M.Sc	Master of Science degree
m ²	Square meters
m ³	Cubic meters
Ma	<i>Mega annum</i> (Million years)
mamsl	Meters above mean sea level
MARD	Mean Absolute Relative Differences
MBA	Masters of Business Administration
MDDZ	Mines D'Or du Zaire
MIBA	Société Minière de Bakwanga
MGL	Compagnie Minière Zairoses Des Grand Lacs
Moz	Million ounces
Mt	Million tonnes
MW	Mega Watt power
NATA	National Association of Testing Authorities

TERM	EXPLANATION
NAV	Net Asset Value
NMC	New Mining Code
NMD	Notified Maximum Demand
NPV	Net Present Value
oz	Ounce
PAR	Plan for Mitigation and Rehabilitation
PEPM	Exploitation Permit for Small Mines
PE	Permis d'Exploitation
PGE's	Platinum Group Elements
PGEp	Environmental Management Programme
pH	Potential of Hydrogen
ppb	Parts Per Billion
ppm	Parts Per Million
Pr.Sci.Nat	Professional Natural Scientist
QA/QC	Quality Assurance and Quality Control
ROM	Run-Of-Mine
SACNASP	The South African Council for Natural Scientific Professions
SARL	Company whose liability is limited to the contributions of its members
SENET	Senet Dynamic Engineering (SENET)
SGS	Inspection, verification, testing and certification company
SOMINKI	La Société Minière et Industrielle du Kivu SARL
SRK	SRK Consulting (UK) Ltd
t	metric tonnes
tpd	tonnes per day
tpy	tonnes per year
tpm	tonnes per month
TSX	Toronto Stock Exchange
US	United States of America
USD	US Dollar
USDm	Million US Dollars
USD/oz	US Dollar per ounce
USGS	United States Geological Survey
Venmyn	Venmyn Rand (Pty) Limited
ZAR	South African Rand
ZARm	Million South African Rands
ZAR/t	South African Rands per tonne

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited (DTTL), a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.com/about for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms.

Deloitte provides audit, tax, consulting and financial advisory services to public and private clients spanning multiple industries. With a globally connected network of member firms in more than 150 countries, Deloitte brings world-class capabilities and high-quality service to clients, delivering the insights they need to address their most complex business challenges. Deloitte has in the region of 200 000 professionals, all committed to becoming the standard of excellence.

© 2013 Deloitte & Touche. All rights reserved. Member of Deloitte Touche Tohmatsu Limited