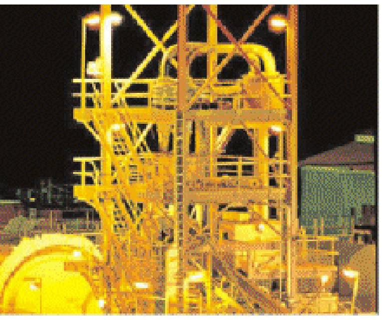
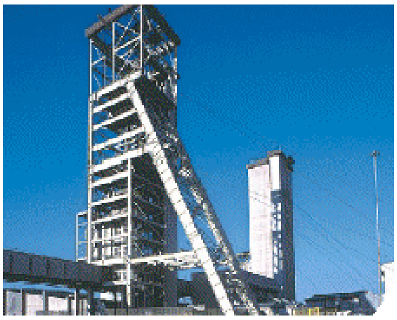
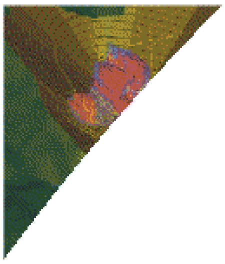


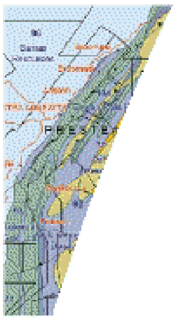




RSG GLOBAL
Integrated Mining Solutions

Mokopane, Limpopo Province, South Africa

Qualified Persons Report
Rooipoort PGE



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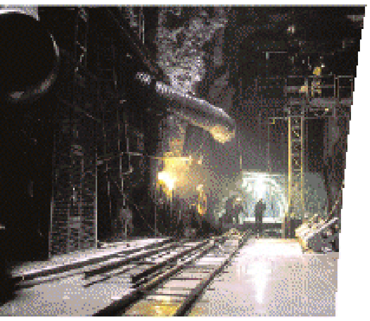

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Rooipoort PGE
Mokopane, Limpopo Province, South Africa

Qualified Persons Report

Prepared by RSG Global on behalf of:

Caledonia Mining Corporation

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Date: December 2005

Job Number: JROO02

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1 SUMMARY

Eersteling Gold Mining Company Ltd. (“EGMC”) is a 100% owned subsidiary of Caledonia Mining Corporation and holds 100% of the Rooipoort Pt/Pd/Au/Ni/Cu project which is situated in the Limpopo Province, South Africa, some 250km north of Johannesburg and 5km south of the town of Mokopane (formerly Potgietersrus). The Rooipoort Project incorporates two adjacent farms viz. Rooipoort 46KS (the whole farm) and Grasvally 293KR (Portions 9, 11, 13, 14 and 16) comprising a contiguous area of 3687.1948 hectares. EGMC is the holder of the Prospecting Permit and Prospecting Right, issued by the South African Department of Minerals and Energy, to the Rooipoort Project area.

Acquisition of the properties comprising the Rooipoort Project area and the subsequent exploration programme were initiated as the area is underlain by approximately 7km of strike length of the Northern Lobe overlying the floor rocks. The project area has limited exposure and had been poorly explored in the past, with published extrapolations of the Platreef southwards from Mokopane indicating possible Platreef sub-outcrop along the 7km strike close to the floor rocks.

The Rooipoort Project lies in the southern part of the Northern Lobe of the Bushveld Complex, the largest layered intrusion in the world and the world’s most important resource of platinum group metals. Thirty kilometres along strike to the north of the Rooipoort Project is the Potgietersrus Platinum’s Ltd. opencast Pt/Pd/Au/Ni/Cu mine of Anglo Platinum Corporation Ltd. located on the Platreef. The Platreef forms the lowermost unit of the Northern Lobe of the Bushveld Complex in that area which lies on a floor of Transvaal Supergroup rocks and Basement granites. The Platreef is unique to the Northern Lobe. The type area of the Platreef extends in outcrop from Mokopane for some 35km to the north. It consists of an assemblage of feldspathic pyroxenites and pyroxenites hosting platinum group metals (PGMs), nickel and copper bearing sulphide mineralization.

Exploration by EGMC was undertaken in a phased manner commencing in mid-2003 with the acquisition of airborne geophysical (aeromagnetic) data followed by a soil geochemical survey and two phases of core drilling, culminating in September 2005 with 3D modelling and resource estimation (RSG Global). The interpretation of the aeromagnetics coupled with soil geochemical data and geological extrapolation provided the basis for positioning of drillholes for the first phase of the core drilling programme. The interpretation of this drilling programme of 23 drillholes totalling 7,470m of core and 4,886 assays is that the Platreef is not present however several mineralized zones within a 600m to 800m stratigraphic sequence were identified.

The second phase of core drilling added 31 drillholes totalling 10,979.17m of core and 7,782 assays and allowed for definition of seven previously unidentified PGM and base metal (Ni & Cu) bearing sulphide mineralized zones, as well as the recognition of a stratigraphic sequence of this area. A local stratigraphic terminology has been developed which does not correlate directly with the established stratigraphic terminology applied to the Bushveld Complex. Potential correlation with the standard stratigraphy is presented in the context of previous work on the area of Grasvally and adjacent properties to the south of the project area. The mineralized zones were essentially numbered upwards from the base of the enclosing unit with broader cut mineralization given the suffix ‘S’.

On the project area, a broad, shallow, north plunging synclinal structure is developed, separated by a northerly trending fault zone (the Grasvally Fault) from a westerly dipping unit. Only mineralized material to the east of the Grasvally fault is considered in this interpretation, although it is clear that additional mineralized material exists to the west of this fault. This represents upside potential to the resource calculated in this exercise.

The deposit is disrupted by several smaller-scale faults and intruded in the north by an easterly trending bifurcating dyke. The EGMC geological interpretations separate the resource into 3 main zones, the C & G block to the south of the dyke, the B block between the bifurcated limbs of the dyke and the A block to the north of the dyke. Only mineralization in the Lower Units have been modelled in the A block. RSG Global has treated all 3 blocks together, as they would have originally been continuous.

A mineral resource estimation was carried out by RSG Global on two of the seven defined mineralized zones viz. the M2 and L3, primarily due to the level of confidence in the lateral geological continuity of the selected zones. RSG Global considers the mineral resource to be an Inferred Mineral Resource, primarily because of the sparse drill information. Data quality and geological understanding are considered appropriate for this level of classification.

Metal contents and block tonnages were accumulated and formed the basis for reporting the resource as tabulated below. Resource tabulations are based on a 0.5g/t Pt+Pd+Au ("2PGE+Au") cut-off above 900m elevation, which correlates approximately to 200m depth, considered appropriate for an open pit.

Table 1_1

Inferred Resource

At 0.5g/t 2PGE+AuPGE+Au cut-off and 900m base (200m). Inferred Resource
Apparent inconsistencies between grades, tonnage and contained metal may arrize from rounding

	Ave Thick (m)	Tonnes	Pt (oz)	Pd (oz)	Au (oz)	Ni (tonnes)	Cu (tonnes)	2PGE+ AuPGE+Au (g/t)	Pt (g/t)	Pd (g/t)	Au (g/t)	Ni (%)	Cu (%)
M2	1.8	12,791,000	172,900	340,300	39,200	25,300	14,900	1.34	0.42	0.83	0.10	0.20	0.12
L3	1.3	5,337,000	101,300	88,300	8,400	8,000	5,200	1.15	0.59	0.51	0.05	0.15	0.10

2 INTRODUCTION AND TERMS OF REFERENCE

2.1 Scope of the Report

RSG Global was requested by Caledonia Mining Corporation ("Caledonia") to prepare an Independent Technical Report for the Rooipoort Pt-Pd-Au-Ni-Cu Project in the Mokopane (formerly Potgietersrus) area of Limpopo Province, South Africa. It is understood by RSG Global that this report is required for lodgement on SEDAR to support a material change resulting from the first reporting of the resource at Rooipoort by Caledonia. Accordingly, this Technical Report complies with all relevant aspects of the Canadian National Instrument 43-101 (NI43-101) and NI43-101F1.

Eersteling Gold Mining Company Limited. ("EGMC") is the holder of the Prospecting Permit and Prospecting Right to the Rooipoort Project area. EGMC is a South African registered company and is a wholly owned subsidiary of the Caledonia.

2.2 Principal Sources of Information

Information used in the compilation of this report was provided largely by EGMC. RSG Global has also made use of various open file resources including the internet.

EGMC provided RSG Global with an Access database containing drillhole and assay information, including flagged intercepts based on an approximate 0.5g/t 2PGE+Au (Pt+Pd+Au) cut-off. Furthermore, they provided RSG Global with a series of wire-frame files which constitute a 3-D geological interpretation of the Rooipoort mineralization.

EGMC also provided RSG Global with reports detailing the geology of the Rooipoort deposit and QA/QC procedures and results carried out during the exploration drilling. Significant assistance was provided by EGMC in the preparation of this report.

Dr Verbeek visited the EGMC exploration offices in Mokopane during September 2005 and the Rooipoort Project nearby the town. During this visit, he completed random checks to verify the validity of the database with respect to handwritten logs and original assay certificates, and viewed representative core intersections. Dr Verbeek also discussed the geological models and exploration strategies with exploration staff.

2.3 Qualifications and Experience

RSG Global is an integrated Australian-based consulting firm, which has been providing services and advice to the international minerals industry and financial institutions since 1987. RSG Global has maintained a fully operational office at Accra in Ghana since 1996, providing an operational base for consulting and contracting assignments throughout the West African region. In 1999, an additional African office was established in Johannesburg, South Africa, to support expanding activities within the southern and eastern parts of the continent.

The following key personnel were assigned to the project team and their specific areas of responsibility are given below. The qualifications and appropriate experience of each author are detailed in Appendix 5: Authors Certificates.

Dr Julian Verbeek, RSG Global Principal Consultant Resources

Mineral resources, geological interpretations, quality control, quality assurance, geological site visits, report preparation.

Ken Lomberg, RSG Global Senior Consultant Resources

Peer review

2.4 Independence

Neither RSG Global nor the authors of this report have any financial interest in EGMC or Caledonia. This report has been prepared solely on the basis of professional fees.

3 DISCLAIMER

RSG Global has based its review of the Rooipoort PGM Project on information provided largely by EGMC. These data include third party technical reports prepared by government agencies and previous tenement holders, along with other relevant published and unpublished third party information. RSG Global has endeavoured, by making all reasonable enquiries, to confirm the authenticity and completeness of the third party technical data upon which this report is based. However, RSG Global does not warrant the authenticity or completeness of any such third party information. A final draft of this report was provided to EGMC, along with a written request to identify any material errors or omissions.

Neither RSG Global nor the authors of this report are qualified to provide extensive comment on the legal aspects associated with ownership and other rights pertaining to EGMC mineral properties, which are included in this report. RSG Global did not see the legal title of EGMC to the properties nor apply any legal due diligence to confirm such title. Similarly, neither RSG Global nor the authors of this report are qualified to provide extensive comment on the environmental issues associated with Rooipoort PGM Project, as discussed in this report.

No warranty or guarantee, be it expressed or implied, is made by RSG Global with respect to the completeness or accuracy of the information on the legal, environmental, metallurgical or mineral processing aspects not undertaken by RSG Global, referred to in this document. Neither RSG Global nor the authors of this report accept any responsibility or liability in any way whatsoever to any person or entity in respect of these parts of this document, or any errors in or omissions from it, whether arising from negligence or any other basis in law whatsoever.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Demographics and Geographic Setting

South Africa is a constitutional democracy with an independent judiciary.

Although South Africa and its neighbours have a large and experienced workforce of skilled and semi-skilled mining labour, this labour pool is ageing rapidly. In addition, the high incidence of HIV/AIDS is likely to have a marked impact on the future availability of skilled labour. Nonetheless, a high number of job-seekers, coupled with a good training infrastructure, should ensure an adequate supply of skilled mineworkers.

South Africa has sophisticated financial infrastructure, with a world-respected banking system. The country possesses an efficient transport infrastructure, which has for many years also been utilised by other countries in Africa, as far north as the Democratic Republic of the Congo and Tanzania. The rail and port system is run by a parastatal company, Transnet Limited. The rail network extends over 22,000km and seven major harbours are utilised. The national and provincial road networks consist of some 73,500km of surfaced and 288,000km of unsurfaced roads.

There are major international airports at Johannesburg, Cape Town and Durban, and a total of 727 registered airfields in South Africa.

Electricity is generated mainly by parastatal company, Eskom, the country's electricity utility, and is amongst the cheapest in the world. Imaginative agreements between this utility and mineral processors in the past have seen the establishment of world-rated mineral-beneficiation projects, such as the Alusaf Hillside aluminium smelter, as well as the current development of a new deepwater port at Coega in the Eastern Cape.

South Africa possesses a modern telecommunications network, with international links including submarine cables and satellite stations. There are three cellular telephone providers.

The population of South Africa amounts to approximately 46.6 million (mid-2004 estimate), with a population growth rate of -0.31% (2005 estimate). English is widely spoken as a first and second language, with a literacy rate of 86.4%. There are 11 official languages.

4.2 Political and Financial Status

Exchange controls exist, but do not apply directly to foreign investors. An additional tax on dividends to foreign shareholders was cancelled in October 1995. Taxation of mining concerns (other than gold mines) is levied at the same rate as that for other companies. However, the inherent risks involved in mining are acknowledged through the benefit of accelerated depreciation of capital expenditures. In respect of mines this can be redeemed immediately against mining revenue.

No restrictions exist on foreign investment and the regulations and procedures applicable to operating a business in South Africa also apply to foreign investors. A foreign company need not have South African resident directors.

South Africa is a signatory to the World Trade Organization (WTO) which embodies the General Agreement on Tariffs and Trade (GATT). As a member of the WTO, South Africa is in the process of reducing tariffs and quotas on a wide range of imports. Export and import controls, with regard to minerals and mineral products, are minimal. There are no constraints on the extent of foreign ownership of companies involved in mining operations in South Africa.

The local currency is the South African Rand (ZAR), which was traded on 6 December 2005 at ZAR6.30 to US$1.00. A number of economic indicators for the last 10 years are shown in Table 4.1.2_1.

Table 4.1.2_1

A Selection of Economic Indicators for South Africa (1993 - 2004)

Year	GDP R (Millions)	Mining Proportion of GDP (%)	R/$	CPI (%)
1993	426,132	7.1%	3.27	9.9%
1994	482,120	6.7%	3.55	8.8%
1995	548,098	6.4%	3.63	8.7%
1996	617,959	6.3%	4.30	7.3%
1997	685,732	5.9%	4.61	8.6%
1998	742,424	6.2%	5.55	6.9%
1999	813,683	6.4%	6.12	5.2%
2000	922,148	6.9%	6.94	5.4%
2001	1,020,008	7.6%	8.62	5.7%
2002	1,164,944	7.9%	10.53	9.2%
2003	1,251,469	6.7%	7.57	5.8%
2004	1,374,476	6.3%	6.46	1.4%

4.3 Mining Industry

Background

The mining industry in South Africa has traditionally been controlled by the six large mining conglomerates: Anglo American - De Beers, Gencor - Billiton, Gold Fields, JCI, Anglovaal and Rand Mines, which dominated gold, platinum, chrome, coal and base metal production in South Africa. Sweeping changes in the industry have taken place as a result of a rising cost structure from ageing mines and the impact of a new democratic constitution.

Historical Perspective – Legislative Development

Since about 1860, mining regulation in South Africa has evolved to keep pace with changing technological, economic, and socio-political needs to grow and sustain the country's world-class mining industry.

Enactment of the Minerals Act, No. 50 of 1991 (Minerals Act) marked the consolidation of a substantial legislative modernisation that began in the 1960s. After the first democratic elections in 1994, all government policies and legislation were subject to fundamental review. A White Paper (governmental discussion document) on minerals and mining policy was published in October 1998. Mine health and safety was given first priority with enactment of The Mine Health and Safety Act, 1996 (Act No 29 of 1996). The Parliament of South Africa passed The Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) ("MPRDA"), which was subsequently promulgated and became effective on 1 May 2004).

Mineral and Petroleum Resources Development Act, 2002

The MPRDA sets out the mechanics for converting mineral rights previously held under the Minerals Act to mineral rights recognised under the MPRDA. In addition to describing the new legislation, the following sections also refer to relevant background and provisions of the Minerals Act.

From Private Ownership to State Custodianship

Unique features of the Minerals Act were that it allowed mineral rights to be held privately and that these rights were severable from rights to particular minerals and surface rights in a particular property. Over the years, the South African system of mineral rights had developed into a dual system in which some mineral rights were owned by the State and some by private landholders (including surface owners). This was on the basis that South African mineral rights are a common-law concept as opposed to most other countries where mineral rights are vested in the State and are granted to individuals or corporate entities under the terms of mineral legislation.

This concept of state custodianship of mineral rights (now embodied in the MPRDA) has replaced the common law principles previously embodied in the Minerals Act. Enactment of the MPRDA places South Africa in line with global mineral ownership principles.

MPRDA - Mechanics

The two-stage system under the Minerals Act, which required consent from the mineral owner and subsequent application to the State for a prospecting permit or mining authorisation backed up by adherence to specified environmental requirements, has been replaced under the MPRDA by providing for the Minister to grant prospecting and mining rights.

Prospecting and mining rights are limited real rights in respect of the minerals and the land concerned, which entitle the holder to prospect or mine and to carry out all other activities incidental to prospecting or mining. These rights can generally be traded with the consent of the Minister.

A prospecting right may be granted for up to five years and may be renewed once for a period not exceeding three years. Mining rights are granted for a maximum of 30 years but are renewable for an indefinite number of further periods, each of which may not exceed 30 years. Security in the transition between prospecting and mining is enhanced in that the MPRDA stipulates that the holder of a prospecting right has the exclusive right to apply for and be granted a mining right.

In terms of the Minerals Act of 1991, all applications for the same mineral on the same land had to be treated as competing applications. However, the new MPRDA provides that applications will be dealt with in order of receipt. Consequently, only those applications received on the same day become competing applications. Another important improvement in the MPRDA is the provision for the disclosure of prospecting information once prospecting has been completed. This requirement should significantly reduce exploration costs in previously explored areas.

The MPRDA has enabled a significant number of international junior mining and exploration companies to become active in the country for the first time.

Transitional Arrangements

”Old order” rights to mineral assets previously held in terms of the Minerals Act to mineral rights recognised under the MPRDA can be transferred to “new order” rights in accordance with the transitional terms stated in Schedule II of the MPRDA as outlined below.

The objects of Schedule II of the MPRDA are to:-

- ensure security of tenure in respect of current prospecting and mining operations;
- give the holder of an old-order right an opportunity to comply with the new MPRDA; and
- promote equitable access to the nation’s mineral resources.

In order to ensure a smooth transition, all applications for prospecting permits, mining authorisations, consent to prospect or mine, and all environmental management programmes which had been lodged in terms of the Minerals Act, but not finalised or approved before 1 May 2004 (the date on which the new MPRDA took effect), are regarded as having been lodged in terms of the MPRDA.

Schedule II of the MPRDA places rights previously recognised under the Minerals Act into the following categories:-

- “old order prospecting right” - means any prospecting lease, permission, consent, permit or licence, and the rights attached thereto, listed in Table 1 to this Schedule in force immediately before the date on which this Act took effect (1 May 2004) and in respect of which prospecting is being conducted;
- “old order right” - means an old order mining right, old order prospecting right or unused old order right, as the case may be; and
- “unused old order right” - means any right, entitlement, permit or licence listed in Table 3 to this Schedule in respect of which no prospecting or mining was conducted before this Act took effect.’

Any old-order prospecting right, as substantiated by a valid prospecting permit issued in terms of the Minerals Act, will continue to be in force for a period of two years from 1 May 2004, subject to the terms and conditions under which it was granted, provided that the holder lodges an application for conversion within the two-year period together with certain prescribed information. A specific requirement for conversion is that prospecting operations must have been conducted on the property prior to conversion and it must certify that the intention to continue prospecting exists.

Similarly, any old-order mining right, as substantiated by a valid mining authorisation issued in terms of the Minerals Act, will continue to be in force for a period of five years from 1 May 2004 (effective date of MPRDA), subject to the terms and conditions under which it was granted. Provided that the holder lodges an application for conversion within a five-year period together with certain prescribed information. Of special importance are the requirements that mining operations must have been conducted on the property, there must be an intention to continue mining, and a prescribed social and labour plan must have been submitted. The applicant for conversion must also provide an undertaking that he or she will give effect to the objectives of the MPRDA pertaining to empowerment of Historically Disadvantaged South Africans (‘HDSA’) and economic growth and development.

Unused old-order rights, i.e. rights in respect of which no prospecting or mining was being conducted immediately prior to 1 May 2004, continued to be in force for up to one year from 1 May 2004 or until 30 April 2005. Within this period of one year, the holder of such an unused old-order right had the exclusive right to apply for a prospecting or mining right in terms of the MPRDA.

Environmental management programmes approved in terms of the Minerals Act will remain in force under the MPRDA.

Empowerment Charter and Scorecard

Recognising South Africa's unique history and in pursuance of the objectives of the MPRDA, Section 100 requires the Minister to develop a broad-based Socio-Economic Empowerment Charter that will set the framework, targets and timetable for effecting the entry of HDSAs into the mining industry. Since it is a specific requirement of the MPRDA that the granting of a mining right will expand opportunities for HDSAs, this important Charter was released in October 2002, well in advance of the coming into operation of the MPRDA.

Targets, timeframes and commitments are discussed in respect of each of the following facets of empowerment:-

- Human resource development.
- Employment equity (target: 40% participation in management by HDSAs in five years).
- Non-discrimination against foreign migrant labour.
- Mine community and rural development.
- Housing and living conditions.
- Procurement.
- Ownership and joint ventures (target: 26% ownership by HDSAs in 10 years).
- Beneficiation.

A scorecard has been developed to measure the performance of each mining company in respect of each of these facets. In practice, this will be used to judge applications for mining rights as well as applications for converting old-order mining licences into new-order mining rights.

Environmental Management

The MPRDA's requirements for environmental management during prospecting and mining operations are largely similar to those contained in the Minerals Act. These requirements have been aligned with the principles and objectives of the National Environmental Management Act, 1998 (Act No 107 of 1998), which is the principal Act governing all environmental matters in South Africa.

Applicants for a mining right are required to conduct an environmental impact assessment and submit an environmental management programme. Applicants for a prospecting right, mining permit or reconnaissance permission are required to submit an environmental management plan. Prospecting and mining rights become effective on the date that the corresponding environmental management plan or programme is approved.

Long delays were often experienced during the processing of environmental management programmes in terms of the Minerals Act of 1991. However, specific time limits for consultation and approval of environmental management programmes are stipulated by the MPRDA. Other government departments now have 60 days in which to comment on environmental management plans or programmes and approval must be completed within 120 days from lodgement of the plan or programme.

Financial provision for the remediation of environmental impacts and the issuance of a closure certificate are included in the MPRDA. New features include the requirement that financial provision must be in place prior to approval of the environmental management plan or programme. Additionally, an application for a closure certificate now becomes compulsory upon lapsing of a mining right or cessation of activities.

The Mineral and Petroleum Royalty Bill

The South African Government intends to provide for the imposition of production royalties in a Mineral and Petroleum Royalty Bill (which is at present before Parliament). The draft legislation proposes a royalty for PGMs of 4% of gross sales. At the date of this report, the implementation of the Royalty Bill has been postponed until 2009. The Royalty Bill will bring the South African dispensation in line with that of most of the other major mining jurisdictions in the world, e.g. Canada, and Australia.

Electronic copies of the MPRDA and other regulations can be found at the DME's website: **www.dme.gov.za**.

4.3.1 Mining Tenure

The Country mineral exploration and Mining Rights are provided in Table 4.3.1_1 below.

4.4 Project Location

The Rooipoort Project is situated to the south of Mokopane in the Limpopo Province, South Africa, some 250km north of Johannesburg (Figure 4.4_1). Table 4.6_1 summarises the areas of the properties held by EGMC. The northern and southern boundaries are 5km and 12km south of the town, respectively. The centre of the prospecting right is situated at approximately 29° 00´ 05˝ E / 24° 18´ 16˝ S.

4.5 Land Area

A total of 3,687 hectares are currently held under prospecting rights by EGMC.

Table 4.3.1_1
Mineral Exploration and Mining Rights

Country		***Mineral Exploration And Mining Rights***
Mining Act	:	Mineral and Petroleum Resources Development Act, No. 28 of 2002 (Implemented 1 May 2004)
State Ownership of Minerals	:	State custodianship
Negotiated Agreement	:	In part, related to work programmes and expenditure commitments.
Mining Title / Licence Types		
Reconnaissance Tenements	:	Yes
Exploration Tenements	:	Yes,
Mining Tenements	:	Yes
Retention Tenements	:	Yes
Special Purpose Tenements	:	n/a
Small Scale Mining Tenements	:	Yes.
Reconnaissance Tenement		
Name	:	Reconnaissance Permission
Purpose	:	Geological, geophysical, photo geological, remote sensing surveys. Does not include "Prospecting", i.e. disturbs the surface of the earth.
Maximum Area	:	Not limited. Ministerial discretion.
Duration	:	2 years
Renewals	:	No and no exclusive right to apply for prospecting right
Area Reduction	:	No
Procedure	:	Apply to Regional Department of Minerals and Energy.
Granted by	:	Minister
Prospecting Tenement		
Name	:	Prospecting Right
Purpose	:	All exploration activities including bulk sampling.
Maximum Area	:	No limit, Ministerial discretion
Duration	:	5 years.
Renewals	:	Once for 3 years
Area Reduction	:	No
Procedure	:	Apply to Regional Department of Minerals and Energy.
Granted by	:	Minister
Mining Tenement		
Name	:	Mining Right
Purpose	:	Mining and processing of minerals
Maximum Area	:	No limit, Ministerial discretion
Duration	:	Up to 30 years, Ministerial discretion
Renewals	:	Yes, with justification, Ministerial discretion
Procedure	:	Apply to Regional Department of Minerals and Energy.
Granted by	:	Minister

4.6 Prospecting Rights Description

EGMC acquired the rights to prospect on farm Rooipoort 46KS through an agreement with Rustenburg Platinum Mines Ltd. dated 4 December 2003 as result of which EGMC was granted a Notarial Mineral Lease and the right to "search for, mine, win, recover and for its own benefit and account dispose of the Minerals in, on and under the Property" in respect of all base and precious metals, gold and platinum (the "Minerals") on Rooipoort 46KS. In March 2004 EGMC purchased the rights to all minerals on Portions 11 and 16 of Grasvally and concluded Prospecting and Option Contracts with the owners of Portions 9, 13 and 14 of Grasvally 293KR.

Figure 4.4_1
Location of the Rooipoort Project Relative to the Bushveld Complex

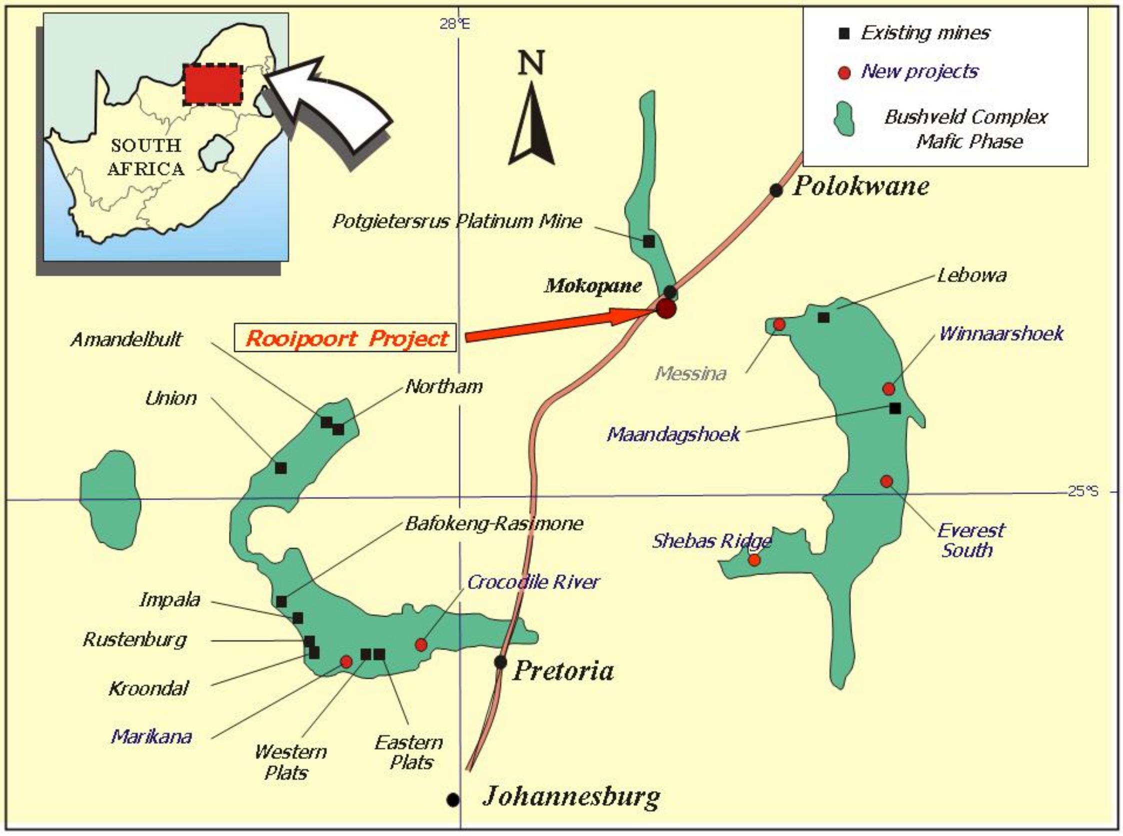


Table 4.6_1 Prospecting Rights held by EGMC, November 2005	
Farm Name	**EGMC prospecting rights (Ha)**
Rooipoort 46KS	3345.34
Grasvally 293KR	341.8548
Total	**3687.1948**

Prospecting Permit number 30/2003 was issued for Rooipoort 46KS in terms of the Minerals Act No. 50 of 1991, on 22nd April 2003 and is valid until 29th April 2006. New Order Prospecting Right number 07/2005 was issued for Portions 9, 11, 13, 14, and 16 of Grasvally 293KR in terms of section 17 of the Mineral and Petroleum Resources Development Act (Act 28 of 2002) ("MPRDA") on 4th May 2005 and is valid until 3rd May 2008.

An application for "conversion" of the Prospecting Permit over Rooipoort 46KS to a New Order Prospecting Right in terms of Schedule II section 6 of the MPRDA must be submitted before 29 April 2006. The Prospecting Right over Portions 9, 11, 13, 14 and 16 of Grasvally 293KR may be renewed for a further period of 3 years in terms of section 18 of the MPRDA.

In terms of the Prospecting and Option Agreements regular payments are due to the mineral rights owners on Grasvally as well as a lump sum if a Mining Right is obtained in terms of Section 23 of the MPRDA. The status of these prospecting and option payments is shown in Table 4.6_2.

Table 4.6_2
Rooipoort Project
Schedule of Prospecting and Option Payments: Farm Grasvally 293KR
(Blue denotes paid)

Portion No.	Owner	Due Date	Amount
Ptn 9	G.P.van Tonder	**27-Feb-04**	**R2, 000**
		13-May-05	**R 2,200**
		13-May-06	R 2,500
Ptn 13	P.J & M.C. Bosman	**09-Feb-04**	**R2, 000**
		25-Apr-05	**R 2,200**
		25-Apr-06	R 2,420
Ptn 14	C.A.Ferreira	**05-Mar-04**	**R3, 000**
Ptn 14	K. Enslin	**20-May-05**	**R 3,300**
(Enslin has purchased the property from Ferreira)		20-May-06	R 3,630
		20-May-07	R 4,000
		20-May-08	R 4,400

All rights are surveyed and registered in the Deeds Office of the Surveyor-General. The New Order Prospecting Right over the area of Portions 9, 11, 13, 14 and 16 of Grasvally 293KR are in process of registration with the Mining Titles Registration Office ("MTRO") as required by Section 25 of the MPRDA.

EGMC does not own any surface rights in the project area and would have to acquire such for any mining and processing operations. Land usage is largely for dry land cattle ranching or game farming and no particular obstacles are envisaged for the purchase of surface rights.

4.7 Agreements and Encumbrances

No royalties are payable to any of the current or previous owners of the properties, however the State may at some time in the future determine that royalties will payable on the value of minerals produced from the property. The exact nature and level of these royalties are currently under review.

4.8 Environmental Liabilities and Permits

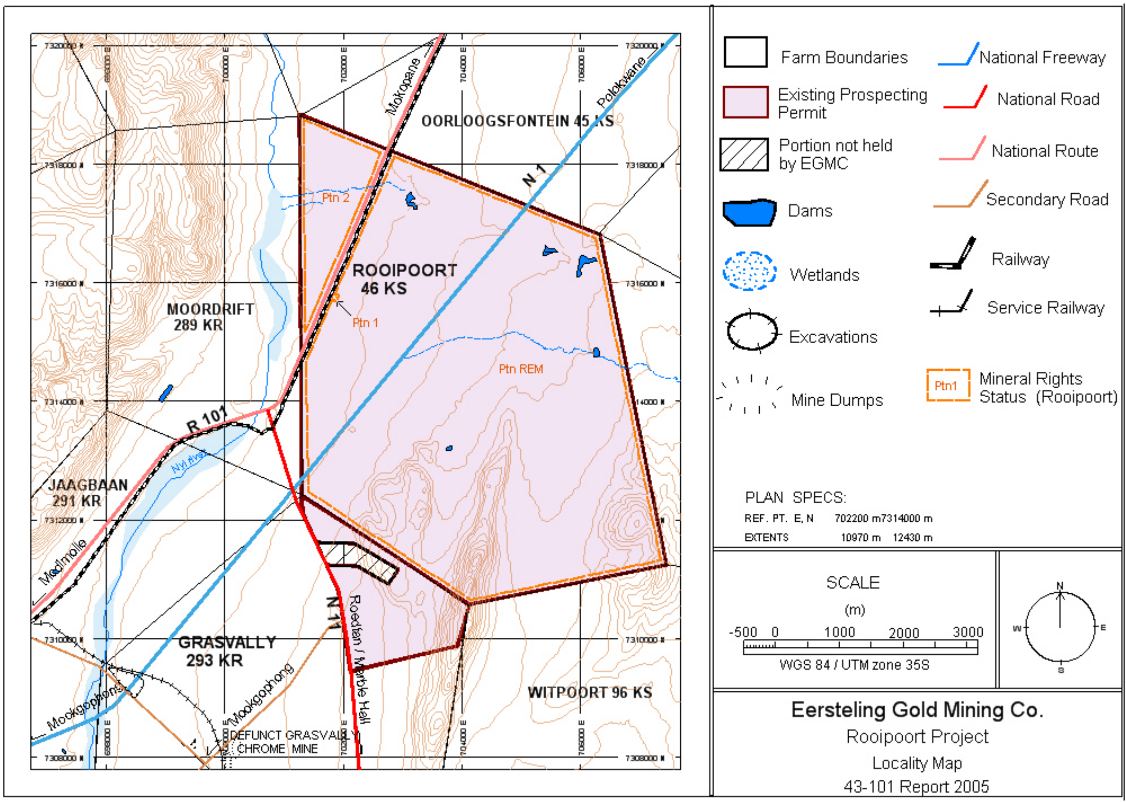
All environmental requirements on the properties are subject to the terms of a current Environmental Management Plan ("EMP") approved by the Department of Minerals and Energy prior to commencement of work on the properties. All rehabilitation of drillhole sites and access roads required in terms of this EMP has been completed. In addition the required deposits into the approved environmental rehabilitation trust in respect of related potential liabilities are up to date. There are no other environmental liabilities on the properties.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Access

The Rooipoort Project is well situated, close to existing road, rail power and township infrastructure. The R101 national road to Mookgophong (previously Naboomspruit) and Polokwane (previously Pietersburg) from Mokopane (previously Potgietersrus) and the parallel electrified north-south rail line pass through the western side of Rooipoort. The western side of the property is accessible via numerous gravel roads. The N11 running south-easterly through the southern part of the project area connects Mokopane to the town of Roedtan. The northeast and east sides are accessed by gravel road from the Mokopane – Zebedelia tarred road (Figure 5.1_1).

Figure 5.1_1
Local Setting of the Rooipoort Project



The project area is virtually bisected by the N1 toll road that connects Johannesburg with Polokwane and Musina (previously Messina) on the Zimbabwe border. The Nyl Plaza tollgate and ramp access to Mokopane is located just off the southwest corner of Rooipoort.

The west boundary of Rooipoort lies parallel to the course of the northward flowing Nyl River.

5.2 Climate

The climate is semi-arid with moderate winter temperatures and warm to hot in the summer. The majority of the 350-400mm of average annual rainfall occurs in the period November to March. Climatic conditions have virtually no impact on potential mining operations in the project area. Mining and exploration activities can continue throughout the year.

5.3 Physiography

The properties lie at an average elevation of 1,100m above sea level and the generally flat topography of the Nyl valley reaches high points of 1,404m at the south corner of Rooipoort on the Magaliesberg quartzite ridge and 1251m on the norite hills, which form the core of the Rooipoort synform.

5.4 Local Resources and Infrastructure

Mining services and recruitment are readily available from Mokopane which has a long history of mining with the Potgietersrust Platinum’s Ltd. mine (Anglo Platinum) situated north of the town. Furthermore, drilling contractors, mining services and consultants are readily sourced within the greater Gauteng area.

North-south high tension power lines pass over the eastern side of the property. All homesteads on the various portions are served by mains electricity. Power could be readily obtained from the national grid.

Water availability is limited and would need to be sourced for production purposes. The faulted nature of the ground surrounding the mineralized area suggests that significant underground water reservoirs may exist in secondary aquifers.

6 HISTORY

6.1 Ownership History

As far as can be determined the farm Rooipoort 46KS was first registered in 1887. The rights to all minerals on portions Remainder and 2 came into the hands of Oceana Consolidated Company Ltd in 1914 (Ptn 2) and 1918 (Remainder). The area of Ptn 1 was transferred to State in 1914 for the Rooipoort railway siding (Figure 5.1_1). The rights to Remainder and ptn 2 were transferred to African Gold and Base Mineral Holdings Ltd in 1937 and then split into the current holdings in 1975 (Rustenburg Platinum Mines), 2001 (Anglo Operations Ltd) and 2003 (Samancor Ltd). The previous ownership history of Grasvally 293KR is not known. The current ownership status extracted from the respective title deeds is summarised in Table 6.1_1.

6.2 Exploration History

The earliest reported exploration for platinum in this area, along the Northern Lobe of the Bushveld Complex was reportedly under the direction of Dr. Hans Merensky in 1925. Old trenches are to be found on Portion 16 of Grasvally 293KR.

Rand Mines optioned the mineral rights to Rooipoort 46KS, and in 1968 conducted a soil sampling programme over the southern portion of the farm.

In 1986, Anglo American Corporation carried out a systematic soil sampling programme and geological mapping over an area which covers the contact between the Bushveld Complex and the underlying meta-sediments on Rooipoort. This was followed by trenching of the best soil geochemical results and wagon drilling.

A total of 3,193 soil samples were taken by Anglo American and submitted for analysis by atomic absorption spectrometry for Cu, Ni and Cr. Anomalous areas were identified, and a small trench (location unknown) was excavated over the highest Cr anomaly (~5,000ppm). The trench attained a depth of 3 meters, but failed to reach bedrock. Despite this, channel samples were taken vertically along the trench sidewall, at 2 meter intervals. The results are reported as being far from encouraging, with a maximum value of 800ppm Cr. To test for depth integrity, some 4 wagon drillholes were drilled over the same anomaly, to straddle the trench site. The area drilled was reported to have been hampered by a considerable thickness of sandy soil and overburden, which may in part have been responsible for the poor surface results (450-1200ppm Cr). Furthermore, drilling failed to intersect the contact of the Bushveld and underlying Transvaal rocks. No maps are available from this work.

The Council for Geoscience carried out a regional geochemical soil sampling survey of the Nylstroom Sheet (2428) that covers the area of the properties with a sample density of 1 sample per square kilometre. Hard copy maps for selected elements were acquired, scanned and geo-referenced. The nickel and chromium distribution are particularly useful since they are good indicators of Lower and Critical Zone lithologies.

There is a well defined regional Ni and Cr anomaly centred on the Lower Zone rocks on Grasvally and Zoetveld to the south of Rooipoort. On Rooipoort two weak Cr anomalies occur close to the basal contact of the mafic rocks along the northern and southern boundaries of the farm.

Table 6.1_1

Current Status of Mineral Titles on Rooipoort 46KS and Grasvally 293KR Forming the Project Area

Farm Name	Portion	Area	Owner	Title Deed	Minerals
Rooipoort 46KS	Remainder	3345.3428 hectares	Anglo Operations Ltd	K5767/2001RM	All minerals **excluding** platinum, palladium, rhodium, iridium, ruthenium, osmium and chrome
			Rustenburg Platinum Mines Ltd	K3353/1975RM	All rights to platinum, palladium, rhodium, iridium, ruthenium, osmium (subject to certain rights in the UG2 seam)
			Samancor Ltd	K5020/2003RM	All rights to chrome
	Portion 1	2227 sq m	State		State reserved all minerals.
	Portion 2	314.5942 hectares	Anglo Operations Ltd	K5767/2001RM	All minerals **excluding** platinum, palladium, rhodium, iridium, ruthenium, osmium and chrome
			Rustenburg Platinum Mines Ltd	K3353/1975RM	All rights to platinum, palladium, rhodium, iridium, ruthenium, osmium (subject to certain rights in the UG2 seam)
			Samancor Ltd	K5020/2003RM	All rights to chrome
Grasvally 293KR	Portion 9 a portion of portion 1	13.4904 hectares	G.P.van Tonder	T105840/1999	All minerals, metals , oil, oil shale, coal, lime and other mineral deposits and precious stones
	Remainder portion 11 a portion of portion 1	114.2314 hectares	Eersteling Gold Mining Company Ltd. (purchased from W.G. Smit March 2004)	K2330/04RM	All minerals
	Portion13 (a portion of portion 9)	21.4133 hectares	P. J. Bosman and C.P. Bosman	K5908/1999RM	All rights to minerals
	14 (a portion of portion 9)	21.4133 hectares	K. Enslin	T94252/2001	All minerals, metals , oil, oil shale, coal, lime and other mineral deposits and precious stones
	16	171.3064 hectares	Eersteling Gold Mining Company Ltd (purchased from W.G. Smit March 2004)	K2330/04RM	All Minerals

Note: The rather complicated ownership of different mineral commodities on Rooipoort now falls away with the implementation of the MPRDA.

6.3 Resource History

No resource or reserve estimates are known to have been declared for the Rooipoort Project area.

6.4 Production History

There has been no production from the Rooipoort Project.

7 GEOLOGICAL SETTING

7.1 Regional Setting

The Bushveld Complex ("BC") in South Africa (intrusion age ca. 2,060Ma) is the largest layered intrusion in the world. It has an area of 65,000km^2 and comprises the Rustenburg Layered Suite, which is an approximately 7km thick sequence of layered mafic igneous rocks, capped by granitoids of the Lebowa Granite Suite (ca. 2,054Ma) (Figure 5.1_1). The BC is broadly divided into a Western Lobe, an Eastern Lobe and a Northern Lobe, all of which host platinum group element (PGE)–bearing horizons that are currently being exploited viz. Merensky Reef, UG2 Chromitite Layer and Platreef.

Rooipoort 46KS and Grasvally 293KR are situated in the southern part of the Northern Lobe of the BC. The Northern Lobe extends for about 110km in a north-south direction with an average thickness of 4km (Armitage et al., 2002; Ashwal et al, 2005). The mafic rocks have a westerly dip of about 35° and intrude and transgress the underlying Palaeoproterozoic Transvaal Supergroup (2600-2100Ma) to eventually lie on Archaean basement granites from approximately 40km north of Mokopane to as far as the known northern limit of the Bushveld rocks of the Northern Lobe. Approximately 30km strike of the Northern Lobe lies to the south of Mokopane.

The Lebowa Granite Suite is overlain to the west by sediments of the Waterberg Supergroup (ca. 1800Ma).

The Rustenburg Layered Suite is the result of several episodes of intermediate[1] magma that were injected to within 5-10km of the surface and intruded into the volcano-sedimentary sequence of the Transvaal Supergroup. As the magmas cooled they differentiated to form layers of different mafic rock types. These layers range in thickness from a few millimeters to tens of meters and can be traced along strike for many kilometers.

The Rustenburg Layered Suite has been traditionally classified into five stratigraphic packages, viz. Upper Zone, Main Zone, Critical Zone, Lower Zone and Marginal Zone (Figures 7.1_1). These stratigraphic zones have a transgressive relationship with each other, as well as with the floor rocks.

The association of economic PGEs and base metals (predominantly nickel and copper) with layered mafic intrusions is well documented. The first discovery of economic PGE in the Northern Lobe of the BC was in 1925 on the farm of Sandsloot 236KR (Vermaak & van der Merwe, 1976). The mineralization in the Northern Lobe is hosted in a varied pyroxenitic package at the base of the BC and in the classic section is called the Platreef.

The Platreef is a layer of sulphide mineralization (containing PGE's and base metals) hosted by variable pyroxenites that have been intruded along the base of the Northern Lobe of the BC. It has a sharp hanging wall contact with the overlying Main Zone and displays extensive interaction with the underlying floor rocks. The Platreef is a sinuous body that pinches and swells due to undulating floor rock topography, along a north north-westward strike. The Platreef dips at between 32 and 45° west and ranges in thickness from <50m in the north of the lobe to 400m in the southern sector just north of Mokopane (Kinnaird, 2004).

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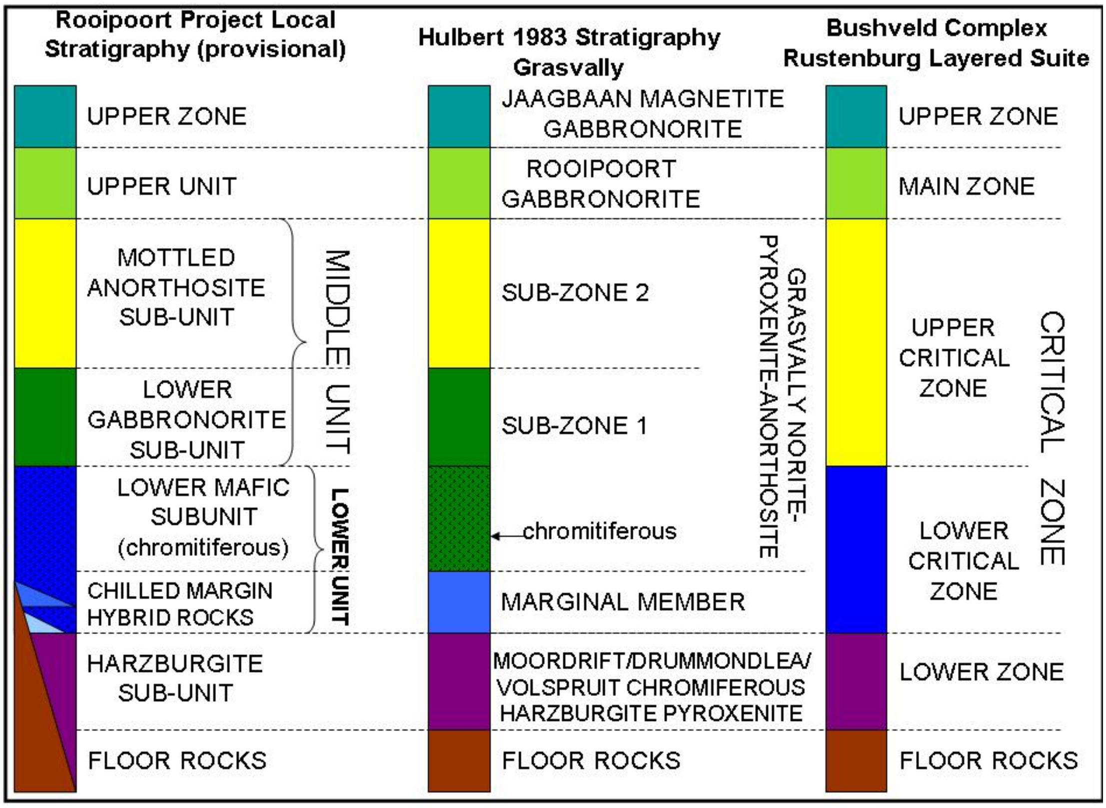
[1] An intermediate magma is 50-62wt% SiO_2 and the Platreef is a basaltic-andesitic, Mg-rich intermediate magma.

Figure 7.1_1
Stratigraphy of the Rooipoort Project Area



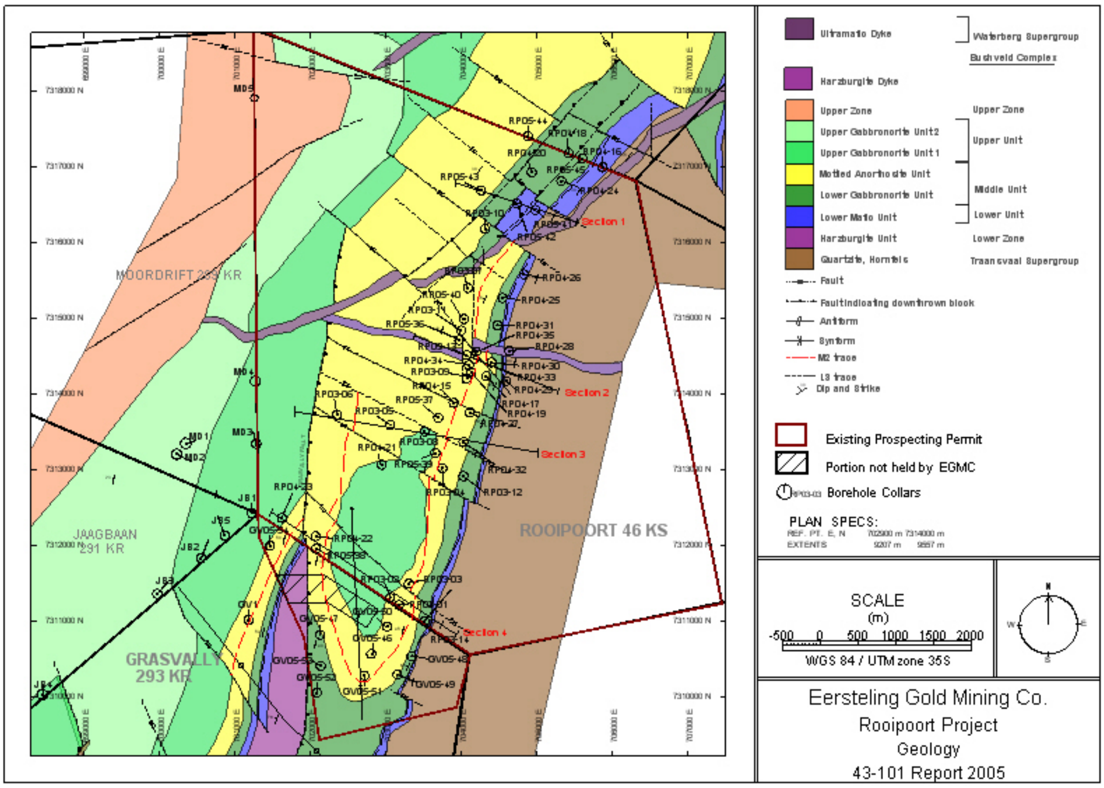
7.2 Project Geology

South of Mokopane, the Northern Lobe is distinct from that north of the town. This distinction is primarily due to the transgressive nature of both the BC lithologies and the change in the Transvaal Supergroup lithologies forming the floor to the BC. The Pretoria Group floor rocks in the south are made up of inter-bedded quartzites and shales of the Magaliesberg Formation, which are overlain by Lower Unit lithologies as defined in the project stratigraphy (Figure 7.1_1). The strike in the south is north-east with average dips ranging from 25 to 45º west.

Litho-stratigraphic definitions in the Northern Lobe do not readily conform to the formal stratigraphic terminology of the Rustenburg Layered Suite as defined elsewhere in the BC.

Stratigraphic terminology applied to the project area is not directly comparable to published stratigraphic successions (South African Council for Stratigraphy). Differences have been introduced to accommodate the local stratigraphy (Figure 7.1_1). Outcrops of BC rocks within the project area are limited largely to the hilly country straddling the Rooipoort/Grasvally boundary. Surface mapping of Grasvally and drill intersections defined not only the major lithological packages shown in Figure 7.2_1, but also an average strike and dip of 026/40° W.

Figure 7.2_1
Geology of the Rooipoort Project



The dominant structure in the project area is the north-south trending Grasvally Fault to the west of the project area. According to Hulbert (1983), the Grasvally Fault is part of the F1 stage of deformation and has elevated Lower Zone lithologies to the west. F2 north-east and F3 north north-west trending faults are also present on Rooipoort, resulting in horst-graben structures that in many cases seem to be hinged on the floor and have relatively little displacement. In addition, the layered mafic rocks form the Rooipoort syncline that plunges 10 to 15° to the north. This syncline is interpreted as resulting from drag along the Grasvally fault.

7.2.1 Stratigraphic description

7.2.1.1 Upper Unit

Upper Gabbronorite Unit ("UGN"): This unit was only intersected in 3 drillholes but is well exposed in outcrops in the hills forming the core of the Rooipoort syncline. It is dominated by medium-grained gabbronorites that often have a strong igneous layering. Hulbert (1983) also noted this texture in outcrops on Grasvally and he interpreted it to be the result of parallel alignment of grey, platy plagioclase crystals as well as concentrations of pyroxene.

Petrographic descriptions of the unit indicate that it is dominated by up to 50% plagioclase that has been weakly saussuritized with ± 30% oikocrystic orthopyroxenes and ± 15% interstitial, anhedral clinopyroxenes. The orthopyroxenes are of inverted pigeonite type indicating a Main Zone magmatic origin equivalent to Sub-Zone C of Nex et al (1998).

7.2.1.2 <u>Middle Unit</u>

Mottled Anorthosite Sub-unit ("MNO"): The contact between the UGN and the MNO is sharp and a fine-grained chilled margin is developed. This indicates two separate phases of magma injection. The MNO unit is distinguished by a substantial increase in plagioclase cumulates (up to 82%) and the development of lithologies such as mottled anorthosite, spotted anorthosite and leuconorite. The lithologies are dominantly vari-textured, with gradational contacts and cumulate textures. The mottles and spots are pyroxene oikocrysts, dominantly clinopyroxene, with diameters ranging from 2 to 5cm, and 1 to 2cm respectively. The leuconorites are fine to medium-grained and equigranular with sub- to anhedral orthopyroxenes and subordinate clinopyroxenes forming intercumulus grains to cumulate sub- to euhedral plagioclase. Weak saussuritization and chloritization has affected some of the rocks, especially in the structurally complex portions of the project area. Biotite is a common accessory mineral in the unit, occurring as reddish-brown interstitial plates. The presence of biotite suggests a post-magmatic, hydrous phase of alteration.

Occasionally fine-grained chilled margins are observed between leuconorites and fine-grained gabbronorites within the MNO sub-unit. Petrography studies of the fine-grained gabbronorites reveals that they are dominated by clinopyroxenes, often inverted pigeonite. This, together with the igneous contact provide evidence that the fine-grained gabbronorites are rafts of a later magma influx correlated with to the Main Zone which intruded into the MNO as it was cooling.

Lower Gabbronorite Sub-unit ("LGN"): The contact between the MNO and the LGN is gradational. EGMC geologists have subjectively defined the contact where there is a change from leucocratic to mesocratic lithologies. The LGN is a monotonous unit of medium-grained, homogenous gabbronorites. There are rare xenoliths of mottled anorthosite and pyroxenite, with fine-grained chilled margins and/or sheared contacts. These are interpreted as xenoliths of the overlying and underlying MNO and LMF respectively. In addition, petrography confirms the dominance of clinopyroxene (average 30%) over orthopyroxene (average 16%) and the presence of inverted pigeonite. This provides support for the hypothesis that the LGN is a Main Zone-type magma (similar to the UGN) that intruded along the contact between the MNO and LMF.

7.2.1.3 <u>Lower Unit</u>

Lower Mafic Sub-unit ("LMF"): The contact between the LGN and LMF is gradational and is recognized in the core as a change from mesocratic to melanocratic lithologies. However the most efficient method of classifying the LMF is by using the chromium ("Cr") values received in the assay results, which show a marked increase as the LMF is encountered with values jumping from a few hundred parts per million ("ppm") in the LGN to several thousand and tens of thousands of ppm in the LMF. The Cr in the LMF is seen in a number of forms, ranging from fine-grained disseminated chromite, through 1 to 5cm long schlieren to 0.5 to 1.2m thick chromitite-layers. These chromitite-layers consist of ca. 80% to 100% chromite associated with fine to coarse-grained pyroxene crystals and blebby, polymetallic sulphides. The wavy contacts of the chromitite-layers, together with the abundance of chromitite-schlieren all through the LMF, suggests that they were once larger and have been subsequently broken up and redistributed throughout the sub-unit. This would also explain the fact that they are fairly continuous from hole to hole, often occurring near the top of the LMF, but not correlatable over the entire project area.

The LMF is dominated by mafic lithologies such as melanorite, feldspathic pyroxenite and pyroxenite, all of which are vari-textured and observed as fine to coarse-grained types as well as pegmatitic phases. The prevailing pyroxene in the LMF is orthopyroxene (up to 69%) suggesting a Critical Zone affiliation. Thin section descriptions of the orthopyroxenites show that they are made up of sub to euhedral, cumulus orthopyroxenes of primary Mg-hypersthene type with post-cumulus plagioclase, minor quartz and biotite.

The LMF can be in basal contact with either floor rocks (Transvaal Supergroup) or the Harzburgite Unit (HZB). Where the LMF is in contact with the floor rocks two different relationships have been observed. In the eastern part of Rooipoort the LMF chills against the floor rocks. These fine-grained chilled margins range in thickness from a few centimeters to ±20m. Towards the west of the farm in deeper portions of the Rooipoort Syncline a hybrid zone of mixed mafic and sedimentary lithologies is developed. This hybrid zone displays abundant partial melting and re-crystallization textures and ranges in thickness from a few meters on the edges of the syncline to ±80m in the centre of the syncline.

Fine-grained chilled margins have also been observed in the LMF when it is contact with the HZB, suggesting a long period of cooling of the HZB before influx of LMF magma. Serpentinization of the LMF rocks is common when the unit is in contact with the HZB. In some cases a 1m to 2m thick sedimentary xenolith has been incorporated along the LMF/HZB contact and here the ultramafic rocks of the HZB unit have chilled against the previously cooled sediments.

Harzburgite Sub-Unit (HZB): A wedge of ultramafic rocks, dominated by harzburgites, is developed in the extreme south and west of Rooipoort and in the north-west of Grasvally. Figure 7.1_1 shows the HZB correlated with the Lower Zone of the Rustenburg Layered Suite. The unit is made up of poikilitic harzburgites that are olivine-chromite cumulates with 1cm to 4cm orthopyroxene oikocrysts interlayered with medium to coarse-grained orthopyroxenites. Occasionally up to 10cm, massive chromite layers are observed. Hulbert (1983) describes cyclicity within the ultramafic rocks as well as lateral changes in the stratigraphy due to on- and off-lapping of the varying cyclic units. Although the HZB unit in the project area has not been closely studied, it correlates broadly with Hulbert's Moordrift harzburgite-pyroxenite that contains cumulate chromite and predominantly bronzite-type orthopyroxenites.

Floor Rocks (FLR): Inter-bedded quartzites and shales of the Magaliesberg Quartzite formation form the floor rock in the project area and are highly re-crystallized, hornfelsed and folded. Quartzites are dominant and often have a large feldspar percentage (ca. 25%, arkose). The quartzites and arkoses are fine to medium-grained and are inter-bedded with strongly hornfelsed shales. Alteration in the shales ranges from chloritization and biotization to amphibolitization, epidotization and occasionally diopside is developed. The alteration indicates predominantly pelitic parental lithologies that have undergone contact metamorphism. The development of epidote and diopside further indicates some calc-silicate protoliths (siliceous limestones, dolomites, marls)

Figures 7.2.1.3_1, 7.2.1.3_2, 7.2.1.3_3 & 7.2.1.3_4 are roughly east-west oriented vertical cross sections through drillholes from north to south, showing interpreted geology. The position of these section lines is shown on the geology plan Figure 7.2_1.

Figure 7.2.1.3_1
Vertical Cross Section No. 1 Geology

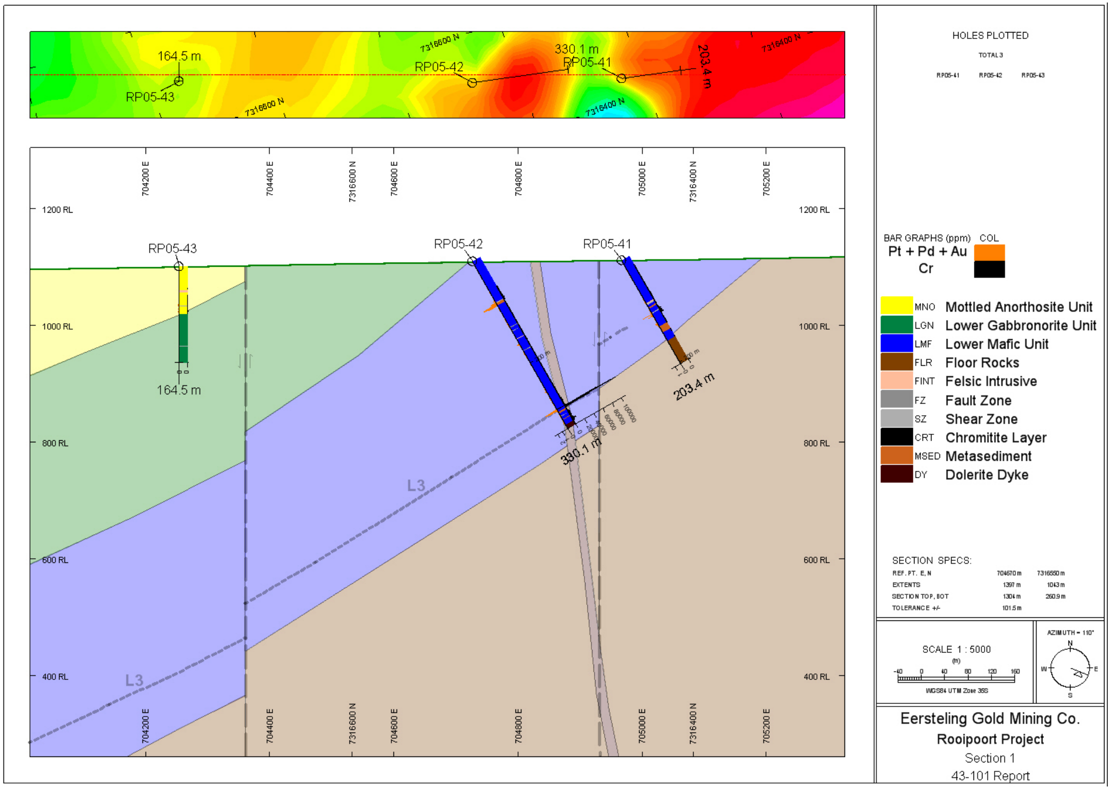


Figure
Vertical Cross Section No. 2 Geology

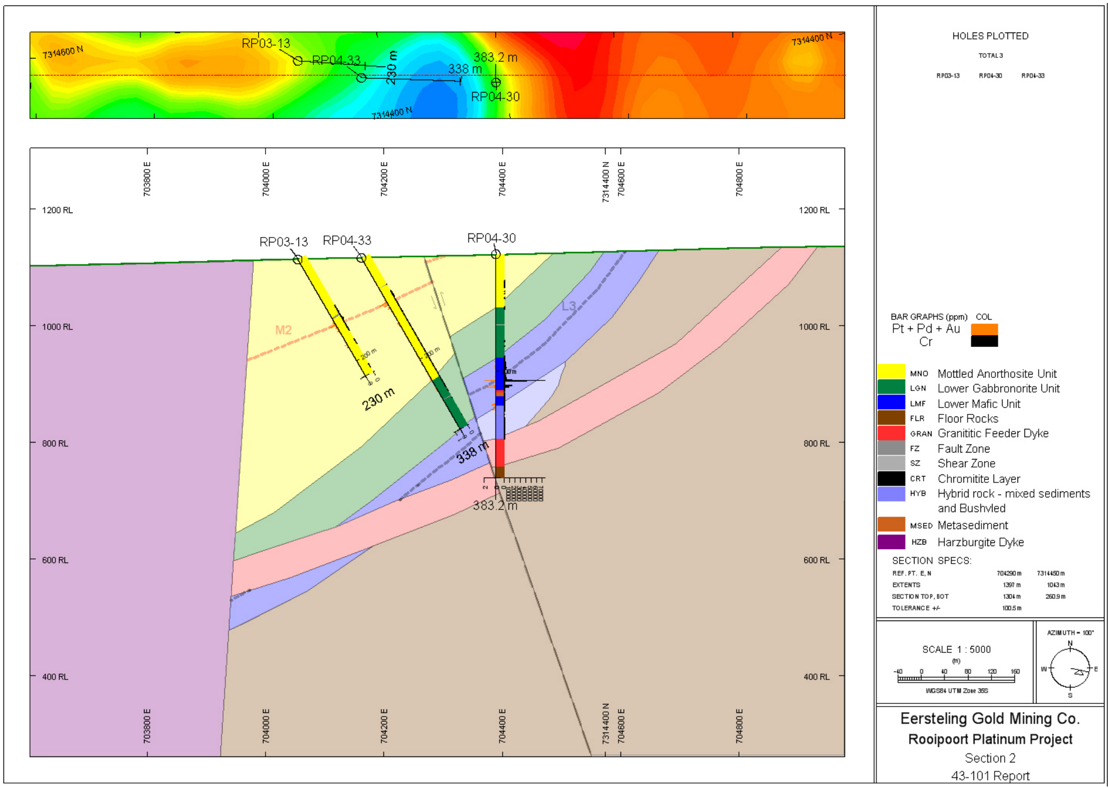


Figure 7.2.1.3_3
Vertical Cross Section No. 3 Geology

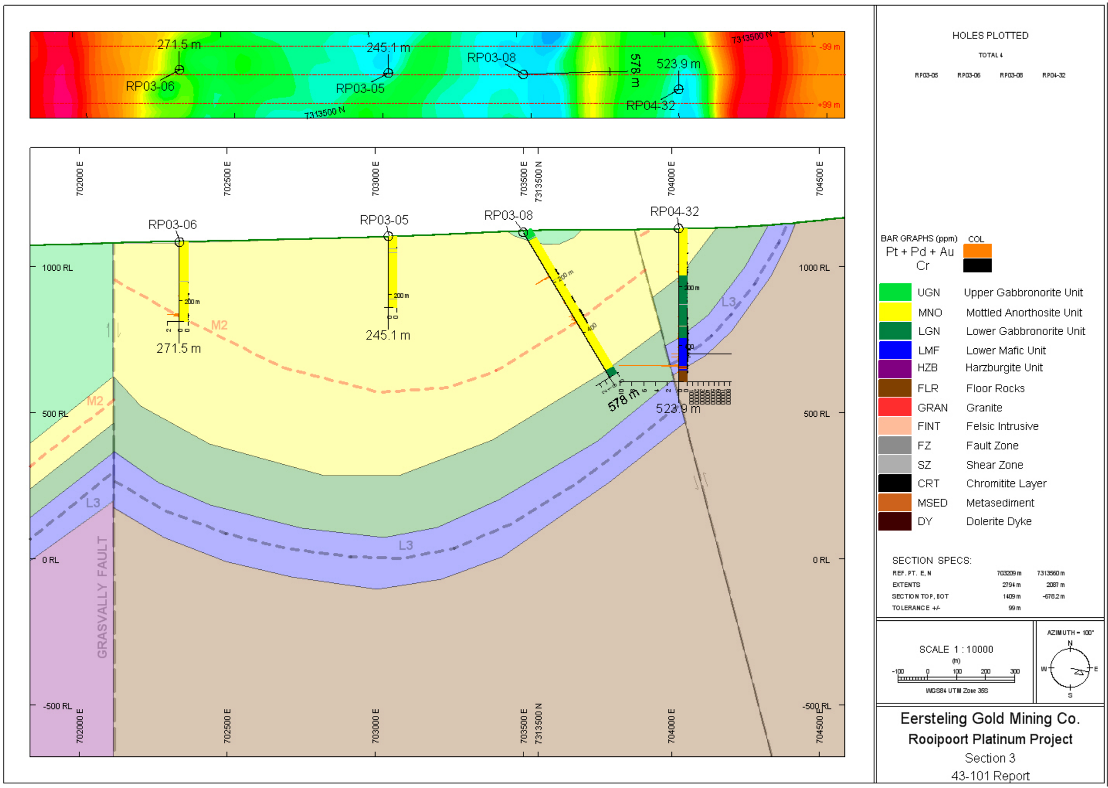
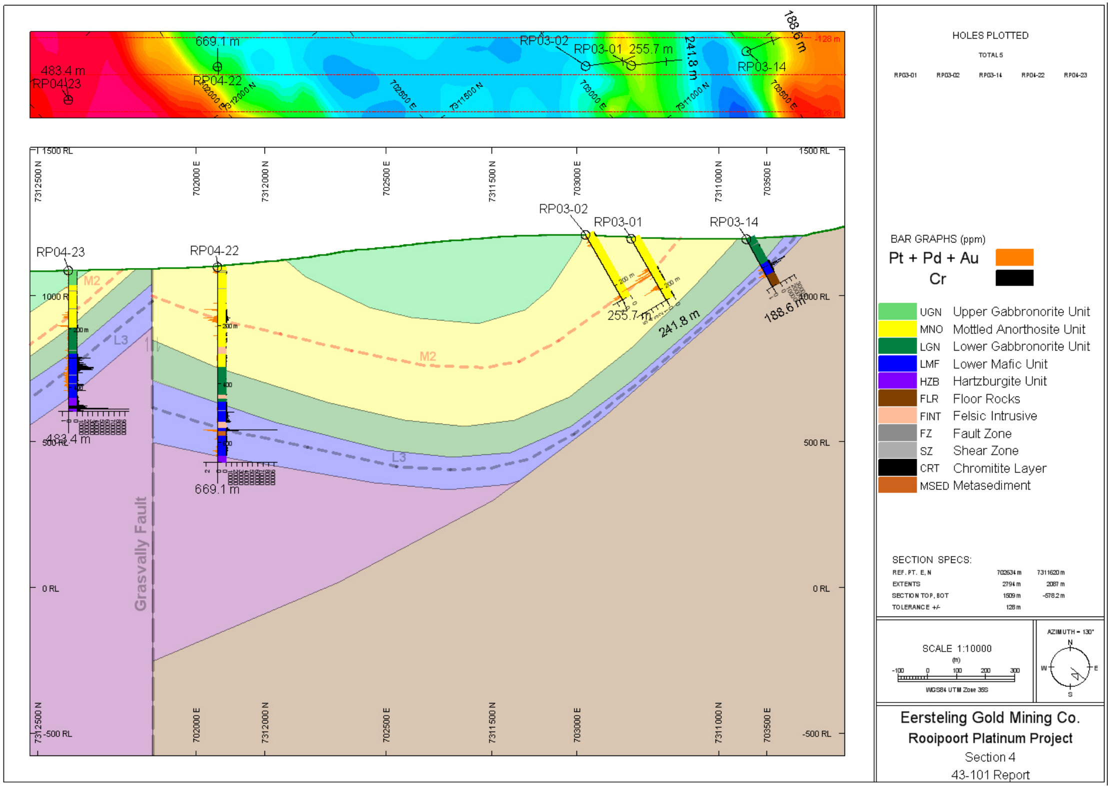


Figure 7.2.1.3_4
Vertical Cross Section No. 4 Geology



8 DEPOSIT TYPES

8.1 Emplacement of the Bushveld Complex

The mafic phase of the BC was emplaced ca. 2,060Ma as a result of melting of mantle rocks. The details of the emplacement of the BC are still contentious, however it is generally accepted that a staging chamber was located in centre of the original Transvaal Supergroup basin. The thinned and depressed crust under the basin was heated by an underlying mantle diapir and conical fractures formed in the crust which were subsequently exploited by mafic magmas to form the BC. Several 'feeder' sites have been proposed throughout the BC, based on gravity anomalies and observed proximal and distal magma facies. The Northern Lobe feeder site (based on a gravity anomaly) is situated south of Mokopane and west of the project area.

8.2 Origin of the layering

Many different theories have been developed regarding the origin of the layering of the Rustenburg Layered Suite, ranging from pressure changes to gravity settling of minerals, however, magma-mixing is widely regarded today as the most likely origin. The magma-mixing theory is based on double-diffusive convection ("DDC").

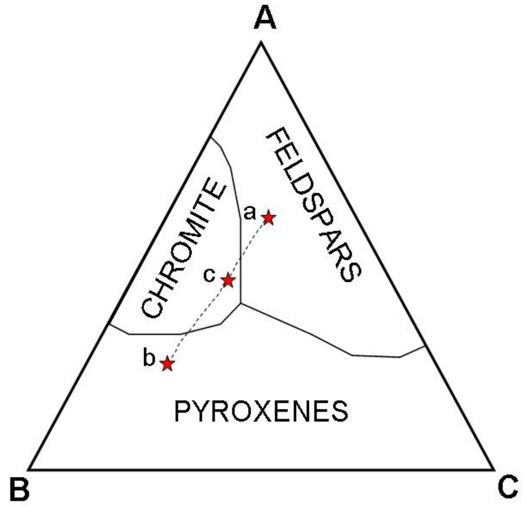
DDC occurs when a magma chamber or column that is graded due to compositional changes, with heavier liquid at the base and lighter liquid at the top, is heated from the base by the introduction of a hot, denser fluid, causing the column to split into a series of liquid layers, each with a different composition and temperature (Eales, 2001).

Magma-mixing involves injection of very hot liquid magma into a relatively cool layered magma column, as described above. The new liquid will rise through the column until it reaches a boundary layer which it cannot cross because the above layer is less dense. Consequently the new magma spreads sideways along the boundary layer and cools rapidly, resulting in an increase in density and subsequent inter-fingering with the layer below, finally forming a layer of mixed magma.

The importance of magma-mixing in the formation of layered mafic rocks is shown in the ternary phase diagram (Figure 8.2_1), which represents a liquid magma with a composition made up of 'A', 'B' and 'C'. A liquid with composition 'A' will crystallize plagioclase feldspars, whilst composition 'B' will crystallize pyroxenes. If the two liquid magmas mix they will combine to form composition 'C' that would form chromite crystals.

Several mechanisms have been proposed for the segregation of sulphides from the parental magma and enrichment in certain horizons of the layered mafic suite (Platreef, Merensky and UG2). In the Platreef, interaction with and contamination by floor rocks has been proposed as the most likely mechanism. Digestion of crustal rocks causes a change in the oxygen fugacity, the silica content or the sulphur content. The PGE's are considered to be magmatically derived, often with a later hydrothermal overprint.

Figure 8.2_1
The Effect of Magma-Mixing on Layered Intrusives (after Eales, 2001)



9 MINERALIZATION

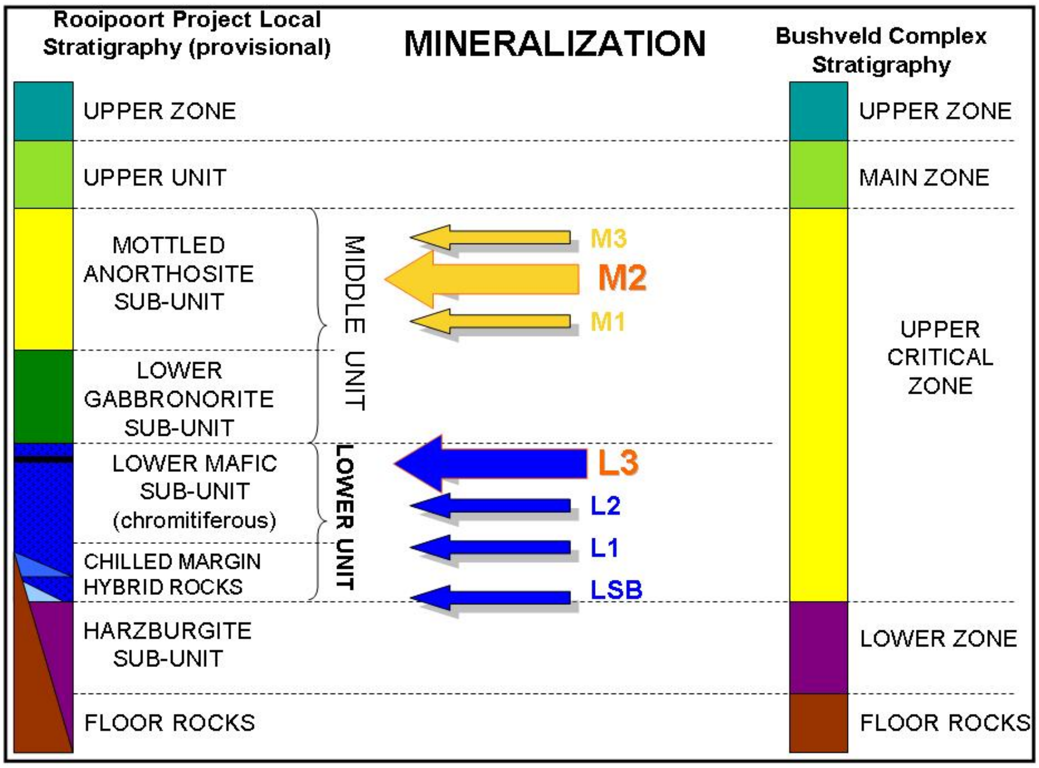
Layered mafic rocks are well established targets for PGEs[2] and base metal mineralization, for example the Voisey's Bay deposit, Labrador, Canada (Ni-Cu-Co+PGE); Stillwater Complex, Montana, USA and the eastern and western lobes and northern lobe of the BC, South Africa. In the eastern and western BC, the main PGE mineralized horizons are the Merensky Reef and the UG2 Chromitite Layer, which together form the world's largest resource of PGE's and chromite. As a result, South Africa is the world's largest producer of platinum (Pt) and the second largest producer of palladium (Pd). In the northern lobe of the BC a ±200m thick PGE-rich package called the Platreef is being exploited (Potgietersrust Platinums Ltd.). The Platreef has been correlated by some researchers to the Merensky Reef, however the Platreef is very different to the Merensky Reef in many respects, for example it has a Pt:Pd ratio of ~0.9, whilst the Merensky Reef has a Pt:Pd ratio of ~1.7 in the eastern lobe and ~2.1 in the western lobe (Vermaak, 1995). In the context of this report the Platreef will be used as a basic example for the mineralization processes.

PGEs in the Platreef are commonly associated with sulphides, such as Pt- and Pd-bearing pentlandite, pyrrhotite and chalcopyrite. In addition they often occur as PGE-bearing tellurides and antimonides, among others, that display a close affiliation with sulphides. Sulphides in the Platreef can reach up to 30% by volume over several meters (Kinnaird, 2004) and occur in many different forms, ranging from fine-grained disseminations to semi-massive and massive zones.

Seven mineralized zones have been identified in the Rooipoort Project area, all of which are either hosted by the MNO or LMF units (Figure 9_1). The three mineralized zones observed in the MNO have been named the M3, M2 and M1, whist the four mineralized zones in the LMF have been named the L3, L2, L1 and LSB. The mineralized zones are not lithologically bounded; however they are classified according to their position within their stratigraphic units. The lack of lithological correlation along strike and lack of marker horizons is due to the discontinuous nature of the layers and is a common feature of the Northern Lobe. Mineralized layers are, however, interpreted as continuous based on the correlation between drill intersections, particularly in the case of the M2 and L3 mineralized horizons.

[2] The Platinum Group Elements are: platinum (Pt), palladium (Pd), ruthenium (Ru), rhodium (Rh), osmium (Os) and iridium (Ir)

Figure 9_1
Stratigraphy and Mineralization of the Rooipoort Project Area



9.1 Middle Unit Mineralisation (M3, M2, M1)

These mineralized zones are predominantly associated with plagioclase-rich rock types such as mottled anorthosites and medium-grained leuconorites. However in the south of Rooipoort and on Grasvally the Middle Unit mineralization (M-zones) is commonly associated with medium-grained feldspathic pyroxenites and pyroxenites. Sulphides in the M-zones are dominantly fine grained disseminations, although some medium-grained and blebby sulphides have been recorded. The M3, M2 and M1 zones are stratigraphically individual horizons with elevated PGE's, labelled from the base of the Middle Unit upwards. The M2 zone is the most continuous in the Middle Unit along strike and down dip and has therefore been the focus of attention.

The **M3** zone is situated at the top of the MNO and is not developed in all of the drillholes because some were collared below the base of the M3 zone. In the M3, 66% of the mineralization observed occurs in mottled anorthosites, with the remaining 34% in feldspathic pyroxenites and pyroxenites. Irrespective of rock type the mineralization is associated with disseminated sulphides, but when the rock type is a mottled anorthosite the disseminated sulphides occur within the mafic mottles. One hole, RP03-08, has blebby sulphides associated with the mineralization and has the best grade and width of the M3 zone. Grade and width are not affected by the host lithology of the mineralization; however increased nickel values correlate with M3 zones associated with feldspathic pyroxenites, for example in hole RP04-22. The M3 within the project area is closely associated with the base of the UGN gabbronorites that outcrop in the centre of the Rooipoort syncline. This distribution pattern suggests that the M3 represents a phase of mineralization at the base of the UGN where it has come into contact and reacted with underlying Middle Unit magmas.

The average distance between the M3 and the underlying M2 is 172m on the east of the Rooipoort syncline and 36m on the west of the syncline.

The **M2** zone is recognised not only by its stratigraphic position but also by a halo of disseminated sulphides that surround it, in contrast to the other M-zones, which have sharp contacts with barren rocks. Almost half of the host lithology of the M2 zone is mottled anorthosites, where the mineralization is recognised as disseminated sulphides that occur within the mafic mottles. The balance of the M2 zone is hosted by feldspathic pyroxenites and pyroxenites where the sulphides are dominantly blebby but also disseminated. No sympathetic correlation between mafic or felsic host lithology has been observed with the grade of the M2. Where the M2 zone is hosted by mottled anorthosites, it is nearly always underlain or overlain by a pyroxenite/feldspathic pyroxenite. The host lithologies are dominantly medium-grained but occasionally pegmatitic with blebby sulphides and in these instances the grade and width are above average, for example RP03-01. The M2 can be traced from hole to hole, with similar depths down-hole as well as localized grade and width similarities. Fluctuations in grade are likely to be an effect of the host rock type. For example grade hosted by mottled anorthosites tends to be diluted due to the high anorthosite content versus the mineralization within the mafic mottles. The Cr (chrome) values in the M2 zone are low throughout with the exception of holes RP05-38, RP04-22, GV05-54 and RP03-13. The first three holes mentioned are all located in the south-west of the project area close to and west of the Grasvally fault. The elevated Cr values (<1404ppm) in RP03-13 are possibly due to its close proximity to a harzburgitic dyke. Along the eastern side of the Rooipoort synform the M2 zone corresponds to a linear magnetic high on the total magnetic intensity and vertical gradient images, which probably indicates the pyroxenite that is associated with the M2 (Figure 9.1_1). The magnetic high pinches and swells along strike. When the holes that overlie the linear feature are examined, it is evident that the form of the high corresponds very well to thickness of the M2 in the holes as well as the depth to the intersection. This strongly supports the interpreted continuity of the mineralization. The M2 host lithology along the linear feature varies considerably from mottled anorthosites, gabbronorites and feldspathic pyroxenites, demonstrating that the mineralization transgresses the lithologies.

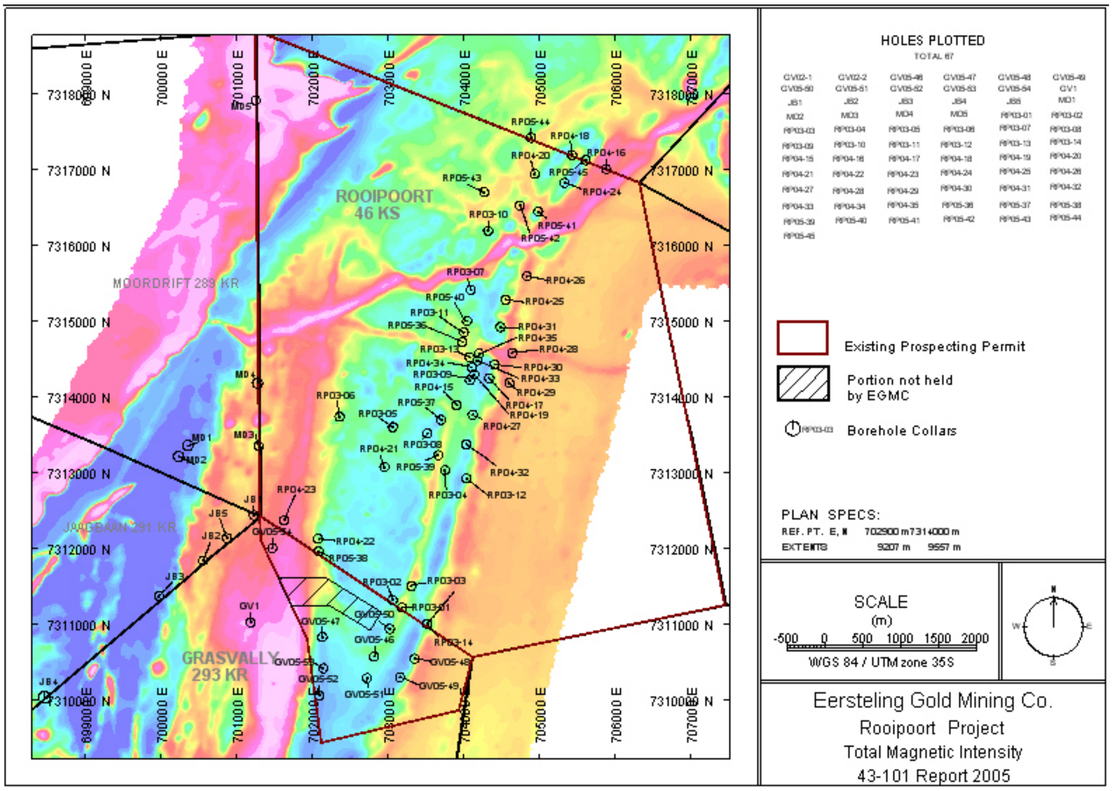
The **M1** zone is located at the base of the MNO but is not present in all holes collared in this unit because of the intrusive nature of the underlying LGN which has eradicated sections of the mineralized unit. Despite this, the M1 is locally consistent along strike in individual regions of the project area, in width and grade and the down-hole depth to mineralization. However the M1 zone is not as easy to correlate down dip. Mineralization in the zone is not bounded by a specific rock type, although all the host lithologies are medium-grained with disseminated sulphides.

9.2 Lower Unit Mineralization (L3, L2, L1, and LSB)

All of the Lower Zone (L-zone) mineralization, with the exception of the LSB, is marked by increased Cr values in the LMF. Host lithologies are mafic with dominantly pyroxenites and feldspathic pyroxenites in the north and south of the property and gabbronorites and melagabbronorites in the centre. This localised change in host lithology does not affect the grade of the L-zones. Mineralization exists as disseminated, medium-grained and blebby polymetallic sulphides comprised of pentlandite, pyrrhotite, chalcopyrite and occasional millerite. The L units are labelled from bottom up, with LSB occurring at the base. The L3 unit near the top of the unit is the most continuous zone along strike and down dip and has therefore been the focus of attention and has a favourable Pt:Pd ratio of 1.3.

The **L3** zone is a continuous 0.5m to 1.2m chromitite layer. The chromitite layers are on average 80% fine-grained chromite with interstitial orthopyroxenes and blebby sulphides. Contacts of the chromitite layers with the host rock, which range from gabbronorites to pyroxenites, are irregular. The L3 zone can be traced with confidence both along strike and down dip throughout the project area.

Figure 9.1_1
Aeromagnetic Map of the Rooipoort Project



The grade and width fluctuate from north to south across the property. Three intersections have been observed in the north of Rooipoort in holes RP05-45, RP04-24 and RP05-42. Here the L3 can be correlated between the three holes, displaying similar widths and grades and Cr values. The L3 zone appears to cut down through the stratigraphy in a southerly direction between the three holes and this could be a result of the irregular floor rocks in the area or due to structural duplication in RP05-42. In the centre of Rooipoort the L3 can be confidently traced between all of the holes, with similar widths and grades. The horst-graben structures in the central part of Rooipoort account for the slight differences in depth to the L3 in the area. In the south of Rooipoort and on Grasvally the L3 can be correlated from hole to hole and down dip and exhibits similar Ni, Cu and Cr values as well as down-hole depths. Simple down-hole arithmetic averages of the 2PGE+Au (Pt, Pd +Au) grades reveal very similar values across the project area, ranging from 1.10g/t 2PGE+Au in the south to 1.5g/t in the north.

The **L2** zone is a thin package of blebby and disseminated sulphide mineralization associated with elevated Cr, hosted by gabbronorites and feldspathic pyroxenites. It occurs an average of 18m below the L3 zone. The L2 has only been observed in seven drillholes across the property and its sporadic nature is interpreted as being due to the transgressive nature of the mafic rocks with the floor rocks, where the LMF has been pinched out against the floor and the mineralization truncated. The mineralization can, howeve,r be traced along strike between three adjacent drill holes that have been collared <500m apart with similar widths and grades.

The **L1** zone is only developed in 4 drill holes, one of which is on the west side of the Grasvally Fault and is therefore not directly comparable to the other three holes. The discontinuous nature of the L1 zone is interpreted as the result of the transgressive nature of the mafic rocks with the floor rocks, where the LMF has been pinched out against the floor and hence the mineralization is truncated. The three holes that intersect the L1 have a complete succession of L-zone mineralization from L3 to LSB. When the holes that do not contain L1 mineralization are examined, it can be seen that they also often do not host L2 mineralization, highlighting the effect of a floor rock high in those parts of the property. This is illustrated in the north of Rooipoort where there is no L2 or L1 mineralization and the floor rocks are known to have a shallower dip. In holes where L2 and L3 are not developed, the stratigraphically lower LSB zone is often better developed. It is possible that the LSB zone is related either to a later phase of magma injection or accumulated as basal sulphides.

The three holes that host L1 mineralization all have highly elevated Cr values and increased Ni and Cu. The host lithologies in these holes are all different; however there is a close relationship with an overlying chromite layer observed in each of the intersections. The chromite layers are never further that 2m away from the L1.

The **LSB** is a zone of mineralization that not only has higher PGE values (1.09g/t 2PGE+Au average) but also an elevated Ni content with an average of 2,133ppm. The LSB occurs at the base of the LMF an average of just under 10m above the floor rocks. In some areas of the property the distance from floor rock is greater, in one case reaching 169m, however this drastic increase can be accounted for by the presence of post-mafic phase granitoid intrusives underlying the horizon. There is no apparent correlation between the distance from floor rock and grade, and there is not an anomalous amount of sedimentary xenoliths in and around the LSB indicating that interaction with the floor rocks may not be the cause of the mineralization. The LSB zone can be traced along strike and down dip with some degree of certainty although it may not be present in parts of the property due to the transgressive nature of the LMF onto the floor rocks. The host lithology is variable although a tendency towards fine to medium-grained feldspathic pyroxenites has been recognised. The sulphides in the LSB are coarse-grained polymetallic blebby sulphides mixed with fine-grained disseminations.

9.3 Mineralization Model

Mineralization observed in the Rooipoort Stratigraphy consists of disseminated and blebby polymetallic sulphides hosted by relatively unaltered lithologies. The lack of alteration in the Rooipoort Stratigraphy implies that hydrothermal processes were not dominant in the formation of the mineralization. Furthermore, there do not appear to be specific trap sites where the grade and width of the mineralized zones is enhanced.

EGMC geologists have interpreted the mineralization on Rooipoort to be primarily magmatic.

The floor rocks in the project area are rich in silica and relatively non-reactive compared to the calc-silicate floor rocks in other parts of the Northern Lobe where skarn-type mineralization is developed. Although floor rock xenoliths are found in the LMF, neither sulphide mineralization nor grade increase as a result of this contamination.

10 EXPLORATION

10.1 Exploration and Development Strategy

In light of the deposit model described above an exploration programme was devised including aeromagnetics, soil sampling and extensive drilling, as well as field mapping (Table 10.1_1). The exploration procedures are discussed in Item 12.

Table 10.1_1

Exploration Techniques and Deposit Model

Exploration Technique	Reasoning
Aeromagnetic survey	Layering in the Bushveld Complex, and varying compositions are highlighted by aeromagnetics. Mafic rocks display a strong magnetic signatures and differing proportions of magnetic minerals result in variations in magnetic intensity. Felsic rocks have a weaker magnetic signature. The technique is used extensively in Bushveld Complex exploration. Aeromagnetics define the strike of the lithologies and structures such as faulting and folding.
Soil sampling	Layered mafic rocks host elevated and variable base metal contents and PGM's. Base metal soil geochemistry is a useful technique in exploration and identification of drill targets. Soil sampling traverses are laid out perpendicular to the strike as defined by aeromagnetics.
Drilling	Drill targets are identified from the aeromagnetic images and the results of the soil sampling. Diamond core drilling provides detailed geological and stratigraphic information Assay results define areas of mineralization.

The objectives of the drill programme were as follows:-

- Test the geophysical interpretation of the aeromagnetic data, with particular emphasis on the stratigraphic setting for the Rooipoort Project area;
- test significant Cu, Ni and Cr in soil anomalies, recognized by the geochemical soil sampling program; and
- provide quantitative data on the occurrence and grade of platinum group element and base metal mineralization on the property.

10.2 Petrography

During the initial stages of drilling, 10cm sections of split core were selected for optical microscopy and petrographic analysis. This work was undertaken by Mr Ted Thatcher of Microsearch cc in Johannesburg. Particular emphasis was given to mineralogy (presented as an estimated volume percentage), major texture, mineralogical features, and IUGS classification.

10.3 Research

Towards the latter half of the drilling programme a specialised analytical programme was undertaken by Prof Wolfgang Maier (University of Pretoria)

Prof Maier selected core samples for major and trace element analysis (ICP by Dr N. Walsh at the Royal Hollaway University of London), limited sulphur isotope analysis (by Prof. E. Ripley of Indiana State University), sulphur analysis (Leco method by SGS Lakefield) and 6 PGE assay (ICP-MS by Genalysis, Western Australia). The purpose of this specialized analytical programme was to determine:-

- Whether the sulphide and PGM mineralized horizon at the base of the stratigraphic sequence on the farm Rooipoort represents "Platreef" as seen north of Mokopane.
- Possible compositional differences between the Rooipoort mineralization and "Platreef" elsewhere in the northern lobe of the BC, and how these differences might be important in constraining the origin and concentration of the mineralization.
- The origin and stratigraphic relationship of mineralized pyroxenite / melanorite / leuconorite layers and xenoliths found within the homogeneous noritic - gabbronoritic rocks that resemble the Main Zone.
- Possible similarities or differences between the Main Zone as developed on Rooipoort and elsewhere in the BC, as a means to constrain the stratigraphic position (particularly the distance to the floor) in future drilling programmes further to the west, where the floor of the BC has not yet been intersected, but where Merensky Reef, UG2 equivalents are developed.

This research work is still on-going and no final conclusions are yet available.

10.4 Survey

EGMC established a local grid base line on a bearing of 012° true North from the southern boundary of Rooipoort 46KS with Ptn 16 of Grasvally 293KR (nominally 10000S/10000W) to approximately the point where the N1 highway cuts the northern boundary of the farm with Oorlogsfontein 45KS. Beacons, comprising steel pegs with aluminium tags engraved with the grid coordinates and a cairn of white painted boulders, were placed at 400m intervals using differential GPS.

Subsequently, the area of Rooipoort east of the N1 highway has been pegged with a 200m grid. All borehole collars were surveyed employing a differential GPS system, carried out by Louis Nel (Professional Land Surveyor) based in Mokopane.

11 DRILLING

11.1 Diamond Core Drilling

Diamond drilling was carried out between September 2003 and the end of June 2004 (23 drillholes) and between August 2004 and August 2005 (31 drillholes). These programmes have generated 18,450m of core from which 12,668 core samples were collected and assayed for Pt, Pd, Au, Ni, Cu and Cr. Selected samples were analysed for Co and S, as well as for petrographic studies.

The deepest drill hole was 877m and the shallowest 65m.

Holes were drilled by a contractor (Raldril Pty. Ltd of Pretoria, South Africa) and supervised by qualified EGMC geological staff. NQ core was drilled (core diameter of 47.2mm).

Holes were drilled along the eastern limb of the Rooipoort syncline in a swath about 1,000m wide from the northern to the southern boundaries of the property over a strike of 7km. Two sections over 2.5km were drilled across the syncline to the western farm boundary in the southern half of the property. Drillholes were generally sited within 500m of each other with a maximum distance of 800m between holes.

Appendix 01 shows a summary of all diamond drillholes drilled on the Rooipoort Platinum Project with hole number, collar co-ordinates (local and UTM), dip, azimuth, final depth (EOH) and dates started and completed indicated. Collars have been surveyed by Louis Nel (Professional Land Surveyor based in Mokopane).

11.2 Drilling Results

RSG Global has used only drillholes that intersect the mineralized horizons on the east of the Grasvally Fault in the resource estimation. Similarly drillhole intersections deeper than 200m from surface have not been included in the resource estimation.

Drillholes (RP04-23 and GV05-54) to the west of the Grasvally Fault have not been incorporated into the estimation.

11.3 Drilling Orientation

Thirty of the drillholes were inclined at -60º to intersect the westward dipping stratigraphy close to right-angles, the remainder (24 drillholes) were drilled vertically. Intersection angles are variable due to variations in dip of the mineralization.

11.4 Drilling Quality

RSG Global has examined randomly selected drillhole cores. The core recovery and core quality meet or exceed industry standards.

12 SAMPLING METHOD AND APPROACH

12.1 Soil Sampling

Due to the thick vegetation on Rooipoort, numerous fence lines and tracks traversing the area at roughly 400m intervals across strike were utilized as soil sampling traverses. On Grasvally, the sampling was conducted along cut lines at 400m intervals (Figures 12.1_1, 12.1_2 and 12.1_3).

Figure 12.1_1
Soil Geochemical Contours – Ni

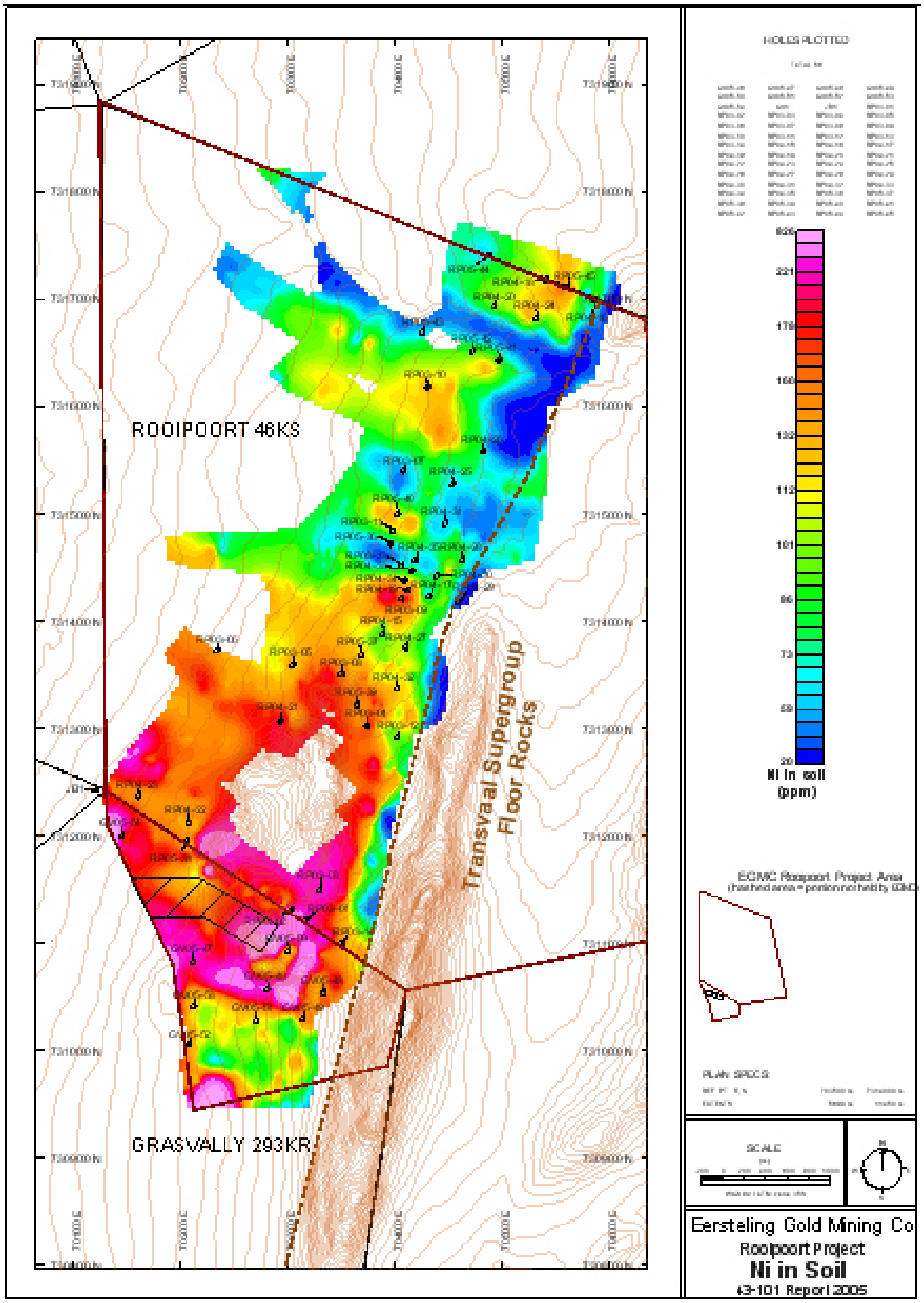


Figure 12.1_2
Soil Geochemical Contours – Cu

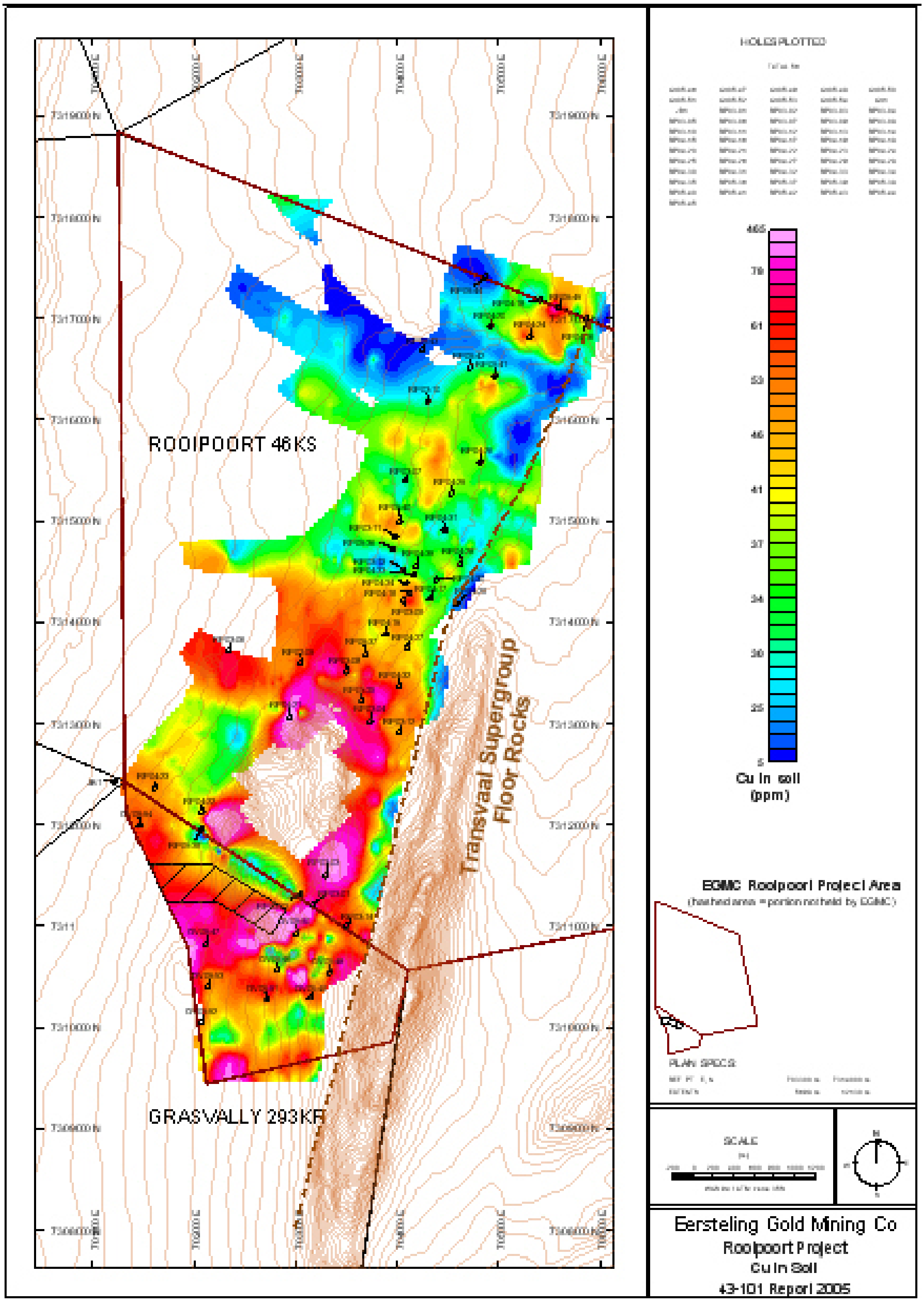
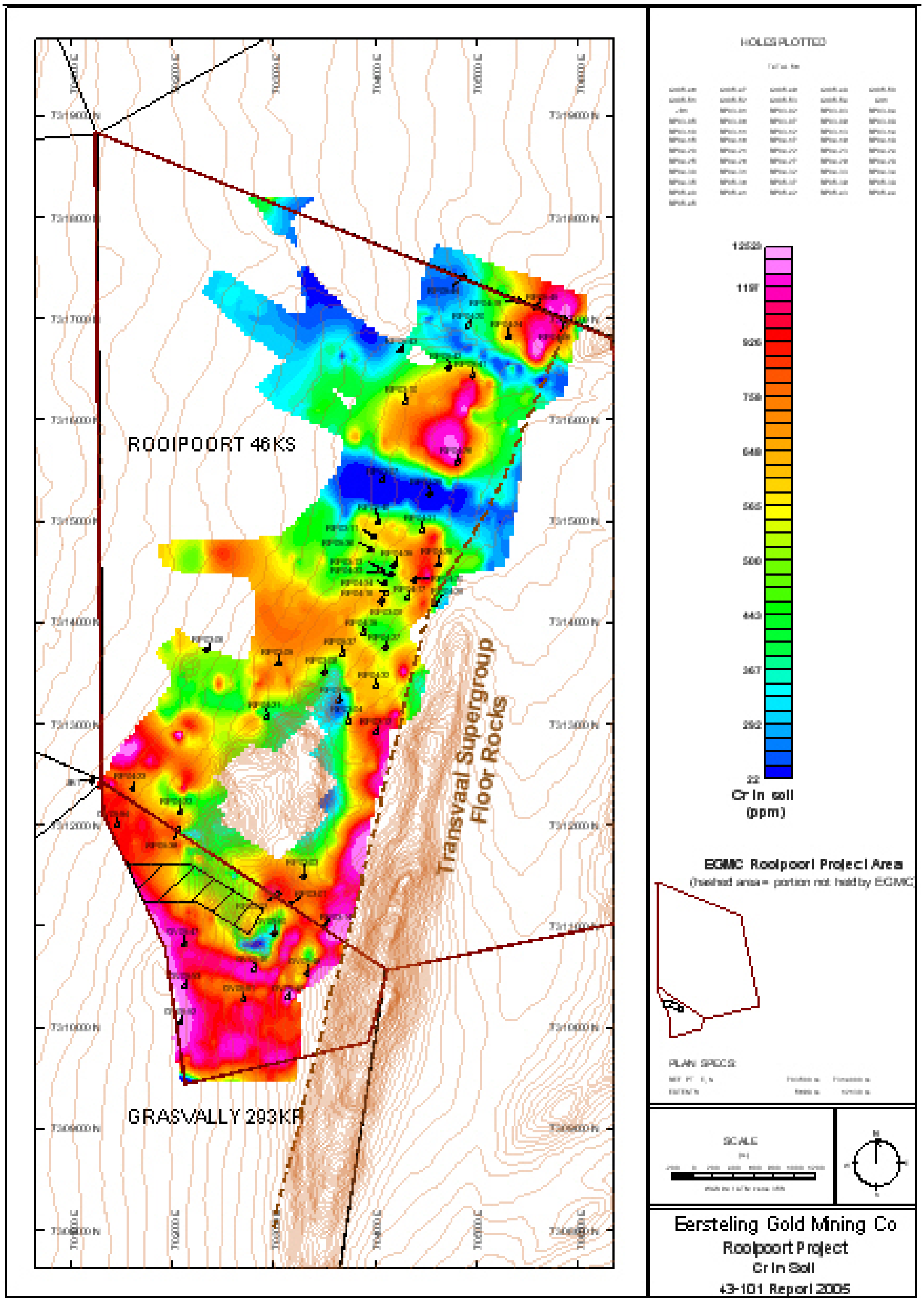


Figure 12.1_3
Soil Geochemical Contours – Cr



25 soil sampling traverses of varying lengths were completed during the last quarter of 2003. A further 8 traverses were completed in 2004. A total of 9.6km of traverse lines was completed. Soil samples were collected every 25m along traverses at a depth of approximately 15cm and screened through an 80# sieve (~180µ). A total of 1,935 samples, including field duplicates, were collected.

The –80# fraction was submitted to SGS Lakefield Research Africa (Pty) Ltd in Johannesburg, for Ni, Cu and Cr analysis by pressed pellet XRF. At the laboratory, the samples were milled to 90% passing –75µm. Initial soil samples were also analysed for Co but responses were poor and very close to the detection limit. Consequently Co analyses were discontinued.

Laboratory quoted detection limits for Ni, Cu and Cr by the XRF technique are:-

- Ni – 10ppm
- Cu – 10ppm
- Cr - 20ppm

12.2 Diamond Core Sampling

Sample selection was undertaken by qualified geologists based on a minimum sample length of approximately 30cm. For narrow layers, such as chromitites, where the intersected interval is greater than 50cm, the sample interval is divided into 3 samples, an upper, middle and lower. The upper and lower sample of such an intersection overlaps the top and bottom contacts by a minimum of 1cm. Not all core has been sampled, but all core with visually identifiable sulphide mineralization has been analysed, and low grade to waste portions straddling these zones has also been sampled. A maximum sample length of 1m has been applied.

The sampled core is split using an electric powered circular diamond blade saw and broken on sample boundaries by cold chisel to minimise loss of material.

12.3 Sample Recovery

Core recoveries, RQD (Rock Quality Designation) and a note of core quality, are recorded continuously for each drillhole. Minimum core recovery accepted 95% measured over a 6m run. This was achieved for all drillholes.

12.4 Sample Quality

RSG Global has examined selected boreholes and has assessed the quality of sampling to meet or exceed industry standards.

13 SAMPLE PREPARATION, ANALYSIS AND SECURITY

13.1 Sample Security

Half core samples are and labelled twice, once in the bag and again on the top of the bag. Batches of approximately 20 samples are packed into large poly-weave bags and sealed with a plastic cable tie. The batch submission number, sample numbers and number of samples are recorded on the outside of the bag.

Sample batches are delivered to the laboratory by EGMC staff. Duplicate sample forms, bearing the batch lot number, sample numbers and number of samples are delivered with each batch. One copy is signed for by the laboratory receiving personnel and the duplicate is returned to the Mokopane office for incorporation into the database.

Crushed coarse fraction of the samples and the balance of the pulp is eventually returned and stored at the Mokopane office. These are bagged together, labelled and stored in plastic crates in a dry storage area.

All drill core is stored in galvanised steel core trays in a secure under cover core racking system.

Assay results from the SGS Lakefield laboratory are transmitted electronically in a standard format to the Mokopane office. They are imported to an Access database directly from the laboratory files. Certified assay certificates and a CD containing PDF versions of the certificates are filed at the Mokopane office.

The database has been customised to site specific use and all logging data, core recoveries and sampling data are captured. Assays are electronically matched and joined on sample number.

13.2 Analytical Laboratories

All samples have been analysed by SGS Lakefield Research Africa (Pty) Ltd, Johannesburg.

13.3 Sample Preparation and Analytical Procedure

The laboratory separates batches into a number of laboratory sub-batch lots of approximately 40 samples.

The entire half core sample is crushed to 85% <2mm (“coarse fraction”), homogenised and a 250g split taken which is further pulverised to 95% <75µm (“pulp”). The pulp is split into a 30g charge for fire assay and approximately 20g for XRF pressed pellet. Surplus pulps are retained.

The balance of the coarse fraction and the pulp is returned to EGMC and stored at Mokopane and used for check analyses at a second laboratory as required.

Out of each sub-batch lot the laboratory selects selected approx. 5-10% of the samples for duplicate analysis (“Laboratory Duplicates”) upon completion of the sample run. These duplicates originate from a second aliquot taken from the crushed coarse fraction of the sample for duplicate Pt, Pd & Au assay, in the case of the fire assay procedure, and base metal analysis in the case of the XRF procedure. The laboratory also includes its own certified standards and blanks in each sub-batch.

13.4 Analytical Procedures

Pt, Pd and Au, are analysed by lead fire assay / ICP-OES finish (30g charge) and Ni, Cu and Cr by pressed pellet XRF.

Laboratory quoted detection limits for the assay techniques applied are:-

- Pt, Pd and Au: 0.02ppm
- Ni and Cu: 10ppm (pressed pellet XRF)
- Cr: 20ppm (pressed pellet XRF)

13.5 Adequacy of Procedures

Pt, Pd and Au fire assay results are certified by SGS, whereas the base metal XRF data is regarded as indicative and are not certified by SGS.

RSG Global endorses the use of fire assay techniques but suggests that as the value of the base metals in the Rooipoort Project outweighs the value of the PGE's and Au, a certified analytical technique should be used for base metal analyses.

14 DATA VERIFICATION

14.1 Analytical Quality Control Procedures

14.1.1 Soil Samples

Field duplicates of soil samples were collected every 20th sample and submitted blind. The field duplicate sample was split from –80# sieved fraction. Approximately 10% of samples submitted to the laboratory were also repeated as laboratory duplicates. These were chosen at random by the laboratory staff and do not constitute blind samples.

Precision charts for Ni, Cu and Cr plotting both field and laboratory duplicates were used to monitor sample and assay quality. Sample dispatches were broken down in the laboratory to smaller batches of approximately 40-50 samples, analysed and reported on an individual batch basis. Precision charts were prepared for each batch and data quality verified.

14.1.2 Diamond Drillhole Core

Quartz blank material (gravel) from Silicon Smelters, Polokwane, is inserted approximately every 20th sample to monitor contamination and sample numbering. Samples are submitted blind.

Certified reference material ("CRM") from MINTEK, Johannesburg and supplied in 75g charges is also inserted approximately every 20th sample. A copy of the MINTEK certified reference material documentation is attached (Appendix 02).

Batches of samples are assigned unique submission batch numbers. Each batch or consecutive set of batches contains samples from the same drillhole.

14.1.3 Standards

QA/QC plots are presented in Appendix 03.

14.1.3.1 Certified Reference Material – SARM7b (Appendix 02)

Quality control and assurance plots covering the period September 2003 to June 2004, during which the inserted SARM7b certified reference material was monitored, are contained in Appendix 07.

Precision is very good for Pt, Pd for SARM7b however QA/QC plots for Au suggest poor precision. It is uncertain whether this is due to variability in the standard or laboratory problems during this period. The former is suspected as there do not appear to be problems with other standards.

The SARM7b CRM covered approximately 4,400 of the 12,668 core samples.

Insertion of the SARM7b was discontinued at the end of June 2004.

14.1.3.2 Certified Reference Material – SARM73 (Appendix 02)

Use of the SARM73 CRM was introduced into the sample stream during March 2004, overlapping with the SARM7b period.

Pt and Pd assays of the certified reference material (SARM73) from March 2004 to September 2005 stay largely within the ±5% envelope and within the Mintek determined expected repeat precision of 2.3 x standard deviation envelope. Batch lots LA009557 to LA010162 were repeated due to poor QA/QC returns, but the repeats had very similar values. Assays from the original samples were used in the database.

In the case of the base metals, an envelope of ±10% of the certified reference material value has been used. Ni values fall within the 10% envelope and the participating laboratory range, but breaches the 2.3 x standard deviation envelope. There is a drift towards the minus 10% line over time

Cu stays within the 10% and 2.3 x standard deviation range envelopes. There is however also a drift towards the minus 10% line over time.

This standard is suitable for the following concentration ranges:-

- Pt 2.197g/t to 2.705g/t
- Pd 1.32g/t to 1.75g/t
- Au 0.055g/t to 0.230g/t
- Ni 2000ppm to 2330ppm (3850ppm actual-rejected)
- Cu 900ppm to 1100ppm

14.1.4 Blanks

For Pt and Pd assays, two blanks returned assays above the detection limit but not exceeding twice detection. One gold assay reports above the detection limit. The base metal analyses show some elevated values of up to 40ppm for Ni and Cu and up to 60ppm for Cr. It is uncertain whether this is related to spectrometer calibration curves or matrix interference. It is not, however, considered to reflect contamination in the sample preparation.

In general blank material submitted in the sample batches returned acceptable results with the exception of a few base metal anomalies. Investigation in the laboratory of the base metal assays revealed a sample numbering problem for one batch, which has been corrected in the data set (Appendix 03).

14.2 Umpire Assaying

Pulps (approx.75g) for check assays are submitted to Genalysis Laboratory Services Pty Ltd, Perth, Western Australia for Pt, Pd and Au, by lead collection fire assay (25g charge) / ICP-MS finish and Ni, Cu and Cr by multi-acid dissolution and flame atomic adsorption spectrometry (AAS) finish.

The host rocks to the mineralization contain negligible to no olivine which is the primary mineral in silicate attributable Ni. Therefore, the anticipated difference between the base metal XRF assays and acid soluble base metal assays is likely to be of the order of 10% lower in the former compared to the latter.

Approximately 5% of the returned pulps of the samples were sent to Genalysis for check assay. Certified reference material was also inserted with the batch lot to monitor precision. Detection limits at Genalysis are as follows:-

- Pt, Pd and Au: 1ppb
- Ni: 2ppm
- Cu and Cr: 1ppm

Assays of selected sample pulps by Genalysis identified discrepancies in the second batch submitted. Both laboratories were requested to re-assay the sample suite with the result that the Genalysis (referee laboratory) data was confirmed. Genalysis results for these samples were incorporated in the dataset for estimation purposes.

14.2.1 Pulp Reassays

Precision charts for the laboratory duplicates show that the majority of the Pt and Pd assays are within 5% of each other. Au tends to show some scatter especially where the Au assays are close to the detection limit. The Ni, Cu and Cr analyses are all within a 5% variance.

14.3 Assay Certificate Verification

RSG Global has randomly audited a number of boreholes from the Rooipoort Project. In all cases the standard of the logs, archiving and correspondence between assay certificates and the borehole database met or exceeded industry standards.

14.4 Data Quality Summary

Graphs of the certified reference material and blanks against the certified value by laboratory batch lot (time) are contained in Appendix 03.

RSG Global has reviewed quality control plots for assays from the Rooipoort Project. These generally meet or exceed industry standards; however the quality of low grade Au assays is low for some batches. It is uncertain whether this is due to the quality of the CRM used or due to poor assay procedure, although the latter is suspected.

Some poor repeatability was identified after umpire assaying. It is suspected that this was the result of poor sample preparation (grind) in the original assays and the umpire results have been incorporated into the database. Other QA/QC measures for these batches appear acceptable, nevertheless there remains a risk that other samples have also been affected by this problem. The extent of this problem has not been quantified.

15 ADJACENT PROPERTIES

15.1 Oorlogsfontein 45KS

The northern boundary of Rooipoort adjoins the farm Oorlogsfontein 45KS. Platinum Group Metals Limited ("PTM") of Toronto Canada (www.platinumgroupmetals.net) has carried out exploration work on this property. On 19 October 2005 PTM announced an Inferred Resource on this farm (War Springs Project) based on 18 drillholes of 29.6 million tonnes grading 1.03g/t 2PGE+Au (0.31g/t Pt; 0.63g/t Pd; 0.09g/t Au), 0.13% Ni, 0.11% Cu.

15.2 Jaagbaan 291KR and Moordrift 289KR

The western boundary of Rooipoort adjoins Moordrift and the south western corner adjoins Jaagbaan. In the 1960's and 1970's Johannesburg Consolidated Investments (predecessor of Rustenburg Platinum Mines) drilled ten holes on these farms, mostly along the boundary with Rooipoort and portions of Grasvally not held by EGMC. EGMC has gained access to the logs and assays through the current mineral rights holder, Anglo Platinum. Three of these holes reported intersections of PGE mineralization at depths of between 451.5m and 1743m. Anglo Platinum has correlated these intersections with the Merensky Reef and UG2 PGE horizons that are mined in the western and eastern lobes of the BC. None of the data have been verified by EGMC.

In 2002 Falconbridge Ventures of Africa (Pty) Ltd ("FVA") acquired prospecting rights to Moordrift and Jaagbaan and drilled three boreholes. None of the results of this work have been published.

15.3 Grasvally 293KR

Portions 3, 6, 19 and 24 of Grasvally are held under Prospecting and Option Contract by FVA and 2 drillholes were drilled on portion 3. None of the results of this work have been published.

In 1973 Falconbridge Explorations Limited drilled three holes on portion 16 of Grasvally, one of the intersections is reported as being 0.5m at 1.9g/t 3E2PGE+Au in a pyroxenite at 100m depth. No other assay results are reported.

In 1985 Goldfields of South Africa drilled one hole on portion 8, which is now under Prospecting and Option Contract to EGMC, but not the subject of this report. This drillhole intersected UG2-like mineralization at a depth of 232.14m and a grade of 1.56g/t 2PGE+Au over 1.14m. Additionally, minor mineralization was intersected in norites at a depth of 130.44m (0.3m at 1.02g/t 2PGE+Au) and 132.15m (0.2m at 1.09g/t 2PGE+Au) and another chromitite at 256.9m (1.88m @ 0.5g/t 2PGE+Au).

Considerable additional drilling has been done on Portion 18 by African Minerals Corporation Ltd, a subsidiary of SAMANCOR Chrome, who operated the Grasvally Chrome mine in the 1970's and 1980's. This mine is now closed. Some additional exploration work is being conducted by BHP Billiton on these properties, but no details are available.

Table 15.3_1 summarises the drilling on various portions of Grasvally 293KR known to EGMC.

Table 15.3_1 Summary of Drilling on Grasvally			
Company	**Portion**	**Dates**	**Drill holes**
Council for Geoscience (Geological Survey of South Africa)	4 19	1986 1986	1794, 1800, 1816 1827
Shell Coal	17	1979-80	GR1-GR10
Aloe Minerals	4 17 19 24	1973 1974 1974 1973-74	DC-1 DC-4 DC-3, DC-6A, DC-9 DC-2A, DC-7
African Minerals Corporation Ltd	4 5 18	1962-63 1961 1961-62	G20, G24 G15 G1-G14, G16-G19, G23

15.4 Volspruit 326KR

In 2004 Pan Palladium published an Indicated Resource of 71.2 million tonnes with a grade of 1.15g/t 2PGE+Au, 0.11% Ni and 0.03% Cu plus an additional 22.3 million tonnes of Inferred Resource grading 1.03g/t 2PGE+Au, 0.11% Ni and 0.03% Cu. This deposit is located in pyroxenitic rocks of the Lower Zone and was discovered by Rio Tinto in the 1970's and subsequently acquired by Genmin, now Impala Platinum, who optioned the property to Pan Palladium.

Pan Palladium announced after the completion of an advanced prefeasibility study in December 2004, that the Grass Valley Project does not currently represent a sufficiently attractive investment opportunity and that the project had been placed on a low priority monitoring status.

16 MINERAL PROCESSING AND METALLURGICAL TESTING

16.1 Introduction

Limited, preliminary metallurgical test work has been carried out on the Rooipoort Project.

16.2 Metallurgical Testing

Preliminary bench scale metallurgical test work was carried out in September 2004 on composited samples selected from several drillholes from the initial 23 drill holes.

SGS Lakefield Research laboratories of Johannesburg, South Africa carried out preliminary flotation work on five composited samples.

16.3 Metallurgical Results

The tests included milling and basic flotation to produce a flotation concentrate. The tests indicated that from each of the mineralized zones , a re-cleaner flotation concentrate of low mass recovery can be produced that contains medium to high recoveries of Pt, Pd, Au, Ni and Cu. This initial test work indicates that a simple metallurgical process route could produce an acceptable flotation concentrate from a low grade feed.

Initial results of crude rougher concentrates from non optimized flotation indicates an “easily floatable” ore with rougher concentrate recoveries of 78.4% to 89.9% for Pt+Pd+Au, 65.1% to 86.1% for Ni, and 85.9% to 92.0% for Cu.

17 MINERAL RESOURCES AND MINERAL RESERVES

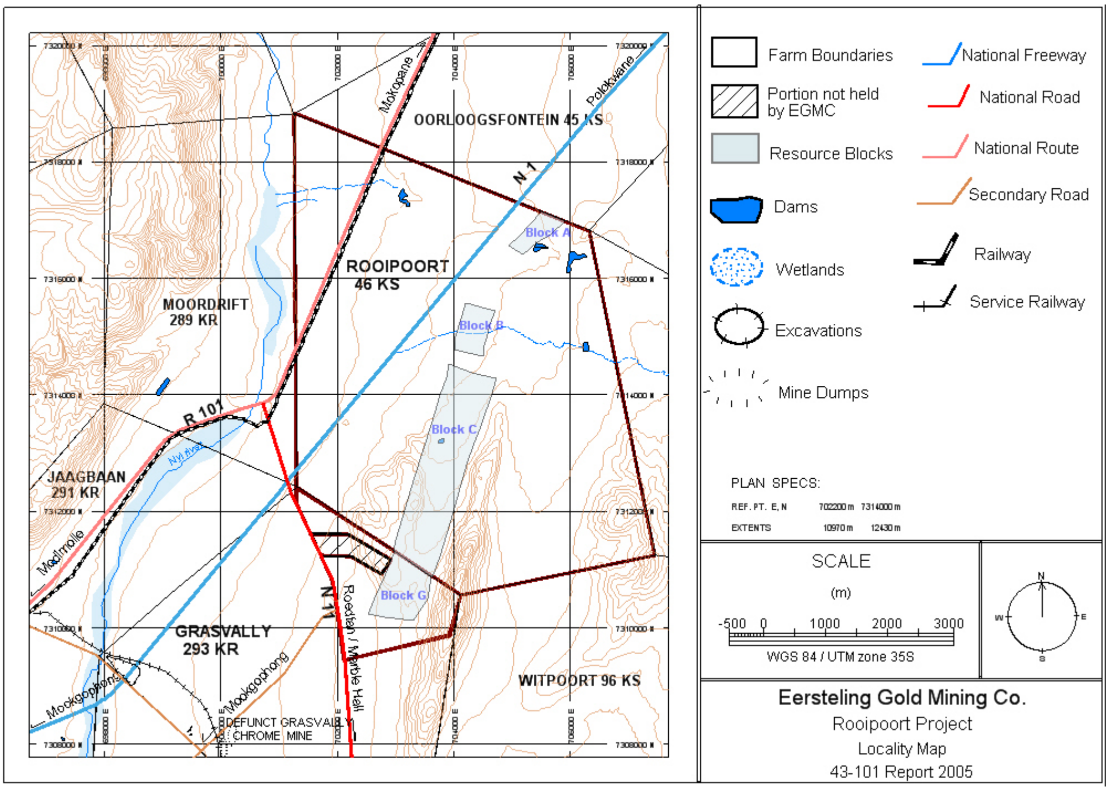
17.1 Mineral Resources

A Mineral Resource Estimation was carried out by RSG Global and a report submitted to EGMC on 20 September 2005. The following are extracts from that report.

EGMC provided RSG Global with an Access database containing drill hole and assay information, including flagged intercepts based on an approximate 0.5g/t 2PGE+Au (Pt+Pd+Au) cut-off. Furthermore RSG Global was provided with a series of wire-frame files which constituted a 3-D geological model of the Rooipoort mineralization.

The EGMC geological interpretations separate the resource into 4 main blocks, separated by a diabase dyke. RSG Global has treated all 4 blocks together, as they would have originally been continuous (Figure 17.1_1).

Figure 17.1_1
Resource Blocks on Rooipoort Project



Only the M2 zone in the Middle Unit was considered in the RSG Global evaluation, based primarily on a 2PGE+Au cut-off of about 0.5g/t. M1 and M3 have not been evaluated in this exercise as they are generally thinner, lower grade and less continuous. Additional drilling may, however, identify portions of these zones that can be modelled and incorporated in subsequent evaluations.

Similarly, mineralization in the Lower Unit is prefixed L and numbered L1, L2 and L3 from the base up. This evaluation considers only the L3 mineralized zone representing the third zone from the base of the Lower Unit. The L3 is associated with a chromitite layer which forms a local marker horizon.

Only mineralized material to the east of the Grasvally Fault was considered in the RSG Global resource evaluation, although it is clear that additional mineralized material exists to the west of this fault.

RSG Global has accepted the EGMC interpretations, and considers them appropriate for evaluation as an Inferred Resource at this stage of the exploration cycle.

RSG Global produced two wire-frames representing the base of the L3 and M2 zones as defined by EGMC. The wire-frames were based on the EGMC wire-framed interpretations and have been clipped to the lower contact defined by the intersections.

17.2 Grade Estimation

A notional block model was built to represent each of the M and L zones, based on a 10m vertical thickness and 100m x 100m parent block size in the X-Y plane. This model, together with the drill-hole intersections was rotated so that strike was nominally north-south and the limbs of the syncline were within 10 degrees from the horizontal. The centres of both intersections and blocks were then projected to a horizontal plane for estimation.

This technique has the advantage of reconstructing continuity between faulted blocks and allowing a 2-dimensional estimation of the mineralized horizon to be carried out. Furthermore only one base wire-frame surface for each of the M and L zones was required, and the complicated process of developing valid, 3-D wire-frames was obviated.

True thickness of the mineralized intervals was determined by trigonometry from the core to lithological contact angle as provided by EGMC, interpreted from 2-D sections. This was then interpolated into the 100m blocks using a linear average. Estimated true thickness was subsequently used to define tonnage within the 100m blocks. Calculated true thickness at drillhole support was used to calculate a grade/thickness accumulation for each of five variables, being Pt, Pd, Au, Ni and Cu over the full width of the intersection. The distribution at intersection support was not strongly skewed and consequently no top cut was applied. This accumulation was estimated into the 100m blocks using inverse distance (squared) as an estimator. The grade/thickness accumulation was used in conjunction with estimated thickness to calculate metal content and grade for each block.

Estimation into the rotated and flattened model was carried out by sub-blocking the 100m cells in to 10m cells and estimating each 10m centre as a point estimate. Subsequent to 2-D estimation, the models were rotated back into real space and regularised back to 100m. This approximates estimation into a 100m block, discretized to 10 x 10m. Search parameters used between 2 and 4 samples to estimate each block.

Constant densities were applied to each of the mineralized envelopes, based on limited density determinations. RSG Global accepts this as sufficient for an Inferred Resource, but would consider it a material deficiency for higher levels of classification.

Geological loss of 20% was applied to the modelled tonnages to allow for drillholes treated as null (due to intrusions, sub-grade etc) and potential losses due to structural complexity and possible potholes.

17.3 Resource Tabulations

Metal contents and block tonnages were accumulated and formed the basis for reporting the resource as shown in Table 17.3_1. Resource tabulations are based on a 0.5g/t 2PGE+Au cut-off above 900m elevation, which correlates approximately to 200m depth, considered appropriate for an open pit mining scenario.

Table 17.3_1

Mineral Resource Tabulation

Inferred Resource
At 0.5g/t 2PGE+AuPGE+Au cut-off and 900m base (200m). Inferred Resource
Apparent inconsistencies between grades, tonnage and contained metal may arrize from rounding

	Ave Thick (m)	Tonnes	Pt (oz)	Pd (oz)	Au (oz)	Ni (tonnes)	Cu (tonnes)	2PGE+ AuPGE+Au (g/t)	Pt (g/t)	Pd (g/t)	Au (g/t)	Ni (%)	Cu (%)
M2	1.8	12,791,000	172,900	340,300	39,200	25,300	14,900	1.34	0.42	0.83	0.10	0.20	0.12
L3	1.3	5,337,000	101,300	88,300	8,400	8,000	5,200	1.15	0.59	0.51	0.05	0.15	0.10

17.4 Classification

RSG Global believes that the estimated resource should be considered an Inferred Resource, primarily because of the sparse drill information. Data quality and geological understanding and interpretation are considered appropriate for this level of classification.

17.5 Mineral Reserves

No conversion to mineral reserve has been attempted.

18 OTHER RELEVANT DATA AND INFORMATION

No further relevant information is known.

19 INTERPRETATION AND CONCLUSIONS

On a deposit scale the stratigraphy of the project forms a broad synclinal structure, separated by a northerly trending fault zone (the Grasvally Fault) from a westerly dipping unit. Only mineralized material to the east of the Grasvally Fault close to the floor rock contact and in the synformal closure is considered in this interpretation, although it is clear that additional mineralized potential from the axial trace of the Rooipoort synform west-wards up to the Grasvally Fault and to the west of this fault exists. This represents upside potential to the resource calculated in this exercise.

Interpretation of the L3 chromitite layer as being the equivalent of the UG2-like chromitite described on Grasvally (Hulbert, 1983) indicates a distinct unit not described from the Platreef sections north of Mokopane.

Examination of the M2 mineralized zone in the southern part of the project area suggests that it may be the up-dip equivalent of the Merensky pyroxenite unit described on the adjoining properties to the west. This will form one of the areas to be investigated in future.

20 RECOMMENDATIONS

Although this deposit has been evaluated as a precious metals deposit, the potential value of the contained base metals far exceeds the value of the precious metals. RSG Global recommends that future evaluations consider the base metals as a primary revenue earner and that the mineralized intersection should be redefined with this in mind.

Future exploration programmes should take into account the potential for additional mineralization west of the Grasvally Fault and the north western part of the project area underlain by the Middle Unit.

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APPENDIX 1

Rooipoort Project Drill Collars

Rooipoort Project Drill Collars

	East_X	North_Y	UTM_E	UTM_N	Elevation	Azimuth	Dip	EOH	Date Started	Date Completed
RP03-01	-10263.65	-9888.67	703163.51	7311217.37	1195.52	123.00	-60.00	241.76	15/09/2003	24/09/2003
RP03-02	-10403.46	-9818.70	703042.35	7311316.20	1208.77	122.00	-60.00	255.72	02/10/2003	17/10/2003
RP03-03	-10199.97	-9586.40	703291.70	7311498.46	1183.59	99.00	-60.00	247.50	02/10/2003	17/10/2003
RP03-04	-10100.30	-8000.21	703735.53	7313024.73	1135.53	102.00	-60.00	283.76	17/10/2003	29/10/2003
RP03-05	-10899.14	-7593.86	703044.68	7313595.84	1105.67	0.00	-90.00	245.14	20/10/2003	04/11/2003
RP03-06	-11615.01	-7615.34	702341.33	7313731.27	1085.33	0.00	-90.00	271.51	23/10/2003	10/11/2003
RP03-07	-10288.37	-5606.22	704075.00	7315402.26	1107.51	110.00	-59.25	400.41	12/10/2003	01/11/2003
RP03-08	-10436.72	-7578.00	703499.44	7313510.29	1118.54	98.00	-59.20	578.00	06/11/2003	15/04/2004
RP03-09	-10042.74	-6768.62	704060.78	7314214.13	1118.21	0.00	-90.00	217.51	12/11/2003	20/11/2003
RP03-10	-10236.77	-4794.41	704302.71	7316183.28	1108.49	96.00	-57.85	463.90	13/11/2003	30/09/2004
RP03-11	-10255.83	-6171.76	703983.20	7314843.20	1107.72	101.00	-60.00	247.89	17/11/2003	24/11/2003
RP03-12	-9804.86	-8042.26	704014.68	7312919.15	1139.66	102.00	-60.00	208.91	17/11/2003	25/11/2003
RP03-13	-10110.51	-6474.59	704058.87	7314515.91	1113.23	104.00	-59.77	230.00	26/11/2003	08/12/2003
RP03-14	-9890.71	-10027.52	703497.14	7311000.37	1193.99	107.00	-59.28	188.58	04/12/2003	09/12/2003
RP04-15	-10141.97	-7127.24	703885.59	7313885.81	1118.57	99.60	-60.19	301.90	15/01/2004	26/01/2004
RP04-16	-8894.34	-3660.67	705860.56	7316996.51	1131.16	105.00	-60.00	139.54	15/01/2004	23/01/2004
RP04-17	-9797.11	-6689.30	704317.83	7314237.88	1122.88	102.00	-58.96	211.25	28/01/2004	07/02/2004
RP04-18	-9374.69	-3577.67	705409.88	7317182.45	1121.00	0.00	-90.00	166.45	27/01/2004	06/02/2004
RP04-19	-10004.43	-6682.28	704117.03	7314290.03	1118.28	102.00	-60.77	407.58	10/02/2004	25/02/2004
RP04-20	-9798.36	-3928.43	704919.77	7316932.67	1107.86	129.00	-88.82	133.96	11/02/2004	19/02/2004
RP04-21	-10891.4	-8132.5	702934.55	7313068.46	1104.96	0.00	-90.00	877.21	12/03/2004	01/06/2004
RP04-22	-11524.57	-9240.52	702074.52	7312125.42	1098.36	0.00	-90.00	669.10	28/04/2004	19/05/2004
RP04-23	-12031.45	-9106.24	701609.17	7312367.21	1086.56	0.00	-90.00	483.40	11/06/2004	20/06/2004
RP04-24	-9391.12	-3956.24	705311.15	7316816.58	1113.7	0.00	-90.00	275.04	16/08/2004	27/08/2004
RP04-25	-9811.69	-5631.73	704534.66	7315273.24	1115.62	0.00	-90.00	212.15	28/08/2004	07/09/2004
RP04-26	-9606.1	-5267.6	704814.85	7315583.70	1118.83	0.00	-90.00	177.18	10/09/2004	20/09/2004
RP04-27	-9904.93	-7206.47	704099.63	7313756.73	1127.04	106.00	-59.76	343.90	26/06/2004	19/07/1004
RP04-28	-9572.47	-6297.62	704622.70	7314571.10	1123.69	102.00	-60.00	135.58	27/09/2004	09/10/2004
RP04-29	-9524.09	-6691.86	704583.74	7314175.77	1130.99	0.00	-90.00	64.24	22/07/2004	20/08/2004
RP04-30	-9769.82	-6495.87	704386.73	7314420.73	1122.36	0.00	-90.00	383.24	11/10/2004	27/10/2004
RP04-31	-9800.01	-6000	704465.60	7314911.27	1116.5	0.00	-90.00	386.84	02/09/2004	26/09/2004
RP04-32	-9902.03	-7604.38	704015.53	7313367.76	1131.5	0.00	-90.00	523.86	05/11/2004	26/11/2004
RP04-33	-10000.44	-6498.58	704161.07	7314468.47	1116.16	102.00	-60.00	338.00	29/11/2004	13/01/2004
RP04-34	-10053.15	-6597.1	704088.10	7314383.83	1116.16	102.00	-60.00	265.81	29/11/2004	10/12/2004
RP04-35	-10000.03	-6399.98	704183.00	7314564.59	1115.52	102.00	-60.00	287.08	10/01/2005	19/01/2005
RP05-36	-10250.56	-6300.02	703960.33	7314716.87	1107.6	102.00	-60.00	405.78	14/01/2005	27/01/2005
RP05-37	-10298.23	-7362.16	703681.76	7313690.68	1119	102.00	-60.00	473.22	20/01/2005	15/02/2005
RP05-38	-11498.34	-9407.5	702063.67	7311956.73	1100.5	0.00	-90.00	700.27	27/01/2005	18/03/2005
RP05-39	-10234.37	-7825.42	703642.87	7313224.61	1132.44	102.00	-60.00	352.81	17/02/2005	11/03/2005
RP05-40	-10248.87	-6014.71	704024.32	7314994.94	1107.66	102.00	-60.00	329.19	15/03/2005	02/04/2005
RP05-41	-9646.16	-4403.11	704964.61	7316436.14	1111.4	102.00	-60.00	203.36	23/03/2005	08/04/2005
RP05-42	-9900.88	-4377.35	704721.64	7316516.93	1109.79	102.00	-60.00	330.14	08/04/2005	24/04/2005
RP05-43	-10399.28	-4309.9	704249.95	7316691.62	1101.03	0.00	-90.00	164.52	11/04/2005	15/04/2005
RP05-44	-9952.13	-3474.74	704868.81	7317409.05	1112.21	102.00	-60.00	200.46	18/04/2005	27/04/2005
RP05-45	-9181.68	-3604.99	705592.29	7317113.62	1123.97	102.00	-60.00	219.86	05/05/2005	13/05/2005
GV05-46	-10467.523	-10594.206	702810.42	7310573.39	1142.466	0.00	-90.00	514.12	12/05/2005	31/05/2005
GV05-47	-11201.025	-10499.862	702115.17	7310825.72	1116.932	0.00	-90.00	628.12	13/05/2005	09/06/2005
GV05-48	-9954.308	-10511.675	703329.32	7310541.81	1179.403	102.00	-60.00	161.67	16/05/2005	25/05/2005
GV05-49	-10086.505	-10792.275	703138.99	7310296.84	1159.81	102.00	-60.00	217.88	01/06/2005	08/06/2005
GV05-50	-10356.743	-10200.612	703004.52	7310933.31	1210.898	0.00	-90.00	606.20	02/06/2005	20/06/2005
GV05-51	-10508.884	-10899.632	702703.32	7310284.35	1139.451	0.00	-90.00	479.87	09/06/2005	28/06/2005
GV05-52	-11073.415	-11258.193	702074.03	7310057.76	1121.696	0.00	-90.00	604.26	14/06/2005	11/07/2005
GV05-53	-11101.165	-10899.564	702125.30	7310413.82	1122.264	0.00	-90.00	418.52	21/06/2005	07/07/2005
GV05-54	-12102.024	-9501.074	701454.07	7311997.33	1087.459	0.00	-90.00	576.40	08/07/2005	03/08/2005

Appendix 2

Mintek Certificates

Certificate of Analysis

PLATINUM ORE SARM 7B

CERTIFIED REFERENCE MATERIAL

Prepared by and Distributed by
MINTEK
P/Bag X3015, Randburg 2125
Republic of South Africa

Email: info@mintek.co.za
Telephone: +27 11 7924047
Telefax: +27 11 7926650

1. **STATUS OF CERTIFICATE**
   Further data from improved techniques may necessitate a revision in later years

2. **DATE OF ORIGINAL CERTIFICATION**
   1975-03-10

3. **DATE OF REVISION**
   2002-07-15 Revision notes are indicated with this superscript *

   Constituents which were re - certified are Pt, Pd, Rh, Ru, Ir and Au.

4. **AVAILABILITY OF OTHER FORMS/SIZES OF THE MATERIAL**
   The material is supplied in 3 kg and 0,5 kg amounts.

5. **SOURCE OF THE MATERIAL**
   The material is a composite of samples from the Merensky Reef taken from 5 localities in the Bushveld Complex in the Transvaal, South Africa. See 18.1 for further details and a map of the Bushveld Complex showing its exact locality.

6. **DESCRIPTION OF THE MATERIAL**
   The material consists mainly of a felsphathic pyroxenite.

   Major constituents are pyroxene, olivine, serpentine and plagioclase.

   Minor constituents are chromite, pentlandite, chalcopyrite and pyrrhotite.

   The platinum minerals are mainly ferroplatinum, cooperite, sperrylite, braggite and moncheite.

   Silica and magnesia account for about 70% of the sample and oxides of iron, aluminium and calcium for a further 24%. See 18.1 for more detailed mineralogical and chemical analyses.

7. **INTENDED USE**
   A reference material (RM) for calibration of equipment that is used for determining precious metals.

   An arbitration sample for commercial transactions.

   Verification of analytical methods for precious metals.

   For the preparation of secondary reference materials of similar composition.

8. STABILITY, TRANSPORT AND STORAGE INSTRUCTIONS

Because of the stability of the major and minor elements present the material should remain stable. The trace amounts of sulphides may oxidize but this will not affect the certified values.

There are no special storage instructions other than that the material must be protected from contamination from precious metals and should not be subjected to vibration which might cause segregation.

9. INSTRUCTIONS FOR THE CORRECT USE OF THE REFERENCE MATERIAL

It is not necessary to dry the material before use as it is not hygroscopic.

10. METHOD OF PREPARATION OF THE REFERENCE MATERIAL

Approximately 7 500 kg of rock were reduced to a fine powder, 96% to less than 75 µm and 66% to less than 37 µm. This was achieved by crushing in a jaw crusher and roller crusher in the initial stages and by grinding in a rubber –lined ball mill in the final stage of comminution. A full description of the preparation is given in 18.1.

11. STATE OF HOMOGENEITY

The material has been shown to be sufficiently homogeneous for the purpose of which it was intended – measuring techniques preceded by concentration of the precious metals usually by fusion of 10 g or more of the sample. If sub - samples of less than 1 g are used, sensitive measuring techniques may detect in - homogeneity for gold. See 18.1 for a full description of tests carried out to check the homogeneity of the material.

12. CERTIFIED PROPERTY VALUE/S AND CONFIDENCE/UNCERTAINTY LIMITS

Constituents with * have revised certified values.

Certified Values (See 16)	ppm	Limits at 95% confidence level (See 16)
1) Platinum*	3,74	±0,045
2) Palladium*	1,54	±0,032
3) Gold*	0,27	±0,015
4) Silver	0,42	±0,040
5) Rhodium*	0,24	±0,013
6) Ruthenium*	0,46	±0,057
7) Iridium*	0,09	±0,012
8) Osmium	0,063	±0,006
9) PGM + Au	5,71	±0,087

13. UNCERTIFIED/APPROXIMATE PROPERTY VALUES

H_2O^+	0,1	%	Ni	0,2	%
H_2O^-	0,8	%	Cu	0,1	%
SiO_2	52	%	V	60	ppm
MgO	20	%	Ba	50	ppm
FeO	9	%	Sr	50	ppm
Al_2O_3	8	%	Co	36	ppm
CaO	5	%	Pb	24	ppm
Fe_2O_3	2	%	Zn	23	ppm
Na_2O	0,8	%	Zr	10	ppm
Cr_2O_3	0,6	%	F	5	ppm
S	0,4	%	Y	5	ppm
CO_2	0,2	%	La	5	ppm
TiO_2	0,2	%	Rb	4	ppm
Mn_3O_4	0,2	%	Nb	2	ppm
P_2O_5	0,1	%	As	<1	ppm
K_2O	0,1	%	Ga	<1	ppm

14. VALUES OBTAINED BY INDIVIDUAL LABORATORIES/METHODS

36 laboratories in 8 countries reported over 2 000 results for the 8 precious metals. Reference should be made to 18.1 for the result submitted by each contributing laboratory.

* 6 laboratories participated in re - certification

15. MEASUREMENT TECHNIQUE/S USED FOR THE CERTIFICATION

The techniques used by the contributing laboratories were the following:

Atomic-absorption spectrophotometry

Emission spectroscopy

Gravimetric analysis

Neutron-activation analysis

Spectrophotometry

X-ray fluorescence

In nearly all analyses the measurement step was preceded by a collection (concentration) of the precious metals as a group. The most usual procedures were fire assay techniques with one of the following as a collector:

Lead

Tin

Nickel sulphide

An alloy of copper-nickel-iron. See 18.1 for a more detailed description of the methods used.

* Techniques involved in re - certification

Collection techniques have remained the same . The major changes have been the reading techniques.

ICP OES	Inductively Coupled Plasma Optical Emission Spectroscopy
ICP MS	Inductively Coupled Plasma Mass Spectroscopy

16. THE ESTIMATOR AND CONFIDENCE LIMITS OF THE CERTIFIED VALUE

Statistical tests were used to identify outlying results which were then removed from the main population of results. The mean of the set means was weighted by a standard procedure known as "inverse variance", which is a weighting by the inverse of the sum of the variance of the set mean and the between-set variance. The certified values in 12 are the weighted means. For the confidence limits, the variance of the weighted mean was calculated. Close agreement was obtained by the use of other forms of weighting. See 18.1 for further information and for the mathematical expressions for the weighting technique and the confidence limits of the weighted mean.

NOTE: The certified value is an estimate of the "true" value based upon the best available data at the time of certification.

* Guidelines outlined in ISO Guide 34 and 35 were used in assigning certified values and confidence limits.

17. NAMES OF ANALYSTS/INVESTIGATORS/CO-OPERATING LABORATORIES

Australia

Australian Mineral Development Laboratories........ Frewville
Quantum Laboratories (Pty) Ltd........ Brisbane
Supervise-Sheen Laboratories (Pty) Ltd........ Queens Park
Western Mining Corp. Ltd........ Belmont

Belgium

Rijksuniversiteit-Gent, Laboratorium voor Analytische Chemi ....hent
Instituut voor Nucleaire Wetenschappen........ Ghent
SA Metallurgie Hoboken-Overpelt........ Hoboken
Université Catholique de Louvain, Laboratorire de Traitement des Minerals........Louvain-la-Neuve

Canada

Canadian Copper Refiners Ltd .... Montreal
Department of Energy,Mines and Resources, Analytical Chemistry Section........ Ottawa
Department of Natural Resources, Analysis and Control Service .... Ste-Fov.Quebec
Falconbridge Nickel Mines Ltd. Metallurgical Laboratories........Thornhill
International Nickel Co of Canada Ltd. J Roy Gordon Research Laboratory .... Ontario
Noranda Mines Ltd........ Noranda

France

Bureau de Recherches Géologiques et Miniéres........ Orleans

Great Britain

Alfred H Knight Ltd .... Wallasey,Chesshire
Robertson Research International........ Llandudno,North Wales

South Africa

Anglo American Corp. of SA Ltd.,Anglo American Research Laboratory	Crown Mines
Anglo Transvaal Consolidated investment Co Ltd	Johannesburg
Atomic Energy Board	Pelindaba
Corner House Labortories (1968((Pty) Ltd.	Johannesburg
Johannesburg Consolidated Investment Co Ltd, Minerals Processing Research Laboratory	Knights
McLachlan and Lazar (Pty) Ltd.	Johannesburg
National Institute for Metallurgy	Randburg
Rio Tinto Management Services SA (Pty) Ltd	Johannesburg
Rustenburg Platinum Mines Ltd	Rustenburg
Western Platinum Ltd	Johannesburg

United States Of America

Cornell University	Ithaca
Engelhard Minerals and Chemicals Corp	New Jersey
Hazen Research Inc	Golden, Colorado
Ledoux and Co	Teaneck, New Jersey
Newmont Exploration Ltd	Danbury, Connecticut
Pennsylvania State University	University Park, Pennsylvania
United States Department of the Interior, Geologiocal Survey	Denver, Colorado
United States Department of the Interior, Bureau of Mines	Reno, Nevada

Zimbabwe

Rhodesia Chrome Mines Ltd	Selukwe

* **Laboratories involved in Re - certification**

Amplats	South Africa
Genalysis	Australia
Mintek	South Africa
P.F. Retief Laboratory	South Africa
Stillwater Mining Co	U.S.A
Swedish Institute For Metal Research	Sweden

18. **REFERENCES:**

PREPARATION AND CERTIFICATION PROCEDURES USED IN THIS SAMPLE

18.1 Steele,TW, et al: Preparation and certification of a reference sample of a precious metal ore – Report No. 1696-1975 of the National Institute for Metallurgy.

19. SIGNATURE/NAME OF CERTIFYING OFFICER/S

Murugan

S. Murugan
Manager, Analytical Science Division
MINTEK

CERTIFICATE OF ANALYSIS
SARM 73
MERENSKY ORE

CERTIFIED REFERENCE MATERIAL
Prepared by and Distributed by

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Republic of South Africa

Email: **info@mintek.co.za**
Telephone: **+ 27 11 7924047**
Telefax: **+ 27 11 7926650**
+ 27 11 7932413

1. STATUS OF CERTIFICATE

This is the first issue of the certificate.

2. DATE OF ORIGINAL CERTIFICATION

November 2004

3. AVAILABILITY OF THE MATERIAL

2,5 Kg units of the powdered material are available.

4. SOURCE OF THE MATERIAL

The material was supplied by Anglo Platinum.

5. DESCRIPTION OF THE MATERIAL

Merensky reef ore

6. INTENDED USE

As a control sample in the analysis of samples of a similar type.

Verification of analytical methods for analysis of Merensky ore.

As a reference material for the calibration of equipment used for analysing similar materials.

7. LEGAL NOTICE

This certificate and reference material described in it has been prepared diligently. Mintek, or the Manager of the Analytical Science Division accept no liability for any decisions or actions taken following the use of the reference material.

8. STABILITY, TRANSPORTATION AND STORAGE INSTRUCTIONS

Care must be taken to avoid undue vibration, since this could cause segregation within the container.

9. INSTRUCTIONS FOR THE CORRECT USE OF THE MATERIAL

The material should be well mixed and dried at 110°C over night (see label) before sub-samples are taken. Sub-samples of 25 g for PGM analysis, and 0.2g for base metals and Sulphur should be the minimum sample mass for analysis. It is recommended that a sample splitter should be used when sub sampling

10. METHOD OF PREPARATION OF THE REFERENCE MATERIAL

Approximately 600 kg of material was reduced in particle size until 99,8% was less than 75 µm and 95% was less than 18µm. This was achieved in multiple stages using Crushers, a ball mill and a stirred mill.

Figure 1

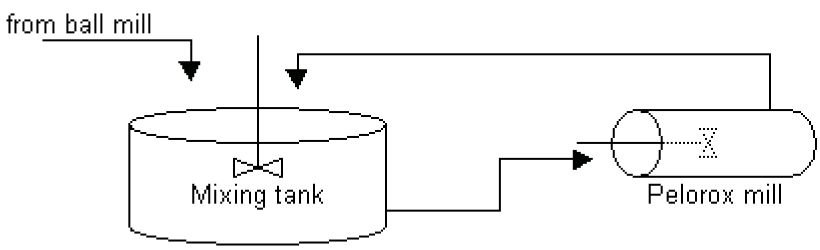
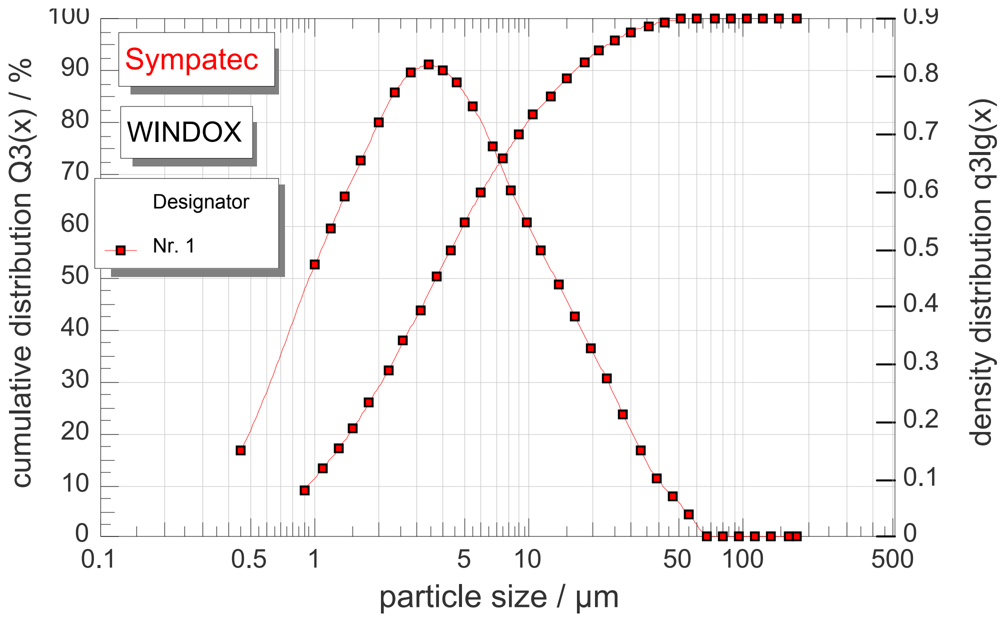


Figure 1: Flow sheet for ultra-fine milling

The material from the ball was fed into the mixing tank and this was circulated continuously until the grind was achieved (see figure1). This was measured by taking discharge samples at intervals. The dried material was screened at 600µm and blended. Subsequently the material was split into the final units. Graph 1 shows distribution of particles size in the material.

Graph 1



Graph 1: Particle size distribution

11. STATE OF HOMOGENEITY

This reference material consist of 200 2.5 Kg units, five units were analysed five times each for Pt, Pd, Rh and total PGM + Gold. Analysis of variance at alpha 0.02 was used to test if there is a significant difference in means between the units. There was no difference. The overall relative standard deviation (RSD) expressed a percent was less than 2.5 % Pt, Pd and 4.2 % for Rh. Total Pgm+Gold RSD was 2 %. The metals Ni, Fe, Cr and Cu were measured by x-ray fluorescence using a pressed pellet. This was treated in same way as above and no significant difference in the means was observed. The RSD was less than 1 %.

12. CERTIFIED AND TENTATIVE PROPERTY VALUES INCLUDING CONFIDENCE LIMITS AND INTER-LABORATORY STANDARD DEVIATION

PGMS

			Pt ug/g			
Certified	**Value**		**95 % Confidence Limits**		**Lab S**	**N**
AVE	**2.45**	**2.39**	**-----------**	**2.51**	**0.12**	**21**
			Pd ug/g			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**1.56**	**1.51**	**-----------**	**1.60**	**0.094**	**20**
			Ir ug/g			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**0.11**	**0.07**	**-----------**	**0.15**	**0.043**	**7**
			Au ug/g			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**0.19**	**0.17**	**-----------**	**0.20**	**0.026**	**18**
			Rh ug/g			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**0.26**	**0.23**		**0.29**	**0.057**	**18**
			Ru ug/g			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
MEDIAN	**0.51**	**0.45**	**-----------**	**0.56**	**0.067**	**9**

13. CERTIFIED AND TENTATIVE PROPERTY VALUES INCLUDING CONFIDENCE LIMITS AND INTER-LABORATORY STANDARD DEVIATION

BASE METALS AND SULPUR

			Cu Data %			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**0.102**	**0.098**	**------**	**0.105**	**0.0056**	**12**
			Ni Data %			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**0.215**	**0.206**	**------**	**0.223**	**0.013**	**11**
			Co Data %			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**0.009**	**0.008**	**------**	**0.010**	**0.0013**	**9**
			Cr_2O_3 %			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**1.29**	**1.24**	**------**	**1.34**	**0.072**	**11**
			S Data %			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**0.44**	**0.42**	**------**	**0.46**	**0.030**	**10**
			SiO2 Data %			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**49.1**	**47.6**	**------**	**50.6**	**2.22**	**11**
			CaO Data %			
Certified	**Value**		**95 % limits**		**Lab S**	**N**
AVE	**7.56**	**7.39**	**------**	**7.74**	**0.256**	**11**
			MgO Data %			
Tentative	**Value**		**95 % limits**		**Lab S**	**N**
MED	**15.6**	**15.1**	**------**	**16.2**	**1.06**	**11**
			TOTAL Fe Data %			
Tentative	**Value**		**95 % limits**		**Lab S**	**N**
MED	**6.56**	**6.33**	**------**	**6.80**	**0.528**	**11**
			Al_2O_3 Data %			
Tentative	**Value**		**95 % limits**		**Lab S**	**N**
MED	**13.7**	**13.1**	**------**	**14.25**	**0.99**	**11**

NOTES:

- All values (including uncertified values) relate to the dried (110°) material.
- The Certified Value is an estimate of the "true" value based upon the best available data at the time of the certification.
- The 95% Confidence Interval for the Certified Value is the range of values having a 95% chance of containing the certified value, should the certification program be repeated an infinite number of times.
- The precision of the user's proposed analytical method must be taken into account when using this reference material.
- The Standard deviation shown is the inter-laboratory Standard deviation. Ideally a repeat analysis by a laboratory should fall in a range of 2.3 times the standard deviation from the accepted value.
- No Data points were rejected from participating laboratories except for Ni, Cu, Au and Cr_2O_3 see 15

14. VALUES OBTAINED BY INDIVIDUAL LABORATORIES

Fourteen laboratories in four countries submitted analytical results on this material. See 18 for all the results. Only thirteen laboratories were included in metals and sulphur because of late arrival of results.

15. MEASUREMENT TECHNIQUES USED FOR THE CERTIFICATION

Techniques used by the contributing laboratories were the following:

- Gravimetric analysis
- ICP Mass spectrometry
- Optical emission spectroscopy with ICP source
- X-ray fluorescence spectrometry
- Combustion Analysis

In all the analyses of PGM's, the measurement step was preceded by a collection (concentration) of the precious metals as a group. The procedure was Fire assay and the collector was either Lead or Nickel Sulphide.

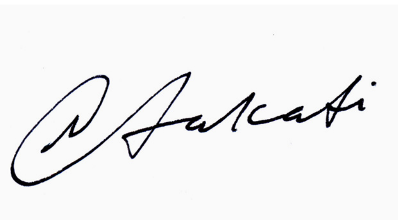
16. TREATMENT OF THE NUMERICAL VALUES

The data was assumed to belong to a normal distribution after examining the data statistically using tests for Normality. Outlier tests were used to identify point which would be far from the mean, no data points were rejected in this study except for Cu, Ni, Cr_2O_3 and Au which failed Grubbs test at 99%. Arithmetic mean was used as an estimator of the central value for certified values and Median for the tentative values.

17. PARTICIPATING LABORATORIES

Genalysis Laboratory Services Pty Ltd	Australia
ALX Chemex	Canada
Acme Analytical Laboratories	Canada
SGS Lakefield	Canada
Still Water Mining	United States
Set Point Laboratories	South Africa
Moruo Analytical Services	South Africa
Mintek Analytical Laboratories	South Africa
Anglo Platinum Research Center	South Africa
Anglo Research Laboratories	South Africa
SGS Lakefield South Africa	South Africa
Impala Platinum Mineral Process Laboratory	South Africa
Lonplats Analytical Laboratory	South Africa
Makwiro Mines Laboratories	Zimbabwe

18. NAME OF CERTIFYING OFFICER



Mr M. Mtakati , Manager Analytical Science Division, MINTEK.

19. DATA

KEY

z2-	Two standard deviations from the mean
AVE	Arithmetic average
7 MED	Median
13	Data point wich was rejected and not included in the average

FA	Fire Assay Gravimetric finish
NiS	Nickel sulphide collection
Pb	Lead collection
XRF	X-ray fluorescence spectrometry
OES	Optical emission spectroscopy with ICP source
COM	Combustion Analysis
N	Number submitted results
LAB S	Inter-Laboratory Standard Deviation

Pt DATA ug/g					
Certified	Value	95 % limits		Lab s	N
AVE	2.45	2.39	2.51	0.12	21
lab	METHOD	LAB AVE	S	N	RSD
	Pb	2.197	0.108		4.9
z2-		2.211			
	NiS	2.290	0.334		14.6
	NiS	2.340	0.017		0.7
	NiS	2.340	0.078		3.3
	Pb	2.351	0.131		5.6
	Pb	2.360	0.056		2.4
	Pb	2.407	0.163		6.8
	NiS	2.415	0.041		1.7
	Pb	2.438	0.026		1.1
AVE		2.450			
	NiS	2.455	0.159	6	6.5
MED	Pb	2.462	0.091	3	3.7
	Pb	2.467	0.042	3	1.7
	NiS	2.479	0.095	5	3.8
	Pb	2.500	0.054	4	2.2
	Pb	2.503	0.021	3	0.8
	Pb	2.526		1	
	Pb	2.528	0.070	3	2.77 5
	Pb	2.535	0.115	4	4.5
	NiS	2.535	0.092	2	3.6
z2+		2.698			
	NiS	2.702	0.081	4	3.0
	NiS	2.705		1	

Pd data ug/g					
Certified	Value	95 % limits		Lab S	N
AVE	1.56	1.51	1.60	0.094	20
lab	METHOD	AVE	S	N	RSD
	NiS	1.32	0.06	3	4.30
z2-		1.37			
	NiS	1.44		1	
	Pb	1.45		1	
	Pb	1.49	0.02	3	1.40
	Pb	1.51	0.03	3	2.06
	NiS	1.50	0.02	4	1.28
	Pb	1.51	0.14	5	8.96
	NiS	1.52	0.03	4	1.97
	Pb	1.53	0.02	3	1.14
	Pb	1.54	0.04	23	2.46
MED	Pb	1.54	0.06	4	3.84
AVE		1.56			
	Pb	1.59	0.05	4	3.35
	NiS	1.59	0.09	6	5.55
	NiS	1.60	0.05	4	2.99
	Pb	1.61	0.02	6	1.33
	NiS	1.65	0.04	2	2.15
	Pb	1.65	0.03	3	1.53
	Pb	1.68	0.04	4	2.14
	NiS	1.68	0.05	4	2.78
	Pb	1.70	0.01	3	0.60
z2+		1.75			

Ir Data ug/g

Certified	Value	95 % limits		Lab S	N
AVE	0.11	0.07	0.15	0.043	7
	METHOD	AVE	S	N	rsd
z2-		0.026			
	NiS	0.060	0.000	2	0.0
	NiS	0.083	0.006	3	6.9
	NiS	0.089	0.002	5	2.7
MED	NiS	0.107	0.009	4	8.0
m		0.113			
	NiS	0.113	0.000	1	0.0
	NiS	0.147	0.018	4	11.9
	NiS	0.190	0.042	2	22.3
z2+		0.200			
	NiS	< 0.13	0.000		
	NiS	<.1	0.002	4	

Rh Data ug/g

Certified	Value	95 % limits		Lab S	N
AVE	0.26	0.23	0.29	0.057	18
	METHOD	AVE	S	N	RSD
	Pb	0.100	0.010	3	10.0
	Pb	0.190	0.010	3	5.3
z2-		0.142			
	Pb	0.240	0.035	3	14.4
	NiS	0.240	0.002	3	0.8
	NiS	0.242	0.011	3	4.6
	Pb	0.243		1	
	Pb	0.248	0.002	3	0.6
	Pb	0.250	0.058	3	23.0
	Pb	0.251	0.058	3	22.9
AVE MED		0.257			
	Pb	0.258	0.012	23	4.5
	NiS	0.268	0.010	4	3.6
	NiS	0.272	0.007	4	2.6
	Pb	0.273	0.019	6	6.8
	Pb	0.275	0.012	6	4.5
	NiS	0.277	0.011	4	3.9
	NiS	0.280	0.010	3	3.6
	NiS	0.322		1	
z2+		0.371			
13	NiS	0.395	0.007	2	1.8

Au Data ug/g

Certified	Value	95 % limits		Lab S	N
AVE	0.19	0.17	0.20	0.026	18
	METHOD	AVE	S	N	RSD
	NiS	0.055	0.000	2	0.0
	NiS	0.120	0.003	4	2.6
z2-		0.133			
	Pb	0.140	0.011	3	8.1
	NiS	0.157	0.019	6	11.9
	Pb	0.177	0.015	3	8.6
	NiS	0.177	0.015	3	8.6
	Pb	0.182	0.007	3	4.0
	Pb	0.183	0.005	3	2.9
AVE		0.186			
	pb	0.188	0.000	1	0.0
MED	Pb	0.193	0.030	4	15.7
	NiS	0.197	0.006	3	2.9
	Pb	0.197	0.013	4	6.4
	pb	0.198	0.002	3	1.0
	Pb	0.199	0.012	4	6.2
	Pb	0.200	0.026	3	13.2
	pb	0.208	0.012	6	5.6
	Pb	0.209	0.008	3	3.7
	NiS	0.230	0.037	4	16.0
z2+		0.239			

Ru Data ug/g

Certified	Value	95 % limits			N
MEDIAN	0.51	0.45	0.56	0.067	9
lab	METHOD	AVE	S	N	RSD
z2-		0.371			
	NiS	0.423	0.015	3	3.6
	NiS	0.437	0.039	6	8.9
	NiS	0.467	0.015	2	3.3
	NiS	0.467	0.036	5	7.7
MED	NiS	0.493	0.038	4	7.7
	NiS	0.506	0.000	1	0.0
AVE		0.507			
	NiS	0.575	0.007	2	1.2
	NiS	0.591	0.053	4	9.0
	NiS	0.607	0.021	3	3.4
z2+		0.643			

Cu Data %

Certified	Value	95 % limits		Lab S	N
AVE	0.102	0.098	0.105	0.0056	12
	METHOD	AVE	S	N	RSD
	OES	0.090	0.010	3	11.1
z2-		0.091			
	OES	0.095	0.002	6	1.7
	OES	0.098	0.005	4	5.1
	OES	0.100	0.000	3	0.0
	OES	0.100	0.000	1	0.0
	XRF	0.101	0.006	3	5.4
AVE + MED		0.102			
	XRF	0.104	0.001	3	1.0
	OES	0.105	0.007	3	6.7
	OES	0.105	0.001	8	0.7
	OES	0.106	0.002	4	1.5
	OES	0.107	0.001	5	0.9
	XRF	0.110	0.000	2	0.2
z+2		0.113			

Ni Data %

Certified	Value	95 % limits		Lab S	N
AVE	0.215	0.206	0.223	0.013	11
	METHOD	AVE	S	N	RSD
z-2		0.190			
	OES	0.200	0.000	3	0.0
	XRF	0.201	0.006	2	3.2
	OES	0.202	0.013	8	6.6
	OES	0.204	0.009	6	4.4
	OES	0.205	0.000	1	0.0
AVE		0.215			
MED	XRF	0.217	0.005	3	2.1
	XRF	0.220	0.002	3	0.7
	OES	0.223	0.006	4	2.6
	OES	0.228	0.005	4	2.2
	OES	0.228	0.002	5	0.9
	OES	0.233	0.015	3	6.5
z+2		0.240			
	OES	0.385	0.007	3	1.8

Co Data %

Certified	Value	95 % limits		Lab S	N
AVE	0.009	0.008	0.010	0.0013	9
	METHOD	AVE	S	N	RSD
	XRF	0.0063	0.0012	3	18.2
z2-		0.0064			
	OES	0.0075	0.0004	8	5.9
	XRF	0.0089	0.0001	2	0.8
	OES	0.009	0.0000	1	0.0
AVE		0.0090			
MED	OES	0.0093	0.0006	3	6.2
	OES	0.0096	0.0010	6	10.8
	OES	0.0098	0.0005	4	5.1
	OES	0.0100	0.0000	3	0.0
	OES	0.0102	0.0002	5	2.3
z2+		0.0115			
	OES	<0.02	0.0000	3	
	OES	<0.05	0.0000	4	

Cr_2O_3 %

Certified	Value	95 % limits		Lab S	N
AVE	1.29	1.24	1.34	0.072	11
	METHOD	AVE	S	N	RSD
z-2		1.15			
	OES	1.20	0.015	3	1.2
	OES	1.22	0.000	1	0.0
	XRF	1.23	0.000	2	0.0
	OES	1.24	0.000	3	0.0
	OES	1.28	0.006	4	0.5
MED	OES	1.28	0.041	8	3.2
	XRF	1.29	0.025	3	1.9
AVE		1.29			
	OES	1.33	0.021	4	1.6
	OES	1.38	0.099	6	7.2
	OES	1.38	0.017	5	1.2
	XRF	1.41	0.015	3	1.1
z+2		1.44			
13	OES	1.71	0.049	3	2.9

TOTAL Fe Data %

TENTATIVE	Value	95 % limits		Lab s	N
MED	6.56	6.33	6.80	0.528	11
	METHOD	AVE	S	N	RSD
z2-		5.68			
	OES	6.05	0.115	4	1.9
	OES	6.33	0.143	6	2.3
	OES	6.42	0.026	3	0.4
	XRF	6.52	0.000	2	0.0
	OES	6.54	0.166	4	2.5
MED	OES	6.56	0.073	8	1.1
	OES	6.61	0.047	3	0.7
	XRF	6.69	0.040	3	0.6
AVE		6.73			
	OES	7.00	0.027	5	0.4
	OES	7.45	0.000	1	0.0
Z2+		7.79			
	OES	7.90	0.092	3	1.2

S Data %

Certified	Value	95 % limits		lab s	N
AVE	0.44	0.42	0.46	0.030	10
lab	METHOD	AVE	S	N	RSD
z2-		0.379			
10	Com	0.380	0.026	3	7.0
13	OES	0.405	0.007	3	1.7
6	Com	0.423	0.084	8	19.9
9	Com	0.430	0.081	3	18.9
AVE		0.438			
1 MED	Com	0.440	0.008	4	1.9
8	Com	0.446	0.004	3	0.9
3	Com	0.453	0.010	4	2.1
2	OES	0.462	0.008	5	1.8
4	Com	0.473	0.006	6	1.2
5	Com	0.473	0.010	3	2.1
z2+		0.498			

Total PGM + Gold Data Ug/g

TENTATIVE	Value	95 % limits		lab s	N
MED	4.41			0.30	5
	METHOD	AVE	S	N	RSD
	FA	3.82	0.025	3	0.7
	FA	4.28	0.126	6	3.0
MED	FA	4.41	0.177	10	4.0
	FA	4.47	0.341	4	7.6
	FA	4.60	0.291	30	6.3

Al_2O_3 Data

TENTATIVE	Value	95 % limits			N
MED	13.7	13.1	14.3	0.99	11
lab	METHOD	AVE	S	N	RSD
z2-		11.35			
	OES	11.55	0.081	3	0.7
	OES	11.65	0.521	4	4.5
	OES	12.45	0.081	1	0.6
m		13.32			
	OES	13.48	0.087	4	0.6
13	OES	13.54	0.014	3	0.1
MED	OES	13.68	0.131	6	1.0
6	OES	13.68	0.097	8	0.7
2	OES	14.03	0.078	5	0.6
10	OES	14.04	0.165	3	1.2
8	XRF	14.07	0.112	3	0.8
5	XRF	14.40	0.000	2	0.0
+2z		15.30			

SiO2 % Data

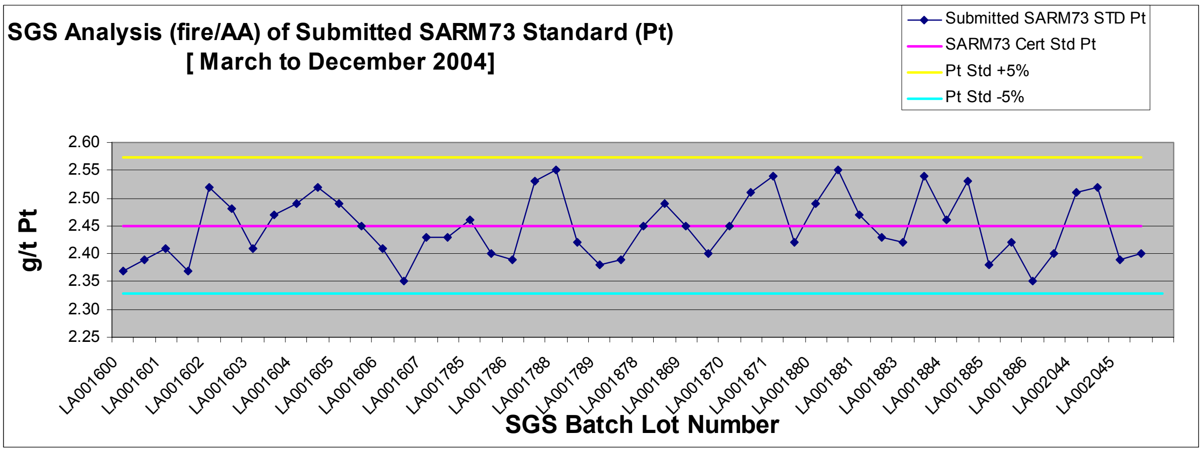
Certified	Value	95 % limits		Lab s	N
AVE	49.1	47.6	50.6	2.22	11
LAB	METHOD	AVE	S	N	RSD
z2-		44.68			
3	OES	44.99	1.054	4	2.3
11	OES	47.18	0.140	3	0.3
1	OES	47.70	0.316	4	0.7
10	OES	48.61	0.263	3	0.5
6	OES	48.86	0.460	8	0.9
MED	XRF	48.90	0.235	3	0.5
AVE		49.12			
13	OES	49.47	0.184	3	0.4
4	OES	49.76	0.832	6	1.7
5	XRF	50.40	0.000	2	0.0
12	OES	50.74	0.000	1	0.0
+2z		53.58			
2	OES	53.76	0.365	5	0.7

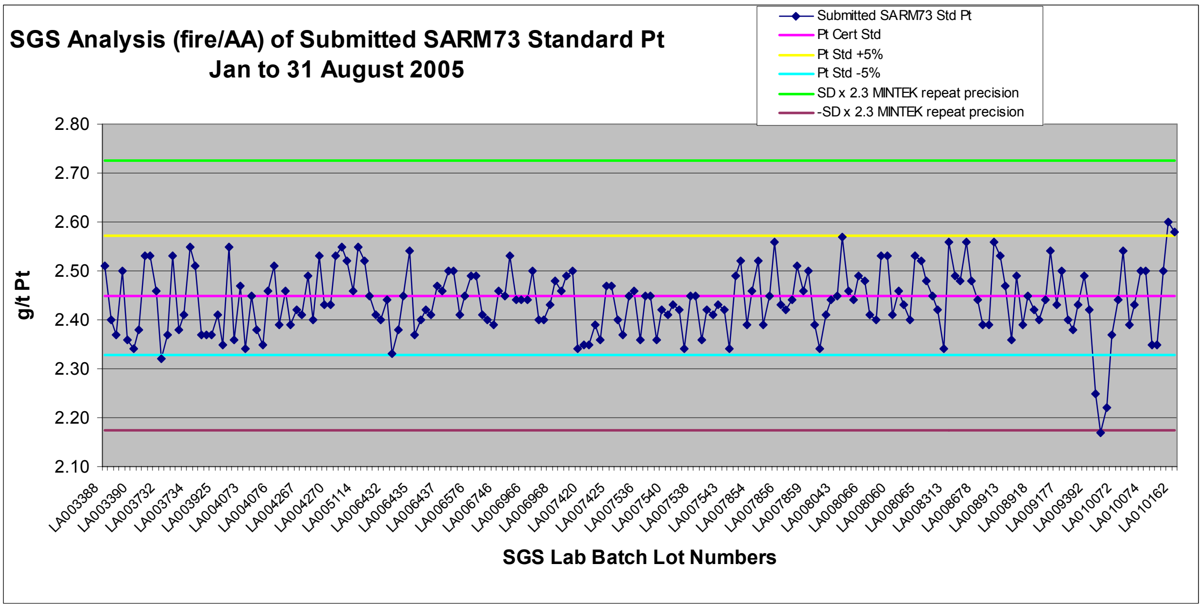
CaO Data					
Certified	Value	95 % limits		labs	N
AVE	7.56	7.39	7.74	0.256	11
LAB	METHOD	AVE	S	N	RSD
	OES	6.96	0.028	4	0.4
z2-		7.05			
	OES	7.38	0.164	4	2.2
	XRF	7.47	0.000	2	0.0
	OES	7.47	0.050	3	0.7
AVE		7.56			
	OES	7.58	0.076	8	1.0
MED	XRF	7.62	0.008	3	0.1
	OES	7.64	0.050	3	0.7
	OES	7.65	0.028	3	0.4
	OES	7.68	0.000	1	0.0
	OES	7.82	0.084	5	1.1
	OES	7.94	0.251	6	3.2
+2z		8.08			

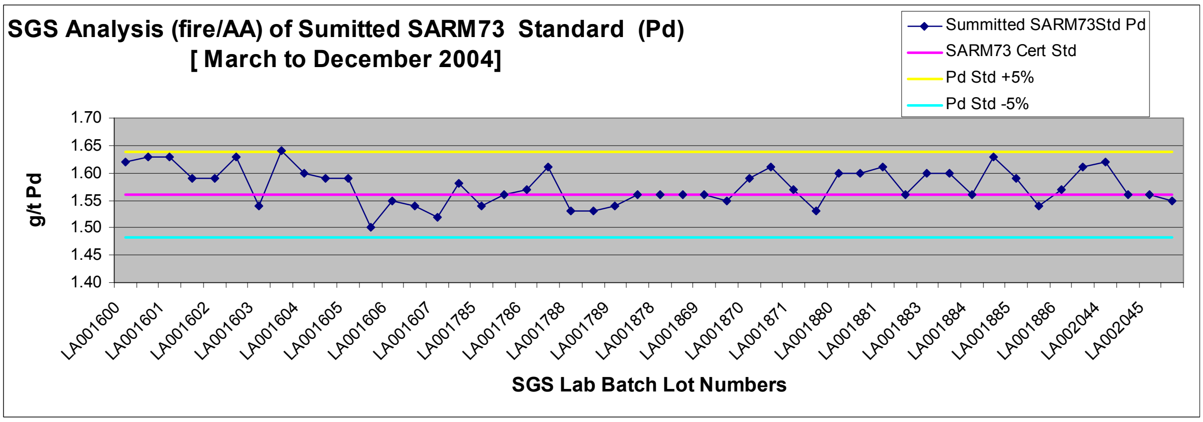
MgO Data					
TENTATIVE	Value	95 % limits		lab s	N
MED	15.6	15.1	16.2	1.06	11
	METHOD	AVE	S	N	RSD
z2-		13.57			
	OES	13.94	0.262	4	1.9
	OES	14.66	0.025	4	0.2
	OES	15.15	0.074	3	0.5
	OES	15.20	0.078	3	0.5
	XRF	15.44	0.049	3	0.3
MED	OES	15.63	0.232	6	1.5
	XRF	15.65	0.071	2	0.5
	OES	15.66	0.177	8	1.1
AVE		15.69			
	OES	16.47	0.111	3	0.7
	OES	17.41	0.000	1	0.0
	OES	17.41	0.129	5	0.7
+2z		17.81			

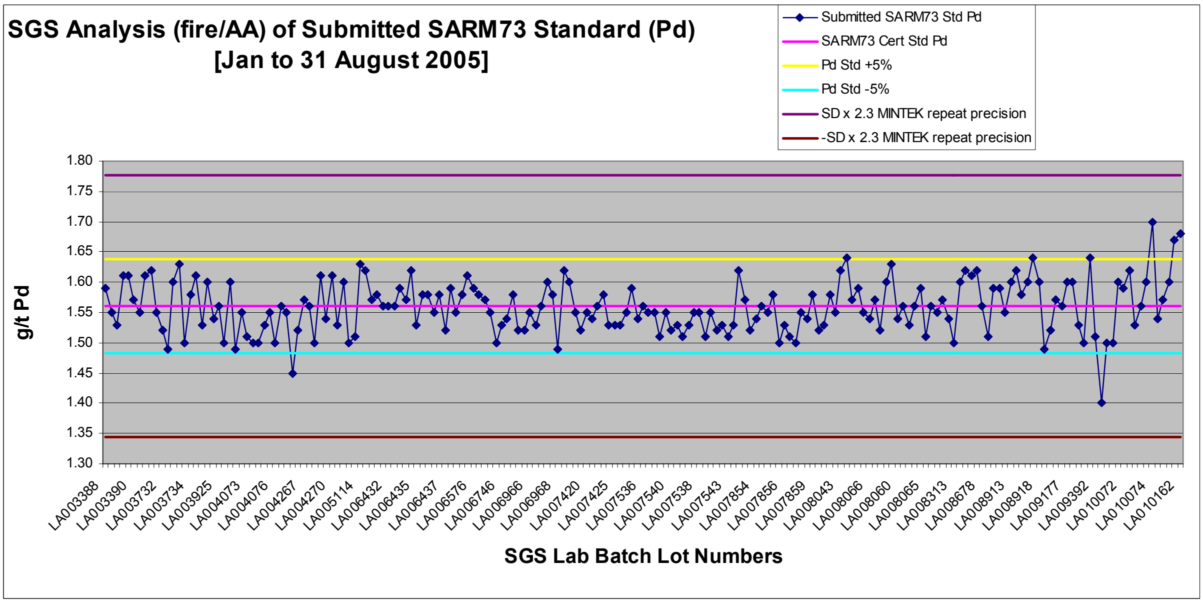
Appendix 3

QA/QC Charts for SARM73

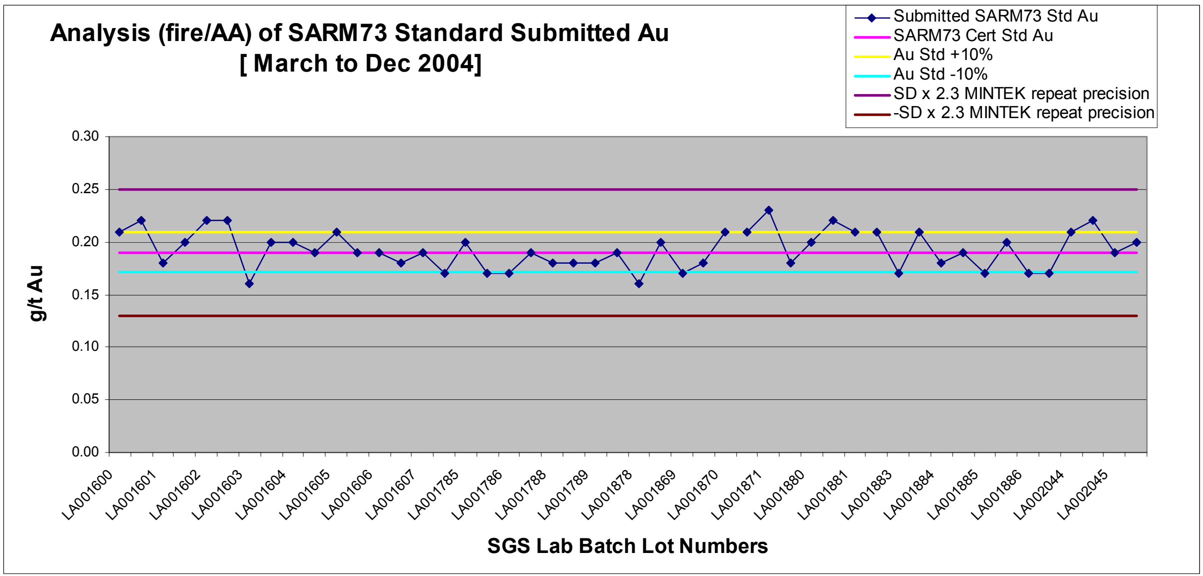

SGS Analysis (fire/AA) of Submitted SARM73 Standard (Pt)
[March to December 2004]
Submitted SARM73 STD Pt
SARM73 Cert Std Pt
Pt Std +5%
Pt Std -5%
g/t Pt
2.60
2.55
2.50
2.45
2.40
2.35
2.30
2.25
LA001600
LA001601
LA001602
LA001603
LA001604
LA001605
LA001606
LA001607
LA001785
LA001786
LA001788
LA001789
LA001878
LA001869
LA001870
LA001871
LA001880
LA001881
LA001883
LA001884
LA001885
LA001886
LA002044
LA002045
SGS Batch Lot Number


SGS Analysis (fire/AA) of Submitted SARM73 Standard Pt
Jan to 31 August 2005
Submitted SARM73 Std Pt
Pt Cert Std
Pt Std +5%
Pt Std -5%
SD x 2.3 MINTEK repeat precision
-SD x 2.3 MINTEK repeat precision
g/t Pt
2.80
2.70
2.60
2.50
2.40
2.30
2.20
2.10
LA003388
LA003390
LA003732
LA003734
LA003925
LA004073
LA004076
LA004267
LA004270
LA005114
LA006432
LA006435
LA006437
LA006576
LA006746
LA006966
LA006968
LA007420
LA007425
LA007536
LA007540
LA007538
LA007543
LA007854
LA007856
LA007859
LA008043
LA008066
LA008060
LA008065
LA008313
LA008678
LA008913
LA008918
LA009177
LA009392
LA010072
LA010074
LA010162
SGS Lab Batch Lot Numbers

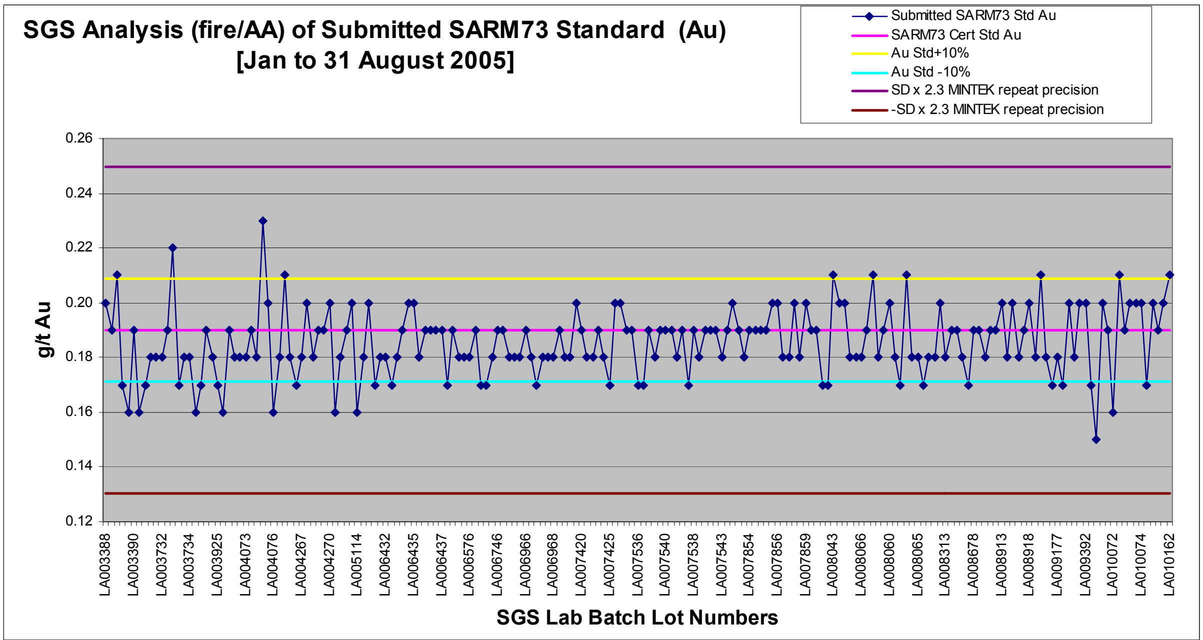

SGS Analysis (fire/AA) of Sumitted SARM73 Standard (Pd)
[March to December 2004]
Summitted SARM73Std Pd
SARM73 Cert Std
Pd Std +5%
Pd Std -5%
g/t Pd
1.70
1.65
1.60
1.55
1.50
1.45
1.40
LA001600
LA001601
LA001602
LA001603
LA001604
LA001605
LA001606
LA001607
LA001785
LA001786
LA001788
LA001789
LA001878
LA001869
LA001870
LA001871
LA001880
LA001881
LA001883
LA001884
LA001885
LA001886
LA002044
LA002045
SGS Lab Batch Lot Numbers



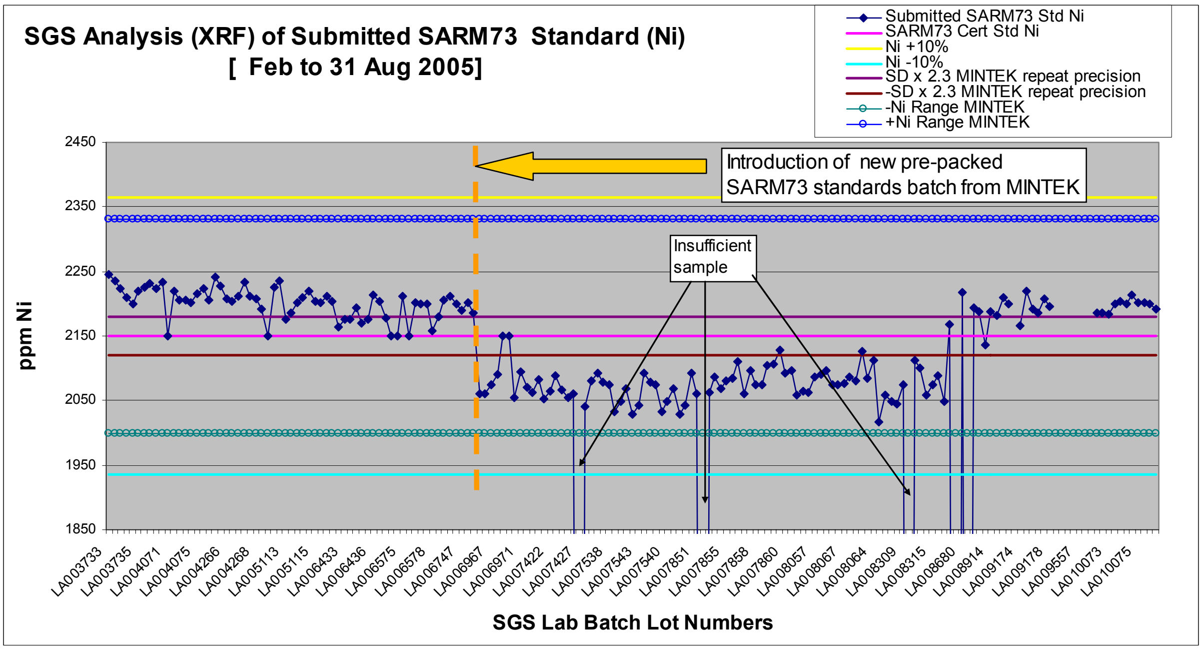
SGS Analysis (fire/AA) of Submitted SARM73 Standard (Pd)
[Jan to 31 August 2005]
Submitted SARM73 Std Pd
SARM73 Cert Std Pd
Pd Std +5%
Pd Std -5%
SD x 2.3 MINTEK repeat precision
-SD x 2.3 MINTEK repeat precision
g/t Pd
SGS Lab Batch Lot Numbers

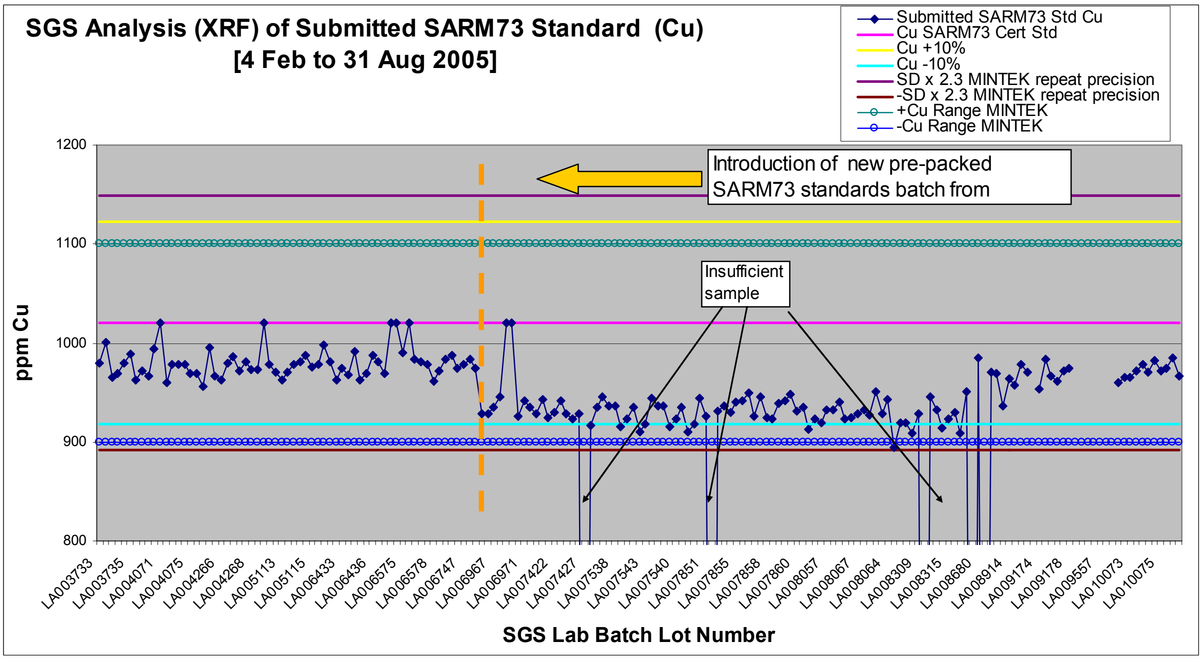


Analysis (fire/AA) of SARM73 Standard Submitted Au
[March to Dec 2004]
Submitted SARM73 Std Au
SARM73 Cert Std Au
Au Std +10%
Au Std -10%
SD x 2.3 MINTEK repeat precision
-SD x 2.3 MINTEK repeat precision
g/t Au
SGS Lab Batch Lot Numbers



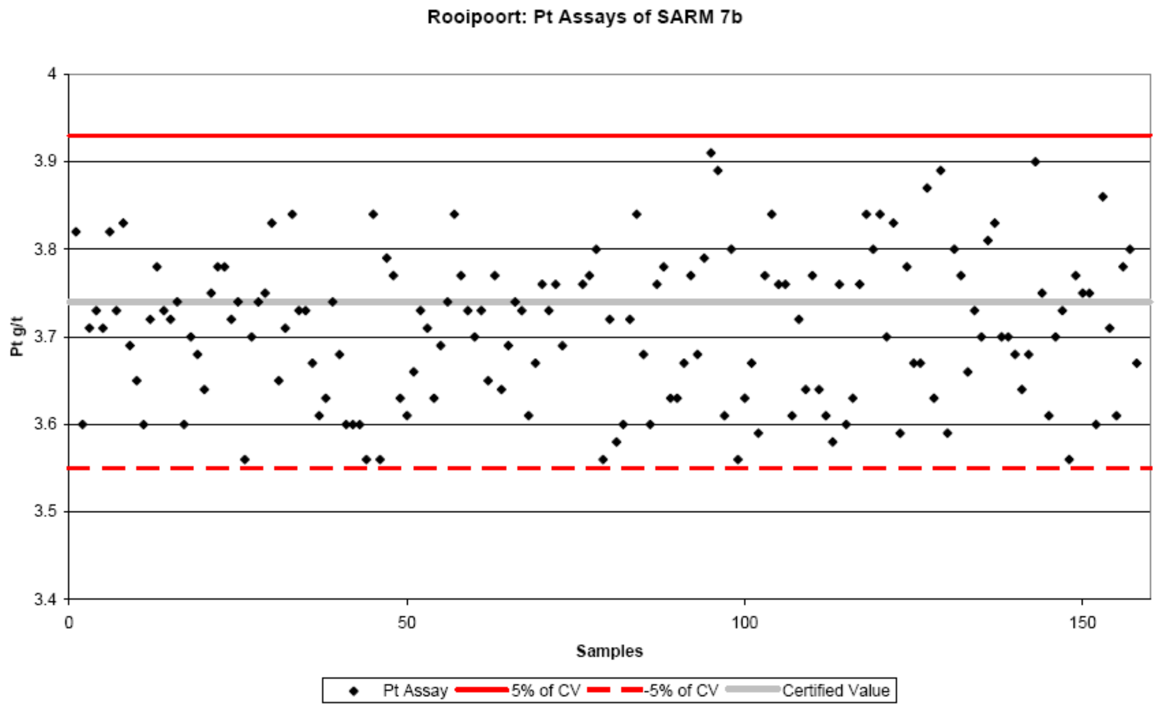
SGS Analysis (fire/AA) of Submitted SARM73 Standard (Au)
[Jan to 31 August 2005]
Submitted SARM73 Std Au
SARM73 Cert Std Au
Au Std+10%
Au Std -10%
SD x 2.3 MINTEK repeat precision
-SD x 2.3 MINTEK repeat precision
g/t Au
SGS Lab Batch Lot Numbers

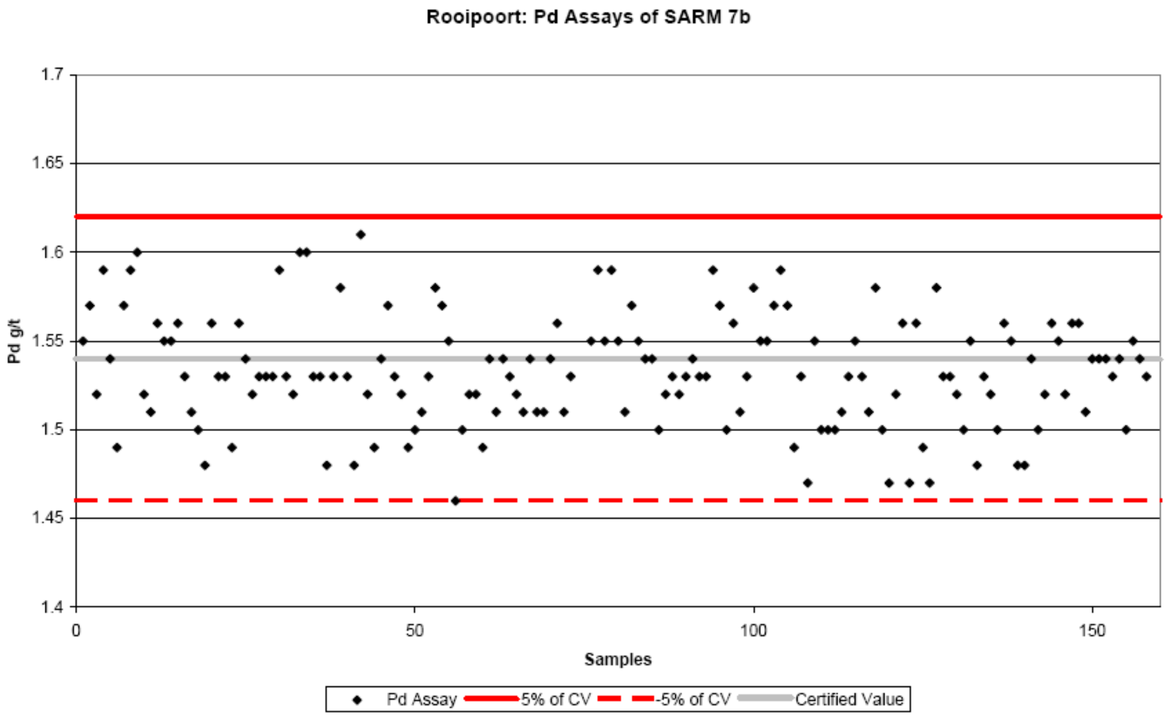

SGS Analysis (XRF) of Submitted SARM73 Standard (Ni)
[Feb to 31 Aug 2005]
Submitted SARM73 Std Ni
SARM73 Cert Std Ni
Ni +10%
Ni -10%
SD x 2.3 MINTEK repeat precision
-SD x 2.3 MINTEK repeat precision
-Ni Range MINTEK
+Ni Range MINTEK
Introduction of new pre-packed
SARM73 standards batch from MINTEK
Insufficient
sample
ppm Ni
2450
2350
2250
2150
2050
1950
1850
SGS Lab Batch Lot Numbers

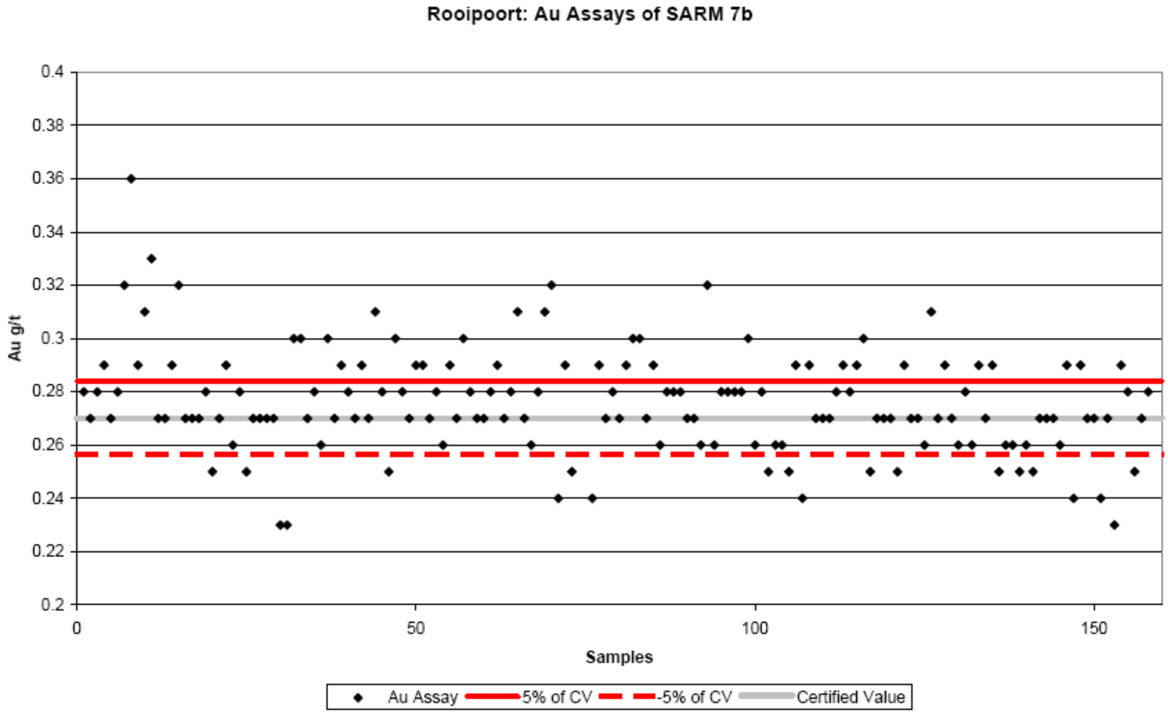

SGS Analysis (XRF) of Submitted SARM73 Standard (Cu)
[4 Feb to 31 Aug 2005]
Submitted SARM73 Std Cu
Cu SARM73 Cert Std
Cu +10%
Cu -10%
SD x 2.3 MINTEK repeat precision
-SD x 2.3 MINTEK repeat precision
+Cu Range MINTEK
-Cu Range MINTEK
Introduction of new pre-packed
SARM73 standards batch from
Insufficient
sample
ppm Cu
1200
1100
1000
900
800
SGS Lab Batch Lot Number

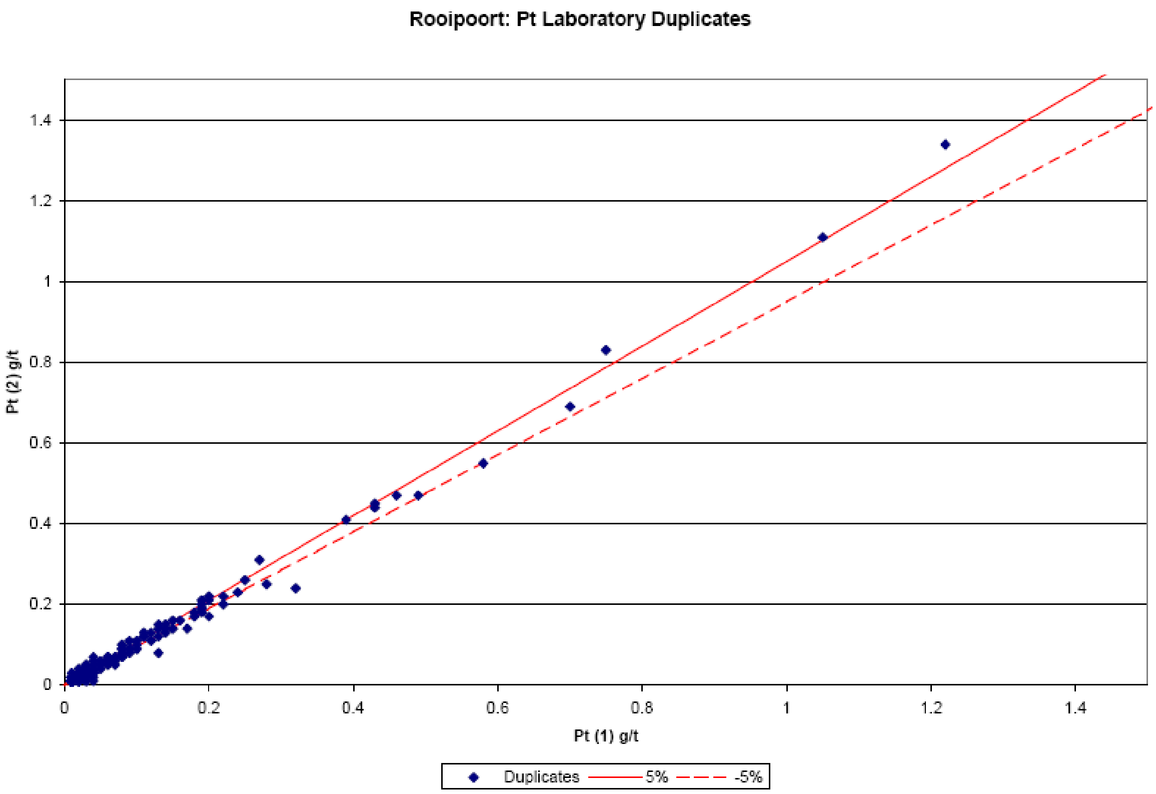
Appendix 4

QA/QC for SARM7B

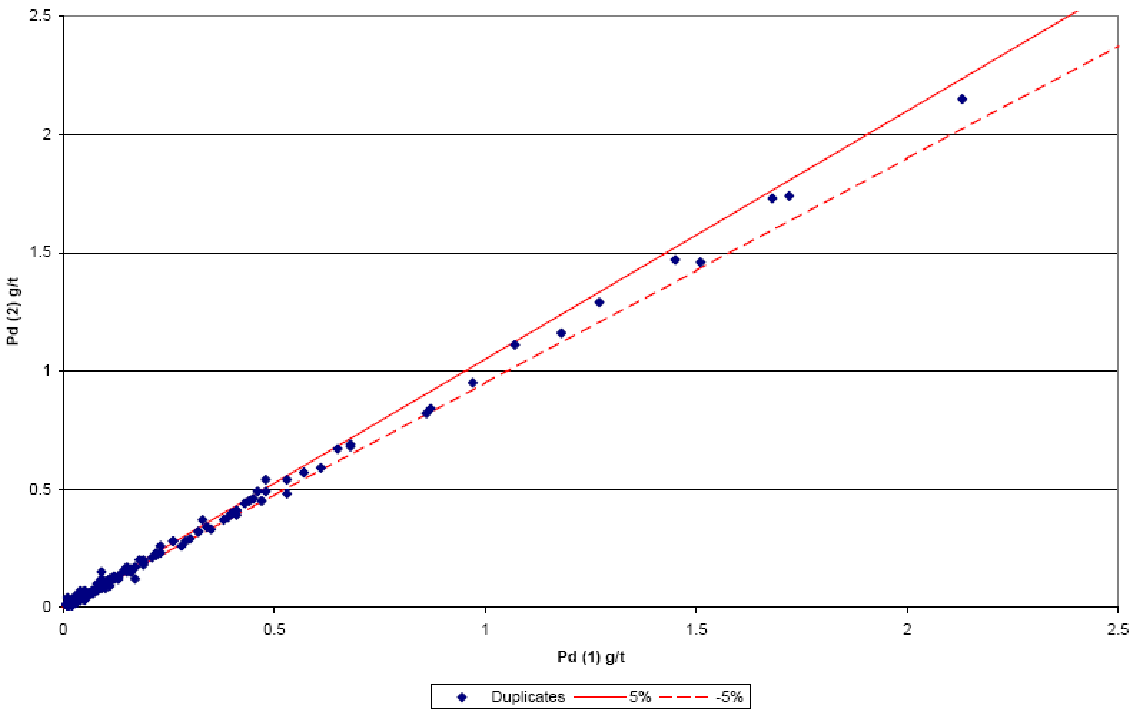

Rooipoort: Pt Assays of SARM 7b
Pt g/t
4
3.9
3.8
3.7
3.6
3.5
3.4
0
50
100
150
Samples
Pt Assay
5% of CV
-5% of CV
Certified Value


Rooipoort: Pd Assays of SARM 7b
Pd g/t
1.7
1.65
1.6
1.55
1.5
1.45
1.4
0
50
100
150
Samples
Pd Assay
5% of CV
-5% of CV
Certified Value

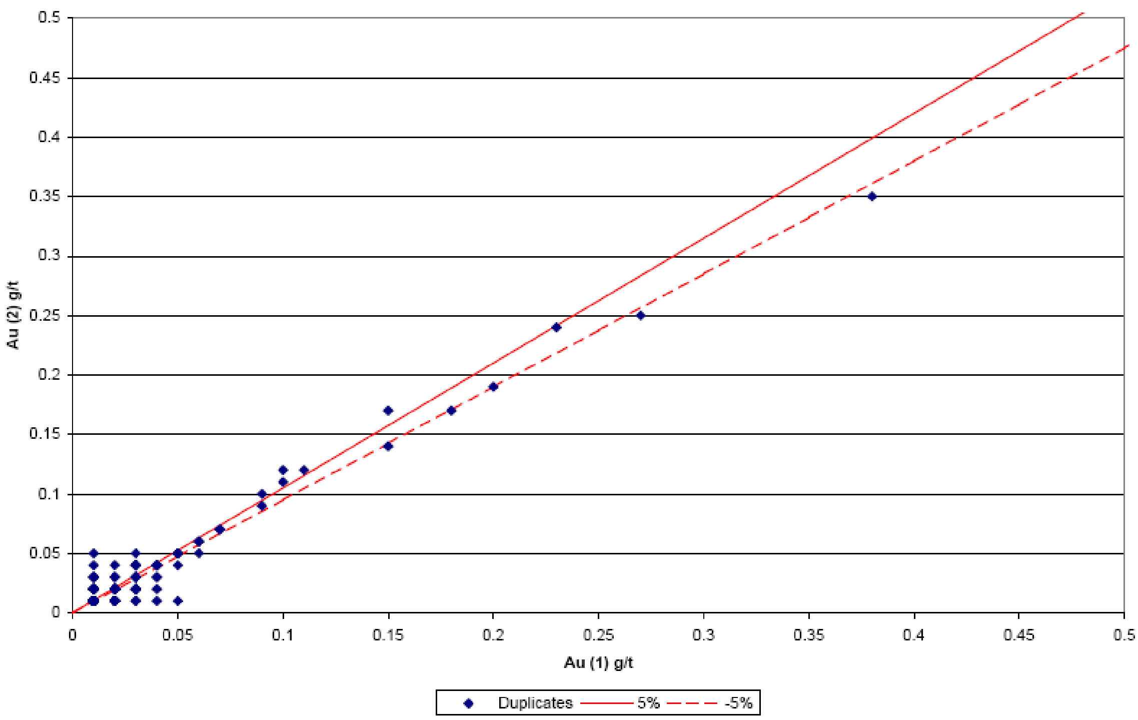

Rooipoort: Au Assays of SARM 7b
0.4
0.38
0.36
0.34
0.32
0.3
0.28
0.26
0.24
0.22
0.2
Au g/t
0
50
100
150
Samples
Au Assay
5% of CV
-5% of CV
Certified Value

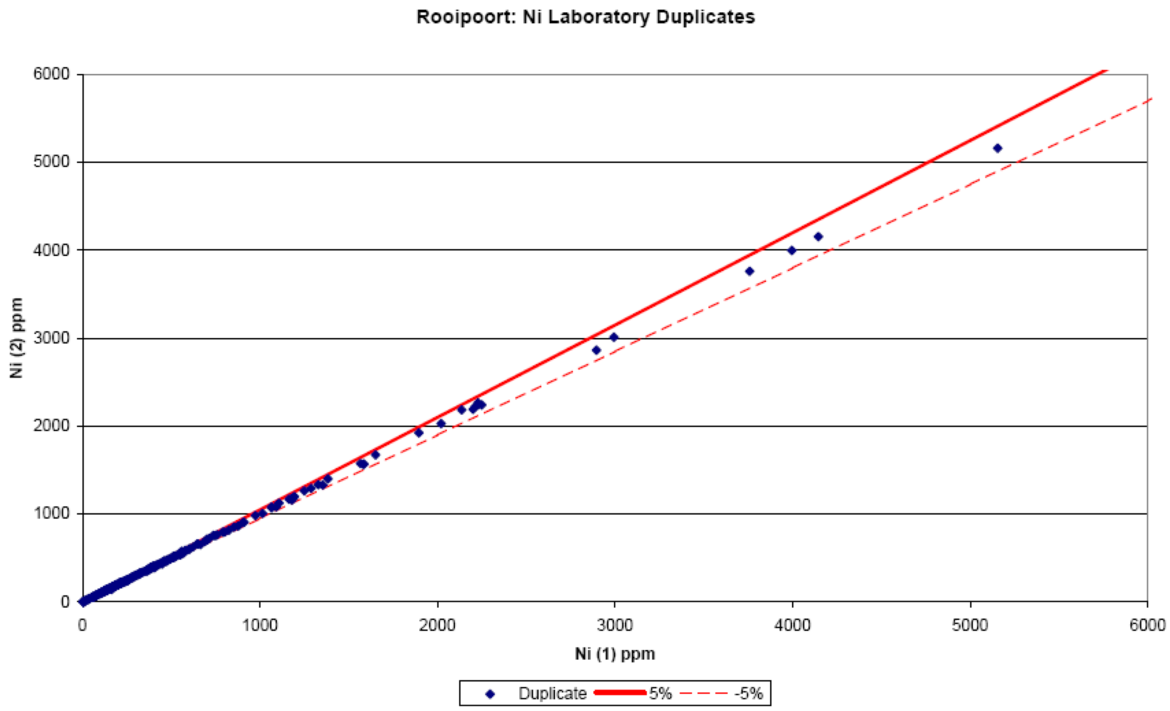

Rooipoort: Pt Laboratory Duplicates
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Pt (2) g/t
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Pt (1) g/t
Duplicates
5%
-5%

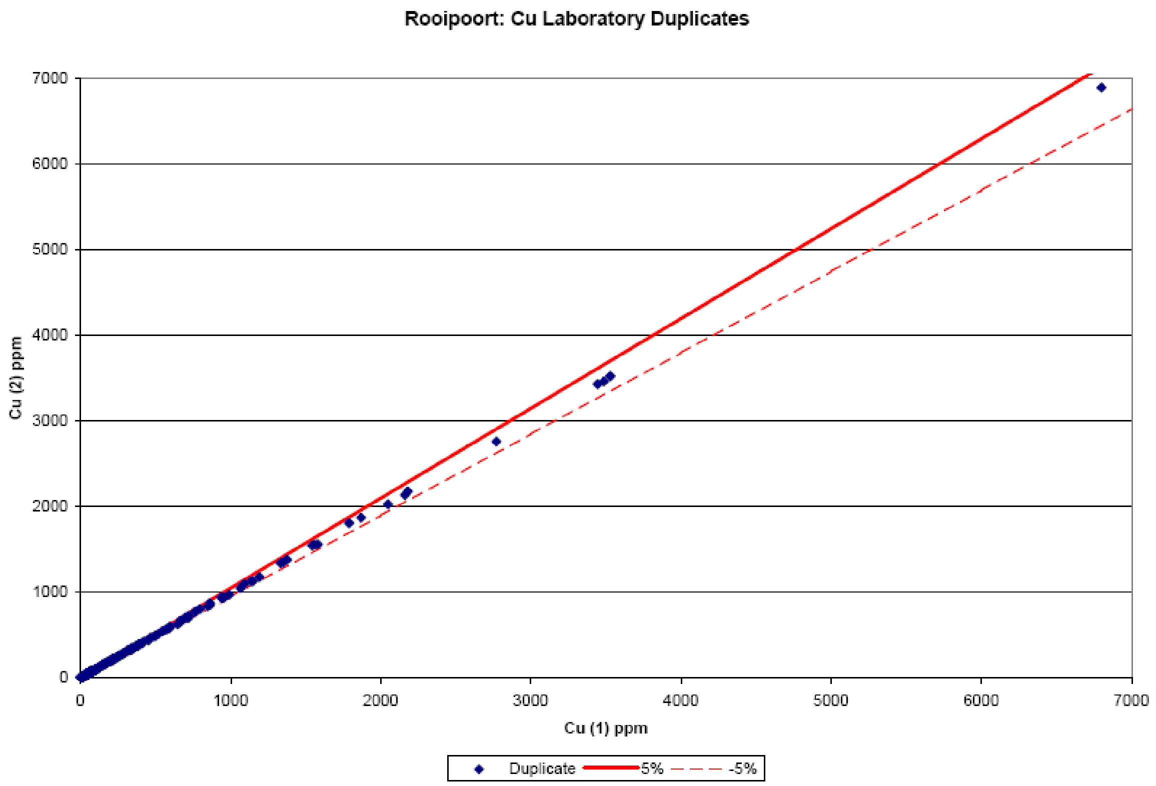
Rooipoort: Pd Laboratory Duplicates



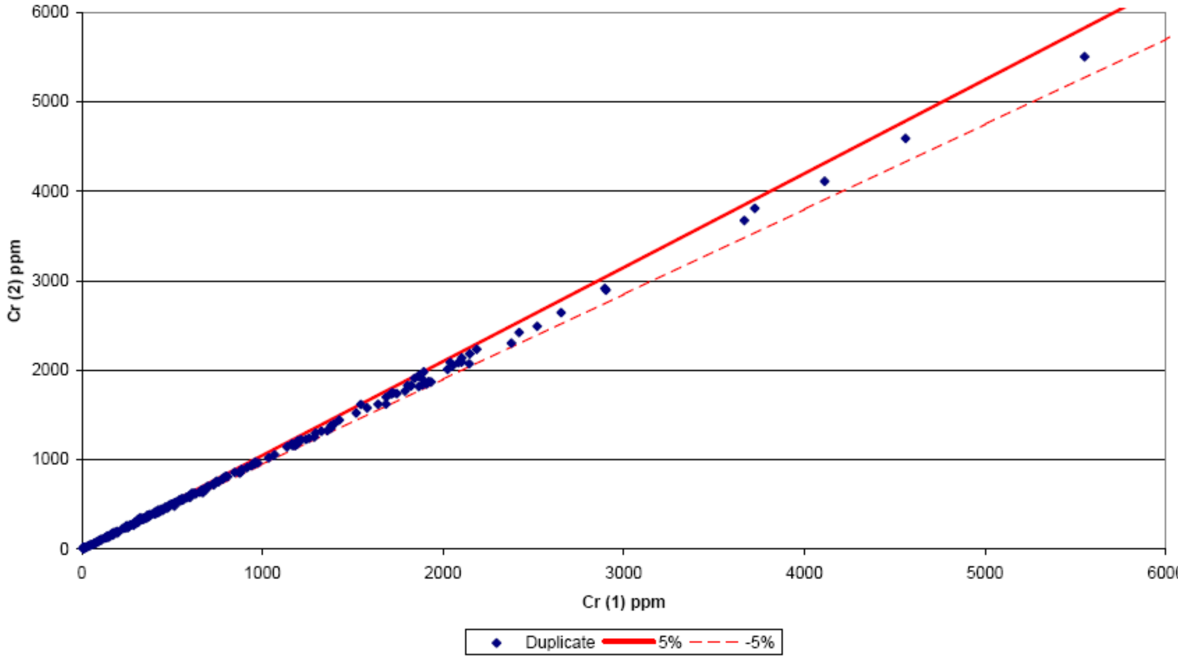
Rooipoort: Au Laboratory Duplicates



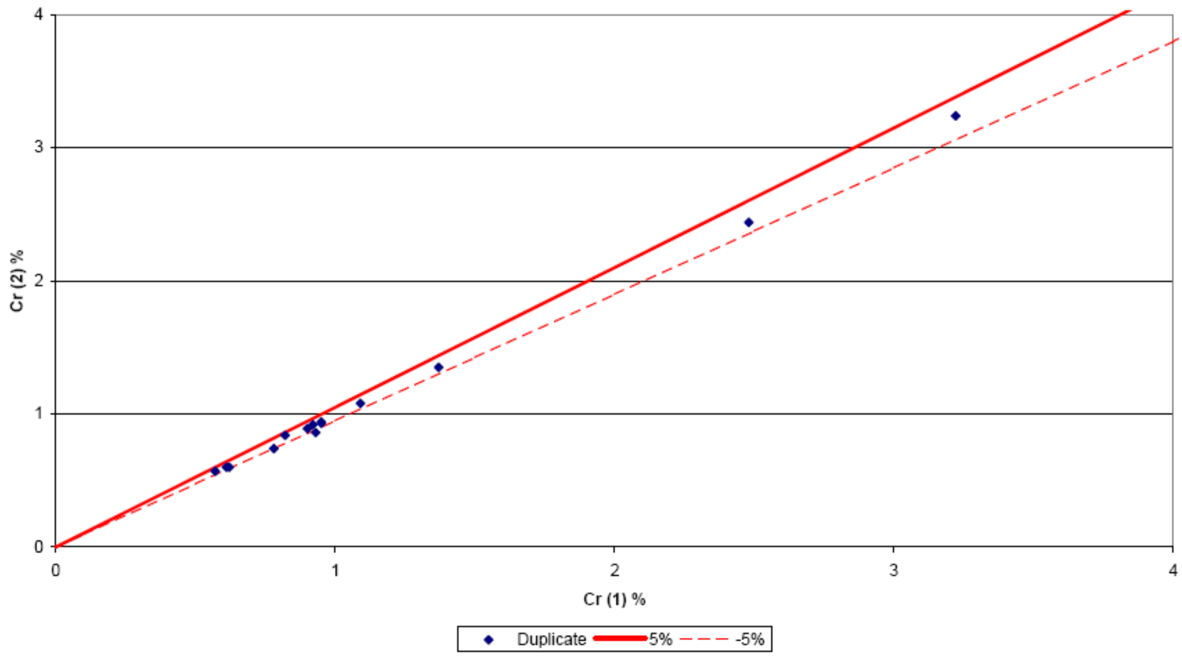

Rooipoort: Ni Laboratory Duplicates
6000
5000
4000
3000
2000
1000
0
Ni (2) ppm
0
1000
2000
3000
4000
5000
6000
Ni (1) ppm
Duplicate
5%
-5%

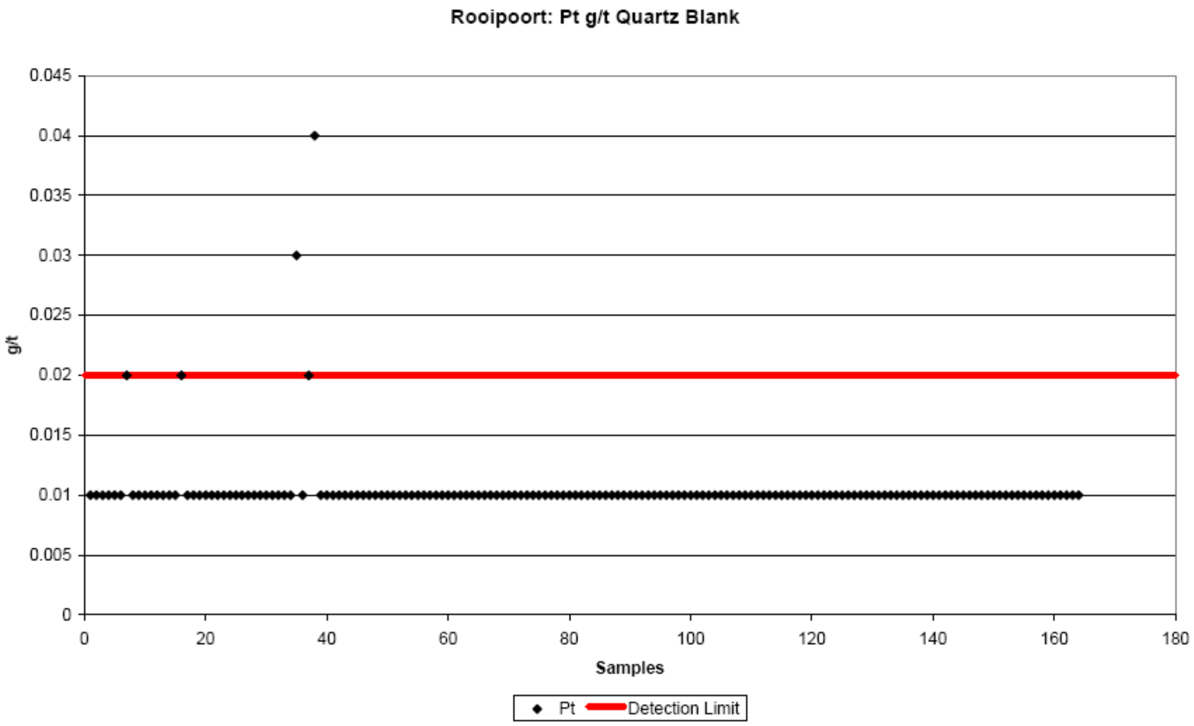

Rooipoort: Cu Laboratory Duplicates
7000
6000
5000
4000
3000
2000
1000
0
Cu (2) ppm
0
1000
2000
3000
4000
5000
6000
7000
Cu (1) ppm
Duplicate
5%
-5%

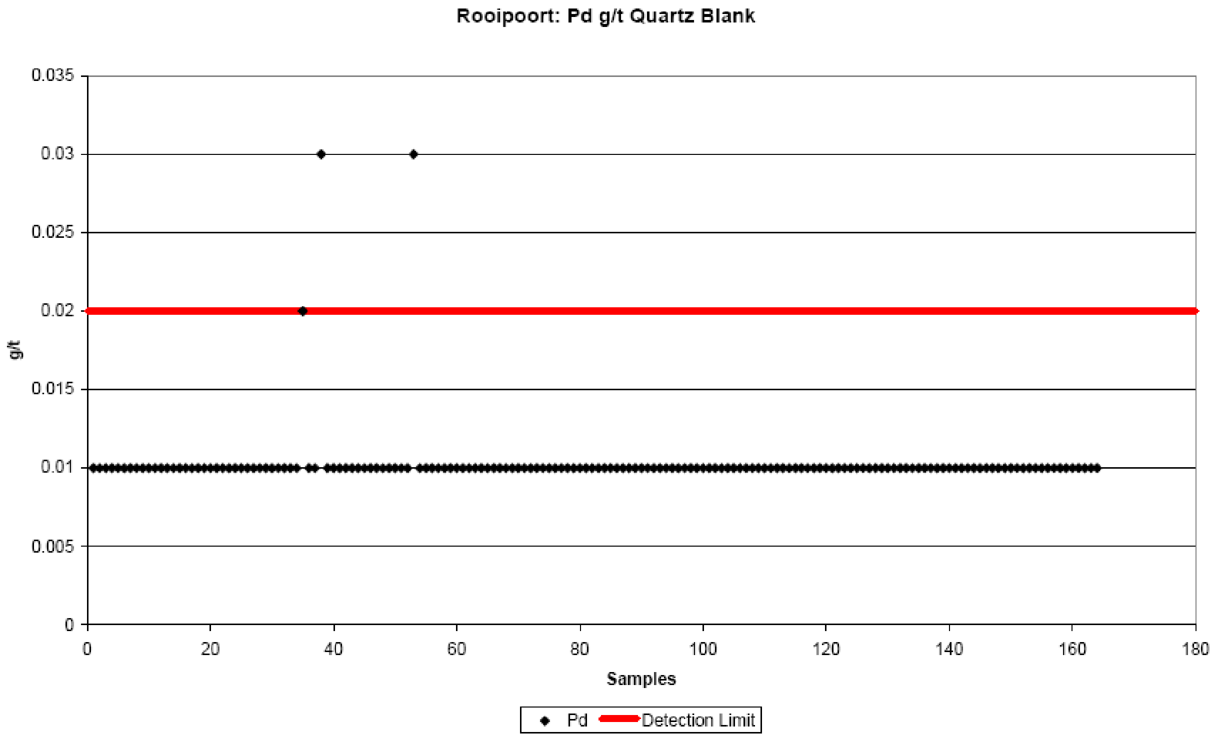
Rooipoort: Cr Laboratory Duplicates



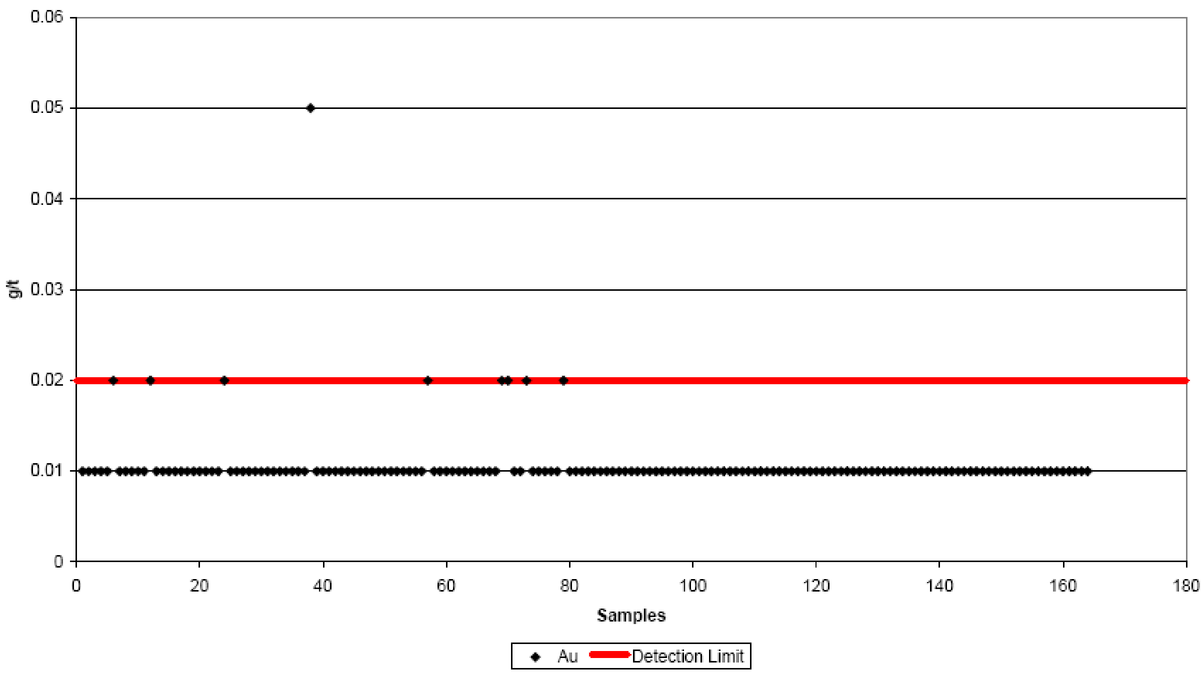
Rooipoort: Cr Laboratory Duplicates



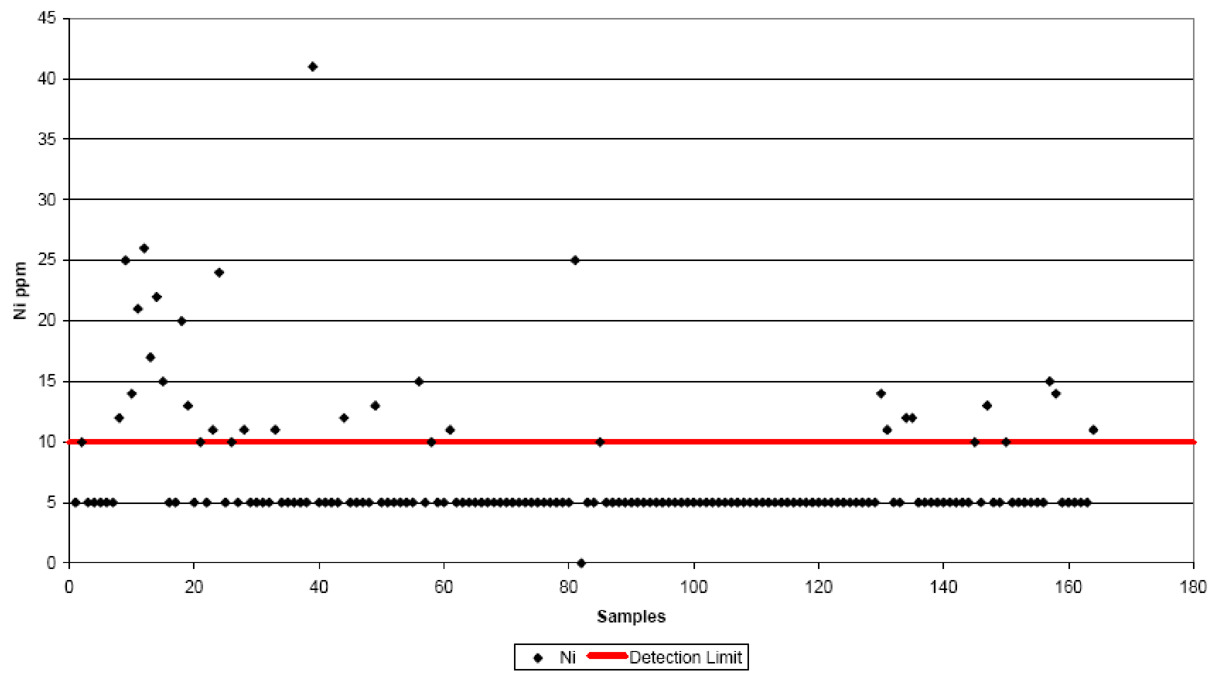

Rooipoort: Pt g/t Quartz Blank
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
g/t
0
20
40
60
80
100
120
140
160
180
Samples
Pt
Detection Limit


Rooipoort: Pd g/t Quartz Blank
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
g/t
0
20
40
60
80
100
120
140
160
180
Samples
Pd
Detection Limit

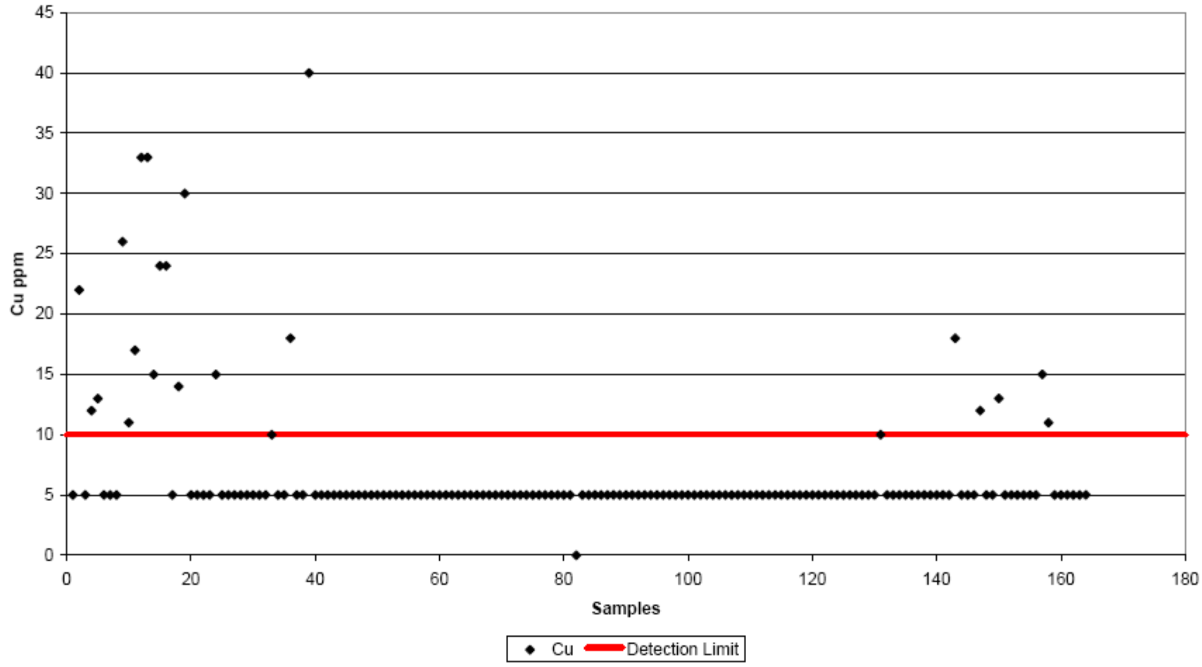
Rooipoort: Au g/t Quartz Blank



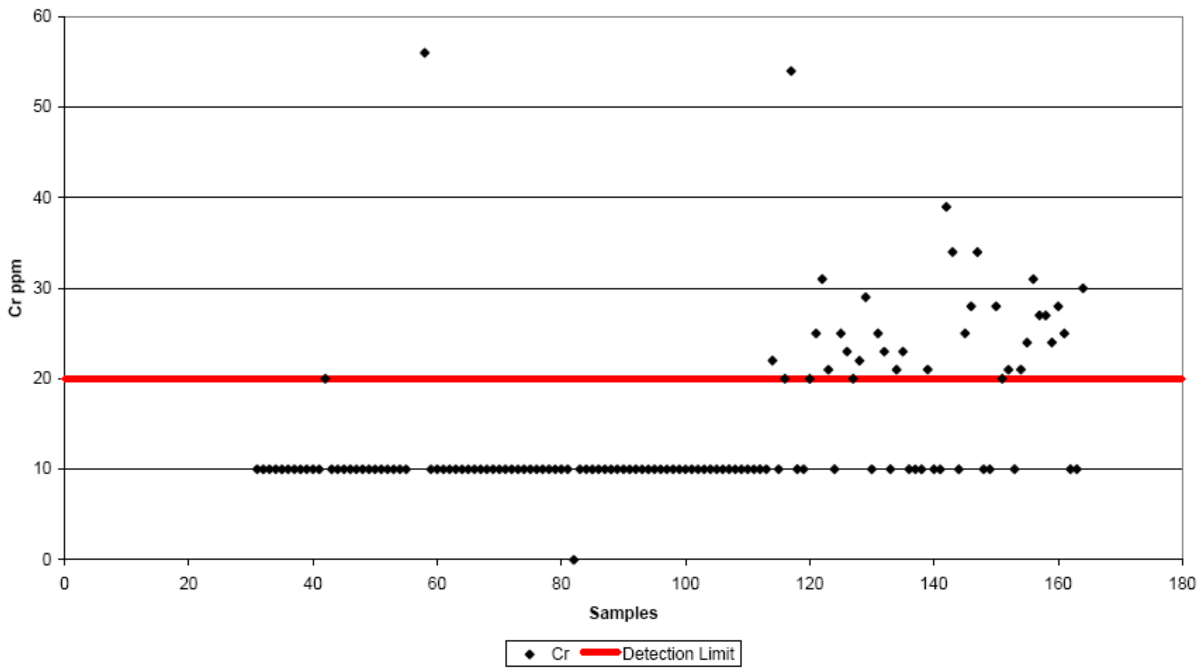
Rooipoort: Ni ppm Quartz Blank



Rooipoort: Cu ppm Quartz Blank



Rooipoort: Cr ppm Quartz Blank



Appendix 5

Author’s Certificates and CV’s

RSG Global Pty. Ltd.

Certificate of Qualified Person

As an author of the report entitled "Qualified Persons Report, Rooipoort PGE" dated December 2005 on the Rooipoort property of Caledonia Mining Corporation (the "Study"), I hereby state:-

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

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

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

4. I have practiced my profession continuously since 1988.

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

6. I have personally visited the Rooipoort Property. I have performed consulting services during and reviewed files and data supplied by Caledonia Mining Corporation between September 2005 and December 2005.

7. I have overseen the preparation the Study and take responsibility for its final form.

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

9. I am independent of Caledonia Mining Corporation pursuant to section 1.5 of the Instrument.

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

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

Dated at Perth, Western Australia, on December 15, 2005

J Verbeek

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

SUMMARY CV – Julian Verbeek

Qualifications	Bachelor of Science(Honours), Geology, University of Natal (1986) Diploma Datametrics, Computer Science, University of South Africa (2000) PhD. Geology, University of Natal (1991) Member, Australasian Institute of Mining and Metallurgy	
Experience	16 years industry and consulting experience in mining geology and grade control, resource evaluation, geostatistics, due diligence, geological modelling, feasibility studies and project management. Has worked on a wide range of commodities (Au, Cu, NiS, Pb, Zn, Cr, diamonds, mineral sands, multi-element) for projects in Africa, Australasian, the Americas. Experienced in a wide range of estimation techniques such as ordinary kriging, indicator kriging, conditional simulation and uniform conditioning. Advanced software skills include Datamine, GSLIB and Isatis.	
Employment Summary	Nov 2004 - Present	RSG Global Pty Ltd Principal Consultant - Resources
	Jul 2003 - Oct 2004	AngloGold Evaluations Manager, Measuring Exploration Success
	May 2002 - Jun 2003	AngloGold Mineral Resources Manager, Morila SA – Mali
	Mar 2001 - Apr 2002	Konkola Copper Mines, Chingola, Zambia Mineral Resources Manager
	Oct 2000 - Feb 2001	Anglo American Corporation Exploration Manager - Zimbabwe
	July 1997 - Oct 2000	Anglo American Corporation Resource Analyst, Exploration and Acquisitions Division, Mineral Resources Evaluation
	July 1995 - 1997	Anglovaal Limited Section Geologist, Sheba Gold mine (July 1995-May1996) Senior Geologist, New Consort Gold Mine (May 1996 -June 1997)
	Dec 1993 - July 1995	Moore Spence Jones and Partners Consulting Geologist
	Oct 1991 - Nov 1993	Geological Survey of South Africa
	Nov 1989 - Feb 1990	South African Antarctic Expedition (Earth Sciences).
	1985 - 1991	University of Natal Graduate Assistant
	Dec 1984 - Jan 1987	De Beers Consolidated Diamond Mines De Beers Transvaal Diamond Exploration
Areas of Expertise	Geological modelling, geostatistical resource estimation, resource classification, project management, feasibility studies, technical evaluation, auditing and due diligence, resource to grade control reconciliation, multivariate analysis, conditional simulation	

SUMMARY CV – Ken Lomberg

Qualifications	BSc (Geology and Geochemistry), University of Cape Town, South Africa Bachelor of Science (Honours) Geology, University of Cape Town, South Africa Bachelor of Commerce (Economics and Statistics), University of South Africa Member Geological Society of South Africa	
Experience	Ken has some 18 years experience in the minerals industry (especially platinum and gold). He has been involved in exploration and mine geology and has had the privilege of assisting in bring a mine to full production. His expertise is especially in the project management, reserve and resource estimation.	
Employment Summary	2004 - Present	RSG Global, Johannesburg Senior Consultant – Resource Geology
	2000 to 2004	Anglo Platinum, Bafokeng Rasimone Platinum Mine Area Resource Manager (Technical Services Manager)
	1993 to 1999	JCI/Anglo Platinum, Rustenburg Platinum Mines Assistant Chief Geologist
	1990 to 1993	General Mining, South Africa and Brazil Exploration Geologist
	1985 - 1989	Gold Fields of South Africa, Far West Wits and Welkom goldfields Geologist
Areas of Expertise	Mine and Exploration geology, Reserve and Resource estimation, Project management, Platinum/Bushveld Geology	