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TECHNICAL REPORT ON THE MINERAL RESOURCE UPDATE FOR THE WATERBERG PROJECT LOCATED IN THE BUSHVELD IGNEOUS COMPLEX, SOUTH AFRICA

For

WATERBERG JV RESOURCES (PTY) LTD

REPUBLIC OF SOUTH AFRICA REGISTERED
COMPANY REGISTRATION NUMBER: 2014/033764/07

A SUBSIDIARY OF

PLATINUM GROUP METALS LTD.
TSX – PTM;
NYSE AMERICAN – PLG

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Important Notice

This report includes results for Mineral Resources. The report communicates the updated Mineral Resource estimate for the Waterberg Project. The reader is warned that Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

This technical report contains forward-looking information within the meaning of Canadian securities laws and forward-looking statements within the meaning of U.S. securities laws ("forward-looking statements"). Forward-looking statements are typically identified by words such as: believe, expect, anticipate, intend, estimate, plans, postulate and similar expressions, or are those, which, by their nature, refer to future events. All statements that are not statements of historical fact are forward-looking statements. The Company cautions investors that any forward-looking statements by the Company are not guarantees of future results or performance, and that actual results may differ materially from those in forward looking statements as a result of various factors, including, but not limited to, variations in market conditions; the nature, quality and quantity of any mineral deposits that may be located; metal prices; other prices and costs; currency exchange rates; the Company's ability to obtain any necessary permits, consents or authorizations required for its activities; the Company's ability to access further funding and produce minerals from its properties successfully or profitably, to continue its projected growth, or to be fully able to implement its business strategies and other risk factors described in the Company's Form 20-F annual report, annual information form and other filings with the SEC and Canadian securities regulators, which may be viewed at www.sec.gov and www.sedar.com, respectively.

Cautionary Note to U.S. Investors

Estimates of mineralisation and other technical information included or referenced in this technical report were prepared in accordance with NI 43-101. The terms "Measured Mineral Resource", "Indicated Mineral Resource" and "Inferred Mineral Resource" are defined in and required to be disclosed by NI 43-101; however, these terms are not defined terms under SEC Industry Guide 7 and normally are not permitted to be used in reports and registration statements filed with the SEC. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Investors are cautioned not to assume that any part or all of the mineral deposits in these categories will ever be converted into Mineral Reserves. "Inferred Mineral Resources" have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an Inferred Mineral Resource will ever be upgraded to a higher category. Under Canadian securities laws, estimates of Inferred Mineral Resources may not form the basis of feasibility or pre-feasibility studies, except in rare cases. Additionally, disclosure of "contained ounces" in a Mineral Resource is permitted disclosure under Canadian securities laws; however, the SEC normally only permits issuers to report mineralisation that does not constitute "Mineral Reserves" by SEC standards as in place tonnage and grade without reference to unit measurements. Accordingly, information contained or referenced in this technical report containing descriptions of the Company's mineral deposits may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements of United States federal securities laws and the rules and regulations thereunder.

INFORMATION RISK

This Report was prepared by CJM Consulting (Pty) Ltd ("CJM"). In the preparation of the Report, CJM has utilised information relating to operational methods and expectations provided to them by various sources. Where possible, CJM has verified this information from independent sources after making relevant enquiry of all material issues that are required in accordance with the requirements of the NI 43-101 and SAMREC (2016) Reporting Codes.

OPERATIONAL RISKS

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

POLITICAL AND ECONOMIC RISK

Factors such as political and industrial disruption, currency fluctuation and interest rates could have an impact on future operations, and potential revenue streams can also be affected by these factors. Most of these factors are, and will be, beyond the control of any operating entity.

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

[SR 1.1 (I)] (Sections for SAMREC Report Comparison)

CJM Consulting (South Africa) Pty Limited (CJM) was requested by Waterberg JV Resources (Pty) Ltd (Waterberg JV Resources), on behalf of Platinum Group Metals Ltd (PTML), the issuer, to complete an Independent Technical Report on the update for the Mineral Resources Waterberg Project. The project covers a buried portion of the Northern Limb of the Bushveld Complex where a deposit containing Platinum Group Metals (PGMs), gold and base metals (Cu, Ni) was discovered through drilling. The objective of this report is to provide an update to the Mineral Resources on the Waterberg project, in accordance with disclosure and reporting requirements set forth in the Toronto Stock Exchange Manual, National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101), Companion Policy 43-101CP to NI 43-101, and Form 43-101F1 of NI 43-101 as well as the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (The SAMREC Code), 2016 edition.

1.2 PROJECT AREA AND LOCATION

[SR 1.2 (i)]

The Waterberg Project is located some 85 km north of the town of Mokopane (formerly Potgietersrus), within Limpopo Province, South Africa and covers an area along the strike length of the previously unknown northward extension of the Bushveld Complex. The Project can be accessed via dirt roads exiting off sealed highway N11.

1.3 WATERBERG PROJECT

[SR 1.5 (i)] [SR1.5 (ii)] [SR1.5 (iii)] [SR1.5 (v)]

The Waterberg Project (Waterberg JV Resources (Pty) Ltd) is comprised of several prospecting rights and a pending mining right application covering an area of 99,244.79 ha. The Project is owned by a consortium consisting of Platinum Group Metals Ltd., Mnombo Wethu Consultants (Pty) Ltd. ("Mnombo"), Japan Oil, Gas and Metals National Corporation ("JOGMEC") and Impala Platinum Holdings Ltd ("Implats"). The area of the prospecting rights extends some 39 km from north to south and 36 km from east to west. A Mining Right Application was filed over the mineral resource area and this application was accepted on September 14, 2017 for consideration by the Department of Mineral Resources. The process of consultation for the Mining Right and Environmental Assessment has commenced.

The Project Area is an extension of the trend at the northern tip of the Bushveld Complex and the discovery is the result of some detailed geophysical, geochemical and geological work that indicated potential for a package of Bushveld Complex rocks under the Waterberg Group sedimentary cover rocks.

1.4 GEOLOGICAL SETTING, DEPOSIT TYPE AND MINERALISATION

[SR 2.1 (i)]

The Bushveld and Molopo Complexes in the Kaapvaal Craton are two of the most well- known mafic/ultramafic layered intrusions in the world. The Bushveld Complex was intruded about 2,060 million years ago into rocks of the Transvaal Supergroup, largely along an unconformity between the Magaliesberg quartzite of the Pretoria Group and the overlying Rooiberg felsites. It is estimated to exceed 66,000 km^2 in extent, of which about 55% is covered by younger formations. The Bushveld Complex hosts several layers rich in Platinum Group Metals (PGM), chromium and vanadium, and constitutes the world's largest known Mineral Resources of these metals.

The Waterberg Project is situated off the northern end of the previously known Northern Limb of the Bushveld Complex, where the mafic rocks have a different sequence to those of the Eastern and Western Limbs of the Bushveld Complex.

PGM mineralisation within the Bushveld package underlying the Waterberg Project is hosted in two main layers: T Zone and F Zone.

The T Zone occurs within the Main Zone just beneath the contact of the overlaying Upper Zone. Although the T Zone consists of numerous mineralised layers, three potential economical layers were identified, TZ, T1 and T0 - Layers. They are composed mainly of anorthosite, pegmatoidal gabbros, pyroxenite, troctolite, harzburgite, gabbronorite and norite.

The F Zone is hosted in a cyclic unit of olivine rich lithologies towards the base of the Main Zone towards the bottom of the Bushveld Complex. This zone consists of alternating units of harzburgite, troctolite and pyroxenites. The F Zone was divided into the FH (harzburgite) and FP (pyroxenite) layers. The FH layer has significantly higher volumes of olivine in contrast with the lower lying FP layer, which is predominately pyroxenite.

1.5 PROJECT GEOLOGY

[SR 2.1 (ii)]

The Waterberg Project is located along the strike extension of the Northern Limb of the Bushveld Complex. The geology consists predominantly of the Bushveld Main Zone gabbros, gabbronorites, norites, pyroxenites and anorthositic rock types with more mafic rock material such as harzburgite and troctolites that partially grade into dunites towards the base of the package. In the southern part of the project area, Bushveld Upper Zone lithologies such as magnetite gabbros and gabbronorites do occur as intersected in drillhole WB001 and WB002. The Lower Magnetite Layer of the Upper Zone was intersected on the south of the project property (Disseldorp 369 LR) where drillhole WB001 was drilled and intersected a 2.5 m thick magnetite band.

On the property, the Bushveld package strikes south-west to north-east with a general dip of 34º - 38º towards the west is observed from drillhole core for the layered units intersected on Waterberg property within the Bushveld Package. However, some structural blocks may be tilted at different angles depending on structural and /or tectonic controls.

The Bushveld Upper Zone is overlain by a 120 m to 760 m thick Waterberg Group which is a sedimentary package predominantly made up of sandstones, and within the project area the two sedimentary formations known as the Setlaole and Makgabeng Formations constitute the Waterberg Group. The Waterberg package is flat lying with dip angles ranging from to 2º to 5º.

1.6 EXPLORATION STATUS

The Waterberg Project is at an advanced project that has undergone preliminary economic evaluations, and a Pre-Feasibility Study, which have warranted further work. Drilling to date has given the confidence to classify Mineral Resources as Inferred, Indicated and Measured. A Definitive Feasibility Study is in progress at the time of this report.

1.7 SAMPLE PREPARATION

The sampling methodology concurs with Waterberg JV Resources' protocol based on industry best practice. The quality of the sampling is monitored and supervised by a qualified geologist. The sampling is done in a manner that includes the entire potentially economic unit, with enough shoulder sampling to ensure the entire economic zones are assayed.

1.8 ANALYSIS

[SR 3.4 (i)] [SR 3.4 (ii)] [SR 3.4 (iii)]

For the present database, field samples were analysed by two different laboratories: the primary laboratory is currently Set Point laboratories (South Africa). Genalysis (Australia) is used for referee test work to confirm the accuracy of the primary laboratory.

Samples are received, sorted, verified and checked for moisture and dried if necessary. Each sample is weighed, and the results are recorded. Rocks, rock chips or lumps are crushed using a jaw crusher to less than 10 mm. The samples are then milled for 5 minutes to achieve a fineness of 90% less than 106 µm, which is the minimum requirement to ensure the best accuracy and precision during analysis.

Samples are analysed for Pt (ppm), Pd (ppm) Rh (ppm) and Au (ppm) by standard 25 g lead fire-assay using a silver collector. Rh (ppm) is assayed using the same method but with a palladium collector and only for selected samples. After pre-concentration by fire assay the resulting solutions are analysed using ICP-OES (Inductively Coupled Plasma–Optical Emission Spectrometry).

The base metals (copper, nickel, cobalt and chromium) are analysed using ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry) after a multi-acid digestion. This technique results in “almost” total digestion.

The drilling, sampling and analytical aspects of the project are considered to have been undertaken to industry standards. The data is considered to be reliable and suitable for Mineral Resource estimation.

1.9 DRILLING

The data from which the structure of the mineralised horizons was modelled, and grade values estimated were derived from a total of 359 932 meters of diamond drilling. This report updates the Mineral Resource estimate using this dataset. The drillhole dataset consists of 437 drillholes and 585 deflections, at the date of drill data cut-off (July 18, 2018).

The management of the drilling programmes, logging and sampling were undertaken from three facilities: one at the town of Marken in Limpopo Province, South Africa and the other on the farm Goedetrouw 366LR within the prospecting right area or at an exploration camp on the adjacent farm Harriet’s Wish.

Drilled core is cleaned, de-greased and packed into metal core boxes by the drilling company. The core is collected from the drilling site daily by Waterberg JV Resources personnel and transported to the coreyard. Before the core is taken off the drilling site, core recovery and the depths are checked. Core logging is done by hand on a pro-forma sheet by qualified geologists under supervision of the Project Geologist.

1.10 QUALITY CONTROL AND QUALITY ASSURANCE

Waterberg JV Resources have instituted a complete QA/QC programme including the insertion of blanks and certified reference materials as well as referee analyses. The programme is being followed and is to industry standard. The data is as a result, considered reliable in the opinion of the Qualified Person.

1.11 MINERAL RESOURCES

[SR 4.1 (i)] [SR 4.3 (i)] [SR 4.4 (i)]

This report documents the Mineral Resource estimate - Effective Date: September 27, 2018. Infill drilling over portions of the project area and new estimation methodology has made it possible to estimate a new Mineral Resource estimate and upgrade portions of the Mineral Resource to the Measured category. All the joint venture partners have been involved in the development of the latest

Mineral Resource model, appropriate cut-off grades, economic parameters and Mineral Resource model criteria. It has been determined in relation to basic working costs and in consideration of the overall resource envelope for the deposit, that at a 2.0 g/t cut-off grade the deposit has a reasonable prospect of economic extraction. The Mineral Resource Statement is summarised in Table 1. Notwithstanding the above, for purposes of the DFS, sensitivity analysis and comparison to the 2016 PFS, which utilized a 2.5 g/t 4E cut-off grade, a Mineral Resource estimate at a 2.5 g/t cut-off grade is the preferred scenario (Table 2).

Table 1: Summary of Mineral Resource effective 27 September 2018 on a 100% project basis at 2.0 g/t (4E) cut-off

T Zone at 2.0 g/t (4E) cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	2.0	3 440 855	1.13	1.97	0.04	0.90	4.04	0.160	0.080	13 901	0.447
Indicated	2.0	22 997 505	1.22	2.06	0.03	0.79	4.10	0.186	0.090	94 290	3.031
M+I	**2.0**	**26 438 360**	**1.21**	**2.05**	**0.03**	**0.80**	**4.09**	**0.183**	**0.089**	**108 191**	**3.478**
Inferred	2.0	25 029 695	1.17	1.84	0.03	0.60	3.64	0.137	0.069	91108	2.929

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	28.0	48.8	1.0	22.2
Indicated	29.8	50.2	0.7	19.3
M+I	29.6	50.0	0.7	19.7
Inferred	32.1	50.5	0.8	16.6

F Zone 2.0 g/t (4E) cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	2.0	75 332 513	0.82	2.00	0.05	0.14	3.01	0.079	0.191	226 833	7.293
Indicated	2.0	273 272 480	0.80	1.85	0.04	0.14	2.83	0.073	0.181	772 103	24.824
M+I	**2.0**	**348 604 993**	**0.83**	**1.86**	**0.04**	**0.14**	**2.87**	**0.075**	**0.183**	**998 936**	**32.117**
Inferred	2.0	121 535 227	0.70	1.62	0.04	0.13	2.50	0.067	0.162	303 722	9.765

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	27.2	66.4	1.7	4.7
Indicated	28.3	65.4	1.4	4.9
M+I	28.9	64.8	1.4	4.9
Inferred	28.4	64.8	1.6	5.2

Waterberg Aggregate Total 2.0 g/t Cut-off September 2018 100% Project Basis

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	2.0	78 773 368	0.83	2.00	0.05	0.18	3.06	0.083	0.186	240 734	7.740
Indicated	2.0	296 269 985	0.83	1.86	0.04	0.19	2.92	0.082	0.174	866 393	27.855
M+I	**2.0**	**375 043 353**	**0.86**	**1.87**	**0.04**	**0.18**	**2.95**	**0.083**	**0.176**	**1 107 127**	**35.595**
Inferred	2.0	146 564 922	0.78	1.66	0.04	0.21	2.69	0.079	0.146	394 830	12.694

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	27.1	65.4	1.6	5.9
Indicated	28.4	63.7	1.4	6.5
M+I	29.1	63.4	1.4	6.1
Inferred	29.0	61.7	1.5	7.8

4E = Platinum Group Elements (Pd+Pt+Rh) and Au. The cut-offs for Mineral Resources were established by a qualified person after a review of potential operating costs and other factors. The Mineral Resources stated above are shown on a 100% basis, that is, for the Waterberg Project entity. Conversion Factor used – kg to oz = 32.15076. Numbers may not add due to rounding. A 5% and 7% geological loss were applied to the Measured/Indicated and Inferred Mineral Resource categories respectively.

Table 2: Summary of Mineral Resource effective 27 September 2018 on a 100% project basis at 2.5 g/t (4E) cut-off

T Zone at 2.5 g/t (4E) cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	**2.5**	3 098 074	1.19	2.09	0.05	0.90	4.23	0.160	0.090	13 105	0.421
Indicated	**2.5**	18 419 181	1.34	2.31	0.03	0.87	4.55	0.197	0.095	83 807	2.694
M+I	**2.5**	**21 517 255**	**1.32**	**2.28**	**0.03**	**0.88**	**4.51**	**0.192**	**0.094**	**96 912**	**3.116**
Inferred	**2.5**	21 829 698	1.15	1.92	0.03	0.76	3.86	0.198	0.098	84 263	2.709

	Prill Split			
Resource Category	Pt	Pd	Rh	Au
	%	%	%	%
Measured	28.1	49.4	1.2	21.3
Indicated	29.5	50.7	0.7	19.1
M+I	29.3	50.5	0.7	19.5
Inferred	29.8	49.7	0.8	19.7

F Zone at 2.5 g/t (4E) cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	**2.5**	54 072 600	0.95	2.20	0.05	0.16	3.36	0.087	0.202	181 704	5.842
Indicated	**2.5**	166 895 635	0.95	2.09	0.05	0.15	3.24	0.090	0.186	540 691	17.384
M+I	**2.5**	**220 968 235**	**0.95**	**2.12**	**0.05**	**0.15**	**3.27**	**0.089**	**0.190**	**722 395**	**23.226**
Inferred	**2.5**	44 836 851	0.87	1.92	0.05	0.14	2.98	0.064	0.169	133 705	4.299

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	28.3	65.4	1.5	4.8
Indicated	29.3	64.4	1.6	4.7
M+I	29.1	64.8	1.5	4.6
Inferred	29.2	64.4	1.7	4.7

Waterberg Aggregate Total 2.5 g/t Cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	**2.5**	57 170 674	0.96	2.19	0.05	0.20	3.40	0.091	0.196	194 809	6.263
Indicated	**2.5**	185 314 816	0.99	2.11	0.05	0.22	3.37	0.100	0.177	624 498	20.078
M+I	**2.5**	**242 485 490**	**0.98**	**2.13**	**0.05**	**0.22**	**3.38**	**0.098**	**0.181**	**819 307**	**26.342**
Inferred	**2.5**	66 666 549	0.96	1.92	0.04	0.34	3.26	0.108	0.146	217 968	7.008

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	28.2	64.4	1.5	5.9
Indicated	29.4	62.6	1.5	6.5
M+I	29.2	63.0	1.4	6.4
Inferred	29.5	58.9	1.2	10.4

4E = Platinum Group Elements (Pd+Pt+Rh) and Au. The cut-offs for Mineral Resources were established by a qualified person after a review of potential operating costs and other factors. The Mineral Resources stated above are shown on a 100% basis, that is, for the Waterberg Project entity. Conversion Factor used – kg to oz = 32.15076. Numbers may not add due to rounding. A 5% and 7% geological loss were applied to the Measured/Indicated and Inferred Mineral Resource categories respectively.

1. Mineral Resources are classified in accordance with the SAMREC (2016) standards. There are certain differences with the "CIM Standards on Mineral Resources and Mineral Reserves"; however, in this case the Company and the QP believe the differences are not material and the standards may be considered the same. Inferred Mineral Resources have a high degree of uncertainty. Mineral Resources might never be upgraded or converted to Mineral Reserves.
2. Mineral Resources are provided on a 100% project basis. Inferred and Indicated categories are separate. The estimates have an effective date of September 27, 2018. Tables may not add perfectly due to rounding.
3. A cut-off grade of 2.0 g/t and 2.5 g/t 4E (platinum, palladium, rhodium and gold) is applied to the selected base case Mineral Resources.
4. Cut-off grade for the T Zone and the F Zone considered costs, smelter discounts, concentrator recoveries from the previous and ongoing engineering work completed on the property by the Company and its independent engineers. Spot and three year trailing average prices and exchange rates are considered for the cut-off considerations. The upper and lower bound metal prices used in the determination of cut-off grade for resources estimated are as follows: US$983/oz-US$953/oz Pt, US$993/oz-US$750/oz Pd, US$1 325/oz-US$1 231/oz Au, US$1 923US/oz-US$972/oz Rh, US$6.08/lb-US$4.77/lb Ni, US$3.08/lb-US$2.54/lb Cu, US$/ZAR15-US$/ZAR12. These metal prices are based on the estimated 3 year trailing average prices and the spot prices at the time of commencement of the Mineral Resource estimate modelling. The lower cut-off was tested against the higher metal price in the range and the higher cut-off was tested against the lower price in the range.

   The objective of the cut-off grade estimation was to establish a minimum grade for working break even. From the PFS the following factors were used for the calculation of Cut-off at 2.0 g/t (4E) at higher potential prices and 2.5 g/t 4E at more conservative lower prices listed above.

   - Working Cost Mining of US$ 25.00, 379 Rand per Tonne, LOM Avg. Total Opex US$ 38, 574 Rand Avg. LOM
   - 80 g/t Concentrate 82% recoveries of the PGMs, 88% of the Copper and 49% of the Nickel
   - 85% Pay ability of the PGMs from a third-party smelter, 73% for Copper and 68% for Nickel

   These costs recoveries and pay abilities are all to be updated in the DFS for the consideration of reserves and there can be no assurance that any of the Mineral Resources will be converted to Mineral Reserves.

   Metallurgical work indicates that an economically attractive concentrate can be produced from standard flotation methods.
5. Charles Muller of CJM Consulting completed the Mineral Resource Estimate and a NI 43-101 technical report for the Mineral Resources reported herein, effective September 27, 2018.
6. Mineral Resources were estimated using Ordinary and Simple Kriging methods in Datamine Studio3 from 437 mother holes and 585 deflections in mineralisation. A process of geological modelling and creation of grade shells using Indicating Kriging (IK) was completed in the estimation process.
7. The estimation of Mineral Resources has considered environmental, permitting, legal, title, taxation, socio-economic, marketing and political factors. The Mineral Resources may be

materially affected by metals prices, exchange rates, labour costs, electricity supply issues or many other factors detailed in the Company's Annual Information Form.

8. Estimated grades and quantities for by-products will be included in recoverable metals and estimates in the on-going Definitive Feasibility work. Copper and Nickel are the main value by-products recoverable by flotation and for Measured and Indicated Mineral Resources are estimated at 0.18% copper and 0.09% nickel in the T Zone and 0.08% copper and 0.18% nickel in the F Zone.

The data that formed the basis of the estimate are the drillholes drilled by Waterberg JV Resources which consist of geological logs, the drillhole collars, the downhole surveys and the assay data, all of which were validated by the QP. The area where each layer was present was delineated after examination of the intersections in the various drillholes.

There is no guarantee that all or any part of the Mineral Resource will be converted to a Mineral Reserve. The Prefeasibility study indicated a conversion rate of less than 50%.

1.12 INTERPRETATION AND CONCLUSIONS

Exploration drilling by Waterberg JV Resources has intersected layered magmatic PGM mineralisation in what is interpreted to be the northern extension of the Northern Limb of the Bushveld Complex under the Waterberg Group rocks. This has confirmed the existence of mineralised zones with potentially economic concentrations of PGM's. Improved understanding of the geology allowed an improved Mineral Resource.

Additional infill drilling in the Indicated Mineral Resource category areas, resulted in portions of the Mineral Resources being upgraded to the Measured Mineral Resource category.

The Estimation was undertaken using best practices in terms of geostatistics.

The objectives in terms of adherence to the Scope of this Study were met in that an updated Mineral Resource model was produced. An objective of converting Indicated mineral resources from the previous estimates to the higher confidence of Measured was also completed. Cut-offs using previous estimates of costs and recoveries from the PFS were utilized for this resource estimate with updated price decks.

The delineation of the F Zone and T Zone units was advanced due to better understanding of the geology. The T Zone was divided into three distinct layers, TZ, T1 and T0.

The database used for this estimate consisted of 437 drillholes and 585 deflections. The mineralisation is considered open down-dip and along strike to the north.

The Waterberg Project represents one of the largest discoveries of PGE mineralisation in recent history. Metallurgical work completed to date at Mintek along with previously published Pre-Feasibility Study adds to the confidence in this discovery.

The Measured and Indicated Mineral Resources are at an appropriate level of confidence to be considered in the ongoing Definitive Feasibility Study for mine planning.

1.13 RECOMMENDATIONS

It is recommended that the Mineral Resources Reported be considered in the ongoing Definitive Feasibility Study, (“DFS”) for the Waterberg Project. The Indicated and Measured Mineral Resources are of a confidence interval appropriate for mine planning and consideration in the DFS. Further work drilling work could be capable of converting the Inferred Mineral Resources to a higher category but at this time it is likely that future drilling may be focused on other areas and items like geotechnical characteristics for mine planning or detailed metallurgical work. A budget for the DFS is in progress so no specific budget is recommended here. Based on the Mineral Resource estimate here it is recommended that the DFS and ongoing Mining Right Application work continue.

2. INTRODUCTION

2.1 ISSUER

This report was compiled for Waterberg JV Resources (Pty) Ltd (Waterberg JV Resources), a subsidiary of Platinum Group Metals Ltd. (PTML). Platinum Group Metals is listed on the Toronto Stock Exchange under the symbol “PTM” and on the NYSE American under the symbol “PLG”.

2.2 TERMS OF REFERENCE AND PURPOSE OF THE REPORT

[SR 1.1 (i)] [SR 4.5 (viii)] [SR 5.1 (i)]

CJM Consulting (South Africa) Pty Limited (CJM) was requested by Waterberg JV Resources, to complete an Independent Competent Persons Report updating the estimation of the Mineral Resources for the Waterberg Project after an infill drilling programme.

This report complies with disclosure and reporting requirements set forth in the National Instrument 43-101 Standards of Disclosure for Mineral Project (NI 43-101), Companion Policy 43-101CP to NI 43-101, and Form 43-101F1 of NI 43-101. The Mineral Resource estimate completed in this report was completed within the guidelines of the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC) updated in 2016.

This report reviews and updates the geology, the exploration activities and states the Mineral Resource estimation (Effective date: September 27, 2018) on the project areas based on documentation related to the project, and discussions with project management up to July 2018.

The intentions of the report are as follows:

- To inform investors and shareholders of the progress of the project; and
- To make public and detail the Mineral Resource estimation for the project.
- To provide a Mineral Resource estimate for mine planning purposes as part of the ongoing DFS

2.3 SOURCES OF INFORMATION

The independent author/Qualified Person (QP) of this report has used the data provided by the representative and internal experts of Waterberg JV Resources. This data was derived from historical records for the area as well as information currently compiled by the operating company, which is Waterberg JV Resources. The author has reviewed the available data and made site visits in 2015, 2016, 2017 and 2018 and made judgements about the general reliability of the underlying data. Where reliability was deemed inadequate or unreliable, the data was eliminated from use or procedures were modified to account for lack of confidence in that specific information.

The public domain sources and documents that were supplied by Waterberg JV Resources are listed in References.

2.4 INVOLVEMENT OF THE QUALIFIED PERSON: PERSONAL INSPECTION

[SR 1.1 (iii)] [SR 9.1 (ii)]

The listed independent QP has no financial or preferential relationships with Waterberg JV Resources. The QP has a purely business-related relationship with the operating company and provides technical and scientific assistance when required and requested by the company. The QP has other significant clients and has no financial interest in Waterberg JV Resources. The independent QP (Mr. CJ Muller) has visited the Waterberg Project property in 2015, 2016, 2017 and last January 2018 and has undertaken appropriate due diligence with respect to the Waterberg JV Resources data.

2.5 FREQUENTLY USED ACRONYMS, ABBREVIATIONS, DEFINITIONS AND UNITS OF MEASURE

Abbreviation	Definition
3D	Three Dimensional
4E	Platinum, palladium, rhodium and gold
AMSL	Above Mean Sea Level
Au	Gold
BEE	Black Economic Empowerment
BC	Bushveld Complex
CIM	Canadian Institute of Mining
CLO	Community Liaison Officer
cm	centimeter
CoV	Coefficient of Variation
DFS	Definitive Feasibility Study
DMR	Department of Mineral Resources
DTM	Digital Terrain Model
EMP	Environmental Management Program
g/t	grams per tonne
JOGMEC	Japanese Oil Gas and Metals National Corporation
LOM	Life of Mine
km	kilometer

Abbreviation	Definition
km2	Square kilometer
m	meter
Moz	million ounces
MPRDA	Mineral and Petroleum Resources Development Act, No. 28 of 2002
Mt	Million tonnes
NI 43-101	Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects
OK	Ordinary Kriging
Pd	Palladium
PFS	Pre-Feasibility Study
PGE	Platinum Group Element
ppb	parts per billion
PR	Prospecting Right
Pt	Platinum
PTM	Platinum Group Metals (RSA) (Pty) Ltd.
PTML	Platinum Group Metals Ltd.
QA/QC	Quality Assurance and Quality Control
QP	Qualified Person
Rh	Rhodium
SAMREC Code	South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (2016)
SD / SDV	Standard Deviation
SG	Specific Gravity
SK	Simple Kriging
USD	United States Dollar

2.6 SPECIFIC AREAS OF RESPONSIBILITY

[SR 4.5 (viii)]

The QP accepts overall responsibility for the entire report. The QP was reliant, with appropriate due diligence, on the information provided by Mr. T Botha, the internal and non- independent expert. The qualified expert has also relied upon the input of the Waterberg JV Resources geological personnel in compiling this filing. The data was verified sufficiently for use in Mineral Resource Estimation.

3. RELIANCE ON OTHER EXPERTS

[SR 4.5 (viii)]

In preparing this report, the author relied upon:

- Land title information, as provided by Waterberg JV Resources;
- Geological and assay information supplied by Waterberg JV Resources;
- Drillhole analytical and survey data compiled by Waterberg JV Resources;
- Other applicable information; and
- Data supplied or obtained from sources outside of the company.

The sources of information were subjected to a reasonable level of inquiry and review. The author was granted access to all information. The author’s conclusion, based on diligence and investigation, is that the information is representative and accurate.

This report was prepared in the format of the Canadian National Instrument 43-101 Technical Report by the QP, Mr. CJ Muller. The QP has the appropriate background and is an independent expert with a geological and geostatistical background involved in the evaluation of precious metal deposits for over 24 years.

The QP has reported and made conclusions within this report with the sole purpose of providing information for Waterberg JV Resources’ use subject to the terms and conditions of the contract between the QP and Waterberg JV Resources. The contract permits Waterberg JV Resources to file this report, or excerpts thereof, as a Technical Report with the Canadian Securities Regulatory Authorities or other regulators pursuant to provincial securities legislation, or other legislation, with the prior approval of the QP.

The data was verified sufficiently for use in Mineral Resource Estimation.

4. PROPERTY DESCRIPTION AND LOCATION

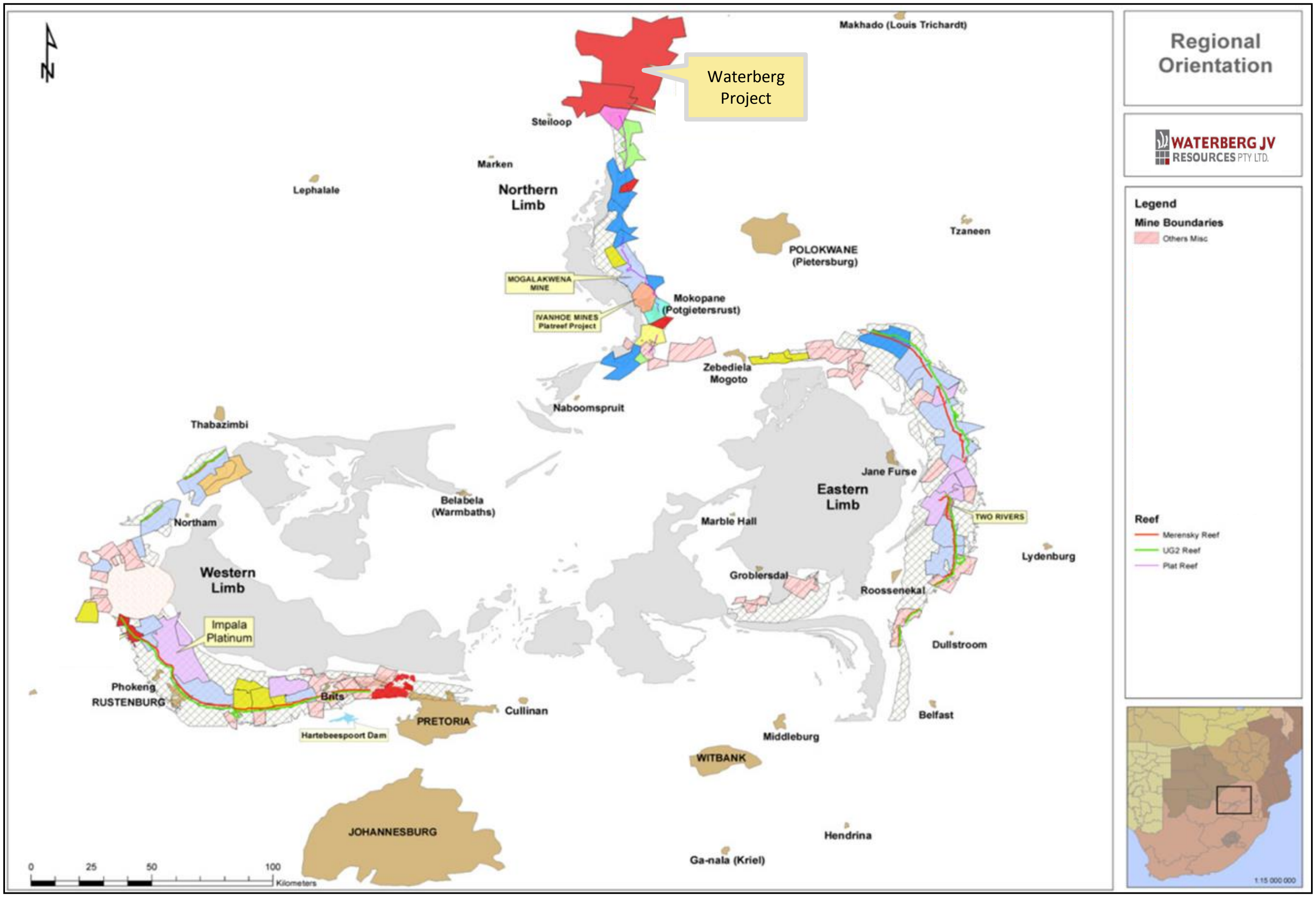
4.1 PROPERTY DESCRIPTION AND LOCATION

[SR1.2 (i)]

The Waterberg Project is located 85 km north of the town of Mokopane (formerly Potgietersrus) in the province of Limpopo, South Africa (Figure 1), approximately 330 km NW from Johannesburg. The property covers 99,244.79 hectares. The project is approximately centred on UTM coordinate (Latitude 23°21′53” S, Longitude 28°48′ 23” E)”. Elevation ranges from approximately 880 to 1365 meters above sea level.

Waterberg JV Resources was granted prospecting rights covering an area of 92,672.15ha (Figure 4, “Active prospecting Rights”). An application for a Mining Right covering an area of 20,482.42ha (Figure 4, “Mining Right Application”) was filed with the DMR Polokwane Regional Office and accepted on September 14, 2018. The mining right application area consist of farms of active prospecting rights and farms of expired prospecting right PR11013 see figure 4. The total project area, active prospecting rights and mining right application area covers a total area of 99 244.79ha.

Figure 1: Location of the Waterberg Project



4.2 MINING TENURE

A summary of the mineral exploration and mining rights regime for South Africa is provided in Table 3.

Table 3: Summary of Mineral Exploration and Mining Rights (South Africa)

South Africa	Mineral Exploration and Mining Rights
Mining and Mineral Laws :	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 programs and expenditure commitments.
Mining Title/Licensed Types	
Reconnaissance Permission :	Yes
Prospecting Right :	Yes
Mining Right :	Yes
Retention Permit :	Yes
Special Purpose Permit/Right :	Yes
Small Scale Mining Rights :	Yes
Reconnaissance Permission	
Name :	Reconnaissance Permission
Purpose :	Geological, geophysical, photo geological, remote sensing surveys. Does not include “prospecting”, i.e. does not allow disturbance of the surface of the earth.
Maximum Area :	Not limited.
Duration :	Maximum 2 years
Renewals :	No and no exclusive right to apply for prospecting right.
Area Reduction :	No.
Procedure :	Apply to Regional Department of Mineral Resources.
Granted by :	Minister.
Prospecting Right	
Name :	Prospecting Right.
Purpose :	All exploration activities including bulk sampling.
Maximum Area :	Not limited.
Duration :	Up to 5 years.
Renewals :	Once, for 3 years.
Area Reduction :	No.
Procedure :	Apply to Regional Department of Mineral Resources.
Granted by :	Minister.
Mining Right	
Name :	Mining Right.
Purpose :	Mining and processing of minerals.
Maximum Area :	Not limited.
Duration :	Up to 30 years.
Renewals :	Yes, with justification.
Procedure :	Apply to Regional Department of Mineral Resources.
Granted by :	Minister.

4.3 MINERAL RIGHT STATUS

[SR 1.5 (i)] [SR 1.2 (iii)]

A summary of the prospecting rights and their status is summarised in Table 4 and their location in Figure 3 and Figure 4. A Mining Right Application was filed and accepted for consideration prior to the expiry dates recorded below on September 14, 2018. The farms included in the Mining Right Application are shown in Figure 2.

Figure 2: The Farms Included in the Mining Right Application

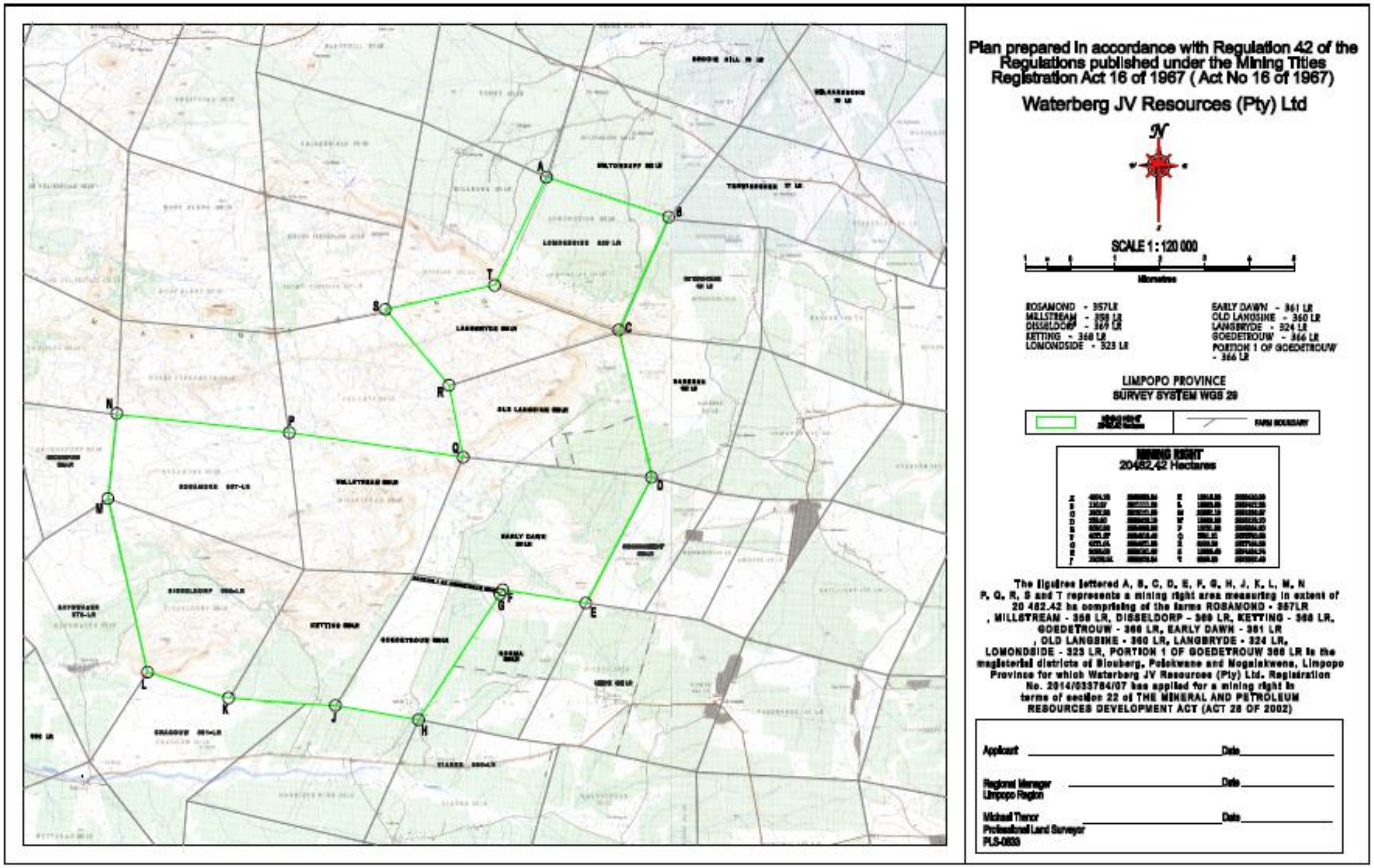


Table 4: Summary of Mineral Exploration and Mining Rights (Waterberg JV Resources)					
DMR PR Reference	Hectares	Period of Prospecting Right	Minerals	Status	Status Details
11013 PR	15,257.00	30/09/2015 to 29/09/2018	PGM, Gold, Chromium, Nickel, Cobalt, Copper, Molybdenum, Rare Earths, Silver, Zinc and Lead	Expired	Expired 29/09/2018.in terms of MPRDA
10667 PR	6,254.80	02/10/2013 to 01/10/2018	PGM, Gold, Chromium, Nickel, Cobalt, Copper, Molybdenum, Rare Earths, Silver, Zinc and Lead	Expired	Registered in MPTO 153/2013 21/11/2013
10667 PR		Renewal Application filed with DMR 05/07/2018 for a further period of 3 years from 01/10/2018 to 02/10/2021 In terms of section 18 (5) MPRDA a prospecting right for which an application for renewal has been lodged, despite its expiry date shall remain in force until the renewal application has been granted or refused	PGM, Gold, Chromium, Nickel, Cobalt, Copper, Molybdenum, Rare Earths, Silver, Zinc and Lead	Pending	DMR acknowledged receipt on 06/07/2018. New SAMRAD reference number given LP30/5/1/1/2/ 13201 PR. Applicable when renewal granted.
10809 PR		30/10/2017 to 30/04/2022	Vanadium and Iron	Granted	Notarially Executed 29/08/2017
10668 PR	3,953.05	02/10/2013 to 01/10/2018	PGM, Gold, Chromium, Nickel, Cobalt, Copper, Molybdenum, Rare Earths, Silver, Zinc and Lead	Expired	This Prospecting Right shall not be renewed. A closure application shall be filed when the Waterberg Mining Right has been granted

Table 4: Summary of Mineral Exploration and Mining Rights (Waterberg JV Resources)					
DMR PR Reference	Hectares	Period of Prospecting Right	Minerals	Status	Status Details
10804 PR	26,961.59	02/10/2013 to 01/10/2018	PGM, Chromium, Copper, Gold, Nickel, Vanadium and Iron	Expired	Registered in MPTO 106/2015 10/09/2015
10804 PR		Renewal Application filed with DMR 05/07/2018 for a further period of 3 years from 01/10/2018 to 02/10/2021 In terms of section 18 (5) MPRDA a prospecting right for which an application for renewal has been lodged, despite its expiry date shall remain in force until the renewal application has been granted or refused.	PGM, Chromium, Copper, Gold, Nickel, Vanadium and Iron	Pending	DMR acknowledged receipt on 06/07/2018. New SAMRAD reference number given LP30/5/1/1/2/ 13203 PR. Applicable when renewal granted.
10805 PR	17,734.80	02/10/2013 to 01/10/2018	PGM, Chromium, Copper, Gold, Nickel, Vanadium and Iron	Expired	Registered in MPTO 49/2015 24/04/2015
10805 PR		Renewal Application filed with DMR 05/07/2018 for a further period of 3 years from 01/10/2018 to 02/10/2021 In terms of section 18 (5) MPRDA a prospecting right for which an application for renewal has been lodged, despite its expiry date shall remain in force until the renewal application has been granted or refused.	PGM, Chromium, Copper, Gold, Nickel, Vanadium and Iron	Pending	DMR acknowledged receipt on 06/07/2018. New SAMRAD reference number given LP30/5/1/1/2/ 13202 PR. Applicable when renewal granted.
10805 PR – Section 102	4,475.13	Section 102 application when granted will have the same benefits as 10804 (prospecting right will be granted from	PGM, Chromium, Copper, Gold, Nickel, Vanadium and Iron	Accepted	Written acceptance by DMR on 09/12/2013

Table 4: Summary of Mineral Exploration and Mining Rights (Waterberg JV Resources)					
DMR PR Reference	Hectares	Period of Prospecting Right	Minerals	Status	Status Details
		1/10/2013 to 2/10/2018)			
10806 PR	13,143.53	30/09/2015 to 29/09/2020	PGM	Granted	Registered in MPTO 76/2017 19/09/2017
10810 PR	4,189.86	23/10/2015 to 22/10/2018	PGM, Chromium, Copper, Gold, Nickel, Vanadium and Iron	Expired	Registered in MPTO 163/2013 03/12/2013
10810 PR		Renewal Application filed with DMR 05/07/2018 for a further period of 3 years w e f 01/10/2018 to 02/10/2021 In terms of section 18 (5) MPRDA a prospecting right for which an application for renewal has been lodged, despite its expiry date shall remain in force until the renewal application has been granted or refused	PGM, Chromium, Copper, Gold, Nickel, Vanadium and Iron	Pending	DMR acknowledged receipt on 06/07/2018. New SAMRAD reference number given LP30/5/1/1/2/ 13200 PR. Applicable when renewal granted.
11286 PR	19,912.44	23/11/2016 to 22/01/2021	PGM, Gold, Chromium, Nickel, Cobalt, Copper, Molybdenum, Rare Earths, Silver, Zinc and Lead, Vanadium, Iron.	Granted	Registered in MPTO 54/2017 12/07/2017

Prospecting Right 11013 PR expired on the 29/09/2018. Renewed period of 3 years expired. No further provision for renewal under MPRDA.
The farms Ketting 368 LR -Goedetrouw 366 LR-Disseldorp 369 LR form part of the Waterberg Mining Right Application which was accepted on the 14 September 2018 by the DMR and is currently undergoing the required adjudication process by DMR.

Prospecting Rights 10667 LR, 10804 PR and 10805 PR all expired on the 01 /10/2018 and 10810 PR expired on the 22/10/2018 and included in these prospecting rights are certain farms which were included in the Mining Right Application (MRA) and are recoded below.

Prospecting Right 10667 PR – the farms Millstream 358 LR, Rosamond 357 LR are included in the MRA,
Prospecting Right 10804 PR – the farms Lomondside 323 LR, Langbryde 324 LR, Old Langsine and Early Dawn 361 LR are included in the MRA, and

Therefore, the above prospecting rights Prospecting Rights 10667 LR, 10804 PR and 10805 PR all expired on the 01/10/2018 and 10810 PR expired on the 22/10/2018 of which renewal applications were filed with the DMR for a further period of 3 years
.
The DMR recorded in its acknowledgment letters in respect of the renewal applications that in terms of section 18 (5) MPRDA a prospecting right for which an application for renewal has been lodged, despite its expiry date shall remain in force until the renewal application has been granted or refused.

Figure 3: Locations of the Waterberg Project Properties

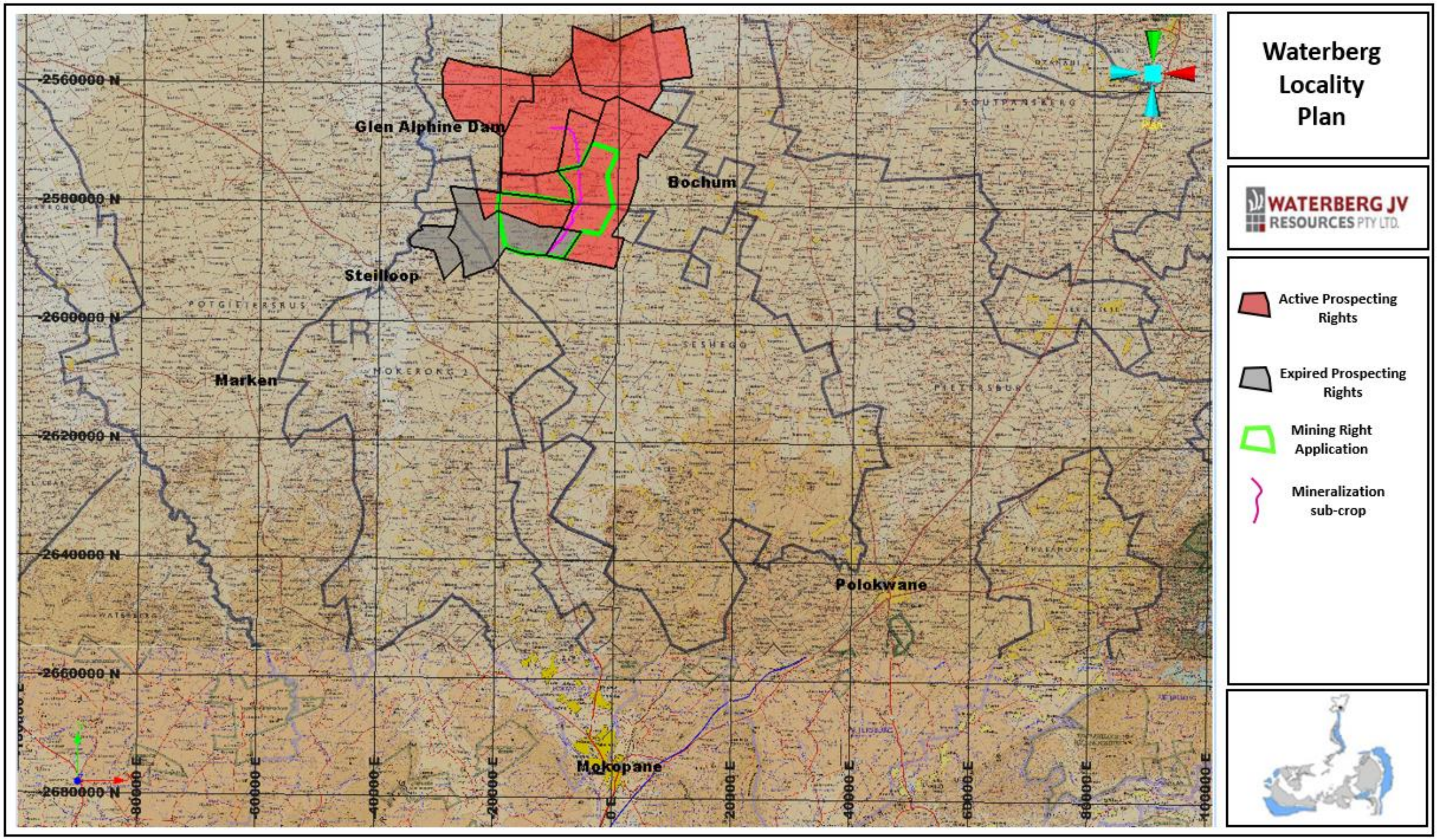
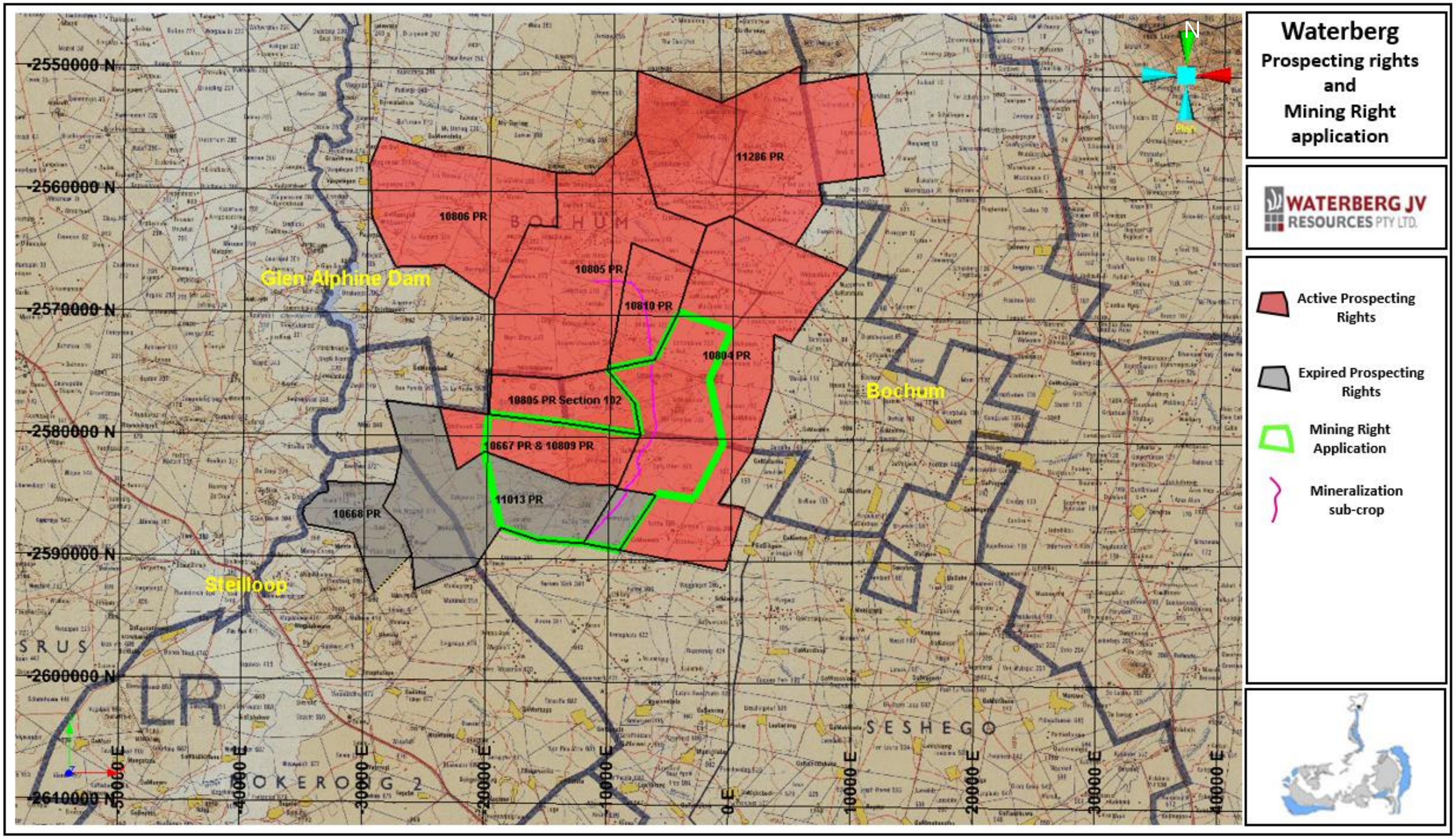


Figure 4: Location of the Waterberg Project Prospecting Rights



4.4 HOLDINGS STRUCTURE

[SR1.5 (ii)] [SR1.5 (iii)] [SR1.5 (v)]

Historically, to cater for the needs, requirements and objectives of the various ownership groups, the Waterberg Project was managed and explored under the direction of two separate technical committees. These were for the Joint Venture (JV) and the Extension Projects respectively.

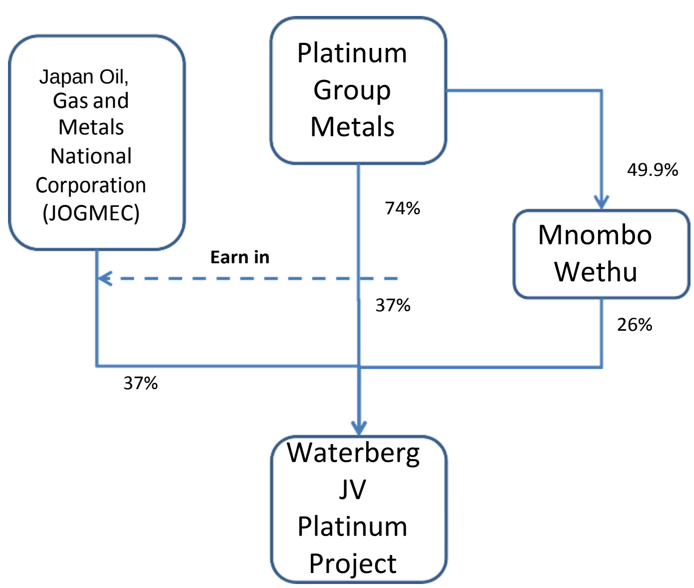
A second agreement described in Section 4.4.3 resulted in the consolidation of all holdings and the combined exploration and management of both areas.

4.4.1 HISTORY OF THE WATERBERG JV PROJECT

PTM RSA applied for the original 137 km^2 prospecting right for the Waterberg Joint Venture (JV) Project area in 2009 which was granted by the DMR in September of that year and valid until September 2012. Application for the renewal of this prospecting right for a further three years was made. Under the Mineral and Petroleum Resources Development Act, No. 28 of 2002 (MPRDA), the prospecting right remains valid pending the grant of the renewal.

PTM RSA initially held a 74% share in the Waterberg JV Project with Mnombo Wethu Consultants (Pty) Ltd (Mnombo), a BEE partner, holding the remaining 26% share (Figure 5).

Figure 5: Schematic Diagram of the Initial Holdings of Waterberg JV Project



In October 2009, PTM RSA and Mnombo entered into a joint venture agreement (the "JOGMEC Agreement") with Japanese Oil, Gas and Metals National Corporation (JOGMEC), whereby

JOGMEC would earn a participating interest of up to 37% in the Waterberg JV Project for an optional work commitment of US$3.2 million over four years. At the same time Mnombo would earn a 26% participating interest in exchange for matching JOGMEC's expenditures on a 26/74 basis (US$1.12 million).

In November 2011, PTM RSA entered into an agreement with Mnombo whereby PTM RSA acquired 49.9% of the issued and outstanding shares of Mnombo in exchange for cash payments totalling R1.2 million and an agreement that PTM RSA would pay for Mnombo's 26% share of costs on the initial Waterberg Joint Venture area until the completion of a feasibility study. Mnombo would retain over 50% held for the benefit of historically disadvantaged persons or historically disadvantaged South Africans.

In April 2012, JOGMEC completed its US$3.2 million earn in requirement to earn a 37% interest in the Waterberg JV Project. Following JOGMEC's earn-in, PTM funded Mnombo's 26% share of costs for US$1.12 million and the earn-in phase of the joint venture ended in May 2012. Pursuant to the JOGMEC Agreement, and prior to the closing of the 2nd Amendment (Section 4.4.3) interests in the Waterberg JV Project were held 37% by the Company, 37% by JOGMEC and 26% by Mnombo. Due to the Company's 49.9% ownership interest in Mnombo, the Company had an effective interest in the Waterberg JV Project of approximately 50%. This ownership percentage will change if the 2nd Amendment, as described in Section 4.4.3, receives Section 11 approval.

During 2012, PTM RSA made application to the DMR to acquire three additional prospecting rights adjacent to the west (one property of 3,938 ha), north (one property of 6,272 ha) and east (one property of 1,608 ha) of the existing Waterberg JV Project. Upon granting by the DMR, these three new prospecting rights covering a total of 118 km^2 became part of the existing joint venture with JOGMEC and Mnombo, bringing the total area in the joint venture to 255 km^2.

4.4.2 HISTORY OF THE WATERBERG EXTENSION PROJECT

The former Waterberg Extension Project includes contiguous prospecting rights with a combined area of approximately 864 km^2 adjacent and to the north of the Waterberg JV Project.

The three prospecting rights were executed in October 2013 and each was valid for a period of five years, expiring in October 2018. The Company made an application under section 102 of the MPRDA to the DMR to increase the size of one of the granted prospecting rights by 44 km^2. The Company has the exclusive right to apply for renewals of the prospecting rights for periods not exceeding three years each and the exclusive right to apply for a mining right over these prospecting right areas. Applications for a fourth and a fifth prospecting right covering 331 km^2 were accepted for filing with the DMR on in February 2012 for a period of five years. These applications, which are not directly on the trend of the primary exploration target, are in process with the DMR.

PTM RSA held the prospecting rights filed with the DMR for the Waterberg Extension Project, and Mnombo was identified as the Company's BEE partner. The Company held a direct 74% interest and Mnombo held a 26% interest in the Waterberg Extension Project, leaving the Company with an approximately 86.974% effective interest by way of the Company's approximately 49.9% shareholding in Mnombo.

4.4.3 WATERBERG PROJECT CONSOLIDATION

In May 2015, a second amendment agreement (the "2nd Amendment") was concluded between PTM, PTM RSA, JOGMEC and Mnombo. Under the 2nd Amendment, the Waterberg Joint Venture and Waterberg Extension projects (collectively the "Waterberg Project") were to be consolidated into a newly created operating company named Waterberg JV Resources (Pty) Ltd. PTM RSA was to hold 45.65% of Waterberg JV Resources while JOGMEC was to own 28.35% and Mnombo would hold 26%.

Through its 49.9% share of Mnombo, PTM RSA would hold an effective 58.62% of Waterberg JV Resources (Pty) Limited post-closing. Based on the June 2014 Waterberg Mineral Resource estimate the number of ounces owned by each entity did not change with the revised ownership percentages. The 2nd Amendment Agreement allowed all the Waterberg Project area to be considered from a Mineral Resource and engineering perspective, allowing for optimization of the 13 km target strike length and allowing for exploration and engineering to be aggressively advanced notwithstanding challenging mining markets.

Under the 2nd Amendment, JOGMEC committed to fund US$20 million in expenditures over a three-year period ending March 31, 2018. Of this, US$8 million would be funded by JOGMEC to March 31, 2016 and the first US$6 million to be spent in each of the following two 12-month periods would also be funded by JOGMEC. Project expenditures exceeding US$6 million in either of the following years were to be funded by the JV partners, pro-rata to their interests in Waterberg JV Resources.

PTM RSA then subsequently entered into an agreement with Waterberg JV Resources (Pty) Ltd, Platinum Group Metals Ltd., Mnombo Wethu Consultants (Pty) Ltd. and Japan Oil, gas and Metals National Corporation in terms of which all the above prospecting rights held by PTM RSA would be ceded to Waterberg JV Resources (Pty) Ltd.

In terms of the agreement, the consent of the Minister of Mineral Resources or his authorised delegate needed to be required for the said cession of the prospecting rights from PTM RSA to Waterberg JV Resources (Pty) Ltd in terms of section 11 of the MPRDA. Such consent was granted on 22 December 2015.

On September 21, 2017 PTM RSA completed the transfer of all Waterberg Project prospecting permits into Waterberg JV Resources (Pty) Limited. Effective September 21, 2017 Waterberg JV Resources (Pty) Limited owned 100% of the prospecting rights comprising the entire Waterberg Project area.

It is also recorded that the now ceded prospecting rights as set out in Table 4.3 above were included in the Shareholders Agreement which was executed by the Shareholders of Waterberg JV Resources (Pty) Limited on the 16 October 2017.

On completion of the transfer of all the prospecting rights to Waterberg JV Resources (Pty) Limited, Waterberg JV Resources (Pty) Limited was owned 45.65% by PTM RSA, 28.35% by JOGMEC and 26% by Mnombo.

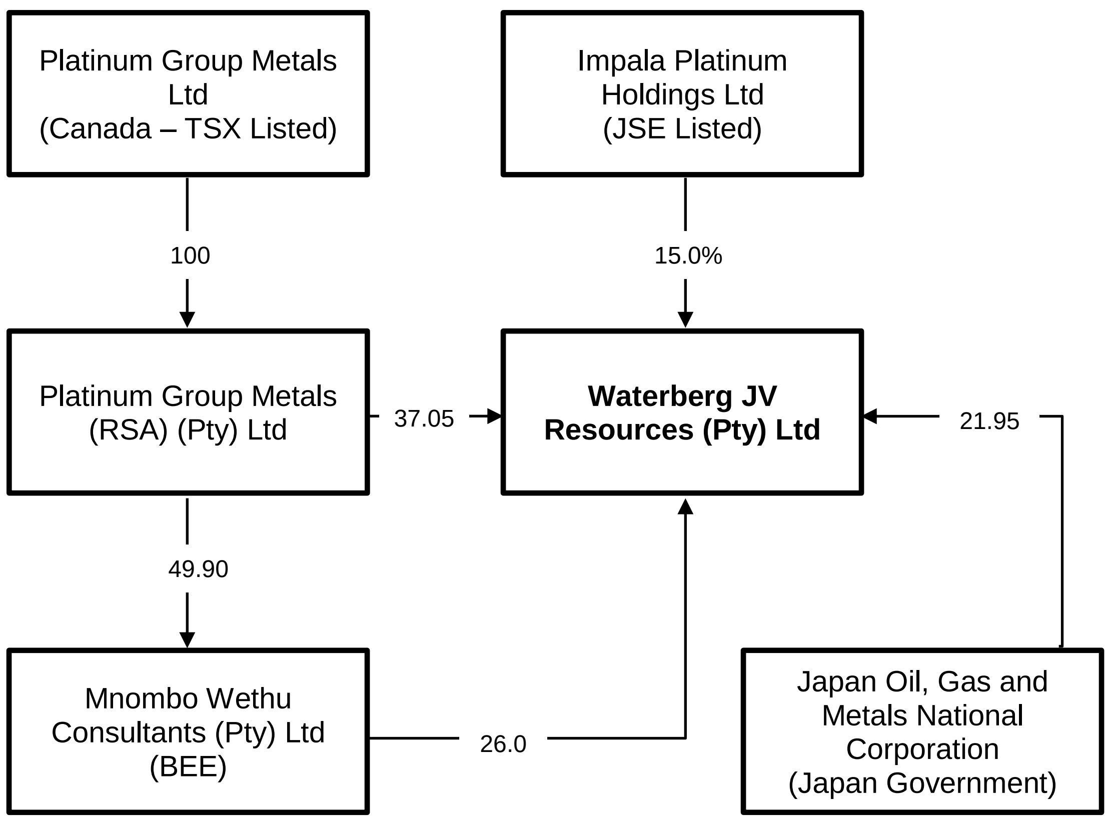
On October 16, 2017 definitive agreements were signed with Impala Platinum Holdings Ltd (IMPLATS) in terms whereof IMPLATS (a) purchased 15% of Waterberg JV Resources. shares from PTM RSA (8.6%) and JOGMEC (6.4%); and (b) acquired a purchase and development option to increase its stake in Waterberg JV Resources. to 50.01% through additional share purchases and earn-in arrangements and acquired a right of first refusal to smelt and refine Waterberg Project concentrate. This transaction closed on November 6, 2017.

Certain of the proceeds of the IMPLATS transaction are ring-fenced by PTM RSA and disbursed to cover its share of the costs of the definitive feasibility study (DFS) which is currently underway and anticipated to be completed in Q1 2019. IMPLATS will have an option within 90 business days of the completion by Waterberg JV Resources of the planned DFS, to elect to exercise the purchase and development option to increase its interest in Waterberg JV Resources up to 50.01% by purchasing an additional 12.195% equity interest from JOGMEC and earning into the remaining interest by making a firm commitment to an expenditure of US$130.0 million in development work.

PTM RSA is the operator of the Waterberg Project, with joint venture partners being JOGMEC, IMPLATS and Mnombo. Figure 6 is schematic diagram of the holdings of the Waterberg Project.

Figure 6: Schematic Diagram of the Holdings of Waterberg Project

The Ownership Structure of Waterberg JV Resources (Pty) Ltd:



- Waterberg JV Resources Proprietary Limited, registration number 2014/033764/07, is a limited liability private company duly incorporated in South Africa.
- Platinum Group Metals Ltd. (PTML), is a limited liability public company duly incorporated under the laws of British Columbia, Canada. It is listed on both the Toronto Stock Exchange (PTM) and the NYSE American (PLG).
- Platinum Group Metals (RSA) Proprietary Limited, registration number 2000/025984/07, is a limited liability private company duly incorporated in South Africa and a wholly owned subsidiary of PTML.
- Japan Oil, Gas and Metals National Corporation (JOGMEC), is an incorporated administrative agency established in accordance with a statute enacted by the National Diet of Japan to promote

and participate in oil, gas, petroleum and metals mining exploration projects of potential benefit to the economy of Japan.

- Mnombo Wethu Consultants Proprietary Limited, registration number 2012/032630/07, a limited liability private company duly incorporated in South Africa. It is 100% blacked owned (50% black women).
- Impala Platinum Holdings Limited (IMPLATS), registration number 1957/001979/06, is a limited liability public company duly incorporated in South Africa. IMPLATS is listed on the Johannesburg Stock Exchange.

4.5 ROYALITIES AND AGREEMENTS

[SR 1.6 (i)]

The QP is not aware of any royalties, back-in rights, payments or other encumbrances, other than in agreements disclosed here, that could prevent Waterberg JV Resources from carrying out its plans or the trading of its rights to its licence holdings at the Waterberg Project.

4.6 ENVIRONMENTAL LIABILITIES

[SR 1.7 (i)]

All environmental obligations on the properties are subject to the terms of a current Environmental Management Plan (EMP) approved by the DMR prior to commencement of work on the properties. All the necessary permissions and permits in terms of the environmental liabilities are included.

All statutory compliance reporting in respect of environmental progress reporting and financial provisioning were filed and acknowledged by the DMR for the current year.

All rehabilitation of drillhole sites and access roads required in terms of this EMP was completed or is on-going. In addition, the required financial deposits into the approved environmental rehabilitation trust in respect of related potential liabilities are up to date. There are currently no known material environmental liabilities on the properties that may restrict exploration.

4.7 LEGAL ACCESS

[SR 1.3 (i)] [SR 4.3 (iv)] [SR 4.3 (v)]

South Africa is a country with a long-established rich mining history. South Africa has detailed regulatory framework for mining and environmental approvals. The Mining Charter as a companion to the Mining Act sets out goals for employment, procurement and black ownership.

The country has a detail regulatory framework of mineral title, mining right grant and mining authorization. The Mineral Resources Petroleum Development Act “MRPDA” is the current minerals legislation. An update to the Mining Charter setting goals for empowerment, procurement and employment has recently be proclaimed. The National Environmental Management Act 107. 1998 also has relevance to the Waterberg Project. The Company will need to comply with certain empowerment, procurement and management targets to be granted a Mining Right. A Water Use License will also be required.

The Social and Labour plan is the documents in the Mining Right application that discusses for consultation the relationship with the local communities. Surface rights for the mining and tailings areas must be purchased or leased from owners and communities in the area.

There is no reason at this time that the permissions, permits, surface and water use rights will not be achieved but these factors are a significant project risk. The risk is mitigated by following the established process of consultation in the Environmental Assessment for a new mining right.

Waterberg JV Resources has consulted with the community and received permissions to access the land where it holds Prospecting Rights. Ongoing rights of access to specific portions of the property may be required as exploration and potential development progresses.

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

[SR 1.1 (ii)]

5.1 ACCESS

The Waterberg Project is located some 85 km north of the town of Mokopane (formerly Potgietersrus) in Seshego and Mokerong, districts of the Limpopo Province. Mokopane provides a full spectrum of local and urban infrastructure.

The Waterberg Project is situated some 13.5 km from the N11 national road that links Mokopane with the Groblers Bridge border post to Botswana. The current drilling area is some 32 km from the N11 National Road. Access to the area from the national road is by unpaved roads that are generally in a reasonable condition.

5.2 CLIMATE

The climate is semi-arid with moderate winter temperatures and warm to hot in the summer. Most of the 350-400 mm 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 project area to the west and east is relatively flat but the area in the central part of the project area is more mountainous with some steep to near vertical cliffs and an elevation difference of 160 m – 200 m (Figure 7). The lowest point in the project area is at 880 m AMSL and the highest point at 1,365 m AMSL. The drilling was undertaken on the eastern flat area with an elevation of approximately 1,000 m AMSL. The area is farmed by the local people who grow crops on limited scale and farm various cattle. The vegetation is typically bushveld vegetation. The Seepabana River cuts across the south-western side of the Waterberg Project area from east to west joining the Molagakwena River which flows north into the Glen Alpine Dam. The remainder of the area has non-perennial rivers.

Figure 7: Photograph looking towards the Eastern Side of the Waterberg Project

5.4 LOCAL RESOURCES AND INFRASTRUCTURE

[SR 4.3 (iii)]

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

Power, sewage and water infrastructure are poorly developed in the project area. The infrastructural requirements of a mine would require additional planning to provide suitable infrastructure to the site. The current activity in the area is in the form of local people undertaking small-scale farming on a subsistence basis for cattle and crops. The major restriction is surface water. The Glen Alpine dam is located 23 km to the northwest of the project area but does not hold enough water capacity for the Project. The Company has established a cooperation agreement for access and distribution of ground water in the area and water resources are currently estimated to be present in levels required for the Project.

6. HISTORY

[SR 1.4 (i)]

6.1 WATERBERG PROJECT

The Waterberg Project is a part of a group of exploration projects that came from a regional target initiative of the Company over the past ten years. Platinum Group Metals targeted this area based on its own detailed geophysical, geochemical and geological work along trend, off the north end of the mapped Northern Limb of the Bushveld Complex.

The prospecting rights for the properties were applied for based on the initial findings on the Project combined with an analysis of publicly available regional government geophysical data that showed an arching NNE tend to the signature of the interpreted edge of the Bushveld Complex.

6.2 EXPLORATION HISTORY

The Council for Geoscience mapped the region, including the property, as presented on the 1:250,000 scale – Map No 2328 – Pietersburg. This sheet is the published geological map of the area and the basis for the metallurgical sheets, as well as regional aeromagnetic and gravity surveys that now form part of the public domain dataset.

There is no publicly available detailed exploration history available for the area. As a result of the cover rocks overlying the Bushveld Complex it appears that no previous exploration for platinum group metals was undertaken. The extensive exploration for platinum group metals on the Platreef targets did not extend this far north. There are undocumented reports of a drillhole through the Waterberg Group into the Bushveld Complex on a farm immediately north of the Waterberg JV area.

The original exploration models for the property involved a potential for paleo placer at the base of the Waterberg Group sediments or an embayment to the west. Both models were discarded with the current discovery and drilling data showing a strike to the north northeast.

6.3 MINERAL RESOURCE HISTORY

[SR 1.4 (iii)] [SR 4.5 (vi|)]

6.3.1 SEPTEMBER 2012

The initial Mineral Resource was declared in September 2012 for the T- and F Zone mineralisation and is confined to only the property Ketting 368LR of the Waterberg JV Project. Data from the drilling completed by PTM prior to September 2012 was used to undertake a Mineral Resource estimate from more than 58 intersections representing 27 drillholes. The data and the geological understanding and interpretation were considered of sufficient quality for the declaration of an Inferred Mineral Resource. This estimate was presented in a NI 43-101 in September 2012 by Mr. KG Lomberg, entitled "Exploration Results and Mineral Resource Estimate for the Waterberg Platinum Project, South Africa. (Latitude 23°21′ 53" S, Longitude 28°48′ 23" E)". Table 5 shows the Mineral Resource Statement for September 2012.

The drillhole intersections were composited for Pt, Pd, Au, Cu and Ni. A common seam block model was developed into which the estimate was undertaken. An inverse distance weighted (power 2) was undertaken using the 3D software package CAE Mining Studio™.

Geological loss of 25% was estimated based on the knowledge of the deposit. The geological losses were made up of areas of where the layers were absent due to faults, dykes and mafic/ultramafic pegmatites.

Table 5: Waterberg Project, Mineral Resource Estimate 1 September 2012, SAMREC code, Inferred Mineral Resource at 2 g/t (2PGE+Au) cut-off 100% Project basis

Cut-off= 2 g/t	Strati-graphic Thick-ness	Tonnage (Mt)	Pt (g/t)	Pd (g/t)	Au (g/t)	2PGE +Au (g/t)	Pt:Pd: Au	2PGE +Au (koz)	Cu (%)	Ni (%)
T1	2.85	10.49	0.77	1.27	0.51	2.55	30:50:20	863	0.17	0.10
T2	3.46	16.25	1.10	1.82	0.92	3.84	29:47:24	2,001	0.18	0.09
T	**3.19**	**26.74**				**3.33**	**29:48:23**	**2,864**		
FH	4.63	18.10	0.80	1.48	0.09	2.37	34:62:4	1,379	0.03	0.12
FP	5.91	23.20	1.01	2.00	0.13	3.14	32:64:4	2,345	0.04	0.11
F	**5.27**	**41.30**				**2.80**	**31:57:12**	**3,724**		
Total	**4.19**	**68.04**	**0.94**	**1.71**	**0.37**	**3.01**		**6,588**		
Content (koz)			**2,049**	**3,733**	**806**	**-**				

QP= Mr. K Lomberg, Coffey Mining

6.3.2 FEBRUARY 2013

An updated Mineral Resource was declared for the T- and F Zone mineralisation and confined to only the properties Ketting 368LR and Goedetrouw 366LR of the Waterberg JV Project. Data from the drilling completed by PTM prior to February 2013 was used to undertake a Mineral Resource estimate from 207 intersections representing 40 drillholes. The data and the geological understanding and interpretation were considered of sufficient quality for the declaration of an Inferred Mineral Resource. Table 6 shows the Mineral Resource Statement for February 2013. This estimate was presented in a NI 43-101 in February 2013 by Mr. KG Lomberg, entitled "Revised and Updated Mineral Resource Estimate for the Waterberg Platinum, South Africa (Latitude 23° 21′ 53" S, Longitude 28° 48′ 23" E)".

The drillhole intersections were composited for Pt, Pd, Au, Cu and Ni. A common seam block model was developed into which the estimate was undertaken. An inverse distance weighted (power 2) was undertaken using the 3D software package CAE Mining Studio™.

Geological loss of 25% was estimated based on the knowledge of the deposit. The geological losses were made up of areas of where the layers were absent due to faults, dykes, potholes and mafic/ultramafic pegmatites.

Table 6: Waterberg Project Mineral Resource Estimate, 1 February 2013, SAMREC code, Inferred Mineral Resource 2g/t (2PGE+Au) cut-off 100% Project basis.

Cut-off=2 g/t	Strati-graphic Thick-ness	Tonnage Mt	Pt (g/t)	Pd (g/t)	Au (g/t)	2PGE +Au (g/t)	Pt:Pd:Au	2PGE +Au (koz)	Cu (%)	Ni (%)
T1	2.58	4.33	0.91	1.37	0.52	2.80	32:49:19	**390**	**0.21**	**0.11**
T2	4.08	25.46	1.07	1.87	0.78	3.72	29:50:21	**3,045**	**0.17**	**0.09**
T	**3.76**	**29.78**	**1.05**	**1.79**	**0.75**	**3.59**	**29:50:21**	**3,435**	**0.18**	**0.09**
FH	4.02	7.19	1.09	2.37	0.20	3.66	30:65:6	**847**	**0.10**	**0.22**
FP	5.46	55.95	1.01	2.10	0.14	3.25	31:65:4	**5,838**	**0.06**	**0.16**
F	**5.24**	**63.15**	**1.02**	**2.13**	**0.15**	**3.29**	**31:65:4**	**6,685**	**0.06**	**0.17**
Total	**4.63**	**92.93**	**1.03**	**2.02**	**0.34**	**3.39**	**30:60:10**	**10,12**		
Content (koz)			**3,071**	**6,040**	**1,009**					

QP= Mr. K Lomberg, Coffey Mining

6.3.3 SEPTEMBER 2013

6.3.3.1 WATERBERG JV PROJECT

A Mineral Resource was declared for the T- and F Zone mineralisation and confined to only the properties Ketting 368LR and Goedetrouw 366LR of the Waterberg JV Project. Data from the drilling completed by PTM prior to 1 August 2013 was used to undertake a Mineral Resource estimate from 337 intersections representing 112 drillholes. Table 7 shows the Mineral Resource Statement for September 2013. The data and the geological understanding and interpretation were considered of sufficient quality for the declaration of an Inferred Mineral Resource. This estimate was presented in a NI 43-101 in September 2013 by Mr. KG Lomberg and Mr. AB Goldschmidt; entitled "Revised and Updated Mineral Resource Estimate for the Waterberg Platinum Project, South Africa".

The drillhole intersections were composited for Pt, Pd, Au, Cu and Ni. A common seam block model was developed into which the estimate was undertaken. An inverse distance weighted (power 2) was undertaken using the 3D software package CAE Mining Studio™.

Geological loss of 12.5% was estimated based on the knowledge of the deposit. The geological losses were made up of areas of where the layers were absent due to faults, dykes, potholes and mafic/ultramafic pegmatites.

Table 7: Waterberg JV Project-Mineral Resource Estimate 2 September 2013, SAMREC Code, Inferred Mineral Resource 2g/t (2PGE+Au) cut-off 100% Project basis										
Cut-off=2g/t	Strati-graphic Thick-ness	Tonnage (Mt)	Pt (g/t)	Pd (g/t)	Au (g/t)	2PGE +Au (g/t)	Pt:Pd:Au	2PGE +Au (koz)	Cu (%)	Ni (%)
T1	2.30	8.5	1.04	1.55	0.47	3.06	34:51:15	842	0.17	0.10
T2	3.77	39.2	1.16	2.04	0.84	4.04	29:51:21	5,107	0.18	0.10
T Total	3.38	47.7	1.14	1.95	0.77	3.86	30:51:20	5,948	0.18	0.10
F		119.0	0.91	1.98	0.13	3.02	30:65:4	11,57	0.07	0.17
Total		166.7	0.98	1.97	0.32	3.26	30:60:10	17,52	0.10	0.15
Content (koz)			5,25	10,55	1,715					

Cut-off applied on 2PGE+Au grade QP=

Mr. K Lomberg, Coffey Mining

6.3.3.2 WATERBERG EXTENSION PROJECT

There was insufficient drilling completed to support a resource estimate in September 2013 for the Waterberg Extension Project.

6.3.4 JUNE 2014

The Waterberg JV Project was further advanced in exploration status and includes an Inferred Mineral Resource estimate that was included in the Mineral Resource statement in June 2014. The majority of the Waterberg Extension Project was still at an early exploration stage, however drilling on the property Early Dawn 361LR, just north of the Waterberg JV Project had enough surface drilling to confirm continuity of mineralisation, hence areas could be classified as Inferred Mineral Resource.

The data was used to define the characteristics of the various layers based on their geochemical signatures. Validation was undertaken on the core with the intention of finding diagnostic features to identify the layers directly from the core. This was successfully achieved for the T Zone. Due to the pervasive alteration, it proved difficult in the F Zone.

All the flagged intersections were checked on the core to ensure that the layer designation was true to the core and consistent for all the deflections from a drillhole. Seven different layers (FP and FH1-FH6) within the F Zone were identified. It is the identification of these layers and the classification of historical exploration data to fit this new interpretation that is the primary difference between this and previous Mineral Resource estimates. These cuts formed the basis of the Mineral Resource Estimate. The cuts were also defined based on the geology, a marginal cut-off grade of 2 g/t PGM and a minimum thickness of 2 m.

Data from 138 drillholes was included in the database. Each drillhole was examined for completeness in respect of data (geology, sampling, and collar) and sample recovery prior to inclusion in the estimate.

Geological models (wireframes) of the seven F Zone units were modelled by CAE Mining (South Africa) on behalf of PTM, using the Strat 3D module of CAE Mining Studio™.

The coded drillhole database supplied by PTM was composited for Pt, Pd, Au, Cu, Ni and density. For each unit a three-dimensional block model was modelled, and an inverse distance weighted (power 2) estimate was undertaken. Two areas were defined where geological loss of 25% and 12.5% respectively were applied. The Mineral Resource estimate tabulation is set out in Table 8.

Table 8: Waterberg Project-Mineral Resource Estimate (SAMREC Code) (12 June 2014) SAMREC Code, Inferred Mineral Resource 2g/t (2PGE+Au) cut-off 100% Project basis

Cut-off=2g/t	Stratigraphic Thickness	Tonnage Mt	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	2PGE +Au (g/t)	Pt:Pd:Rh: Au	2PGE+ Au (koz)	Cu (%)	Ni (%)	Cu (Mlbs)	Ni (Mlbs)
Waterberg Project Totals for both the JV and the Extension													
T1	2.44	10.49	1.02	1.52		0.47	3.01	34:50:0:15	1,015	0.17	0.10	40	23
T2	3.87	43.57	1.14	1.99		0.82	3.95	29:50:0:21	5,540	0.17	0.09	167	90
T Total	3.60	54.06	1.12	1.90		0.75	3.77	30:50:0:20	6,555	0.17	0.10	207	114
F	2.75-60	232.82	0.90	1.93	0.05	0.14	3.01	30:64:2:5	22,529	0.08	0.19	409	994
Total		286.88	0.94	1.92	0.04	0.25	3.15	30:61:1:8	29,084	0.10	0.18	617	1,107
Content (koz)			**8,652**	**17,741**	**341**	**2,350**			kt	**280**	**502**		
Waterberg Project- (JV)													
	Stratigraphic Thickness	**Tonnage Mt**	**Pt (g/t)**	**Pd (g/t)**	**Rh (g/t)**	**Au (g/t)**	**2PGE +Au (g/t)**	**Pt:Pd:Rh: Au**	**2PGE+ Au (koz)**	**Cu (%)**	**Ni (%)**	**Cu (Mlbs)**	**Ni (Mlbs)**
T1	2.44	10.49	1.02	1.52		0.47	3.01	34:50:0:15	1,015	0.17	0.10	40	23
T2	3.87	43.57	1.14	1.99		0.82	3.95	29:50:0:21	5,540	0.17	0.09	167	90
T Total	3.60	54.06	1.12	1.90		0.75	3.77	30:50:0:20	6,555	0.17	0.10	207	114
F	2.75-60	164.58	0.88	1.91	0.05	0.13	2.97	30:64:2:5	15,713	0.07	0.18	247	649
Total	2.44	218.64	0.94	1.91	0.03	0.29	3.17	30:60:1:9	22,268	0.09	0.16	455	763
Content (koz)			**6,605**	**13,407**	**239**	**2,018**			kt	**206**	**346**		

Waterberg Project- (Extension))														
	Stratigraphic Thickness	**Tonnage Mt**	**Pt (g/t)**	**Pd (g/t)**	**Rh (g/t)**	**Au (g/t)**	**2PGE +Au (g/t)**	**Pt:Pd:Rh: Au**	**2PGE+ Au (koz)**	**Cu (%)**	**Ni (%)**	**Cu (Mlbs)**	**Ni (Mlbs)**
F(Cut-off=2g/t)	2.76-60	68.04	0.93	1.98	0.05	0.15	3.11	30:64:2:5	6,802	0.11	0.23	162	344
Total		68.04	0.93	1.98	0.05	0.15	3.11	30:64:2:5	6,802	0.11	0.23	162	344
Content (koz)			**2,043**	**4,325**	**102**	**331**			kt	**73**	**156**		

Cut-off applied on 2PGE+Au grade QP= Mr. K Lomberg, Coffey Mining

6.3.5 JULY 2015

On July 22, 2015 the Company declared a Mineral Resource for the Waterberg Project that include the JV and Extension areas combined

Data used in this estimate comprised 220 original drillholes of the 231 with 270 deflections of the 374 drilled. Of these 89 intersections occurred in the T zone ranging from approximately 140 m to 1380 m in depth below surface. A total of 365 intersections in the F zone were used ranging from approximately 200 m to 1250 m in depth. The Mineral Resource estimate tabulation is set out in Table 9.

Table 9: Summary of Mineral Resources effective 20 July 2015 on 100% Project Basis

T Zone 2.5 g/t Cut-off										
Mineral Resource Category	**Cut-off**	**Tonnage**	**Grade**						**Metal**	
	2PGE+Au		**Pt**	**Pd**	**Au**	**2PGE+Au**	**Cu**	**Ni**	**2PGE+Au**	
	g/t	**Mt**	**g/t**	**g/t**	**g/t**	**g/t**	**%**	**%**	**kg**	**Moz**
Indicated	2.5	16.53	1.28	2.12	0.85	4.25	0.16	0.09	70253	2.26
Inferred	2.5	33.56	1.25	2.09	0.83	4.17	0.13	0.08	139945	4.50
F Zone 2.5 g/t Cut-off										
Mineral **Resource Category**	**Cut-off**	**Tonnage**	**Grade**						**Metal**	
	2PGE+Au		**Pt**	**Pd**	**Au**	**2PGE+Au**	**Cu**	**Ni**	**2PGE+Au**	
	g/t	**Mt**	**g/t**	**g/t**	**g/t**	**g/t**	**%**	**%**	**kg**	**Moz**
Indicated	2.5	104.47	0.93	2.00	0.15	3.08	0.06	0.16	321768	10.35
Inferred	2.5	212.75	0.93	2.01	0.15	3.09	0.07	0.17	657398	21.14

6.3.6 APRIL 2016

Infill drilling over portions of the Waterberg Project area and a revised estimation approach made it possible to update the Mineral Resource estimate and to upgrade portions of the Mineral Resource to the Indicated category. The Mineral Resource Statement is summarised in Table 10.

Table 10: Mineral Resource Details April 2016								
F Zone								
Cut-off	**Tonnage**	**Grade**					**Metal**	
3PGE+Au		**Pt**	**Pd**	**Au**	**Rh**	**3PGE+Au**	**3PGE +Au**	
g/t	**Mt**	**g/t**	**g/t**	**g/t**	**g/t**	**g/t**	**Kg**	**Moz**
Indicated								
2.00	281.184	0.91	1.94	0.15	0.03	3.03	851 988	27.392
2.50	**179.325**	**1.05**	**2.23**	**0.18**	**0.03**	**3.49**	**625 844**	**20.121**
3.00	110.863	1.19	2.52	0.20	0.04	3.95	437 909	14.079
Inferred								
2.00	177.961	0.83	1.77	0.13	0.03	2.76	491 183	15.792
2.50	**84.722**	**1.01**	**2.14**	**0.17**	**0.03**	**3.35**	**283 819**	**9.125**
3.00	43.153	1.19	2.53	0.20	0.04	3.96	170 886	5.494
T Zone								
Cut-off	**Tonnage**	**Grade**					**Metal**	
2PGE+Au		**Pt**	**Pd**	**Au**	**Rh**	**2PGE+Au**	**2PGE +Au**	
g/t	**Mt**	**g/t**	**g/t**	**g/t**	**g/t**	**g/t**	**Kg**	**Moz**
Indicated								
2.00	36.308	1.08	1.81	0.72	-	3.61	131 162	4.217
2.50	**30.234**	**1.16**	**1.94**	**0.78**	**-**	**3.88**	**117 363**	**3.773**
3.00	22.330	1.28	2.14	0.86	-	4.28	95 640	3.075
Inferred								
2.00	23.314	1.10	1.83	0.73	-	3.66	85 240	2.741
2.50	**21.196**	**1.14**	**1.90**	**0.76**	**-**	**3.79**	**80 394**	**2.585**
3.00	14.497	1.28	2.14	0.86	-	4.28	62082	1.996
Waterberg Total								
Cut-off	**Tonnage**	**Grade**					**Metal**	
3PGE+Au		**Pt**	**Pd**	**Au**	**Rh**	**3PGE+Au**	**3PGE +Au**	
g/t	**Mt**	**g/t**	**g/t**	**g/t**	**g/t**	**g/t**	**Kg**	**Moz**
Indicated								
2.00	317.492	0.93	1.92	0.22	0.03	3.10	983 150	31.609
2.50	**209.559**	**1.07**	**2.19**	**0.26**	**0.03**	**3.55**	**743 207**	**23.894**
3.00	133.193	1.21	2.46	0.31	0.03	4.01	533 549	17.154
Inferred								
2.00	201.275	0.85	1.77	0.21	0.03	2.86	576 423	18.533
2.50	**105.918**	**1.04**	**2.09**	**0.28**	**0.03**	**3.44**	**364 213**	**11.710**
3.00	57.65	1.21	2.43	0.37	0.03	4.04	232 968	7.490

2PGE+Au = Platinum Group Elements (Pd+Pt) and Au. 3PGE+Au (Pd+Pt+Rh) and Au. Conversion Factor used – kg to oz = 32.15076. Numbers may not add due to rounding.

6.4 PRODUCTION HISTORY

There is no historic production from the Waterberg Project.

7. GEOLOGICAL SETTING AND MINERALISATION

7.1 REGIONAL AND LOCAL SETTING

[SR 2.1 (i)]

The Bushveld and Molopo Complexes in the Kaapvaal Craton are two of the most well know mafic/ultramafic layered intrusions in the world. The Bushveld Complex was intruded about 2,060 million years ago into rocks of the Transvaal Supergroup, largely along an unconformity between the Magaliesberg quartzite of the Pretoria Group and the overlying Rooiberg felsites. It is estimated to exceed 66,000 km^2 in extent, of which about 55% is covered by younger formations. The Bushveld Complex hosts several layers rich in platinum group metals (PGM), chromium and vanadium, and constitutes the world's largest known Mineral Resource of these metals.

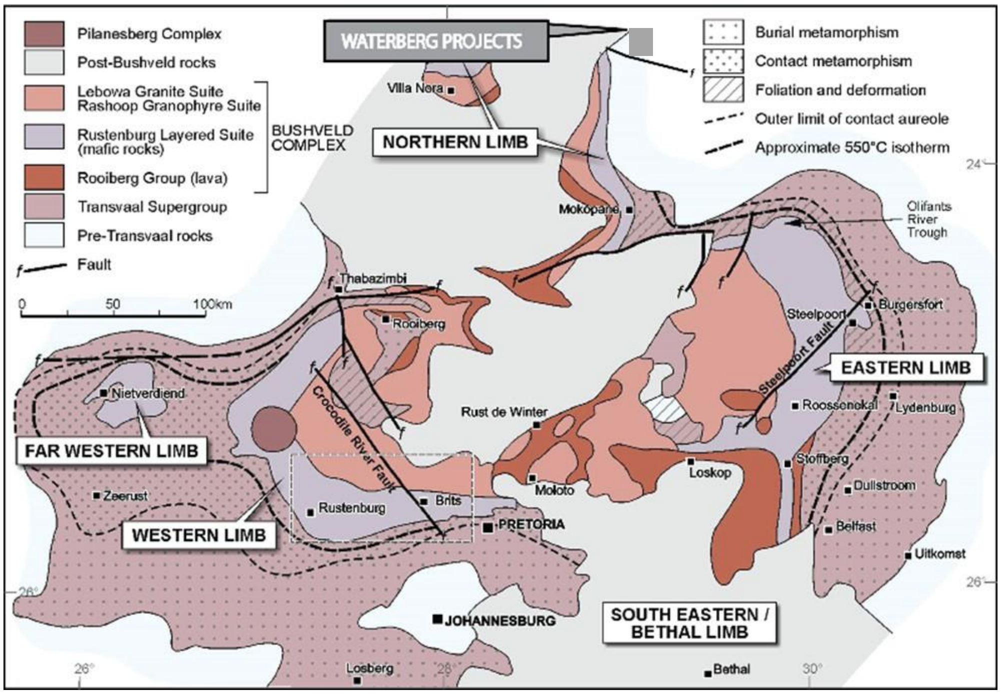
The Waterberg Project is situated off the northern end of the previously known Northern Limb, where the mafic rocks have a different sequence to those of the eastern and Western Limbs of the Bushveld Complex (Figure 8).

The Bushveld Complex in the Waterberg Project area has intruded across a pre-existing craton scale lithological and structural boundary between two geological zones. The known Northern Limb has a north – south orientation to the edge contact that makes an abrupt strike change to the northeast coincident with projection of the east-west trending Hout River Shear system, a major shear that marks the southern boundary of the South Marginal Zone (SMZ).

The SMZ is a 3500 Ma aged compressional terrain formed within the Kaapvaal Craton during the collision with the Zimbabwe Craton. It is comprised of granulite facies granitic gneiss, amphibolitic gneiss and minor quartzite. Within the SMZ there are several major shears that trend parallel the Hout River Shear (van Reenen, 1992) and trend through the Waterberg Project area. The footwall to the Bushveld on Waterberg Project is interpreted to be comprised of facies of the SMZ.

The Platreef characterises the geology of the Northern Limb of the Bushveld. It was first described by Van der Merwe (Van der Merwe, 1976). The Platreef is typically a wide, up to hundreds of meters, pyroxenite hosted zone of elevated Cu and Ni mineralisation with associated anomalous PGM concentrations. The sulphide mineralisation is typically pyrrhotite, chalcopyrite and pentlandite. It was postulated that the interaction with the basement rocks and the dolomites was instrumental in the formation of the mineralisation (Vermaak and Van der Merwe, 2000).

Figure 8: Geological Map of the Bushveld Complex Showing the Location of the Waterberg Project

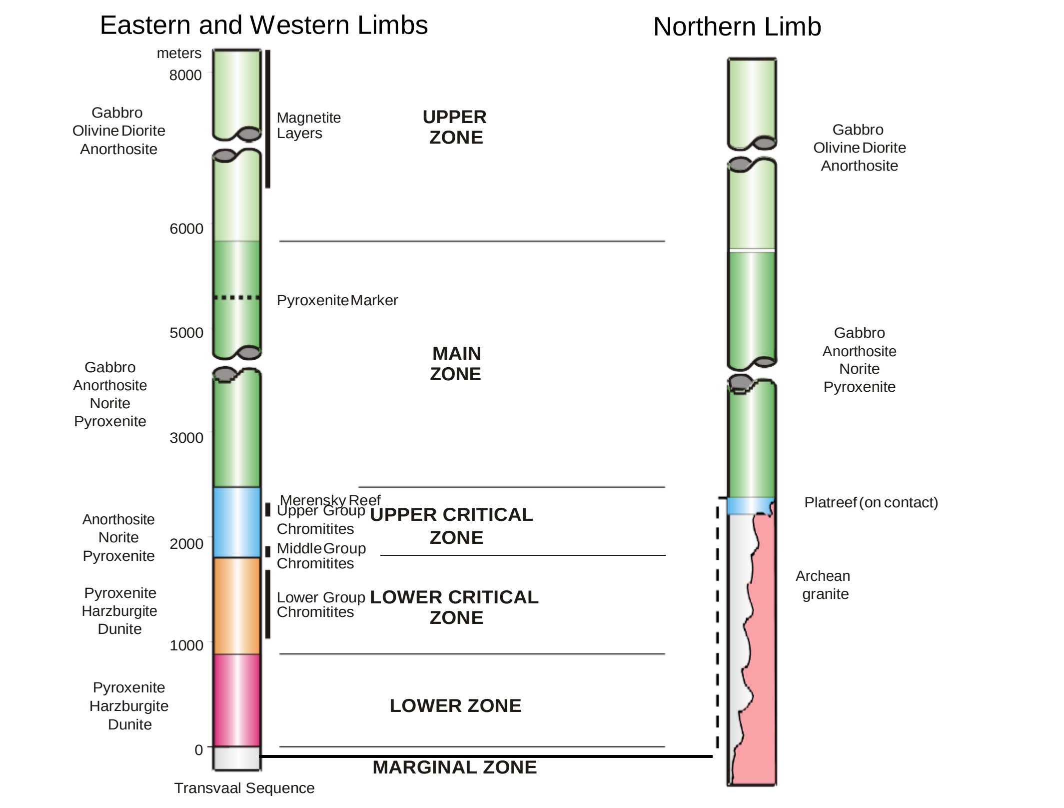


Source: After Cawthorn et al 2006

7.1.1 BUSHVELD COMPLEX STRATIGRAPHY

The mafic rocks of the Bushveld Complex are stratigraphically referred to as the Rustenburg Layered Suite and can be divided into five zones known as the Marginal, Lower, Critical, Main and Upper Zones from the base upwards (Figure 9).

Figure 9: Waterberg Project generalised Stratigraphic Columns of the Eastern and Western Limbs compared to the Stratigraphy of The Northern Limb of the Bushveld Complex



7.1.2 MINERALISATION

The Critical Zone hosts most of the PGE mineralisation in the Bushveld Complex and is characterised by regular and often fine-scale rhythmic, or cyclic, layering of well-defined layers of cumulus chromite within pyroxenites, olivine-rich rocks and plagioclase-rich rocks (norites, anorthosites etc.). The pyroxenitic Platreef mineralisation, north of Mokopane (formerly Potgietersrus), contains a wide zone of more disseminated style platinum mineralisation, along with higher grades of nickel and copper than occur in the rest of the Bushveld Complex.

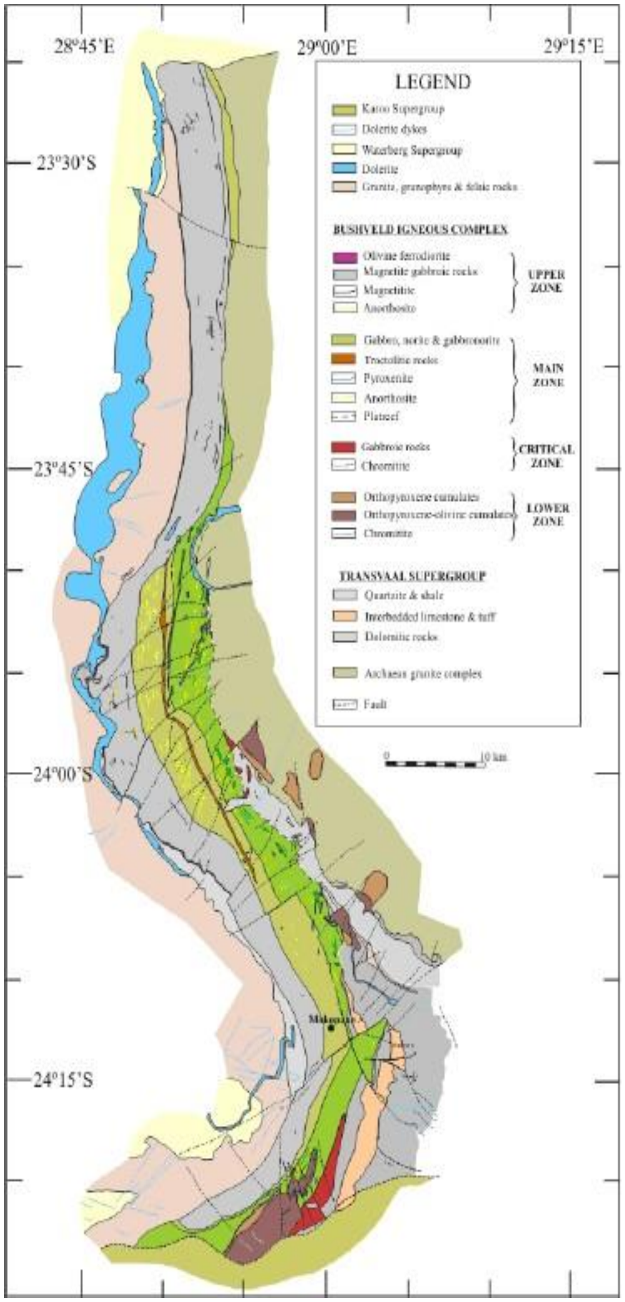
7.1.3 THE NORTHERN LIMB

The Northern Limb is a north-south striking sequence of igneous rocks of the Bushveld Complex with a length of 110 km and a maximum width of 15 km (Figure 10 and Figure 11). It is generally divided up into three different sectors namely the Southern, Central and Northern sectors which have characteristic footwalls:

- The Southern Sector is characterized by a footwall of the Penge Formation of the Transvaal Supergroup

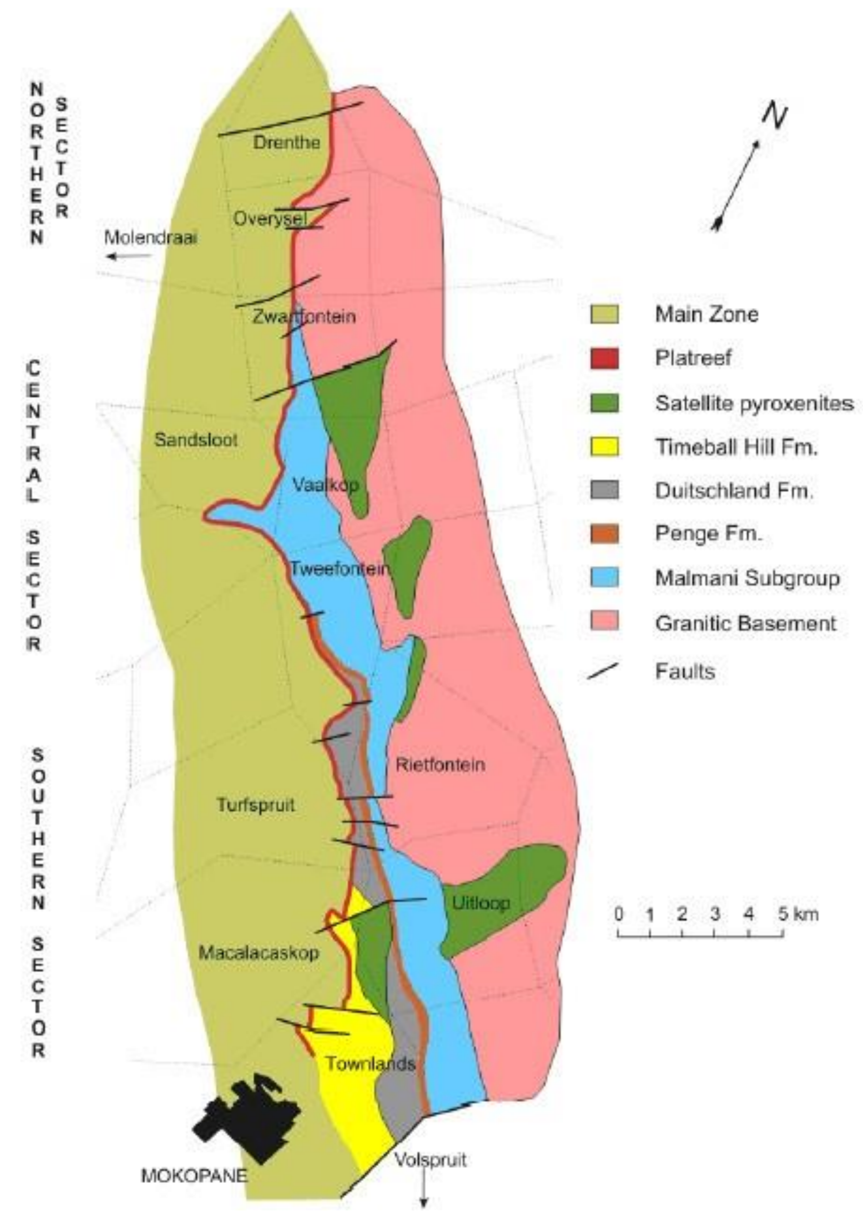
- The Central Sector generally has a footwall of Malmani Subgroup and
- The Northern Sector has a footwall consisting of Archaean granite

Figure 10: General Geology of the Northern Limb of the Bushveld Complex



Source: Sharman-Harris

Figure 11: Geology of the Northern Limb of the Bushveld Complex showing the Various Footwall Lithologies



Source: Sharman-Harris (2006)

7.2 WATERBERG GROUP / BUSHVELD COMPLEX AGE RELATIONSHIP

In general, the contact between the Waterberg Group and the weathered Bushveld Complex was observed in the drillhole core to be sharp. In several of the drill intersections, conglomerate and grit horizons are developed on the contact and appear to contain altered magnetite, suggesting the development of placer mineralisation. If present, such mineralisation is likely to be channelized, as the basal deposits appear to be fluvial. The atypical contact zone between the two rock units was examined by Professor McCarthy (McCarthy, 2012) and is interpreted as a palaeosol (fossilized soil) developed on the Bushveld gabbros. Features in the palaeosol reminiscent of modern weathering of Bushveld rocks were observed. The weathering is considered typically spheroidal in character and finishes in a very fine-grained upper black turf layer (vertisol), corresponding to the 'shale' in the drill intersections.

The nature of the relationship between the Waterberg Group and the Bushveld Complex is confirmed as having no bearing on the presence of mineralisation in the gabbros (T or F Zones) (McCarthy, 2012).

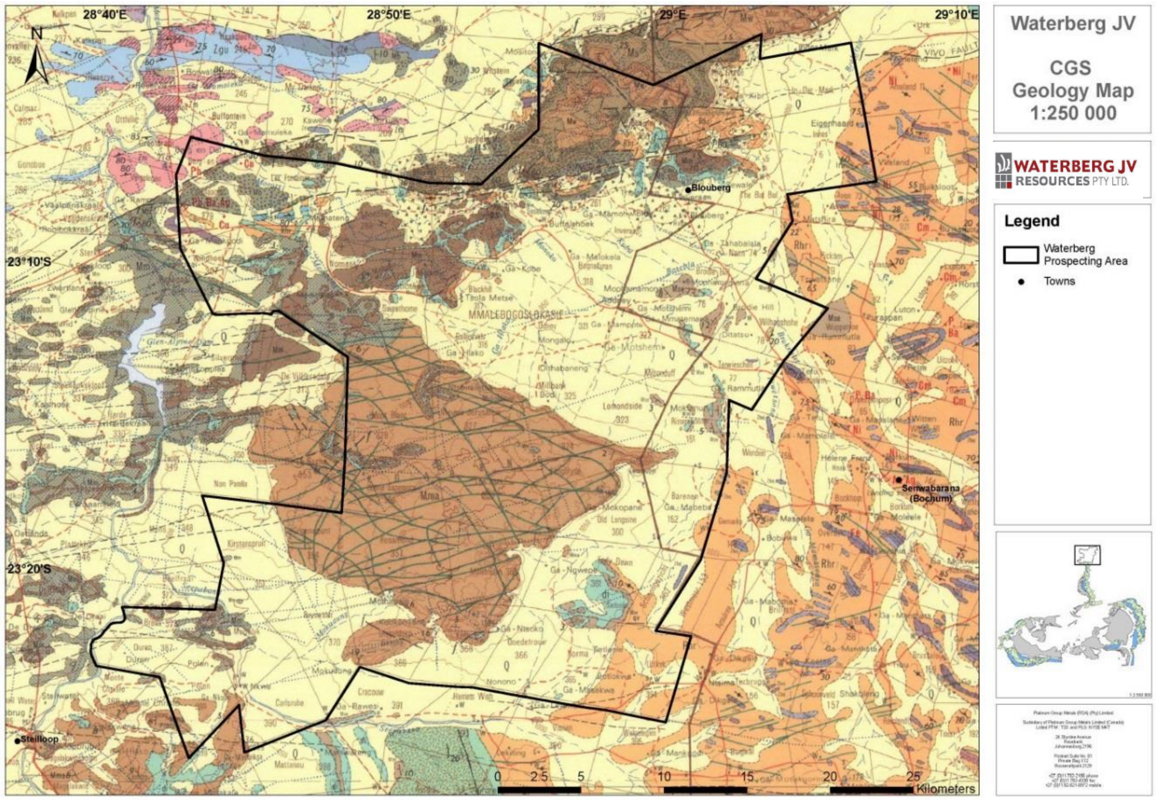
Further to this Prof McCarthy observed that the northern extremity of the Northern Limb of the Bushveld Complex contains a well-developed Platreef horizon, but in addition has mineralisation developed in the Upper Zone. The T Zone has a high Cu/Ni ratio and is Pd and Au dominated. Sulphides like this were described previously from the Upper Zone, but occur in very small quantities, suggesting that atypical conditions pertain in the project area (McCarthy, 2012). In addition, the layered sequence in the north is underlain by quartzite which appears to be a correlative of the upper Pretoria Group. This being the case, Prof McCarthy considers that there is the potential for the development of an extensive Bushveld sub-basin beneath the Waterberg which is also supported by a local gravity high in the area.

7.3 PROJECT GEOLOGY

[SR 2.1 (ii)] [SR 2.1 (iii)]

The Waterberg Project is located along the strike extension of the Northern Limb of the Bushveld Complex. The surface geology is depicted in Figure 12. The Bushveld Geology consists predominantly of the Main Zone gabbros, gabbronorites, norites, pyroxenites and anorthositic rock types with more mafic rock material such as harzburgite and troctolites that partially grade into dunites towards the base of the package. In the southern part of the project area, Bushveld Upper Zone lithologies such as magnetite gabbros and gabbronorites do occur as intersected in drillhole WB001 and WB002. The Lower Magnetite Layer of the Upper Zone was intersected on the south of the project property (Disseldorp 369 LR)) where drillhole WB001 was drilled and intersected a 2.5 m thick magnetite band.

Figure 12: The Surface Geology of the Waterberg Project



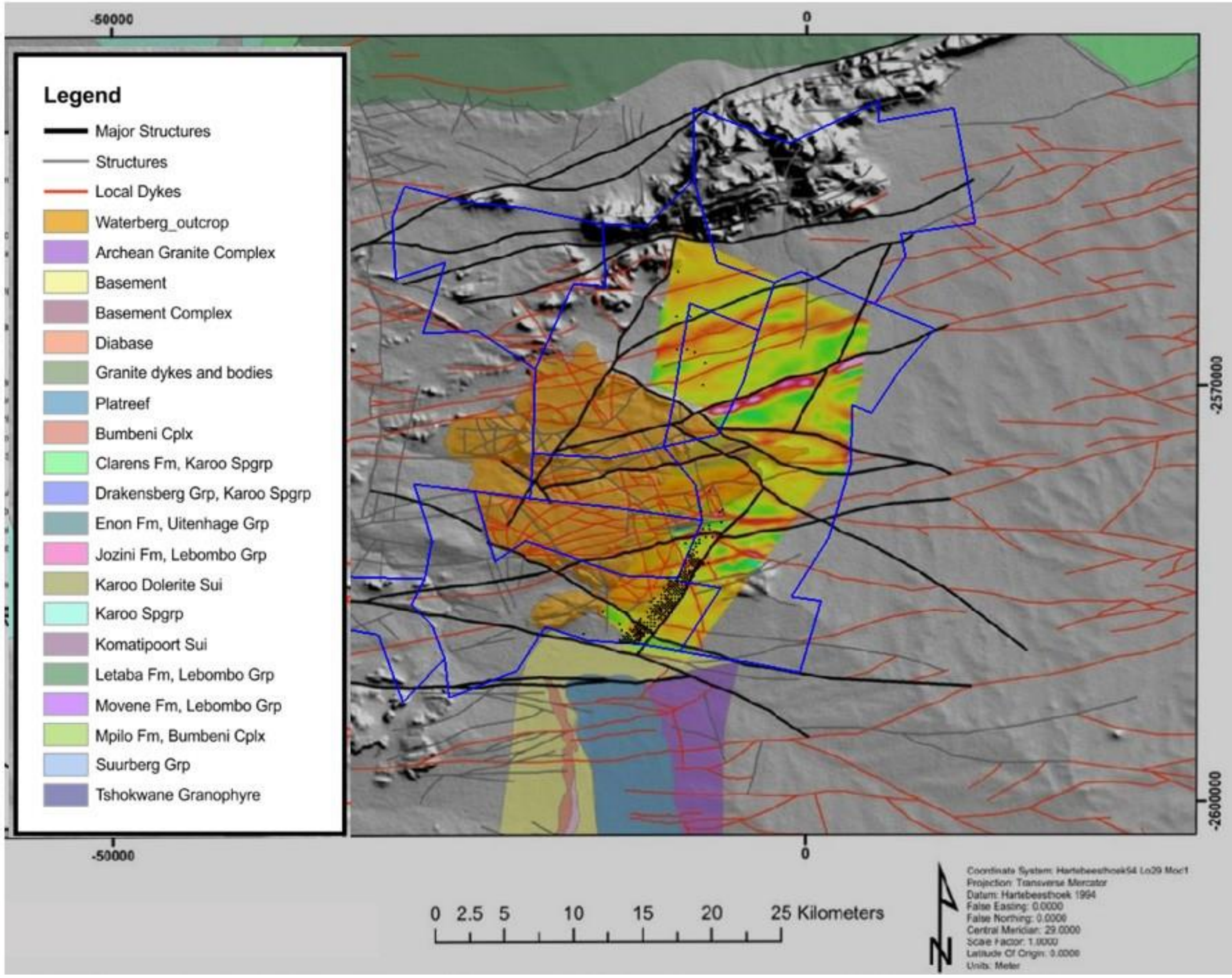
Generally, the Bushveld package strikes south-west to north-east with a general dip of 34º - 38º towards the west is observed from drillhole core for the layered units intersected on Waterberg property within the Bushveld Package. However, some blocks may be tilted at different angles depending on structural and /or tectonic controls.

The Bushveld Upper Zone is overlain by a 120 m to 760 m thick Waterberg Group which is a sedimentary package predominantly made up of sandstones, and within the project area the two sedimentary formations known as the Setlaole and Makgabeng Formations constitute the Waterberg Group. The Waterberg package is flat lying with dip angles ranging from to 2º to 5º.

The base of the Bushveld Main Zone package is marked by the presence of a transitional zone that constitutes a mixed zone of Bushveld and altered sediments/quartzites before intersecting the Transvaal Basement Quartzite and Metasediments.

Structurally, the area has abundant intrusives in the form of thick dolerite, diorite and granodiorite sills or dykes predominantly in the Waterberg package. A few thin sills or dykes were intersected within the Bushveld package. Faults were interpolated from the aerial photographs, geophysics and sectional interpretation and drilling. The faults generally trend (east-west across the property and some are north-west and south-west trending (Figure 13).

Figure 13: Project Geology of the Waterberg Project

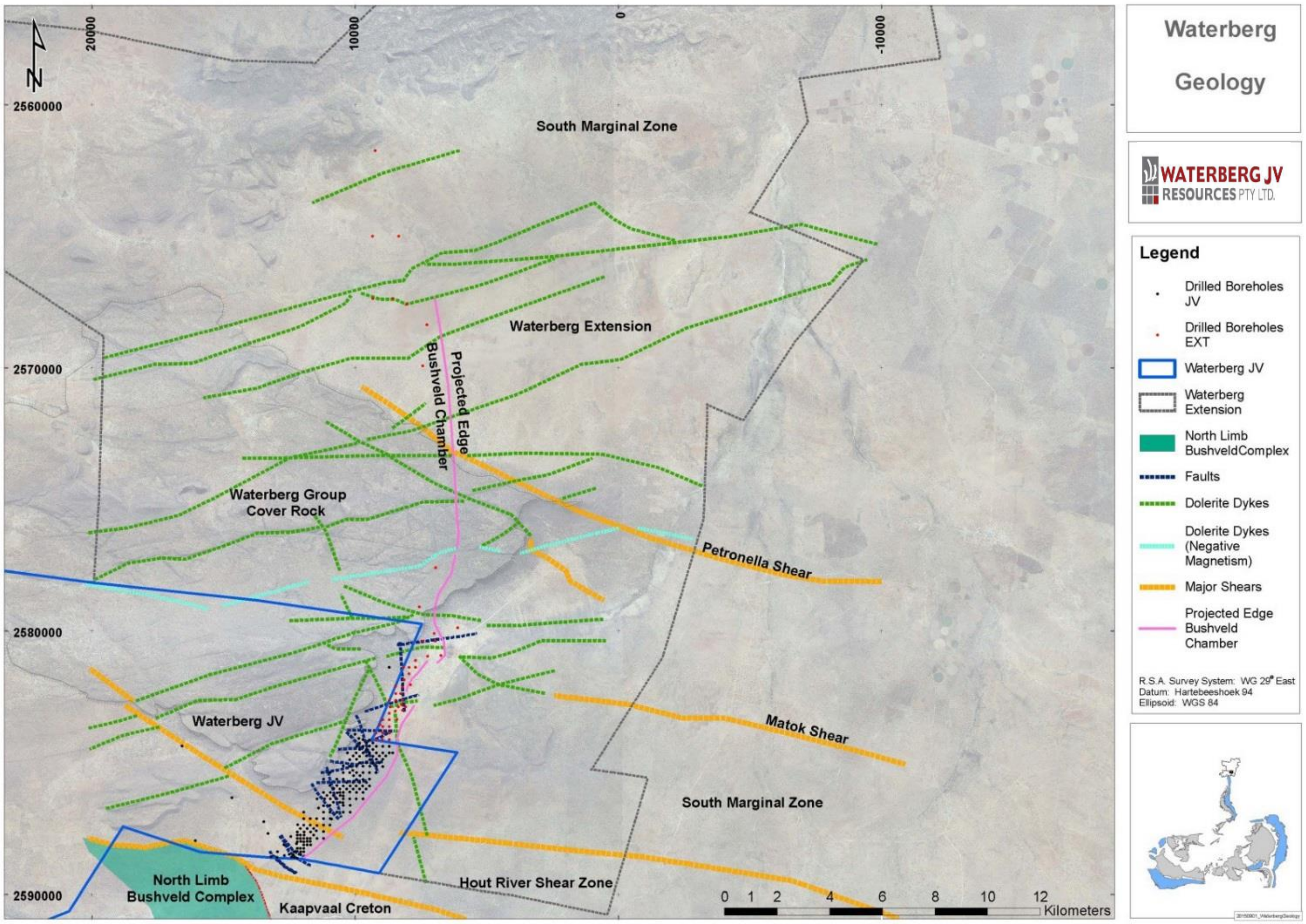


The project geology in the north-eastern portion of the Waterberg JV Project appears to be like the geology in the southeast. However, due to the widely spaced drilling further north, the project geology is less well understood (Figure 14).

There is a general increase in the frequency of late intrusive rocks in the form of dolerite, diorite and granodiorite dykes predominantly in the Waterberg package. A few thin sills or dykes were intersected within the Bushveld package. The dolerite dykes have a variable positive magnetic response and were modelled in 3D from the detailed airborne magnetic data as being vertical to a minimum depth of 300 m. Field mapping confirms the vertical nature of the dykes and recessive weathering nature on surface. The sills and dykes are of similar composition however, the interrelation of the two is currently not known. Many of the east- west dykes appear to have exploited pre-existing structures such as major shears and faults.

A flat lying granodiorite sill with average thicknesses of 80 m appears to be exploiting the contact between the Bushveld Complex igneous rocks and the overlying Waterberg sedimentary rocks. This sill as seen in drillhole intercepts displays both an upper and lower chill margin indicating post Waterberg emplacement. The sill outcrops to the east of the projected edge of the Bushveld and forms low, flat top hills. Using the depth of the sill intersections in drilling and the surface outcrop pattern to the east there appears to be a kink in the dip of sill at or near the projected Bushveld Complex edge that explains the vertical difference in the position of the sill between surface and the projection from drillhole intersections.

Figure 14: Geology of the Northern Waterberg Project Area



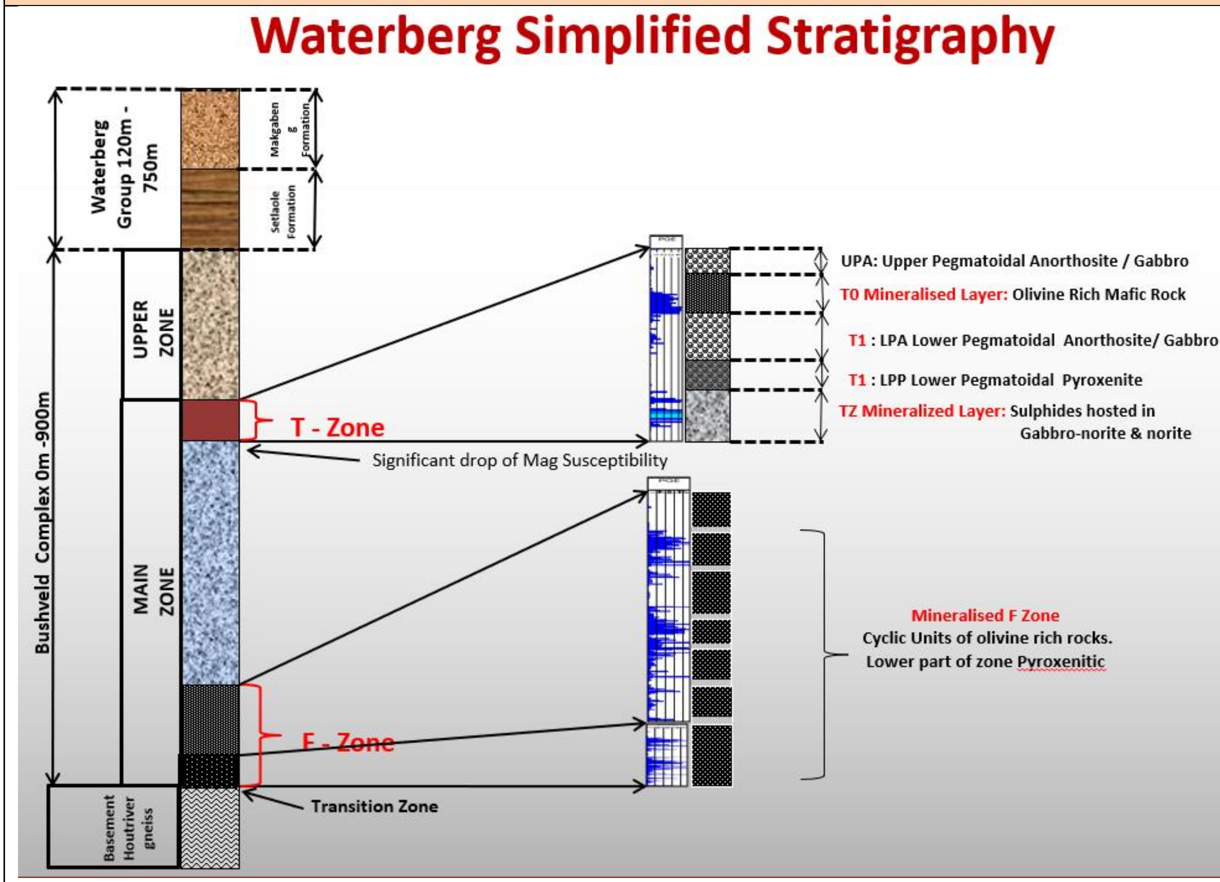
7.4 STRATIGRAPHY

The initial phase of diamond exploration drilling (WB001 and WB002) during the Waterberg JV Project intersected Waterberg Group Sediments (sandstones) and Bushveld Upper Zone and Main Zone lithologies in the western portion of the Disseldorp 369 LR farm property. The follow-up drilling campaign revealed a generalised schematic stratigraphic section that was adopted for use in this property as presented (see Figure 15).

The initial phase of diamond exploration drilling on the farm Early Dawn 361LR intersected Waterberg Group Sediments (sandstones) and Bushveld Complex Main Zone lithologies. This indicates similar stratigraphy to the in the south and, in general, the layers correlate well across farms.

The floor rocks underlying the Transitional zone (Figure 15) are predominantly granite gneiss hosting remnants of magnetite quartzite, metaquartzite, metapelites, serpentinites and metasediments. Some drillholes within the project area have shown dolerite intrusions within the floor rocks, such as drillhole WB028.

Figure 15: Waterberg Simplified Stratigraphy



7.5 BUSHVELD COMPLEX

Bushveld Complex lithologies underlie the Waterberg Group starting with the Upper Zone and underlain by the Main Zone.

7.5.1 THE MAIN ZONE

The 150 m to 900 m thick Main Zone hosts the PGM mineralised layers in its cyclic sequences of mafic and felsic rocks. It is largely composed of gabbronorite, norite, pyroxenite, harzburgite and troctolite with occasional anorthositic phases.

Abundant alteration occurs in these lithologies including chloritisation, epidotisation and serpentinisation. Parts of the F-Zone are magnetic due to the serpentinisation of the olivines. The

F-Zone forms the base of the Main Zone, and it is usually underlain by a transitional zone of intermixed lithologies such as metasediments, metaquartzite / quartzite, and Bushveld lithologies.

7.5.2 THE UPPER ZONE

The south-western part of the project area (west of the farm Ketting 368LR towards farm Disseldorp 369 LR) has a thick package of Upper Zone lithologies. The package in the project consists of magnetite gabbro, mela-gabbronorite and magnetite seams and may be as thick as 350 m. Drillhole WB001 on farm Disseldorp 369 LR collared in Upper Zone and drilled to the depth of 322 m and while still in the Upper Zone intersected a 2.5 m thick magnetite seam.

The appearance of the first non-magnetic mafic lithologies indicates the start of the underlying Main Zone.

7.6 WATERBERG GROUP

In the project area, the Waterberg Sedimentary package occurs mostly with the Makgabeng and Setlaole Formations. The whole package may have a thickness varying from 120 m to slightly over 760 m. Generally, the Waterberg Sedimentary package thickens in the southwest and thins towards the centre of the project area before thickening again to the north. The east-west trending feature through the southern part of the Project is thought to be an erosional channel.

7.6.1 SETLAOLE FORMATION

This is the sedimentary formation underlying the Makgabeng Formation and occurs at the base of the Waterberg Group sedimentary succession. It is this formation that overlies the Bushveld Complex igneous rocks, and it was intersected in more than 90% of the drillholes within the project area.

Lithologically, the Setlaole Formation consists of medium to coarse grained sandstones and several mudstones and shales, that have a general purple colour and usually the package displays a coarsening down sequence. Towards the base of the formation, pebbles may be seen that will eventually appear to be forming conglomerates. The rocks are frequently intruded by dolerite and granodiorite sills. A red shale band of variable thickness is generally present at the base of the Setlaole Formation, below the basal conglomerate.

7.6.2 MAKGABENG FORMATION

This sedimentary formation overlies the Setlaole Formation and is mostly exposed in the mountain cliffs in the northern part of the project area. The formation is composed of light- red coloured banded sandstone rocks and is generally flat lying.

7.7 STRUCTURE

The Waterberg Sedimentary package is intersected by numerous criss-crossing dolerites or granodiorite sills or dykes. These usually range from as thin as 5 cm to as thick as 90 m.

A major northwest-southeast trending fault was inferred based on drillholes towards the southern part of the Ketting 368LR property. The fault throw is estimated to be approximately 300 m. A further fault splay has also been interpreted on the south-eastern part of Ketting 368LR.

8. DEPOSIT TYPES

[SR 2.1 (vi)]

The Platreef-type deposits can include the following features:

- Sulphide-hosted nickel, copper and PGM mineralisation considered to be of magmatic origin.
- A deposit hosted by a composite a combination of norite, pyroxenite, and harzburgite rocks.
- Contact style mineralisation along the base of the intrusion, which may be several hundreds of meters in thickness.
- The mineralised rocks contain locally abundant xenoliths of floor rocks (typically dolomite and shale) suggesting interaction of the magma with relatively reactive floor rocks.
- Thick mineralised intervals greater than 5 m and locally tens to hundreds of meters thick.

The mineralised layers of the Waterberg Project meet some these criteria:

- The mineralisation is hosted by sulphides that are apparently magmatic in origin.
- The mineralised layers can be relatively thick, often greater than 10 m.

The other criteria relating to the Platreef have yet to be demonstrated. Consequently, this mineralisation is deemed to be similar, i.e. Platreef-like, but its stratigraphic position, geochemical and lithological profiles suggest a type of mineralisation not previously recognised in the Bushveld Complex.

8.1 MINERALISATION

[SR 2.1 (v)] [SR 2.1 (vii)]

PGM mineralisation within the Bushveld package underlying the Waterberg Project is hosted in two main layers: T Zone and F Zone.

The T Zone occurs within the Main Zone just beneath the contact of the overlaying Upper Zone. Although the T Zone consists of numerous mineralised layers, three potential economical layers were identified, TZ, T1 and T0 - Layers. They are composed mainly of anorthosite, pegmatoidal gabbros, pyroxenite, troctolite, harzburgite, gabbronorite and norite.

The F Zone is hosted in a cyclic unit of olivine rich lithologies towards the base of the Main Zone towards the bottom of the Bushveld Complex. This zone consists of alternating units of harzburgite, troctolite and pyroxenites. The F Zone was divided into the FH and FP layers. The FH layer has significantly higher volumes of olivine in contrast with the lower lying FP layer, which is predominately pyroxenite.

The mineralisation generally comprises sulphide blebs, net-textured to interstitial sulphides and disseminated sulphides within gabbronorite and norite, pyroxenite, harzburgite.

Within the F Zone, basement topography may have played a role in the formation of higher grade and thicknesses where embayments or large-scale changes in magma flow direction may have facilitated the accumulation of magmatic sulphides. These areas are referred to as the “Super F” Zones where the sulphide mineralisation is over 40 m in thickness and within the defined areas average 3 g/t to 4 g/t (3PGE+Au). Layered magmatic sulphide mineralisation is generally present at the base of the F-Zone. As with the T Zone, the sub-outcrop of the F-Zone unconformably abuts the base of the Waterberg Group sedimentary rocks and trends northeast from the end of the known Northern Limb and dips moderately to the northwest.

The T Zone includes several lithologically different and separate layers (Figure 14) which were initially recognised in the drilling. With subsequent drilling, it has become clear that the most easily identifiable and consistent are the TZ, T1 and T0 - Layers.

8.1.1 DESCRIPTION OF T ZONE LAYERING AND MINERALISATION

The T Zone is a unit which can be correlated and includes five identifiable layers. The three mineralised and economical potential layers are the TZ - Layer, the T1 - Layer, and the T0 - Layer. Figure 16 is a geological interpretation of the T Zone layers.

UPA (Upper Pegmatoidal Anorthosite) – This is the T1 - Layer hangingwall which has a pegmatoidal texture, is mostly anorthositic and in a few cases gabbroic. This unit is generally not mineralised however it was found to have some sulphide mineralisation in a few drillholes and the mineralisation is hosted within the mafic crystals of the pegmatoidal texture.

This unit has a thickness range from 2 m to as thick as 100 m and can be corelated in more than 80% of the drillholes. It must be noted that the unit is absent in few drillholes and it also appears more mafic in some instances due to alteration of the anorthositic and gabbroic phases.

Mineralisation within the **T1 – Layer** is hosted in a troctolite with variations in places where troctolite grades into feldspathic harzburgite. In other localities, olivine bearing feldspathic pyroxenite grades into feldspathic harzburgite. The 3PGE+Au grade (g/t) is typically 1-7 g/t with a Pt:Pd ratio of about 1:1.7. The Cu and Ni grades are typically 0.08% and 0.08% respectively.

The unit is mineralised with blebby to net-textured Cu-Ni sulphides (chalcopyrite/pyrite and pentlandite) with very minimal Fe-sulphides (pyrrhotite). The thickness of the layer varies from 2 m to 6 m.

The direct footwall unit of the T1 - Layer can be divided into two identifiable units: The **Lower Pegmatoidal Anorthosite** (LPA) and the **Lower Pegmatoidal Pyroxenite** (LPP). These units have an unconformable relationship with one another as both are not always present.

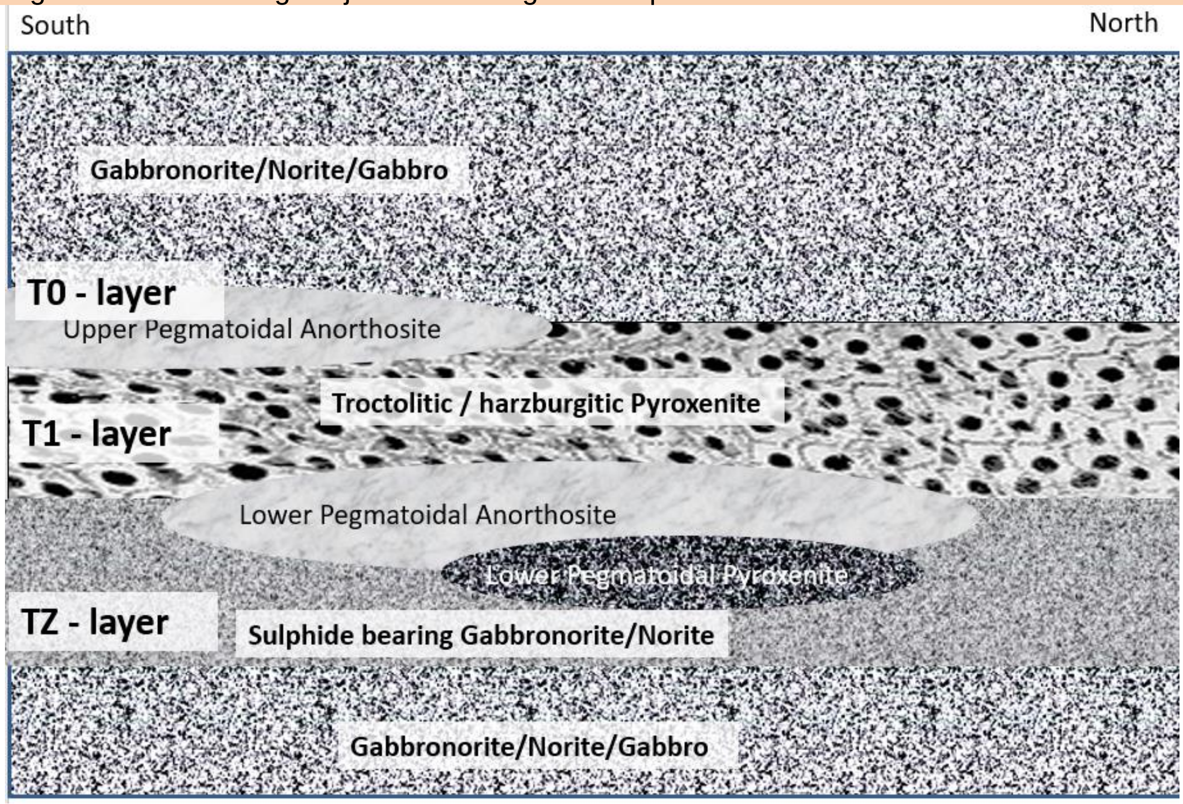
LPA (Lower Pegmatoidal Anorthosite) – This is the first middling unit underlying the T1 – Layer. It has the same composition as that of the UPA but is usually thinner than the UPA. The thickness for this unit ranges from 0 – 3 m, and in some drillholes this unit is not developed. This unit is mineralised in some drillholes.

LPP (Lower Pegmatoidal Pyroxenite) – This is the second middling unit which underlies the LPA, and it predominantly composed of pegmatoidal pyroxenite. It also ranges from 0 – 3 m as it is not developed in other drillholes. This unit also sits as a T2 - Layer hangingwall. Mineralisation has not been identified in this unit.

Mineralisation within the T2 – **Layer** is hosted in Main Zone norite and gabbronorite that shows a distinctive elongated texture of milky feldspars. In some instances, the T2 gabbronorite / norite tends to grade into pyroxenite and in places into a pegmatoidal feldspathic pyroxenitic phases, with the same style of mineralisation as in the gabbronorite / norite. Lithologically, the T2 - Layer is generally thicker than the T1 – Layer. The high-grade zones range from 2 m to approximately 10 m in true thickness within these lithologies. Sulphide mineralisation in T2 – Layer is net textured to disseminated with higher concentration of sulphides compared to the overlying T1 - Layer. The 3PGE+Au grade (g/t) is typically 1-6 g/t with a Pt:Pd ratio of about 1:1.7. The Cu and Ni grades are typically 0.17% and 0.09% respectively.

The Mineral Resource estimate used the data to define the characteristics of the various layers based on their geological characteristics and geochemical signatures (Figure 15).

Figure 16: Waterberg Project - A Geological Interpretation of the T Zone

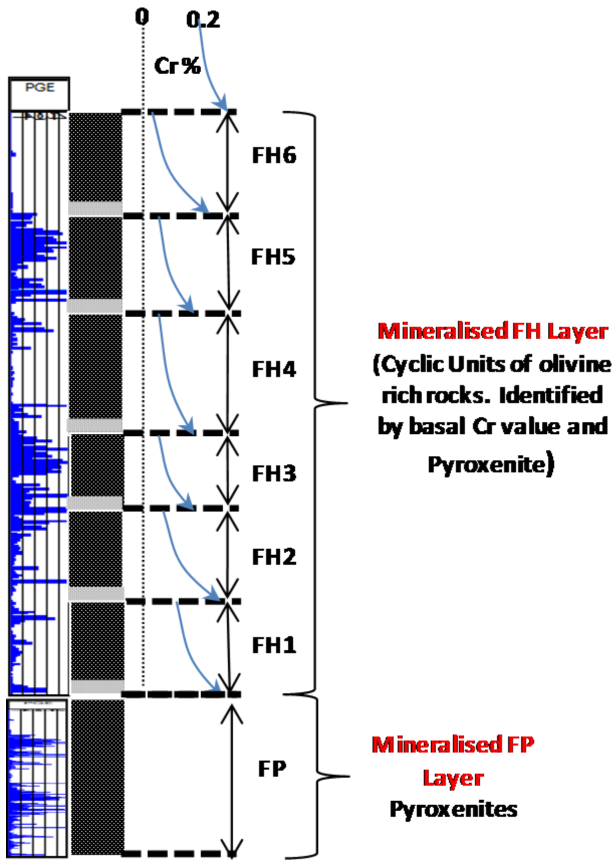


8.1.2 DESCRIPTION OF F – ZONE LAYERING AND MINERALISATION

A thick package of norite and gabbronorite ranging from 100 m to about 450 m underlies the T Zone and overlies the F Zone.

F Zone mineralisation is hosted in a thick package of troctolite, which usually occurs as thin layers of pyroxenite and / or pegmatoidal pyroxenite and harzburgite. These layers or pulses were identified using their geochemical signatures and various elemental ratios. The initial subdivision was into a harzburgitic layer (FH) which is underlain by a pyroxenitic layer (FP). The harzburgitic layer (FH) consist of various cyclic units based on the occurrence of chrome in the geochemical signature (Figure 17). In each case the concentration of the chrome falls off steadily going up in the sequence until the next significant occurrence of chrome is noted. These units cannot be correlated over larger distances.

Figure 17: Individual Units of the F Zone



9. EXPLORATION

[SR 3.1 (i0]

9.1 CURRENT EXPLORATION

The Waterberg Project is at an advanced exploration status and includes an Inferred, Indicated and Measured Mineral Resource estimates. Exploration further north has investigated the interpreted strike extension of the Bushveld Complex. As a result of this drilling program portions of this area are classified as an Inferred Mineral Resource (Figure 42 – Drilled Extension).

Previous mineral exploration activities were limited due to the extensive sand cover and the understanding that the area was underlain by the Waterberg Group. Initial exploration was driven by detailed gravity and magnetics. Subsequently exploration was driven by drilling and was undertaken by Waterberg JV Resources.

Detailed engineering including metallurgy, rock mechanics, mine and infrastructure design work is ongoing as part of the current DFS study.

A total expenditure of US$61 400 622 has been spent to date. It is estimated that an additional US$5 000 000 will be spent to finalise the DFS in 2019.

9.2 SURFACE MAPPING

Topographical and aerial maps for Waterberg at a scale of 1:10,000 were used for surface mapping. A combination of the surface maps and the public aeromagnetic and gravity maps formed the basis for the structural map.

Ground exploration work undertaken included geological mapping and ground verification of the geology presented in various government and academic papers. The major faults and SMZ geology described was confirmed to exist within the property. Contact relationships with the Bushveld Complex were not seen due to the Waterberg cover rock and quaternary sand deposits.

Data for any outcrop observed (or control point) was recorded in the field book: point’s name, description of the outcrop’s rock, identified rock name, XYZ coordinate points, and if well oriented, the dip and strike for the outcrop.

It is noted that most of the area surrounding the Waterberg Mountains is covered by Waterberg sands and as such mapping in these areas has provided minimal information. Access to some parts of the Waterberg Mountains is problematic due to steep slopes close to the mountains.

9.3 GEOCHEMICAL SOIL SAMPLING

In March 2010 two north-south sampling lines (Figure 18) were undertaken. Sampling stations were made at intervals of 25 m. Each sample hole extended to a minimum depth of 50 cm to 1 m at most.

During December 2011 and January 2012 two additional north-south lines on the property Niet Mogelyk 371LR were also sampled (Figure 18). These two lines were done to target the east- west trending dykes that are running through this property and the sampling stations were set at 50 m apart.

During January 2013 an additional three lines were taken on the farms Bayswater 370LR and Niet Mogelyk 371LR. These samples were taken to investigate soil anomalies discover by the previous sampling programs (Figure 18).

A total of 723 samples, of which 367 were soil samples, 277 stream sediment samples and 79 rock chip samples, were collected during this process.

Geochemical sampling of the soils was also partially compromised due to very thin overburden because of sub cropping rock formations.

Geochemical sampling showed elevated PGM’s and this increased exploration interest in the area in 2011.

9.4 GEOPHYSICAL SURVEYS

Initial detailed ground geophysical surveys were confined to the Waterberg JV Project and were funded by the partner JOGMEC. The detailed airborne survey was completed predominantly over the Waterberg Extension area, with some overlap over the defined Bushveld edge geology on the advanced stage Waterberg JV Project.

9.4.1 INITIAL SURVEY

Approximately 60 lines of gravity and magnetic geophysical survey, covering 488 km, were traversed in March 2010 (Figure 18). These were east – west trending lines and were traversed on the farms Disseldorp 369LR, Kirstenspruit 351LR, Bayswater 370LR, Niet Mogelyk 371LR and Carlsruhe 390LR.

In March 2010, the Prospecting Right for the farm Ketting 368LR was still pending. When this was granted, a second phase of Geophysical Survey was conducted on this farm from mid-August 2011 to September 2011 (Figure 18).

Two supplementary north-south ground magnetics lines were surveyed over the farm Ketting 368LR in November 2012. This information was used to interpret and locate east-west striking structures (Figure 18).

On the Waterberg Extension area, due to the presence of Waterberg Group cover rocks, there was no exposure of Bushveld Complex rocks. Geophysical techniques were used to assist in the modelling of the projected Bushveld Complex. A comparison of the regional geophysics modelling, the FALCON airborne survey interpretation and the ground gravity profiles demonstrated general correlation, with local variations, of a north-northeast arch where the edge of the denser Bushveld Complex mafic intrusive rock may project beneath the Waterberg Group sediment cover.

9.4.2 EXTENDED AIRBORNE GRAVITY GRADIENT AND MAGNETICS

An airborne gravity survey was completed on 100 and 200 m line spacing. An interpretation of the results of the survey suggests that there may be continuity to the Bushveld Complex rocks to the northwest and north, which has the potential to host PGM mineralisation to the northeast within the Project area.

PTM contracted FUGRO Airborne Surveys (Pty) Ltd. to conduct airborne FALCON® gravity gradiometry and total field magnetic surveys. The target for the survey was the interpreted edge sub-cropping of the Bushveld Complex to which the Waterberg sediments form the regional hanging wall. Conducted in April 2013, the survey was comprised of 2306.16-line kilometres of Airborne Gravity Gradiometry (AGG) data and 2469.35-line kilometres of magnetic and radiometric data. The total extent of the survey covered approximately 25 km of interpreted Bushveld Complex edge in the north-eastern part of the Project area (Figure 19).

Interpretation was based on creating a starting model using the known geology from drilling and linking it to the airborne response (Figure 20 and Figure 21). The geological units were modelled in three dimensions in order to facilitate a three-dimensional stochastic inversion of the geometry and density of the units making use of the gravity gradient data.

Figure 18: Locations of Geochemical Sampling and Geophysical Traverses

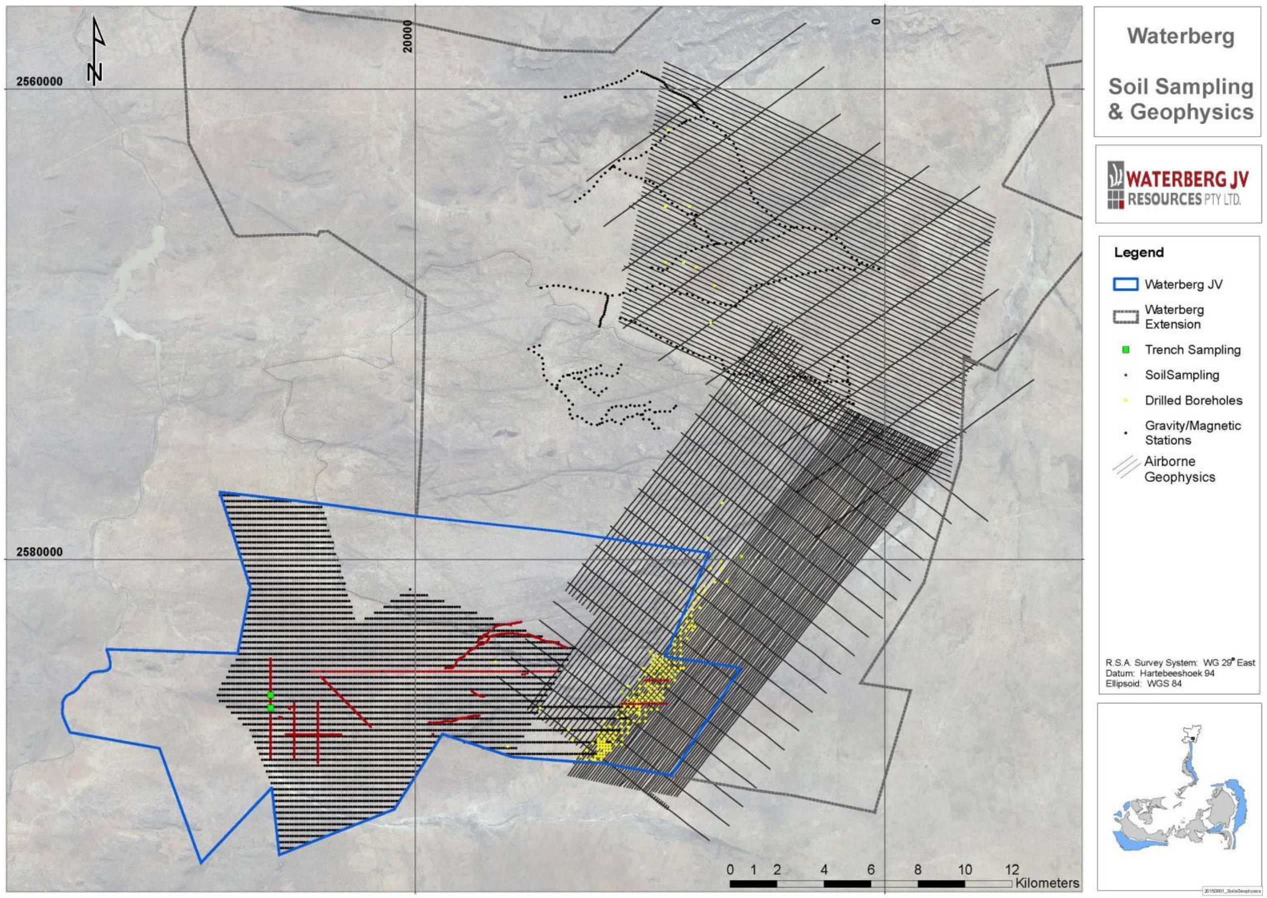


Figure 19: Airborne Gradient Gravity and Magnetic Survey Flight Lines

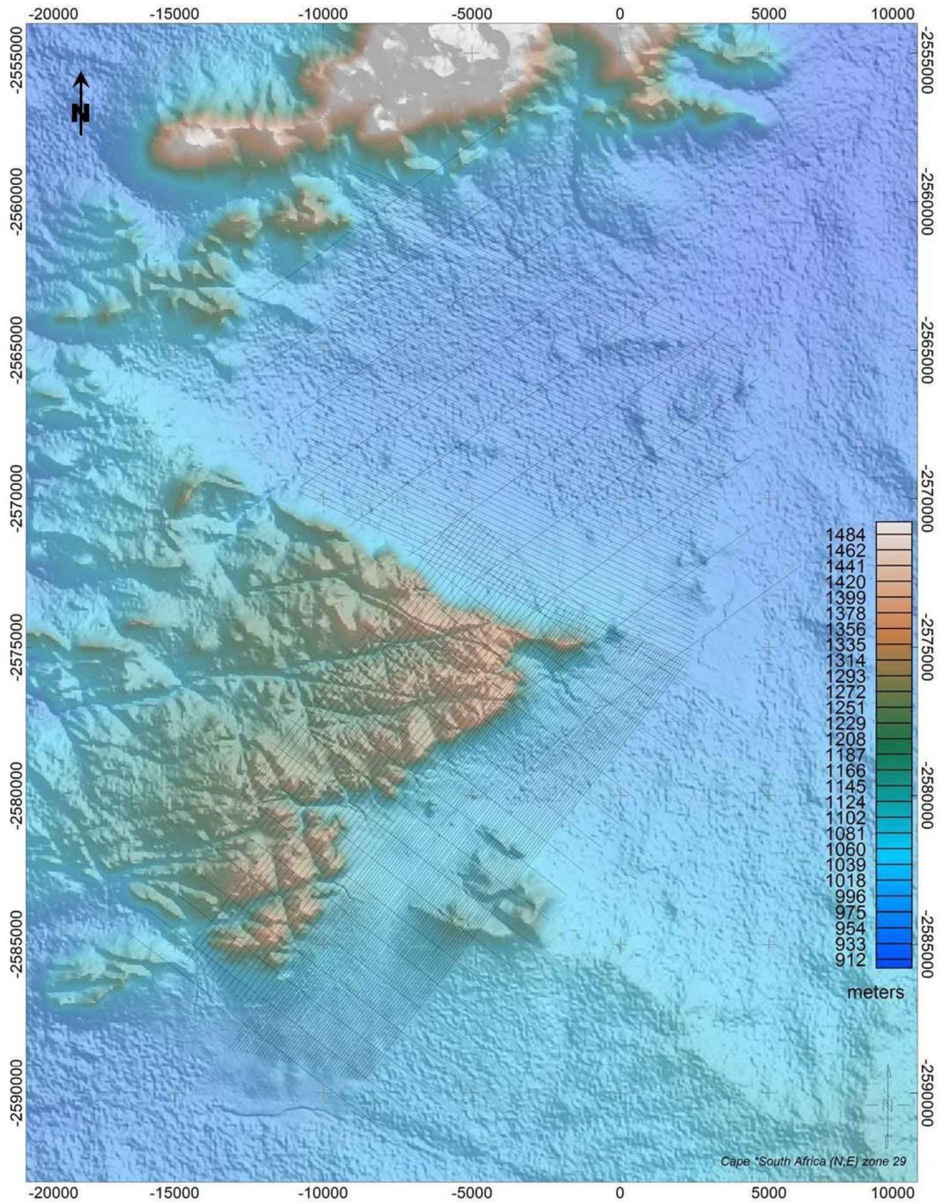


Figure 20: Waterberg Project Airborne Gradient Gravity Plot with Interpreted Bushveld Complex Edge

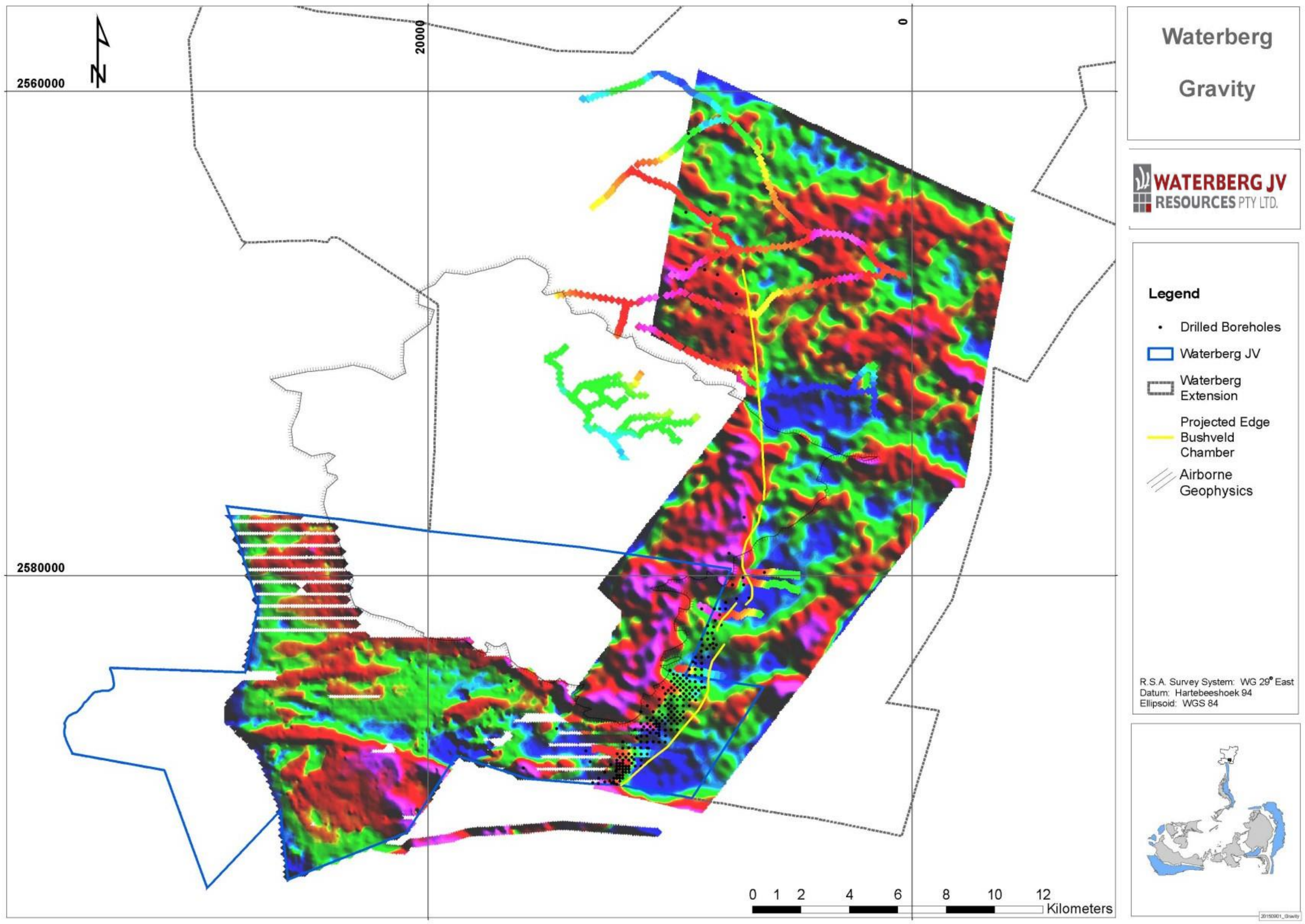
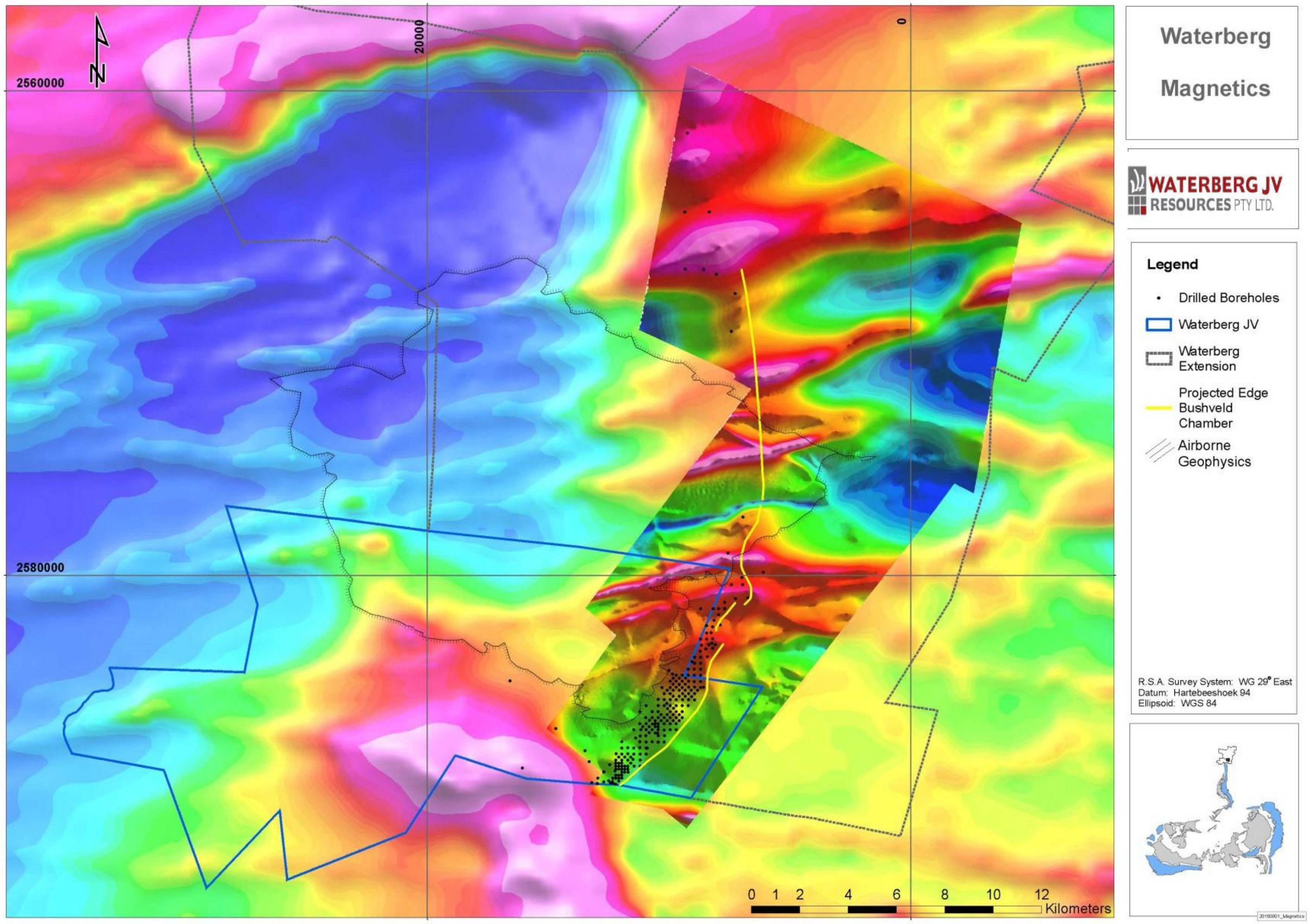


Figure 21: Airborne Total Field Magnetics Plot with Interpreted Bushveld Complex Edge



9.4.3 GROUND GRAVITY

A total of nine ground gravity traverses were completed by Geospec Instruments (Pty) Ltd along roads and tracks. The survey lines were designed to traverses across the projected edge of the Bushveld Complex in the same area covered by the airborne survey as ground confirmation of the airborne results. The two surveys were compared and good correlation between gravity data sets noted. In planning the ground survey, one control line over the known deposit edge at the point where it projected from the southern part of the Project, was completed in order to acquire a signature profile over a known source to compare the remaining regional lines to. The interpretation of the linked ground gravity profiles suggests that there may be a northwest trending continuity to the Bushveld Complex rocks which have the potential to host PGM mineralisation.

9.4.4 HIGH RESOLUTION AEROMAGNETIC AND RADIOMETRIC SURVEY

A high resolution, aeromagnetic and radiometric survey was conducted by Xcalibur Airborne Geophysics in December 2017.

9.4.4.1 GENERAL SURVEY INFORMATION

The project blocks consisted of approximately 1595 line-km. The survey commenced on the 28th of November 2017 and was completed on the 30th of November 2017. Data collected was magnetic, radiometric and DTM.

Figures 22 -24 show the location and design of the survey blocks.

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Figure 22: Survey Area Location

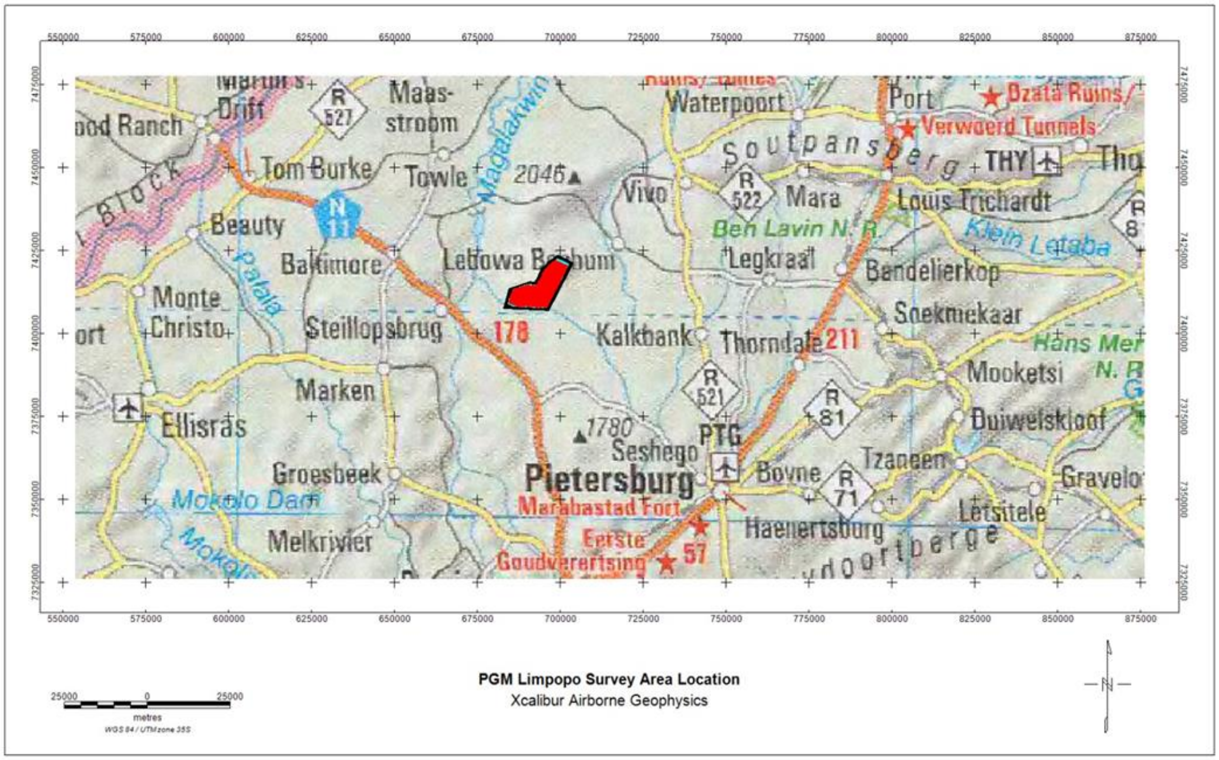

Figure 23: Survey Area SRTM Image

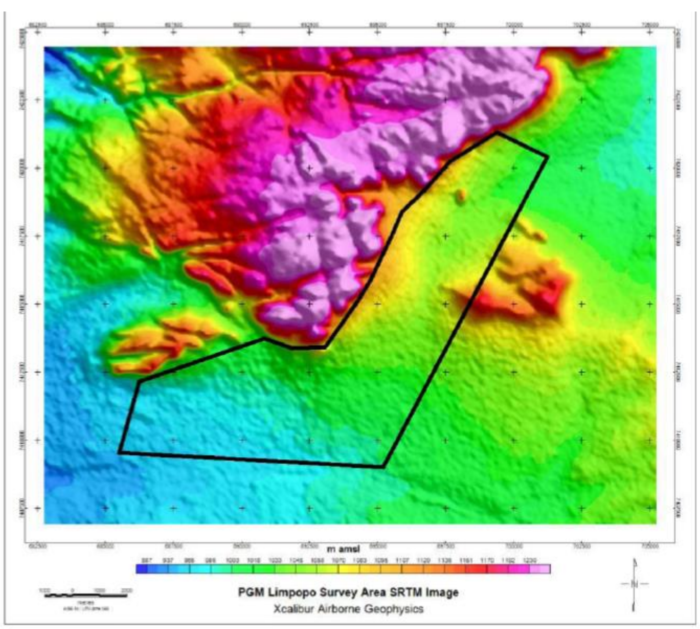

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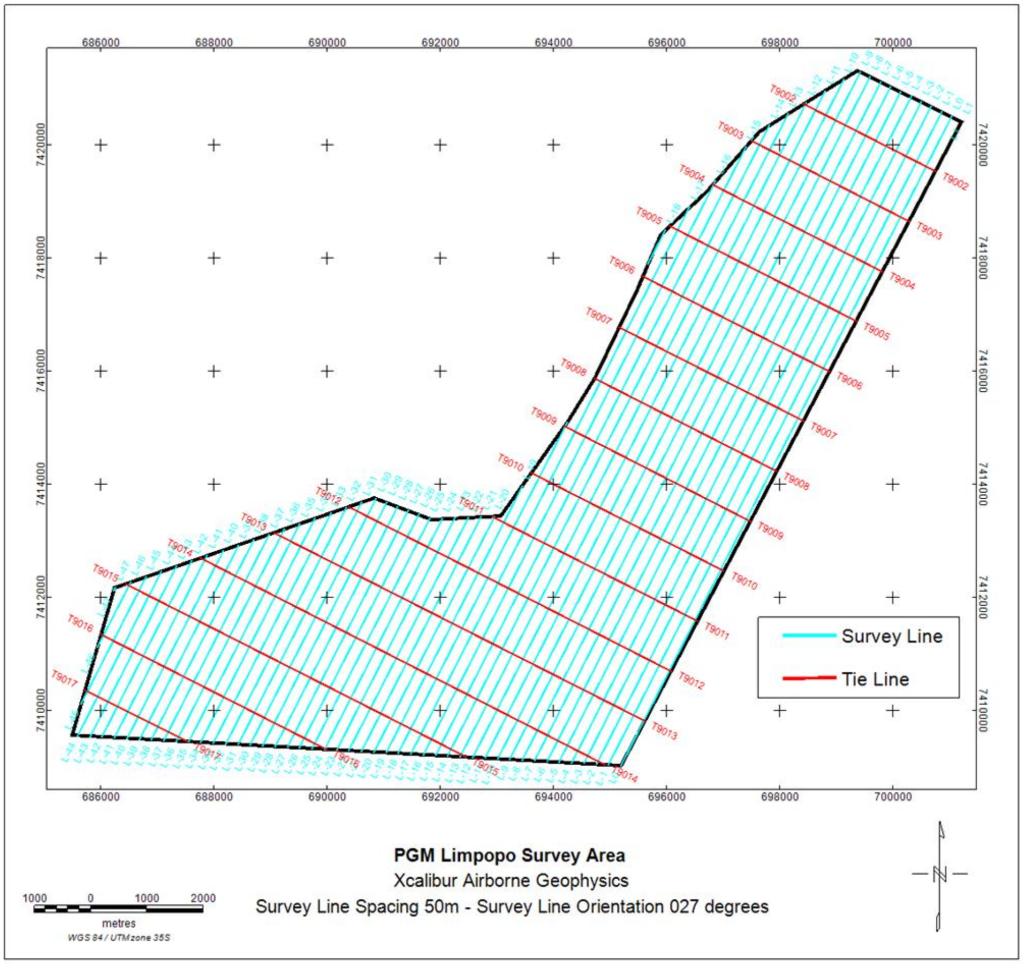
Figure 24: Survey Area Line Spacing 50m and Line Orientation 027 degrees



9.4.4.2 BASIC SURVEY PARAMETERS

Please note: All data were recorded, processed and delivered in the UTM35 South projection system using the UTM WGS 84 datum.

Line Direction: 27 - 207° with respect to UTM 35S Zone coordinate system.

Tie Line Direction 117 - 297° with respect to UTM 35S Zone coordinate system.

Ground Clearance: 35 meters (hazard dependant)

Line Spacing: 50 meters

Tie Line Spacing: 500 meters

Sample spacing: magnetic: 4 meters; radiometric 40 m

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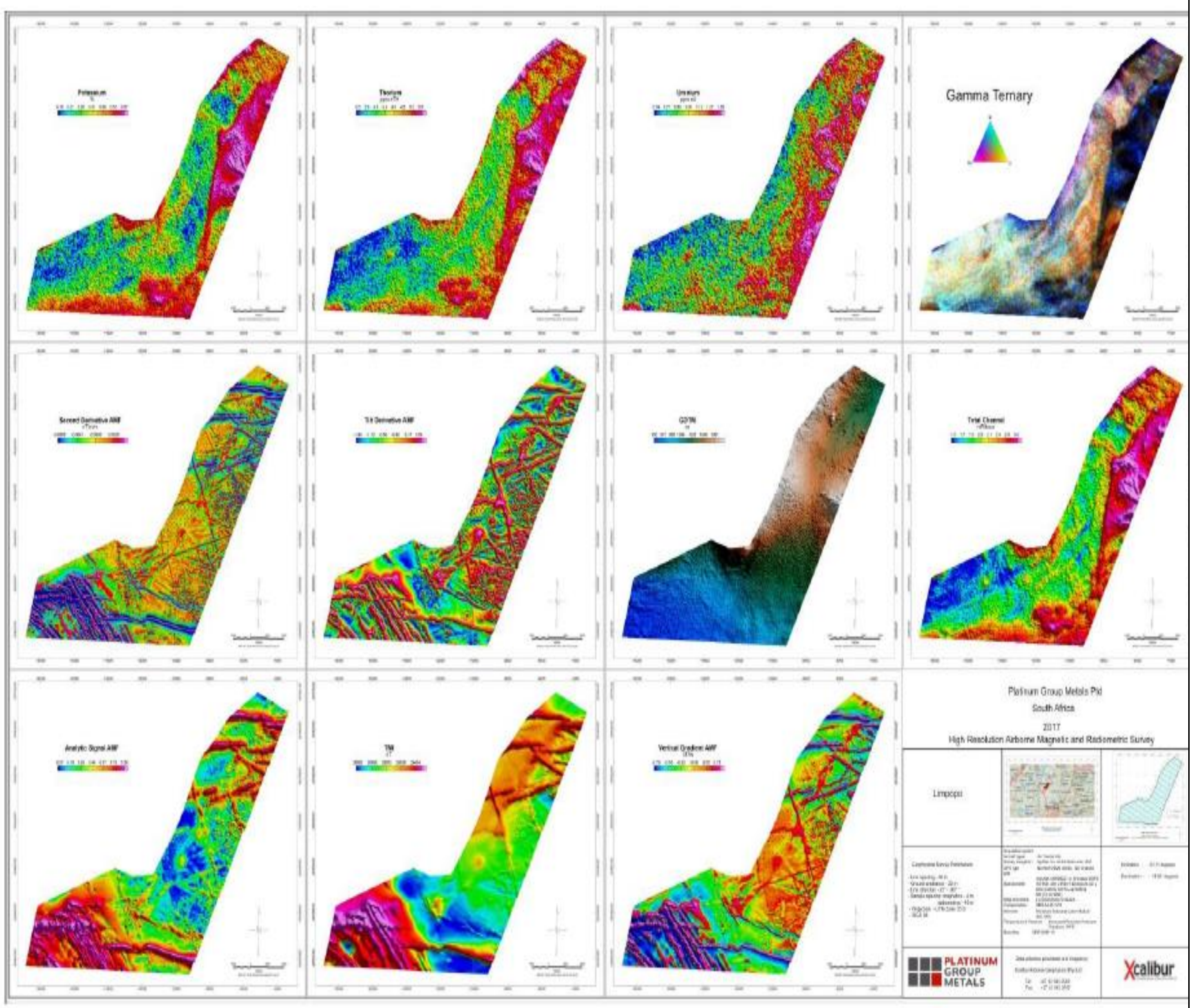
9.4.4.3 BASIC DATA

The high-resolution data is shown in Figure 25.

Figure 25: High Resolution Airborne Magnetic and Radiometric Survey Data



9.5 CJM: TECHNICAL REVIEW

[SR 2.1 (iv)]

Suitable exploration was undertaken with appropriate conclusions and follow-up work completed.

10. DRILLING

[SR 3.2 (i)] [SR 3.2 (iii)] [SR 3.2 (iv)]

Drilling was done by a specialized contractor, Discovery Drilling (Pty) Ltd mobilized out of Marken town, South Africa. All drilling was undertaken by diamond drill coring and are near-vertical at their collars. Generally, drillholes were drilled using NQ core (47.6 mm), occasionally necking down to BQ if poor ground conditions were encountered or deep drilling was required. Metallurgical holes were drilled using NQ sized core. Table 11 summarises the drilling by year.

Table 11: Summary of Drilling by Year

Year	Number of Holes	Deflections	Total Meters	Cumulative Meters	Results
2010	2	2	1 934	1 934	T-Zone Discovery
2011	1	3	1 774	3 708	F Zone Discovery
2012	27	62	30 269	33 977	Mineral Resource Delineation Drilling
2013	82	158	94528	128 505	Mineral Resource Estimate, 2013-09-03
2014	41	53	35 079	163 584	Mineral Resource Estimate, 2014-06-12
2015	78	95	85 164	248 748	Mineral Resource Estimate, 2015-07-20
2016	63	86	49 790	298 538	Mineral Resource Estimate, 2016-04-18
2017	83	95	32 422	330 960	Infill Drilling
2018	60	30	28 972	359 932	Mineral Resource Estimate, 2018-09-30
Totals	437	585	359 932		

The average drillhole length is 617 m, the minimum drillhole length is 200 m (WB218) and the maximum drillhole length is 1643 m (WB004).

10.1 2010 DRILLING

Based on the target generation and the results of the geochemical sampling and geochemical surveys, two drillholes WB001 and WB002 were initially drilled between July and October 2010 on the farm Disseldorp 369LR. A total of 1 934 m was drilled for the first two drillholes in 2010. These holes intersected the “T” layers of mineralisation.

10.2 2011 DRILLING

Drilling resumed in 2011 with a third drillhole WB003 drilled on the farm Ketting 368LR. This hole cut both “T” and “F” zone mineralisation.

10.3 2012 DRILLING

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These drillholes led to the 2012 drill campaign which delineated a portion of the Waterberg mineralisation. In 2012 30 269 meters in 27 holes with 62 deflections were completed. This work delineated the southern portion of the Waterberg Deposit.

10.4 2013 DRILLING

A total of 128 505 m of core had been drilled by September 2013, the cut-off date of the Mineral Resource estimate. The results of 112 drillholes were available for the Mineral Resource estimate. A basic 250 m x 250 m grid drilled grid was used to position the drillholes where possible.

Drilling in some areas proved to be difficult due to bad ground formations particularly in the Waterberg sediments and consequently some drillholes had to be re-drilled a few meters away or totally abandoned or moved.

Diamond drilling commenced towards the north-east in October 2013 upon the official granting of the prospecting right for the Waterberg Extension Area. The initial drillhole locations were chosen to test the interpreted northeast strike continuation of the Bushveld Complex edge and mineralised layers defined on the adjacent Waterberg Project with step outs of 1 to 2 km. Six diamond drill machines were mobilized. Eight of the nine initial drillholes intersected Bushveld Complex stratigraphy.

10.5 2014 DRILLING

The 12 June 2014 Mineral Resource estimate dataset consisted of 153 drillholes, 278 deflections and 163 384 meters. Some 41 drillholes were completed during 2014.

10.6 2015 DRILLING

The initial database for this Mineral Resource estimate was received on 22 April 2015. The raw database consisted of 231 drillholes with 373 deflections totalling 248 748 meters. The southern JV area contains 182 holes and 303 deflections, and the northern Extension area contains 49 drillholes with 70 deflections.

10.7 2016 DRILLING

The database for this Mineral Resource estimate was received on April 1, 2016. The raw database consisted of 294 drillholes with 459 deflections totalling 298 538 meters.

10.8 2017/2018 DRILLING

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The database for this Mineral Resource estimate was received on July 18, 2018. The raw database consisted of 437 drillholes with 585 deflections totalling 359 932 meters.

10.9 COLLAR SURVEYS

[SR 3.1 (v)]

A contracted certified land surveyor used a differential Trimble GPS system to conduct collar surveys on all completed holes. Stations were tied in with survey stations established by the National Survey General Directorate. Drillhole coordinates were given in the Hartebeesthoek 1994 LO29 national coordinate system.

10.10 DOWNHOLE SURVEYS

[SR 3.2 (v)]

Downhole surveys are done on 1 m intervals using a gyroscopic (gyro) tool with some older holes using an electronic multi-shot (EMS) tool. Deflections are done using a gyroscopic (gyro) tool. There are five mineralised, vertically drilled original holes that were not surveyed due to bad ground conditions (WB108 - 427.60 m, WB110 - 1276.47m, WE006 - 498.23 m, WE016 - 883.80 m and WE025 - 736.28 m).

10.11 DRILLING QUALITY

CJM has examined core from randomly selected drillholes. The core recovery and core quality meet or exceed industry standards. The quality of the work in the drilling programs is excellent.

Drilled core is cleaned, de-greased and packed into metal core boxes by the drilling company. The core is collected from the drilling site daily by Waterberg JV Resources personnel and transported to the exploration office. At no time is the core left unattended at the rig. Before the core is taken off the drilling site, the depths are checked and entered on a daily drilling report, which is then signed off by Waterberg JV Resources. The core yard manager is responsible for checking all drilled core pieces and recording the following information:

- Drillers' depth markers (discrepancies were recorded);
- Fitment and marking of core pieces;
- Core losses and core gains;
- Grinding of core;
- One-meter-interval markings on core for sample referencing; and
- Re-checking of depth markings for accuracy.

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Each core box is photographed using a digital camera from fixed vertical distance. The photographs are stored on a network server.

10.12 GEOLOGICAL LOGGING

[SR 3.2 (ii)]

Standardised geological core logging conventions were used to capture information from the drill core. Detailed geological logging was completed daily by qualified geologists onto a pro-forma capture sheet under supervision of the project geologist.

Geological core logging involved the recording of lithology (rock type, grain size, texture, angle to the core axis, top and bottom contact types, colour and optional comments); stratigraphic units; type and degree of alteration (infill, partial, or pervasive); and mineralisation (type, style and visible percentage of sulphides).

Three magnetic susceptibility readings are taken and averaged together from the beginning of the BC lithologies to the end of hole at 1 m intervals.

Once the geological logging is captured into the SABLE database on site, the logs are printed, and a qualified geologist checks the core against the captured logs to verify that the data was recorded and captured correctly. The printed logs are then signed off and stored in the drillhole file.

All data is captured in the field directly in the SABLE database located at Waterberg JV Resource offices, Johannesburg via the company network.

All documentation relating to each drillhole including geological logs, survey certificates, collar certificates, sampling sheets, assay certificates etc. are collated and filed in a file for each drillhole at the field camp. All documentation is scanned and sent electronically to the Waterberg JV Resources office in Johannesburg and saved on the server along with all available digital photographs.

10.13 DIAMOND CORE SAMPLING

[SR 3.3 (ii)] [SR 3.3 (iv)] [SR 3.3 (vii)] [Sr 3.5 (iii)]

Sample selection was undertaken by qualified geologists, based on a minimum sample length of approximately 25 cm, with an average length of 50 cm. Not all drillhole core was sampled, but all core with visually identifiable sulphide mineralisation was analysed, and low grade to

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waste portions straddling these layers have also been sampled. A maximum sample length of 1.5 m was applied where appropriate. The true width of the shallow dipping (30° to 35°) mineralised zones that were sampled are approximately 82% to 87% of the reported interval from the vertical drillhole.

The sampled core is split using an electric powered circular diamond blade saw. Samples are cut according to the sampling sheet created by the geologist logging the hole.

10.14 CORE RECOVERY

[SR 3.3 (vi)]

Core recoveries, RQD (Rock Quality Designation) and a note of core quality, are recorded continuously for each drillhole and for each drill run. The core recovery within the first few meters of drillholes (approximately 5 m) is poor in most cases due to the associated soil horizon classified as overburden. Poor recovery occasionally extended to about 30 m depth due to the weathering of bedrock. However, usually, core recovery improved considerably once drilling reached the Main Zone hanging-wall, reef horizons and footwall rocks, and in these units was commonly 100%. The recoveries only show a substantial decrease within faulted/sheared zones.

10.15 SAMPLE QUALITY

[SR 3.5 (iii)] [SR 3.5 (iv)]

CJM has examined selected drillholes and has assessed the quality of sampling to meet or exceed industry standards.

10.16 INTERPRETATION OF RESULTS

The results of the drilling and the general geological interpretation are digitally captured in SABLE and a GIS software package named ARCVIEW. The drillhole locations, together with the geology and assay results, are plotted on plan. Regularly spaced sections are drawn to assist with correlation and understanding of the geology. This information was useful for interpreting the sequence of the stratigraphy intersected as well as for verifying the drillhole information.

10.17 CJM: TECHNICAL REVIEW

[Sr 3.5 (iv)]

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Suitable drilling was undertaken with appropriate standards in place to ensure that the data is suitable for use in geological modelling and Mineral Resource estimation on the Waterberg Project. Further exploration drilling is ongoing.

In the opinion of CJM the quantity and quality of the lithological, geotechnical, collar and downhole survey data collected in the exploration and infill drill programs are enough to support Mineral Resource estimation as follows:

- Core logging meets industry standards for PGE–Au–Ni–Cu exploration.
- Collar surveys and downhole surveys were performed using industry-standard instrumentation.
- Recovery from core drill programs is acceptable to allow reliable sampling to support Mineral Resource estimation.

11. SAMPLE PREPARATION, ANALYSES AND SECURITY

[SR 3.5 |(i)]

11.1 SAMPLING METHOD AND APPROACH

[SR 3.3 (ii)] [SR 3.3 (vi)] [SR 3.3 (vii)] [SR 3.6 (i)]

Waterberg Project staff members were responsible for the following:

- Sample collection
- Core splitting
- Sample dispatch to the analytical laboratory
- Sample storage
- Sample security

Once geological logging is complete and validated, the qualified geologist identifies the units to be sampled based on stratigraphic, lithological and visible sulphide mineralisation criteria. Continuous sampling from the top of the mineralised zone to well below footwall contacts is undertaken. The geologist varies the thickness of sampling intervals according to changes in stratigraphy, lithology and mineralisation to ensure that samples do not cross-cut these boundaries. Areas of core loss are recorded, and depths of the samples are carefully noted to exclude these intervals. Samples vary from 25 cm to 1.5 m in thickness.

The geologist prepares the sampling instruction sheet for the samples. Sample depths, sample numbers, blanks and standards to be inserted and into what positions are provided. A blank is inserted for one in every 10th sample and a standard (CRM) is also inserted for one in every 10th
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sample. The result is that there is a quality control sample after every five primary samples. This continues down the length of the sampled section.

Before any sampling takes place, the core is orientated and secured together with tape where it is broken in places. A continuous line, marking the estimated plane of symmetry, is drawn on the core by the sampling geologist to ensure that all cores are split correctly.

Drill core is cut using a wet saw. The split core is placed back in the core tray and put in the sun to dry. When the core is dry, samplers mark the sampled intervals and the sample number on the core on both the section of core to be sampled and the core remaining in the tray as instructed from the sample sheet. It is the full responsibility of the Sampler to ensure that representative samples are taken i.e. one side of the core is sampled for all samples. It is also the full responsibility of the Sampler to ensure that the right ticket is allocated to the right sample as on the sample sheet and that the sample plastic bags are properly labelled.

An Assistant is assigned to each Sampler. The Assistant's responsibility is to remove the tape from the samples, squeeze the air out of the sample bags, wrap the sample bags properly, weigh the samples (with weight of the sample bags normalised on the scale) and stapling of the sample bags.

The section of core to be sampled is placed in a plastic bag with a sample ticket from the ticket book.

For inserted standards (CRM's), the label identifying the standard is removed and stored in a separate bag for reference purposes. The sample number assigned to the standard is written on the standard label itself. All the CRM labels are filed in the field camp and are checked if there are any queries. The sachet is placed in a sample bag with the sample ticket.

For blanks, material is placed in the sample bag with the corresponding sample ticket.

The sample bags are then sealed, and the sample number written on the bag itself. The sample in the bag is then weighed and the weight in grams recorded on the sample sheet.

Samples are placed together into a bigger bag and sealed prior to dispatch.

The sample instruction sheets are loaded into the SABLE database and validated.

11.2 DENSITY DETERMINATIONS

[SR 3.7 (i)] [SR 3.7 (ii)]

Routinely, samples are subjected to bulk density determinations by the Archimedes immersion method on site at the core yard. Both the dry mass and the wet mass of the sample are recorded. This data is captured into the SABLE database and validated. The density (SG) is then calculated and matched to the assay results for that sample for modelling purposes.

The formula for Specific Gravity is as follows:

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- Specific Gravity = Ma / (Ma-Mw)

- Where Ma = Mass in Air and Mw = Mass in Water

33 754 samples were measured for bulk density. These densities are representative of the stratigraphic and lithological units used within the geological model.

11.3 QUALITY CONTROL PRIOR TO DISPATCH

[SR 3.5 (iii)]

The project geologist is responsible for timely delivery of the samples to the relevant laboratory. The supervising and project geologists ensure that samples are transported by Waterberg JV Resources contractors.

When samples are prepared for shipment to the analytical facility, the following steps are followed: -

- Samples are sequenced within the secure storage area and the sample sequences examined to determine if any samples were out of order or missing.
- The sample sequences and numbers shipped are recorded both on the chain-of-custody form and on the analytical request form.
- The samples are placed according to sequence into large plastic bags (the numbers of the samples were enclosed on the outside of the bag with the shipment, waybill or order number and the number of bags included in the shipment).
- The chain-of-custody form and analytical request sheet are completed, signed and dated by the project geologist before the samples are removed from secured storage. The project geologist keeps copies of the analytical request form and the chain-of-custody form on site.
- Once the above is completed and the sample shipping bags are sealed, the samples may be removed from the secured area. The method by which the sample shipment bags were secured must be recorded on the chain-of-custody document so that the recipient can inspect for tampering of the shipment.

11.4 SECURITY

[SR 3.5 (iii)]

Samples are not removed from secured storage location without completion of a chain-of-custody document; this forms part of a continuous tracking system for the movement of the samples and persons responsible for their security. Ultimate responsibility for the secure and timely delivery of the samples to the chosen analytical facility rests with the project geologist and samples are not transported in any manner without the project geologist's permission.

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During the process of transportation between the Project site and analytical facility, the samples are inspected and signed for by each person or company handling them. It is the mandate of both the supervising and project geologist to ensure secure transportation of the samples to the analytical facility. The original chain-of-custody document always accompanies the samples to their destination.

The supervising geologist ensures that the analytical facility is aware of the Waterberg JV Resources standards and requirements. It is the responsibility of the analytical facility to inspect for evidence of possible contamination of, or tampering with, the shipment received from Waterberg JV Resources. A photocopy of the chain-of-custody document, signed and dated by an official of the analytical facility, is faxed to Waterberg JV Resources offices in Johannesburg upon receipt of the samples by the analytical facility and the original signed letter is returned to Waterberg JV Resources along with the signed analytical certificate/s.

The analytical facility's instructions are that if they suspect the sample shipment was tampered with, they will immediately contact the supervising geologist, who will arrange for someone in the employment of Waterberg JV Resources to examine the sample shipment and confirm its integrity prior to the start of the analytical process.

If, upon inspection, the supervising geologist has any concerns whatsoever that the sample shipment may have been tampered with or otherwise compromised, the responsible geologist will immediately notify the Waterberg JV Resources management in writing and will decide, with the input of management, how to proceed. In most cases, analyses may still be completed, although the data must be treated, until proven otherwise, as suspect and unsuitable as a basis for a news release until additional sampling, quality control checks and examination prove their validity.

Should there be evidence or suspicions of tampering or contamination of the sampling, Waterberg JV Resources will immediately undertake a security review of the entire operating procedure. The investigation will be conducted by an independent third party, whose report is to be delivered directly and solely to the directors of Waterberg JV Resources, for their consideration and drafting of an action plan. All in-country exploration activities will be suspended until this review is complete and the findings were conveyed to the directors of the company and acted upon.

The QP of this report is satisfied with the level of security and procedures in place to ensure sample integrity.

11.5 SAMPLE PREPARATION AND ANALYSIS

[SR 3.3 (v)] [SR 3.4 (i)] [SR 3.4 (ii)] [SR 3.4 (iii)] [SR 3.6 (i)]

The laboratories that were used to date are Set Point Laboratories (South Africa), Bureau Veritas Testing and Inspections South Africa (Pty) Ltd as the primary laboratories and Genalysis (Perth, Western Australia) for the referee samples.
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Bureau Veritas Testing and Inspections South Africa (Pty) Ltd (Rustenburg, South Africa) has served both as a primary and as a referee laboratory for a sub-set of the samples (5,299 primary samples from the 2016 drilling program, 2,045 primary samples from previous drilling programs and 702 referee samples).

Set Point Laboratories and Bureau Veritas are both accredited by the South African National Accreditation System (SANAS).

The National Association of Testing Authorities Australia has accredited Genalysis Laboratory Services Pty Ltd, following demonstration of its technical competence, to operate in accordance with ISO/IEC 17025, which includes the requirements of ISO 9001: 2000.

Samples are received, sorted, verified and checked for moisture and dried if necessary. Each sample is weighed, and the results are recorded. Rocks, rock chips or lumps are crushed using a jaw crusher to less than 10 mm, the samples are then split using a riffle splitter. The samples are then milled for 5 minutes to achieve a fineness of 90% less than 106 µm, which is the minimum requirement to ensure the best accuracy and precision during analysis.

The laboratory inserts their own certified reference materials to measure accuracy (sample type code LABSTD in the Sable database) where accuracy refers to the closeness of a measured value to a standard or known value. The laboratory also inserts blanks to check for contamination (sample type code LABBLK).

Random primary samples are split to create preparation duplicates (coarse rejects with a sample type code of LABCRD) and to create pulp duplicates (with a sample type code of LABDUP) with a ratio of one to every 20 primary samples of each. These are then inserted into the sample stream. Results are compared to the corresponding primary samples to test the precision of the laboratory measurements where precision refers to the closeness of two or more measurements to each other.

Samples are analysed for Pt (g/t), Pd (g/t) and Au (g/t) by standard 25 g lead fire-assay using silver as requested by a co-collector to facilitate easier handling of prills as well as to minimize losses during the cupellation process. The resulting prills are dissolved with aqua-regia for ICP analysis.

After pre-concentration by fire assay and microwave dissolution, the resulting solutions are analysed for Au and PGM's by the technique of ICP-OES (inductively coupled plasma–optical emission spectrometry).

The base metals (copper, nickel, cobalt, chromium and sulphur) are analysed using ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry) after a multi- acid digestion. This technique results in "almost" total digestion.

Samples submitted for Rh analysis are assayed by fire assay using palladium collection followed by ICP-OES.

All pulp rejects and coarse rejects are returned to the field camp for storage.
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The assay results are reported to the Waterberg JV Resources database manager as Excel spreadsheets via email. The Excel spreadsheets are imported directly into the SABLE database using customized import routines. There is no editing or manipulation of the Excel spreadsheet before import. Once imported, QA/QC checks are done using SABLE software and in Excel.

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11.6 QUALITY ASSURANCE AND QUALITY CONTROL

[SR 3.6 (i)]

Waterberg JV Resources has a well-established and functional quality assurance or quality control (QA/QC) procedure.

Quality monitoring needs to be assessed on two basic factors – assessing the accuracy (how close results are to actual figures) and gauging the precision (the repeatability of the results). The various aspects involved in this process can be divided into quality assessment measures, and quality assurance/control.

The QA/QC of assays is defined as the combination of quality assurance, the process or set of processes used to measure and assure the quality of results, and quality control, which is the procedure for determining the validity of analytical procedures and specific sampling.

Quality assurance includes a broad plan for maintaining quality, which encompasses monitoring activities, proper documentation, training, and data analysis and data management.

Once the analysis is complete, various quality assessments are done to measure the accuracy and overall precision of the results.

The tools used for these assessments are a combination of Microsoft Excel and SatQc (Sable software for producing auditable, statistical and graphical reports demonstrating that the data in the database has passed the required checks).

As the project has progressed, the assessments done have changed. Visual checks were done with some rudimentary analysis in Excel before results were imported into the Sable Data 1 database. Once all data was migrated to the Sable Data Warehouse, the original premise was that Sable's SatQc module would be used to do the assessment. For a period of approximately one year, this module was totally unusable. SatQc attempted to prepare reports for the entire database all at one time and the module ran out of memory and just froze.

In the interim, until SatQc was "fixed", Microsoft Excel was used to do all assessments. Scripts were written to do the evaluation and comparisons of the results required. Imported results already loaded into the database were extracted into Excel and evaluated. For the assessment of the entire database of assay results, Excel is still the preferred tool. Excel has the flexibility of customised graphs and annotations. Excel also allows data to be evaluated by someone who does not have Sable software. It can also be emailed and serves as a snapshot of the data status at the time the assessment was performed and dated.

The following assessments are done on a routine basis:

Reported results are extracted to Excel by drillhole for all batches belonging to that drillhole. There are separate tabs in the Excel spreadsheet for all field results (primary samples, inserted standards
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and blanks), the inserted standards (results, certified mean, and + 3 standard deviations), the inserted blanks (results with the maximum acceptable value of 10 x detection). There are also tabs to laboratory coarse reject duplicates and pulp duplicates where the results are compared, and a percentage difference calculated. The scripts evaluate the reported result with respect to upper and lower acceptable limits and returns a pass or fail as the QA/QC status per element. It is very easy to identify exceptions that need to be investigated further.

Any exceptions are recorded in an exception control sheet. In some cases, the field staff are asked to check which standard or blank was inserted. On some occasions, the sampling sheet had a record of one standard, but another standard was put in the plastic bag.

If the duplicates, inserted standards or blanks have perceived erroneous values, the samples to be investigated are highlighted in the original spreadsheet received from the laboratory. The 5 primary samples before in the sequence and the 5 primary samples after in the sequence are also highlighted to indicate that if needed, repeats will be carried out on all highlighted samples. This file is returned to the laboratory for investigation. The exceptions spreadsheet is updated with the outcomes of all investigated and flagged as resolved, results accepted or other comments.

Guidelines were defined by an expert in QA/QC (Dr. Barry Smee) as to what statistics and graphs should be compiled for evaluation purposes. This means that results have a batch-specific Excel spreadsheet containing all QC samples. This is archived in the database confirming that wherever possible and feasible, exceptions were resolved. Laboratory inserted standards and blanks are also represented in tabs and results flagged as passing or failing acceptable limits.

When SatQc became operational, it was possible to create PDF reports directly from the database to demonstrate that the results in the database pass all checks. These PDF reports are also archived in the database for each sample type.

Finally, checks of the entire dataset of QC samples are also done in Excel. These checks are done annually but can be done at any time. Graphs plotted include Z-score graphs for standards (both field and laboratory certified reference materials), plots for blanks and x-y plots for duplicates. Z-score graphs are very efficient for displaying all standards on the same graph for comparative purposes.

Waterberg JV Resources are the custodians of the QA/QC results. Over the history of the Project CJM Consulting has reviewed the findings of QA/QC results for the purposes of establishing validity of the data for inclusion into the Mineral Resource estimation, with focus on the results since the last Mineral Resource Statement. To this end, data from Set Point, Bureau Veritas, and Genalysis were examined.

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11.7 ANALYTICAL QUALITY ASSURANCE AND QUALITY CONTROL DATA

[SR 3.4 (ii)] [SR 3.5 (i)] [SR 3.6 (i)]

Table 12 shows the laboratories and methods used throughout the history of the Waterberg Project.

The laboratories used have the following certifications:

- Set Point Laboratories, Part of Torre Industries, is an ISO 17025 accredited analytical chemistry lab.
- Bureau Veritas Testing and Inspections South Africa (Pty) Ltd (Rustenburg, South Africa) was certified when used by the Waterberg Project. The laboratory is now closed and no longer has a certificate on the SANAS web site.
- ALS is an ISO 17025 accredited analytical chemistry lab. SANAS Accreditation Number T0387.
- Set Point Laboratories (SANAS Accreditation Number T0223) is accredited by the South African National Accreditation System (SANAS).
- The National Association of Testing Authorities Australia has accredited Genalysis Laboratory Services Pty Ltd, following demonstration of its technical competence, to operate in accordance with ISO/IEC 17025, which includes the management requirements of ISO 9001: 2000." Accreditation Number 3244.

The QA/QC results are within acceptable limits and therefore the results for the primary samples are deemed to be reliable and can be used for Mineral Resource estimates.

Table 12: The laboratories and methods used throughout the history of the Waterberg Project

Laboratory	Method for PGE's	Method for Base metals.	Detection limits for elements	Units for reporting
Set Point	Fire assay with Pb collection fire assay and ICP/OES* analysis	4 acid digestion with ICP/OES analysis.	Au 0.01 g/t, Pt 0.01 g/t, Pd 0.01 g/t, Cu 10 ppm, Ni 10 ppm.	g/t for Au, Pt and Pd, ppm or Cu and Ni
Bureau Veritas	Fire assay with Pb collection fire assay and ICP/MS analysis	4 acid digestion and ICP/MS analysis	Au 0.001 g/t, Pt 0.005 g/t, Pd 0.005 g/t, Cu 2 ppm, Ni 2 ppm	ppm for Au, Pt and Pd, ppm or Cu and Ni
ALS	Fire assay with Pb collection fire assay and ICP/MS analysis	4 acid digestion and ICP/OES analysis	0.01 ppm for Pt, Pd and Au, 10 ppm for Cu and Ni	ppm for Au, Pt and Pd, ppm or Cu and Ni
Genalysis	Pb collection fire assay and ICP/MS analysis	4 acid digestion and ICP/OES analysis	Au 1 ppm, Pt 0.5 ppb, Pd 0.5 ppb, Cu 1ppm and Ni 1 ppm	Au=ppm, Pt=ppb, Pb=ppb, Cu=ppm, Ni=ppm

ICP/OES is Inductively Coupled Plasma – Optical Emission Spectrometry

ICP/MS is Inductively Coupled Plasma Mass Spectrometry

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A selection of commercial certified reference materials was used by both the laboratories as well as inserted in the field by the samplers to assess the QA/QC process. These CRM's are documented in Table 13.

Table 13: List of Certified Reference Materials used by Laboratories and for Field Standards.

2SD = ± two standard deviations. The Mean is the expected value. Values are certified

CRM	DESCRIPTION	PT MEAN (g/t)	PT 2SD (g/t)	PD MEAN (g/t)	PD 2SD (g/t)	AU MEAN (g/t)	AU 2SD (g/t)	CU MEAN (ppm)	CU 2SD (ppm)	NI MEAN (ppm)	NI 2SD (ppm)
AMIS0001	PGE Ore Reference material	0.765	0.07	1.04	0.08	0.12	0.024				
AMIS0002	PGE Ore Reference material	0.82	0.112	0.89	0.098	0.155	0.016	1310	120	1970	150
AMIS0005	UG2 Reef (Ore Grade) PGE Reference Material	3.38	0.33	2.23	0.18	0.02		59	8	1081	333
AMIS0006	UG2 Reef (Feed Grade) PGE Reference Material	1.43	0.15	0.91	0.08	0.02		823	82	787	79
AMIS0007	Merensky Reef (Feed Grade) PGE Reference Material	2.48	0.28	1.5	0.2	0.13	0.02	1312	150	2072	208
AMIS0008	Merensky Reef (Ore Grade) PGE Reference Material	8.66	0.78	4.36	0.39	0.36	0.05	2262	231	3782	335
AMIS0010	UG2 Reef (High Feed Grade) PGE Reference Material	2.13	0.2	1.32	0.15	0.025		750	66	1084	166
AMIS0013	Merensky Reef Low Feed Grade PGE Reference Material	10.85	0.86	4.9	0.41	0.52	0.06	2187	284	4040	460
AMIS0014	UG2 Reef (Feed Grade) PGE Reference Material	1.95	0.22	1.2	0.13	0.038		102	19.2	886	172
AMIS0027	UG2 Reef (Ore Grade) PGE Reference Material	2.39	0.36	1.59	0.24	0.05		125	14	1078	222
AMIS0034	Merensky Feed Grade Platinum Ore Reference Material	3.69	0.36	1.63	0.18	0.43	0.08	1544	100	2079	148
AMIS0044	African Minerals Standards for Gold					2.9	0.19				
AMIS0053	Merensky Reef PGE Reference Material	2.41	0.3	1.18	0.14	0.22	0.03	812	52	1652	156
AMIS0056	Platreef Low Grade Platinum Ore Reference Material	0.81	0.1	0.88	0.08	0.16	0.02	1401	183	2009	176
AMIS0064	PGE Ore Reference material	1.24	0.12	0.58	0.06	0.11	0.02	636	66	1452	134
AMIS0067	Platinum (PGM) Merensky Reef Ore Reference material	1.95	0.16	0.98	0.08	0.15	0.02	895	44	1728	182
AMIS0074	Platinum (PGM) ore UG2 Reef Western Limb Bushveld Complex South Africa	1.07	0.1	0.72	0.06	0.05	0.012	65	6.4	668	94
AMIS0075	UG2 Reef, Eastern Limb PGE Reference Material	1.14	0.14	1.49	0.12	0.07	0.016	234	26	1051	124

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Table 13: List of Certified Reference Materials used by Laboratories and for Field Standards. 2SD = + two standard deviations. The Mean is the expected value. Values are certified											
CRM	DESCRIPTION	PT MEAN (g/t)	PT 2SD (g/t)	PD MEAN (g/t)	PD 2SD (g/t)	AU MEAN (g/t)	AU 2SD (g/t)	CU MEAN (ppm)	CU 2SD (ppm)	NI MEAN (ppm)	NI 2SD (ppm)
AMIS0089	Platinum (PGM) Reference Material - UG2 Reef - Western Limb - Bushveld Complex - South Africa	1.09	0.12	0.7	0.06	0.04	0.012	59	6	452	52
AMIS0099	Platinum (PGM) Merensky Reef Ore Bushveld Complex South Africa	0.59	0.07	0.225	0.034	0.089	0.016	256	18	443	48
AMIS0110	Gold and Uranium Ore Witwatersrand - South Africa					2.3	0.18				
AMIS0118	Copper Oxide Ore Reference Material from Lonshi DRC							4615	270		
AMIS0122	Platinum - PGM UG2 Reef Eastern Limb Bushveld Complex	2.61	0.21	3.17	0.24	0.115	0.016	506	47.3	1351	196
AMIS0124	Platreef Low Grade PGE Reference Material	0.84	0.07	0.87	0.06	0.16	0.02	1324	106	1917	136
AMIS0132	Platinum PGM UG2 Tailings Eastern Limb Bushveld Complex SA	0.46	0.04	0.21	0.02	0.028		47.2	7.6	684	121
AMIS0140	Tantalum Standard used by Genalyis -										
AMIS0146	Internal Set Point Standard not certified	1.29	0.05	1.76	0.06	0.164	0.018	1150	83	1841	139
AMIS0148	Platinum (PGM) Platreef Ore Bushveld Complex	1.64	0.1	1.13	0.08	0.84	0.04	541	55	900	77
AMIS0149	Not certified?										
AMIS0151	Platinum (PGM) Merensky Reef Ore Bushveld Complex South Africa	4.64	0.36	3.15	0.28	0.072	0.014	150	14	1281	195
AMIS0160	Copper cobalt oxide ore Mukondo DRC							31000	1800		
AMIS0164	Platinum (PGM) Platreef Concentrate Bushveld Complex - South Africa	23.86	1.72	26.75	1.5	2.97	0.16	25500	1700	35550	1670
AMIS0165	Platinum (PGM) Platreef Concentrate Bushveld Complex - South Africa	16.9	1.36	19.1	1.36	1.66	0.14	17710	1030	28160	1780
AMIS0167	Gold and Uranium Ore Grade Witwatersrand reference material					7.29	0.38				
AMIS0171	Platinum (PGM) Merensky Concentrate Bushveld Complex SA	58.28	3.62	36.86	2.7	4.7	0.28	16220	1030	24680	1530
AMIS0192	Platinum (PGM), Merensky Ore	7.93	0.4	4.04	0.18	1.68	0.12	1562	112	2776	258

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2SD = ± two standard deviations. The Mean is the expected value. Values are certified											
CRM	DESCRIPTION	PT MEAN (g/t)	PT 2SD (g/t)	PD MEAN (g/t)	PD 2SD (g/t)	AU MEAN (g/t)	AU 2SD (g/t)	CU MEAN (ppm)	CU 2SD (ppm)	NI MEAN (ppm)	NI 2SD (ppm)
	Bushveld Complex, South Africa										
AMIS0207	Platinum (PGM) Reference Material UG2 Reef, Western Limb, Bushveld Complex, South Africa	2.28	0.22	1.26	0.08	0.085	0.012	85	9	1059	125
AMIS0208	Gold and Uranium Ore - Witwatersrand - South Africa					1.38	0.1				
AMIS0209	Platinum (PGM) - Merensky Bushveld Complex - South Africa	1.21	0.1	0.63	0.06	0.09	0.01	447	20	909	35
AMIS0210	Gold and Uranium Ore - Witwatersrand - South Africa					1.26	0.16				
AMIS0252	Platinum (PGM) -UG2 Bushveld Complex - South Africa	2.89	0.28	1.53	0.14	0.042	0.012	104	17	1212	232
AMIS0253	Platinum (PGM) -UG2 Bushveld Complex - South Africa	4.03	0.32	2.34	0.18	0.07	0.01	134	23	1220	168
AMIS0254	Platinum (PGM), Merensky Bushveld Complex South Africa	2.19	0.16	1.12	0.08	0.2	0.02	762	49	1735	177
AMIS0256	Platinum (PGM), Merensky Ore Bushveld Complex South Africa	4.86	0.22	2.5	0.12	0.34	0.04	1252	69	2913	181
AMIS0257	Platinum (PGM) UG2 Ore Bushveld Complex, South Africa	1.66	0.16	0.95	0.08	0.11	0.02	65	10	961	157
AMIS0278	Platinum (PGM) Platreef Ore Bushveld Complex - South Africa	1.7	0.1	2.12	0.14	0.26	0.02	1294	80	2026	236
AMIS0282	Nickel-Copper-PGM ore Sudbury basin Canada	0.97	0.1	1.41	0.12	0.19	0.01	1.68	0.12	4971	560
AMIS0283	Nickel-Copper-PGM ore Sudbury basin Canada	0.82	0.08	0.49	0.06	0.092	0.01	27410	1810	22570	1980
AMIS0302	Gold and Uranium Ore Witwatersrand - South Africa					4.47	0.34				
AMIS0325	Platinum (PGM) Platreef Ore Bushveld Complex - South Africa	2.06	0.18	2.25	0.18	0.3	0.04	2426	178	4091	283
AMIS0326	Platinum (PGM) Platreef Ore Bushveld	1.05	0.08	1.25	0.08	0.17	0.02	1403	89	2446	99

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Table 13: List of Certified Reference Materials used by Laboratories and for Field Standards. 2SD = ± two standard deviations. The Mean is the expected value. Values are certified											
CRM	DESCRIPTION	PT MEAN (g/t)	PT 2SD (g/t)	PD MEAN (g/t)	PD 2SD (g/t)	AU MEAN (g/t)	AU 2SD (g/t)	CU MEAN (ppm)	CU 2SD (ppm)	NI MEAN (ppm)	NI 2SD (ppm)
	Complex - South Africa										
AMIS0328	Platinum (PGM) - Merensky Bushveld Complex - South Africa	2.14	0.18	1.38	0.12	0.14	0.01	669	38	1945	226
AMIS0337	Gold Ore siliceous matrix Navaho Mine Namibia					0.66	0.06				
AMIS0354	Platinum (PGM), Merensky Bushveld Complex, South Africa	2.25	0.25	1.34	0.08	0.71	0.05	582	31	1839	226
AMIS0367	Platinum (PGM) - Merensky Bushveld Complex - South Africa	1.8	0.24	0.84	0.08	0.17	0.02	826	41	1766	66
AMIS0395	Platinum (PGM) Platreef Ore - Bushveld Complex - South Africa	0.51	0.04	0.62	0.06	0.095	0.014	847	44	1606	161
AMIS0396	Platinum (PGM) Platreef Ore Bushveld Complex	0.75	0.06	0.93	0.06	0.105	0.016	969	54	1840	157
AMIS0411	Platinum (PGM) Platreef Ore Bushveld Complex	0.54	0.06	0.67	0.06	0.078	0.012	742	60	1368	101
AMIS0413	Platinum (PGM) Platreef tails Bushveld Complex, South Africa	0.265	0.032	0.349	0.036	0.044	0.006	579	36	1030	47
AMIS0416	Platinum (PGM) UG2 Ore Bushveld Complex, South Africa	1.46	0.18	0.75	0.12	0.14	0.04	93	11	1094	148
AMIS0426	Internal Set Point Standard not certified	2.13	0.16	1.07	0.1	0.04	0.018				
AMIS0427	Internal Set Point Standard not certified	0.48	0.02	0.64	0.02	0.081	0.022				
AMIS0442	Platinum (PGM) Platreef Ore Bushveld Complex South Africa	2.11	0.13	2.66	0.16	0.33	0.03	1029	45	1996	78
AMIS0443	Platinum (PGM) Platreef Ore Bushveld Complex, South Africa	0.78	0.07	0.97	0.07	0.14	0.02	951	47	1918	104
AMIS0448	Platinum (PGM) Platreef Ore Bushveld Complex, South Africa	1.899	0.203	1.98	1.98	1.31	0.15	1286	114	2375	270
AMIS0450	Platinum (PGM), Merensky Ore Bushveld Complex South Africa	3.17	0.2	1.56	0.09	0.22	0.02	990.2	94.3	2004	145
AMIS0459	Platinum (PGM) Pulps Bushveld Complex, South Africa	0.431	0.047	0.241	0.021	0.119	0.014	200.6	24.3	686	58
AMIS0484	Blank Silica Powder	0.005		0.005		0.001		2.5		8.5	

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Table 13: List of Certified Reference Materials used by Laboratories and for Field Standards.

2SD = ± two standard deviations. The Mean is the expected value. Values are certified

CRM	DESCRIPTION	PT MEAN (g/t)	PT 2SD (g/t)	PD MEAN (g/t)	PD 2SD (g/t)	AU MEAN (g/t)	AU 2SD (g/t)	CU MEAN (ppm)	CU 2SD (ppm)	NI MEAN (ppm)	NI 2SD (ppm)
CDN-PGMS-19	CDN-PGMS-19 Platinum Group Ore Reference material	0.108	0.012	0.476	0.042	0.23	0.03				
CDN-PGMS-23	CDN-PGMS-23 Platinum Group Ore Reference material	0.456	0.04	2.032	0.166	0.496	0.058				
CDN1	CDN-PGMS-1 Platinum Group Ore Reference material	2.3	0.18	10.35	0.74	0.23	0.06				
CDN11	CDN-PGMS-11 Platinum Group Ore Reference material	0.107	0.016	0.405	0.038	0.219	0.03				
CDN2	CDN-PGMS-2 Platinum Group Ore Reference material	0.21	0.04	3.9	0.47						
CDN3	CDN-PGMS-3 Platinum Group Ore Reference material	0.13	0.03	0.59	0.07	0.33	0.06				
CDN5	CDN-PGMS-5 Platinum Group Ore Reference material	1.24	0.11	5.76	0.3						
CDN6	CDN-PGMS-6 Platinum Group Ore Reference material	0.12	0.02	0.64	0.06	1.37	0.2				
CDN7	CDN-PGMS-7 Platinum Group Ore Reference material	1.01	0.16	3.71	0.47	2.59	0.3				
CDN8	CDN-PGMS-8 Platinum Group Ore Reference material	0.107	0.016	0.405	0.038	0.219	0.03				

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11.7.1 QA/QC RESULTS FOR SET POINT FROM 2010 TO JANUARY 2018

Appendix 2 is the QA/QC results for Set Point as the primary laboratory from the inception of the project until January 2018.

Inserted field standards sent to Set Point have a low number of 117 exceptions (<1%) for the total 14,987 QC samples submitted. The results for only 8 samples (0.05%) have not been resolved. By far the largest error of 51 samples (43.59% of the total exceptions or 0.34% of the total QC samples submitted) is due to human error as a different standard was bagged than the standard specified on the sample sheet. Exceptions caused during laboratory operations and the analysis of samples were resolved for 29.91% of the exceptions or 0.22% of the total number of QC samples submitted. The number of results where repeats confirmed the original results and were accepted is 16.23% of the exceptions or 0.12% of all QC samples. This low number of unresolved exceptions is deemed acceptable for the updated Mineral Resource statement.

Inserted field blanks sent to Set Point have a low number of 17 exceptions (0.11%) for the total of 15 180 QC samples submitted that have not been resolved. There is very little evidence of sample swaps, incorrect samples being prepared or contamination.

Inserted laboratory preparation duplicates for Set Point show good precision where 99% of all duplicate pairs have a HARD of less than 20% for each element. 255 (5.89%) of the preparation duplicates were repeated although only 36 repeats were necessary for PGE's. Results are deemed to be acceptable for all elements. All exceptions were discussed in detail for each element.

Inserted laboratory pulp duplicates for Set Point show good precision where 99% of all duplicate pairs have a HARD of less than 10% for each element for Pd, Cu and Ni. Au has 93% of all duplicate pairs with a HARD of <10%. Au shows variability at grades > 2 g/t due to a possible nugget effect. Pt has 96% of duplicate pairs that are with a HARD of < 10%. Results are deemed to be acceptable for all elements.

Inserted laboratory standards for Set Point have acceptable results with a range of exceptions between 0.23% for Cu and Ni, 1.36% for Pt, 1.12% for Pd and 0.49% for Au. Most of the exceptions are due to AMIS0146 and AMIS427 being used. These are in-house standards that are not certified. A few (8) are reported as one standard but another standard was inserted and analysed. There are 25 exceptions (0.17%). that are unexplained or unresolved of the 14 531 samples analysed. This low number of unresolved exceptions is deemed acceptable for the updated Mineral Resource statement.

Inserted laboratory blanks have exceptionally good results for the 10 442 QC samples analysed. There are no exceptions (> 10 X the detection limit) for Pt, Pd or Au. There is one sample for Cu and Ni that has results > 10 X the detection limit (100 ppm). This is a possible sample swap or contamination. The laboratory does not allow blanks to be reported that are greater than 100 ppm for Cu or Ni. It is assumed that they are repeated along with affected samples until an acceptable result is achieved.

The results of the analysis have shown that the data reported by Set Point is acceptable with variability outside acceptable limits explained wherever possible.

11.7.2 QA/QC RESULTS FOR SET POINT REPORTED DURING 2018

Results for QC samples submitted for analysis during 2018 along with primary samples are presented in Appendix 3.

Inserted field standards sent to Set Point have a low number of exceptions (<1% for each element) for the total 2 256 QC samples submitted. This low number of exceptions is well within accepted norms according to industry best practices.

Inserted field blanks sent to Set Point have a low number of 2 exceptions for Cu and Ni only (0.09%) for the total of 2 167 QC samples submitted that have not been resolved. There is very little evidence of sample swaps, incorrect samples being prepared or contamination. In general, the failure rate is deemed not to have a material effect on the data, with more than 99% of the assays falling within acceptable limits.

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Inserted laboratory preparation duplicates for Set Point show good precision where 99% of all duplicate pairs have a HARD of less than 20% for each element. Results are deemed to be acceptable for all elements.

Inserted laboratory pulp duplicates for Set Point show good precision where 99% of all duplicate pairs have a HARD of less than 10% for each element for Cu and Ni. Au has 93% of all duplicate pairs with a HARD of <10%. Au shows variability at grades > 2 g/t due to a possible nugget effect. Pt has 96% of duplicate pairs that are with a HARD of < 10%. Pd has 99% of duplicate pairs that are with a HARD of < 10%.   Results are deemed to be acceptable for all elements.

Inserted laboratory standards for Set Point have acceptable results with very few exceptions. Most of the exceptions are due to AMIS0146, AMIS0426 and AMIS427 being used. These are inhouse standards that are not certified.

Inserted laboratory blanks have exceptionally good results for the 1 719 QC samples analysed. There are no exceptions (> 10 X the detection limit) for all elements reported. It is assumed that they are repeated along with affected samples until an acceptable result is achieved.

The results of the analysis have shown that the data reported by Set Point during 2018 is acceptable with exceptions outside acceptable limits explained wherever possible.

11.7.3 QA/QC RESULTS FOR BUREAU VERITAS

Results for QC samples reported by Bureau Veritas along with primary samples are presented in Appendix 4. The results of the analysis have shown that the data is acceptable with exceptions outside acceptable limits explained wherever possible.

Inserted blind standards reported by Bureau Veritas show acceptable results on Z-score graphs for most samples although AMIS0395 plots outside acceptable limits for Au. AMIS0395 is not a suitable standard for Au as the expected value of 0.095 g/t is less than 10 times the detection limit.

Inserted blind blanks reported by Bureau Veritas show acceptable results with more than 90% of the assays falling within acceptable limits. Numerous results for Au plot above the acceptable limit of 0.01 g/t (10 times detection) and indicates that that Bureau Veritas's detection limit for Au is closer to 0.005 g/t. There are also numerous failures (> 10 x detection) for Ni. This indicates that the detection limit for Ni is closer to 10 ppm rather than 2 ppm. Operationally, there is very little evidence of contamination, sample swaps or the incorrect sample being prepared.

Inserted laboratory preparation duplicates reported by Bureau Veritas show good precision where 98-99% of all duplicate pairs have a HARD of less than 20% for each element. Results are deemed to be acceptable for all elements. The percentage of Au samples with HARD within 20% is 95% which is slightly lower than for the other elements. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection. The original
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analysis vs. the duplicate analysis showed minimal irregular values. This indicates minimal sample swapping.

Inserted laboratory pulp duplicates reported by Bureau Veritas show good precision where 98-99% for all duplicate pairs have a HARD of less than 10% for each element. Results are deemed to be acceptable for all elements. The percentage of Au samples with HARD within 20% is 95% which is slightly lower than for the other elements. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection.

Inserted laboratory standards for Bureau Veritas have acceptable results with very few exceptions (AMIS0354 – 2 exceptions for Cu and AMIS0367 – 3 exceptions for Ni).

Inserted laboratory blanks for Bureau Veritas have acceptable results with more than 99% of the assays falling within acceptable limits. Rock-RSB is the only blank that shows results that are greater than the background. It is not a certified blank.

11.8 ASSAY VALIDATION

[SR 3.5 (i)] [SR 3.6 (i)]

Although samples are assayed with reference materials, an assay validation programme should typically be conducted to ensure that assays are repeatable within statistical limits for the styles of mineralisation being investigated. It should be noted that validation is different from verification; the latter implies 100% repeatability. The assay validation programme should entail:

- a re-assay programme conducted on standards that failed the tolerance limits set at two and three standard deviations from the Round Robin mean value of the reference material;
- ongoing blind pulp duplicate assays; and
- check assays conducted at an independent assaying facility

Re-assays are routinely carried out for failed standards, laboratory coarse duplicates and pulp duplicates before the acceptance of each batch and final QC sign-off by the Platinum Group Metals database manager.

11.8.1 QA/QC RESULTS FOR FIELD DUPLICATES SUBMITTED TO SET POINT

The QA/QC analysis of field duplicates (core splits) is presented in Appendix 5. The purpose of having field duplicates is to provide a check on possible sample over-selection. The field duplicate contains all levels of error – core or reverse-circulation cutting splitting, sample size reduction in the preparation laboratory, sub-sampling at the pulp and analytical error. Field coarse duplicates are not routinely used on this project due to the assemblage of the core and the different comparative

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results relative to the primary samples. The only explanation possible is that the core is heterogeneous, and mineralisation is not evenly distributed i.e. there is a nugget effect.

The core is split lengthwise during sampling. Half the core is sent as the primary sample for analysis. The other half of the core is retained to preserve the core record in terms of lithology, stratigraphy and mineralisation. Field duplicates are taken by bagging the other half (or quarter) of the core and assigning a new sample number which is then despatched to the same laboratory for analysis.

670 field duplicates were submitted for analysis. Graphs showing the relative distribution of the elements (scatter plots with primary results on the X-axis and the corresponding field duplicate result on the Y-axis) as well Thompson-Howarth plots to show the precision obtained by re-analysis of the field duplicates were plotted for each element. The precision graphs show that field duplicates cannot be used to measure precision.

The percentage of Au samples with HARD within 20% is 74% which is lower than for the other elements. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection. Pt and Pd have percentages of 78% and 82% respectively where HARD is within 20%. This indicates that Pt and Pd are also prone to a nugget effect but to a lesser degree than Au.

Scatter plots of original results versus paired duplicate results show a lot of scatter relative to the regression line. The high number of results that differ cannot be due to sample mix-ups alone. The only explanation is a nugget effect confirming that mineralisation in drillhole core is not evenly distributed. There is a poor correlation between original results and paired field duplicate results.

11.8.2 QA/QC RESULTS FOR FIELD PULP DUPLICATES SUBMITTED TO SET POINT

The QA/QC analysis of field pulp duplicates is presented in Appendix 6.

The purpose of having field pulp duplicates is to measure the precision of the primary laboratory.

Field pulp duplicates are selected at random, allocated a new sample number and re-submitted with a new sample number in a new batch to Set Point. These show good correlation with the original samples with between 80% and 95% of the data falling within acceptable limits.

1893 field pulp duplicates were submitted for analysis.

The percentage of Au samples with HARD within 10% is 82% which is lower than for the other elements. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection. The other elements all have a percentage of samples with HARD within 10% that is greater than 90% which is acceptable.

Graphs showing the relative distribution of the elements (scatter plots with primary results on the X-axis and the corresponding field pulp duplicate results on the Y-axis) as well Thompson-Howarth plots to show the precision obtained by re-analysis of the field pulp duplicates were plotted for each element.

There is some scatter relative to the regression line on the scatter plots. This may be due to sample mix-ups. There is a good correlation between original results and paired field pulp duplicate results.

The norm is that precision should be less than or equal to 10% for field pulp duplicates when compared to primary samples. The graph for Pt shows that the best precision possible for field pulp duplicates relative to primary samples is less than 20% but more than 10% which is outside acceptable limits. The paired results are far from each other. This better precision when compared to duplicates split from the core itself shows that field pulp duplicates are homogenised. The sample selection is different. However, there is something that still results in variability between the results for the original sample and the pulp duplicate. Further research would assist in investigating the causes of the variability.

There is moderate (for Au, Cu and Ni) to good correlation (for Pt, Pd) between original sample results and the field pulp duplicate results although there is some scatter relative to regression lines for each element. This may be due to sample mix ups. Precision ranges from 10% to 20% depending on the element. Field pulp duplicates show better precision than field core duplicates, but precision is not as good as for coarse reject duplicates and laboratory pulp duplicates.

There is no issue with the laboratory precision as proven results for laboratory coarse reject duplicates and laboratory pulp duplicates do fall within acceptable limits of precision and variability. There may be a possibility that the results for the ore body are not normally distributed. This would affect the precision estimates shown by the graphs.

In general, re-assayed coarse rejects and pulp duplicates analysed at the same time as the primary samples show good correlation with the original sample with greater than 90% of the data falling within acceptable limits. Further submissions of pulp duplicates would provide better clarity in terms of assay validation to ensure that assays are repeatable within statistical limits for the styles of mineralisation being investigated.

11.9 CHECK ASSAYS

At this time, the external umpire laboratory used to conduct check assays is Genalysis. Generally, batches are sent to Genalysis on a bi-annual basis. Most of the samples are selected at random from within samples batches known to cover the economic intersections within drillholes. Umpire results from both Bureau Veritas and Genalysis confirm the satisfactory performance of the primary laboratory, Set Point reporting results for the primary samples.

11.9.1 QA/QC RESULTS FOR UMPIRE SAMPLES SENT TO GENALYSIS PRIOR TO 2018

The QA/QC results are presented in Appendix 7.

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A HARD statistic was calculated for each element and for each sample analysed at both laboratories. This is not to measure precision as the laboratories are different. This to identify whether there is agreement between the results between the laboratories. Samples with significantly different results may have been mixed up during the repackaging process before despatch to the umpire laboratory or during processing at the umpire laboratory. At least 90% of the samples should have a HARD within 10%.

Cu and Ni have more than 90% of the samples having a HARD that is greater than 90% showing that the results of the two laboratories are comparable. The percentage of Au samples with HARD within 10% is 73% which is slightly lower than for the other elements. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection. The percentage of samples with HARD within 10% for Au, Pt (81%) and Pd (81%) is lower than the acceptable limit of 90%. The cause of this is not clear. Sample mix-ups are one possible cause but not to such an extent. All results with a HARD greater than 10% are less than 5 g/t for Pt. Further analysis may confirm this phenomenon or may indicate that this poor performance is specific to this dataset.

Scatter plots and Q-Q plots were plotted for each element. Scatter around the regression lines on each of the plots are equally distributed with acceptable correlation and there is no bias indicated by either of the laboratories for Pt, Pd, Cu and Ni. Au does show some scatter above grades of 2 g/t with less correlation than Pt and Pd. Set Point results show a positive bias for grades greater than 4 g/t relative to Genalysis results. There is a slight positive bias for Genalysis Ni results when compared to Set Point results on the Q-Q graph.

11.9.2 QA/QC RESULTS FOR UMPIRE SAMPLES SENT TO GENALYSIS IN 2018

The QA/QC statistics and graphs are presented in Appendix 8.

602 umpire samples were sent to Genalysis during 2018. The Genalysis results confirm the satisfactory performance of the primary laboratory, Set Point. Genalysis results show better recovery of Au and Ni during analysis at higher degrees of mineralisation. Results over common sample ranges in mineralisation for both laboratories are similar for all elements.

A HARD statistic was calculated for each element and for each sample analysed at both laboratories. This is not to measure precision as the laboratories are different. This to identify whether there is agreement between the results between the laboratories. Samples with significantly different results may have been mixed up during the repackaging process before despatch to the umpire laboratory or during processing at the umpire laboratory. At least 90% of the samples should have a HARD within 10%.

For Pt, Pd, Cu and Ni the percentage of samples having a HARD within 10% are within acceptable limits of approximately 90 – 97%. There is an improvement relative to the previous 665 samples analysed. The percentage of samples with HARD within 10% for Au, Pt and Pd is lower than the
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acceptable limit of 90% for the previous 665 samples. What caused the low percentages for the previous samples is not known. Sample mix-ups may have caused these discrepancies. The results for the 2018 indicate that there may also have been sample swaps or samples having a nugget effect, but such samples are within acceptable limits. The percentage of Au samples with HARD within 10% Is 67.2% which is lower than for the other elements and lower than the 73% for the previous 665 samples. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection.

The scatter around the regression line for Pt, Pd, Cu and Ni are equally distributed and there is a good correlation of the duplicate pairs. Results are within acceptable limits. Genalysis shows a positive bias for Pt due to better recovery during analysis

The distribution graphs for each laboratory and each element are similar.

Compared to Pt and Pd, Au shows less correlation and more scatter around the regression line for Set Point versus Genalysis results. Genalysis results have a positive bias as indicated by the regression line. This may be due to better recovery of Au during the analytical process by Genalysis. The R^2 of 0.9164 for Au is acceptable. This means that Set Point Au results are conservative. It is better to have an underestimate of grade by a primary laboratory than an overestimate. There is a positive bias for Genalysis Ni results > 5000 ppm as there is better Ni recovery during analysis relative to Set Point. This means that Set Point Ni results are conservative.

11.9.3 QA/QC RESULTS FOR UMPIRE SAMPLES SENT TO BUREAU VERITAS

The QA/QC statistics and graphs are presented in Appendix 9.

772 samples sent to both Set Point and Bureau Veritas.

A HARD statistic was calculated for each element and for each sample analysed at both laboratories. Samples with significantly different results may have been mixed up during the repackaging process before despatch to the umpire laboratory or during processing at the umpire laboratory. At least 90% of the samples should have a HARD within 10%. Cu and Ni show good comparability between laboratories with 97% of samples having a HARD within 10%. Pt has 92% of the samples with HARD within 10%. This is acceptable. The percentage of Au samples with HARD within 10% is 45% which is very low. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection. The percentage of samples with HARD within 10% for Au and Pt (87%) is lower than the acceptable limit of 90%. The cause of this is not clear. Sample mix-ups are one possible cause but not to such an extent. Results with a HARD greater than 10% for Pt may indicate a positive bias in results from Bureau Veritas.

The distribution graphs for each laboratory and each element are comparable.

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The correlation between Set Point and Bureau Veritas results is acceptable for Pt although there is an observed positive bias for a few Bureau Veritas results when compared to Set Point for grades greater than 2 g/t. There is some scatter at grades less than 4 g/t for Pd and Bureau Veritas results show a positive bias for some samples when compared to Set Point Pd results for grades greater than 2 g/t. The correlation between Bureau Veritas and Set Point for Au is poor with an R^2 of 0.889. Bureau Veritas has a negative bias when compared to Set Point results for Au. Au shows a correlation up to a grade of 1 g/t which is within the range of most mineralised samples.

Cu results are comparable up to 3000 ppm which is within the range of most mineralised samples. There is a negative bias of Bureau Veritas results when compared to Set Point results above 3000ppm.

There is a good correlation between Set Point and Bureau Veritas results for Ni. The result distributions are comparable up to values of 4000 ppm for Ni which is in the range of most mineralised samples.

11.10 DATABASES

Databases in use at Waterberg JV Resources currently include SABLE™, which is an SQL based relational database. This is a centrally managed database containing all aspects of drilling information including logging and assay results. In addition, Waterberg JV Resources uses ARCVIEW, a GIS database system that is also SQL based for all spatial information relating to exploration activities. Several other datasets exist including several Excel spreadsheets of information; however, these are derived from the SQL databases referenced above to ensure that all information is centrally updated and stored.

11.11 SAMPLE SECURITY

The QA/QC practice of Waterberg JV Resources is a process beginning with the actual placement of the drillhole position (on the grid) and continuing through to the decision for the 3D economic intersection to be included in (passed into) the database. The values are also confirmed, as well as the correctness of correlation of reef/mining cut so that populations used in the geostatistical modelling are not mixed; this makes for a high degree of reliability in estimates of Mineral Resources/Mineral Reserves. In the opinion of CJM Consulting, the QA/QC procedures as well as the sample preparation and security procedures are adequate to allow the data to be used with confidence in the Mineral Resource Estimation.

12. DATA VERIFICATION

[SR 3.1 (ii)] [SR 4.1. (ii)] [SR 3.1 (iii)] [SR 3.1 (iv)]

12.1 VERIFICATION OF DATA BY QP

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CJM Consulting as part of the Mineral Resource estimation for the Waterberg Project as detailed below conducted data verification: -

Printed logs for 90 percent of the holes were checked with the drilled core. The depths of mineralisation, sample numbers and widths and lithologies were confirmed. The full process from core logging to data capturing into the database were reviewed at the two exploration sites.

Collar positions of a few random selected drillholes were checked in the field and found to be correct.

Regarding missing specific gravity (SG) values, the average was generated for each individual lithological type, and the missing SG values inserted according to the lithological unit.

Assay certificates were checked on a test basis. The data was reviewed for statistical anomalies.

12.2 NATURE OF THE LIMITATIONS OF DATA VERIFICATION PROCESS

As with all information, inherent bias and inaccuracies can and may be present. Given the verification process that was carried out, however, should there be a bias or inconsistency in the data, the error would be of no material consequence in the interpretation of the model or evaluation.

The data is checked for errors and inconsistencies at each step of handling. The data is also rechecked at the stage where it is captured into the deposit-modelling software. In addition to ongoing data checks by project staff, the senior management and directors of Waterberg JV Resources have completed spot audits of the data and processing procedures. Audits have also been carried out on the recording of drillhole information, the assay interpretation and final compilation of the information.

The individuals in Waterberg JV Resources' senior management and certain directors of the company, who completed the tests and designed the processes, are non-independent mining or geological experts.

The QPs opinion is that the data is adequate for use in Resource Estimation.

12.3 POSSIBLE REASONS FOR NOT HAVING COMPLETED A DATA VERIFICATION PROCESS

All Waterberg JV Resources data was verified before being statistically processed. Copies of the QA/QC data analysis can be provided on request.

12.3.1 INDEPENDENT AUDITS AND REVIEWS

Each Mineral Resource Estimation and Report to date has involved an independent Audit and Review of the Data and Procedures used by Waterberg JV Resources. This includes site visits, verification of drillhole positions, logging verification, assay verification, visits and audits on laboratories used amongst other checks to ensure the accuracy of any Mineral Resource Statement.

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An independent high-level review of the Mineral Resource Estimation by the QP was completed by qualified persons at AMEC GRD SA (Netherlands). The AMEC review made comments on the methodologies applied by the QP. The AMEC review identified moderate to low risks and these were considered by the QP in formulation of the conclusions of this 43-101 report

13. MINERAL PROCESSING AND METALLURGICAL TESTING

[SR 4.1 (iii)])] [SR 4.1 (iv)] [SR4.3 (ii)]

13.1 2013-2014 TEST WORK – SCOPING / PEA STUDY

Mineralogical characterisation was undertaken on samples from the F Zone and T Zone by SGS in Johannesburg. Scoping test work indicated that both samples are soft and mill easily. Feed characterization showed that the T Zone sample has a greater Pt, Pd, Au, Ni and Cu content than the F Zone sample. Quantitative mineralogy was carried out on composites to determine the mineral speciation, particle size and mode of occurrence (association, degree of liberation and exposure). Based on the mineralogical properties, the T Zone sample has better beneficiation properties than the F Zone sample, since there is a greater degree of liberation and particle size.

Flotation test work on both samples confirmed the mineralogical observations. The T Zone sample has a better rate of flotation and maximum recovery for the economic metal as the sample contains clayish minerals and floatable gangue, indicating a good plant operating requirement

Based on the scoping test work, the estimated recoveries for the precious metals are:

- 2PGE (Pt, Pd) +Au: 88% (T Zone) and 83% (F Zone)
- Total Cu: 87% (TZ-Layer) and 74% (F Zone)
- Total Ni: 83% (TZ-Layer) and 59% (F Zone)

Two samples of F Zone and T Zone material were delivered to SGS for further flotation testing and mineralogical characterisation. The flotation test work was carried out at scoping level. The mineralogical test work consisted of petrographic and quantitative microscope analysis (QEMSCAN). The characterisation included petrography examination of the cores, and quantitative analysis of sample material milled to a grind of P80 75 µm. A detailed analysis was carried out on each sample for Ni, Cu, Co, Zn, Pb, Fe, Cr and Mn plus Al_2O_3, SiO_2, Fe_2O_3, MgO, MnO, CaO, K_2O, Na_2O, TiO_2, P_2O_5 and V_2O_5. F Zone material feed assay was 3.24 g/t 2PGE+Au and T Zone 7.22 g/t 2PGE+Au.

After milling to a grind of P80 75 µm, a single rougher-cleaner flotation test was carried out on each sample to determine the recovery and concentration of PGM, total Ni and total Cu.

While the T Zone flotation response is good at 88% recovery, the best recovery on F Zone material achieved in the test work was 83%

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Additional test work completed by WorleyParsons RSA was reported in the Preliminary Economic Assessment dated February 14, 2014. This further work determined that concentrate grades of greater than 100 g/t could be achieved from the material tested from the T and F -Zones without significant reductions in recoveries.

13.2 2015 TEST WORK – PF STUDY

Test work was conducted by Mintek and JOGMEC laboratories and included determination of ore hardness and comminution characteristics, mineralogy, variability and flotation kinetics. Furthermore, Paterson and Cooke have completed tailings rheology test work. The test work determined that the process is to follow a MF2 (two stage milling and flotation protocol) targeting a concentrate containing 80 g/t 4E's with a 3.78% mass pull to concentrate.

Whilst the T Zone has a marginally better recovery than the F Zone material, the overall performance was determined to be as shown in Table 14.

Table 14: Overall Test Work Performance

Element	Mill feed grade	Mass pull	Final Product Grade	Discounted Recovery (%)
3E + Au	3.73 g/t	3.78 %	81.1 g/t	82.1 %
Platinum	1.07 g/t	3.78 %	24.3 g/t	82.5 %
Palladium	2.20 g/t	3.78 %	50.5 g/t	83.2 %
Gold	0.28 g/t	3.78 %	5.7 g/t	75.3 %
Rhodium	0.04 g/t	3.78 %	0.6 g/t	59.4 %
Copper	0.08 %	3.78 %	2.0 %	87.9 %
Nickel	0.15 %	3.78 %	1.9 %	48.8 %

No deleterious materials were found in the mineralisation.

A concentrate specification sheet was developed for smelter off-take agreement discussions and it is planned that the project advance to this stage in the feasibility stage.

13.3 2018 TEST WORK – DF STUDY

DFS Metallurgical test work at Mintek is on-going and completion is expected upon finalisation of the DFS report.

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The focus of the 2018 test work is to understand the metallurgical variability within the different mining zones and to advise the elemental recovery profile for the early years of production as well as for the life of the mine. The 2018 test work data that was produced is not dissimilar to the 2015 results.

Locked cycle tests being run will produce final concentrate samples for display and evaluation.

14. MINERAL RESOURCE ESTIMATES

[SR 4.1 (i)] [SR 4.1 (iv)] [SR 4.1 (vi)] [SR 4.2 (i)] [SR 4.2 (ii)] [SR 4.2 (iv)] [SR 4.3 (i)] [SR 4.3 (ii)] [SR 4.4 (i)] [SR 4.5 (i)] [SR 4.5 (ii)] [SR 4.5 (v)] [SR 4.5 (vi)] [SR 4.5 (vii)] [SR 5.2 (i)]

Updated Mineral Resource Estimates were completed for both the F Zone and the T Zone in the project area, incorporating additional and infill drilling since the last update in April 2016. Table 15 summarises the updated mineral resources for the T Zone and the F Zone at a 2.0 g/t (4E) and 2.5 g/t cut-off.

All the joint venture partners have been involved in the development of the latest Mineral Resource model, appropriate cut-off grades, economic parameters and Mineral Resource model criteria. It has been determined in relation to basic working costs and in consideration of the overall resource envelope for the deposit, that at a 2.0 g/t cut-off grade the deposit has a reasonable prospect of economic extraction. Notwithstanding the above, for purposes of the DFS, sensitivity analysis and comparison to the 2016 PFS, which utilized a 2.5 g/t 4E cut-off grade, a Mineral Resource estimate at a 2.5 g/t cut-off grade is the preferred scenario The Mineral Resource Statement is summarised in Table 15.

The data that formed the basis for the Mineral Resource estimate was an exploration database that contained the details of geological logging and assay values derived from a surface drilling program.

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Table 15: Summary of Mineral Resources effective 27 September 2018 on a 100% Project Basis

Total T Zone at 2.0 g/t (4E) cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	**2.0**	3 440 855	1.13	1.97	0.04	0.90	4.04	0.160	0.080	13 901	0.447
Indicated	**2.0**	22 997 505	1.22	2.06	0.03	0.79	4.10	0.186	0.090	94 290	3.031
M+I	**2.0**	**26 438 360**	**1.21**	**2.05**	**0.03**	**0.80**	**4.09**	**0.183**	**0.089**	**108 191**	**3.478**
Inferred	**2.0**	25 029 695	1.17	1.84	0.03	0.60	3.64	0.137	0.069	91 108	2.929

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	28.0	48.8	1.0	22.2
Indicated	29.8	50.2	0.7	19.3
M+I	29.6	50.0	0.7	19.7
Inferred	32.1	50.5	0.8	16.6

F Zone at 2.0 g/t (4E) cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	**2.0**	75 332 513	0.82	2.00	0.05	0.14	3.01	0.079	0.191	226 833	7.293
Indicated	**2.0**	273 272 480	0.80	1.85	0.04	0.14	2.83	0.073	0.181	772 103	24.824
M+I	**2.0**	**348 604 993**	**0.83**	**1.86**	**0.04**	**0.14**	**2.87**	**0.075**	**0.183**	**998 936**	**32.117**
Inferred	**2.0**	121 535 227	0.70	1.62	0.04	0.13	2.50	0.067	0.162	303 722	9.765

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	27.2	66.4	1.7	4.7
Indicated	28.3	65.4	1.4	4.9
M+I	28.9	64.8	1.4	4.9
Inferred	28.4	64.8	1.6	5.2

Waterberg Aggregate Total 2.0 g/t Cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	**2.0**	78 773 368	0.83	2.00	0.05	0.18	3.06	0.083	0.186	240 734	7.740
Indicated	**2.0**	296 269 985	0.83	1.86	0.04	0.19	2.92	0.082	0.174	866 393	27.855
M+I	**2.0**	**375 043 353**	**0.86**	**1.87**	**0.04**	**0.18**	**2.95**	**0.083**	**0.176**	**1 107 127**	**35.595**
Inferred	**2.0**	146 564 922	0.78	1.66	0.04	0.21	2.69	0.079	0.146	394 830	12.694

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	27.1	65.4	1.6	5.9
Indicated	28.4	63.7	1.4	6.5
M+I	29.1	63.4	1.4	6.1
Inferred	29.0	61.7	1.5	7.8

4E = Platinum Group Elements (Pd+Pt+Rh) and Au. The cut-offs for Mineral Resources were established by a qualified person after

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a review of potential operating costs and other factors. The Mineral Resources stated above are shown on a 100% basis, that is, for the Waterberg Project entity. Conversion Factor used – kg to oz = 32.15076. Numbers may not add due to rounding. A 5% and 7% geological loss were applied to the Measured/Indicated and Inferred Mineral Resource categories respectively

T Zone at 2.5 g/t (4E) cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	**2.5**	3 098 074	1.19	2.09	0.05	0.90	4.23	0.160	0.090	13 105	0.421
Indicated	**2.5**	18 419 181	1.34	2.31	0.03	0.87	4.55	0.197	0.095	83 807	2.694
M+I	**2.5**	**21 517 255**	**1.32**	**2.28**	**0.03**	**0.88**	**4.51**	**0.192**	**0.094**	**96 912**	**3.116**
Inferred	**2.5**	21 829 698	1.15	1.92	0.03	0.76	3.86	0.198	0.098	84 263	2.709

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	28.1	49.4	1.2	21.3
Indicated	29.5	50.7	0.7	19.1
M+I	29.3	50.5	0.7	19.5
Inferred	29.8	49.7	0.8	19.7

F Zone at 2.5 g/t (4E) cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	**2.5**	54 072 600	0.95	2.20	0.05	0.16	3.36	0.087	0.202	181 704	5.842
Indicated	**2.5**	166 895 635	0.95	2.09	0.05	0.15	3.24	0.090	0.186	540 691	17.384
M+I	**2.5**	**220 968 235**	**0.95**	**2.12**	**0.05**	**0.15**	**3.27**	**0.089**	**0.190**	**722 395**	**23.226**
Inferred	**2.5**	44 836 851	0.87	1.92	0.05	0.14	2.98	0.064	0.169	133 705	4.299

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	28.3	65.4	1.5	4.8
Indicated	29.3	64.4	1.6	4.7
M+I	29.1	64.8	1.5	4.6
Inferred	29.2	64.4	1.7	4.7

Waterberg Aggregate Total 2.5 g/t Cut-off

Mineral Resource Category	Cut-off	Tonnage	Grade							Metal	
	4E		Pt	Pd	Rh	Au	4E	Cu	Ni	4E	
	g/t	t	g/t	g/t	g/t	g/t	g/t	%	%	kg	Moz
Measured	**2.5**	57 170 674	0.96	2.19	0.05	0.20	3.40	0.091	0.196	194 809	6.263
Indicated	**2.5**	185 314 816	0.99	2.11	0.05	0.22	3.37	0.100	0.177	624 498	20.078
M+I	**2.5**	**242 485 490**	**0.98**	**2.13**	**0.05**	**0.22**	**3.38**	**0.098**	**0.181**	**819 307**	**26.342**
Inferred	**2.5**	66 666 549	0.96	1.92	0.04	0.34	3.26	0.108	0.146	217 968	7.008

Resource Category	Prill Split			
	Pt	Pd	Rh	Au
	%	%	%	%
Measured	28.2	64.4	1.5	5.9
Indicated	29.4	62.6	1.5	6.5

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M+I	29.2	63.0	1.4	6.4
Inferred	29.5	58.9	1.2	10.4

4E = Platinum Group Elements (Pd+Pt+Rh) and Au. The cut-offs for Mineral Resources were established by a qualified person after a review of potential operating costs and other factors. The Mineral Resources stated above are shown on a 100% basis, that is, for the Waterberg Project entity. Conversion Factor used – kg to oz = 32.15076. Numbers may not add due to rounding. A 5% and 7% geological loss were applied to the Measured/Indicated and Inferred Mineral Resource categories respectively.

Based on the available data a Mineral Resource estimate was undertaken. Prior to declaration of the Mineral Resource, CJM took into consideration the prospect that the project "has a reasonable prospect for eventual economic extraction" as required by the SAMREC and CIM Codes.

1. Mineral Resources are classified in accordance with the SAMREC (2016) standards. There are certain differences with the "CIM Standards on Mineral Resources and Mineral Reserves"; however, in this case the Company and the QP believe the differences are not material and the standards may be considered the same. Inferred Mineral Resources have a high degree of uncertainty. Mineral Resources might never be upgraded or converted to Mineral Reserves.
2. Mineral Resources are provided on a 100% project basis. Inferred and Indicated categories are separate. The estimates have an effective date of September 27, 2018. Tables may not add perfectly due to rounding.
3. A cut-off grade of 2.0 g/t and 2.5 g/t 4E (platinum, palladium, rhodium and gold) is applied to the selected base case Mineral Resources.
4. Cut-off grade for the T Zone and the F Zone considered costs, smelter discounts, concentrator recoveries from the previous and ongoing engineering work completed on the property by the Company and its independent engineers. Spot and three year trailing average prices and exchange rates are considered for the cut-off considerations. The upper and lower bound metal prices used in the determination of cut-off grade for resources estimated are as follows: US$983/oz-US$953/oz Pt, US$993/oz-US$750/oz Pd, US$1 325/oz-US$1 231/oz Au, US$1 923US/oz-US$972/oz Rh, US$6.08/lb-US$4.77/lb Ni, US$3.08/lb-US$2.54/lb Cu, US$/ZAR15-US$/ZAR12. These metal prices are based on the estimated 3 year trailing average prices and the spot prices at the time of commencement of the Mineral Resource estimate modelling. The lower cut-off was tested against the higher metal price in the range and the higher cut-off was tested against the lower price in the range.

   The objective of the cut-off grade estimation was to establish a minimum grade for working break even. From the PFS the following factors were used for the calculation of Cut-off at 2.0 g/t (4E) at higher potential prices and 2.5 g/t 4E at more conservative lower prices listed above.

   - Working Cost Mining of US$ 25.00, 379 Rand per Tonne, LOM Avg. Total Opex US$ 38, 574 Rand Avg. LOM
   - 80 g/t Concentrate 82% recoveries of the PGMs, 88% of the Copper and 49% of the

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Nickel

- 85% Pay ability of the PGMs from a third-party smelter, 73% for Copper and 68% for Nickel

These costs recoveries and pay abilities are all to be updated in the DFS for the consideration of reserves and there can be no assurance that any of the Mineral Resources will be converted to Mineral Reserves. Metallurgical work indicates that an economically attractive concentrate can be produced from standard flotation methods.

5. Mineral Resources were completed by Charles Muller of CJM Consulting and a NI 43-101 technical report for the mineral resources reported herein, effective September 27, 2018.
6. Mineral Resources were estimated using Ordinary and Simple Kriging methods in Datamine Studio3 from 437 mother holes and 585 deflections in mineralisation. A process of geological modelling and creation of grade shells using Indicating Kriging (IK) was completed in the estimation process.
7. The estimation of Mineral Resources has considered environmental, permitting, legal, title, taxation, socio-economic, marketing and political factors. The Mineral Resources may be materially affected by metals prices, exchange rates, labour costs, electricity supply issues or many other factors detailed in the Company's Annual Information Form.
8. Estimated grades and quantities for by-products will be included in recoverable metals and estimates in the on-going Definitive Feasibility work. Copper and Nickel are the main value by-products recoverable by flotation and for Measured and Indicated Mineral Resources are estimated at 0.18% copper and 0.09% nickel in the T Zone and 0.08% copper and 0.18% nickel in the F Zone.

The data that formed the basis of the estimate are the drillholes drilled by Waterberg JV Resources which consists of geological logs, the drillhole collars, the downhole surveys and the assay data. The area where each layer was present was delineated after examination of the intersections in the various drillholes.

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There is no guarantee that all or any part of the Mineral Resource will be converted to a Mineral Reserve. The Prefeasibility study indicated a conversion rate of less than 50%.

14.1 KEY ASSUMPTIONS AND PARAMETERS

[SR 4.1 (iii)] [SR 4.3 (ix)]

The following methodology was used to produce the final Mineral Resource models for both the F Zone and T Zone:

- Import all received information from Waterberg JV Resources into Datamine.
    - Collars
    - Assays
    - Downhole surveys
    - Stratigraphic information
    - Geological parameters
    - Perimeters – farm boundaries, project area
    - Aeromagnetic images
- Detailed checks on imported data.
- Flag overall mineralised zones (F Zone, T Zone) using lithological constraints and 1 g/t 4E cut-off (separate mineralised vs disseminated, scattered and barren values).
- Create structural and overall mineralised envelope wireframes.
- Delineate geological domains based on full mineralised zones considering total vertical thickness, average grade, contained metal content and grade relationship of the geological profile (continuous, scattered etc.).
- Wireframes, drillholes and perimeters (domains) are rotated to a best fit horizontal plane.
- The drillholes are projected to an elevation datum – top contact is made flat/horizontal.
    - Create a probability Model.
    - Code samples as indicators where samples above 1 g/t 4E is assigned a value of 1 and below a value of 0. A 2 m inclusive waste is considered representing internal dilution that will never be selectively stripped and forms part of the mineralised envelope to ensure a continuous ore envelope.
    - Composite indicators (1 and 0) on a 1 m basis.
    - Create an empty start model on a 5 m x 5 m x 1 m basis.
    - Estimate the 1 and 0 indicator values into the start model, which indicate the probability of a cell being ore or waste.
    - Calculate the expected ore versus waste proportion that should be applied to delineate the ore envelope from the composite samples.
    - Produce a table with proportions at various probability cut-offs.

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  - Apply the expected proportion establish from the probability cut-off table to the probability model. Number of samples, distance to the estimated cells and visual checks are also considered.
  - Create a final start model for the grade estimation process

- Flag drillhole samples using the start block model created from the probability model.
- Do adjustments of edge samples to compensate for block centers vs sample centers.
- Perform descriptive statistics for Pt, Pd, Rh, Au, Cu, Ni, 4E and density, for respective geological domains.
- Do histogram and probability Plots (PP plots).
- Apply top capping (outliers), using the histograms and PP Plots.
- Descriptive statistics for top cap values.
- Perform Exploratory Data Analysis (EDA) and variography on the 1 m composites within the Indicator Model envelope. Variography is conducted in the flattened and rotated co-ordinate system.
- Create a 25 m x 25 m x 1 m block model, using the start model, for grade estimation process.
- Produce a global mean model for Simple Kriging.
- Grade estimation – Ordinary and Simple kriging.
- Perform various model validations
- Create a waste model
- Convert the 25 x 25 x 1 m krig model to a 5x5x1 m model (original start model)
- Project back to the rotated plane wireframe
- Rotate then cell centers back to original 3D space.
- Classify model into Measured, Indicated and Inferred.
- A final Planned Mineral Resource model (PRM) is created at a 2.0 g/t (4E) and 2.5 g/t (4E) cut-off from the in-situ model applying a minimum width (2m), inclusive waste of 5 m and eliminate isolated scattered cells.
- The Mineral Resource was cut-off at 1 250 meters vertical depth as a preliminary initial economic limit.
- Produce Mineral Resource tables at appropriate cut-offs.

14.2 DATA USED

A total of 143 new drillholes were drilled in the project area since the last update in April 2016, targeting both the T Zone and F Zone, with another 125 deflections drilled from original holes. The total combined new meters drilled is 61 394 m of which 26 220 samples were taken with 2 603 standard reference samples and 2 490 blank samples added for the QA/QC process. Of the 268 drill intersections (including deflections), 46 intersected the T Zone and 262 the F Zone mineralisation.

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Data used in this estimated comprised 437 original drillholes with 585 deflections (Figure 26). Of these, 242 intersections occurred in the T Zone (Figure 27) ranging from approximately 140 m to 1380 m in depth below surface. A total of 573 intersections in the F Zone (Figure 28) were used ranging from approximately 200 m to 1500 m in depth.

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Figure 26: Diagram Showing Drillholes Drilled in the Project Area

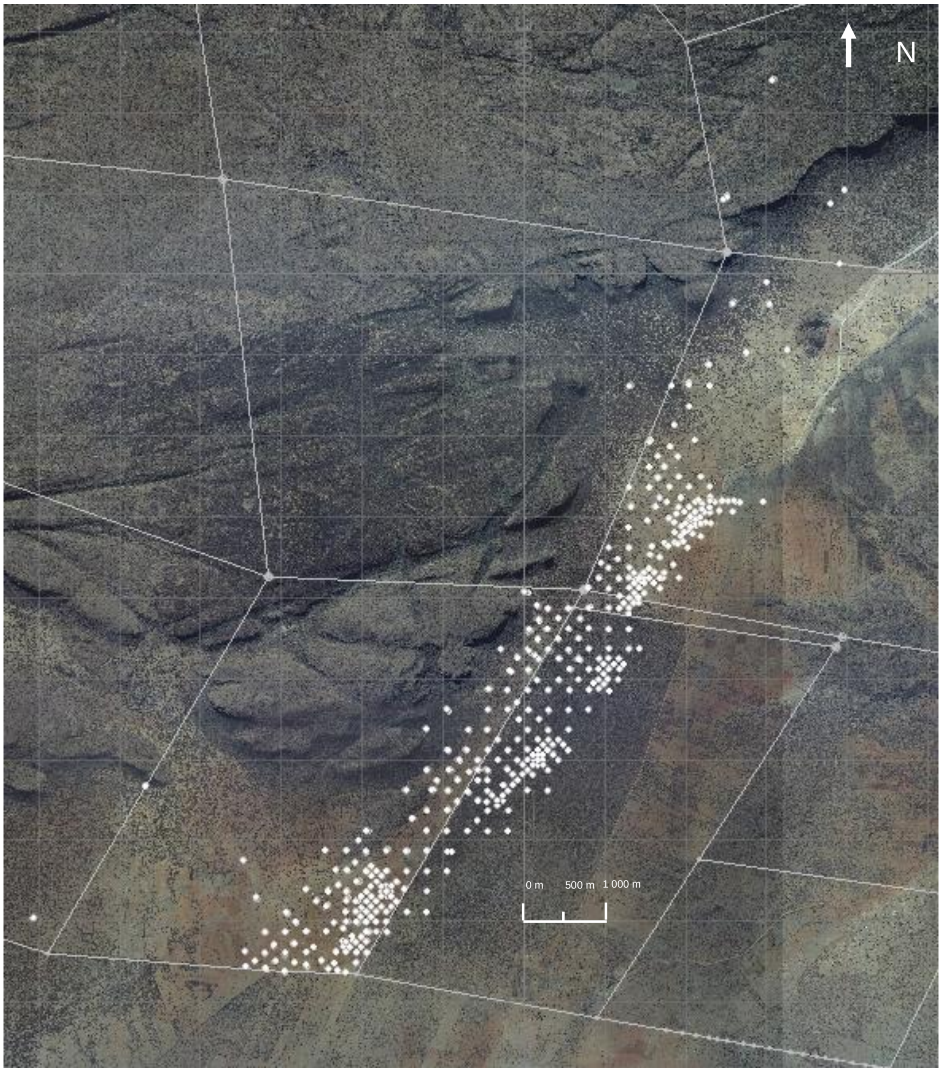

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Figure 27: Drillholes that Intersected the T Zone Mineralisation

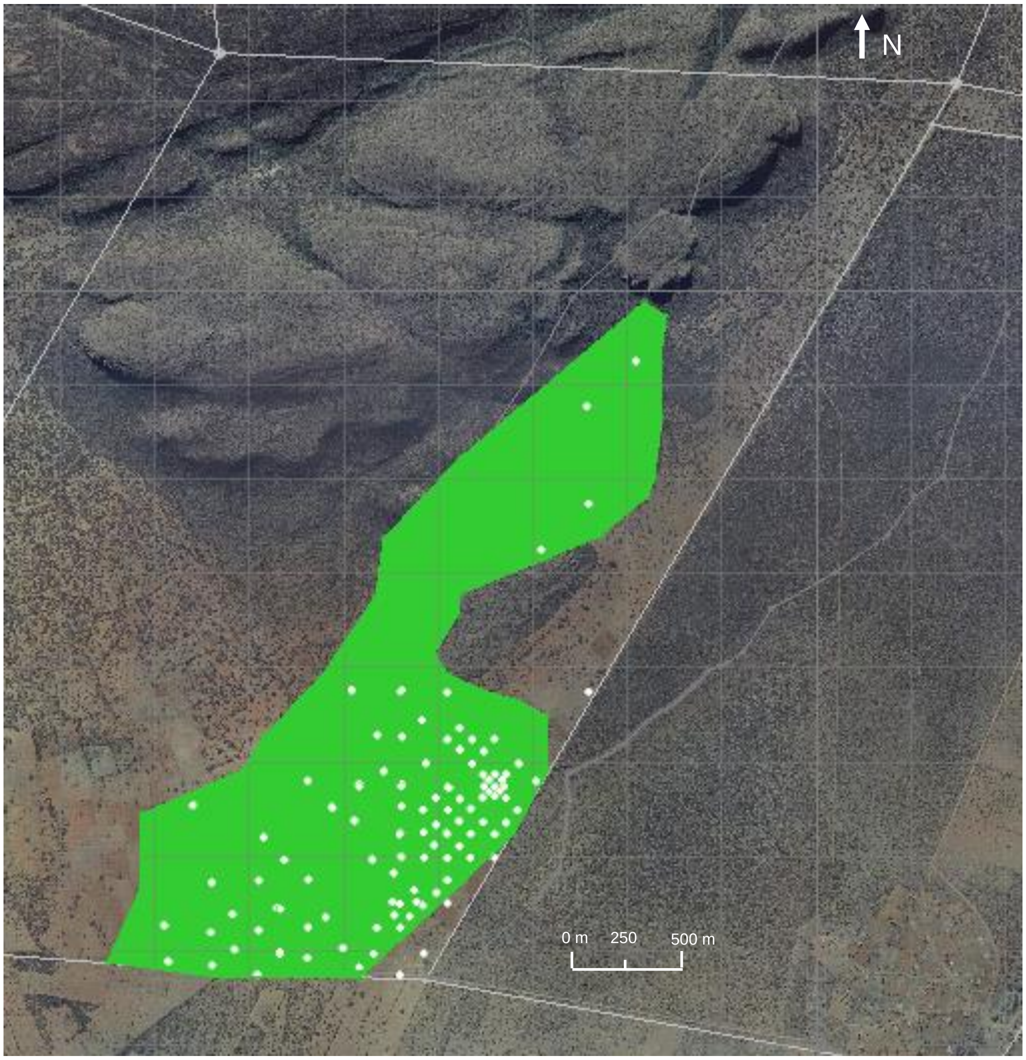

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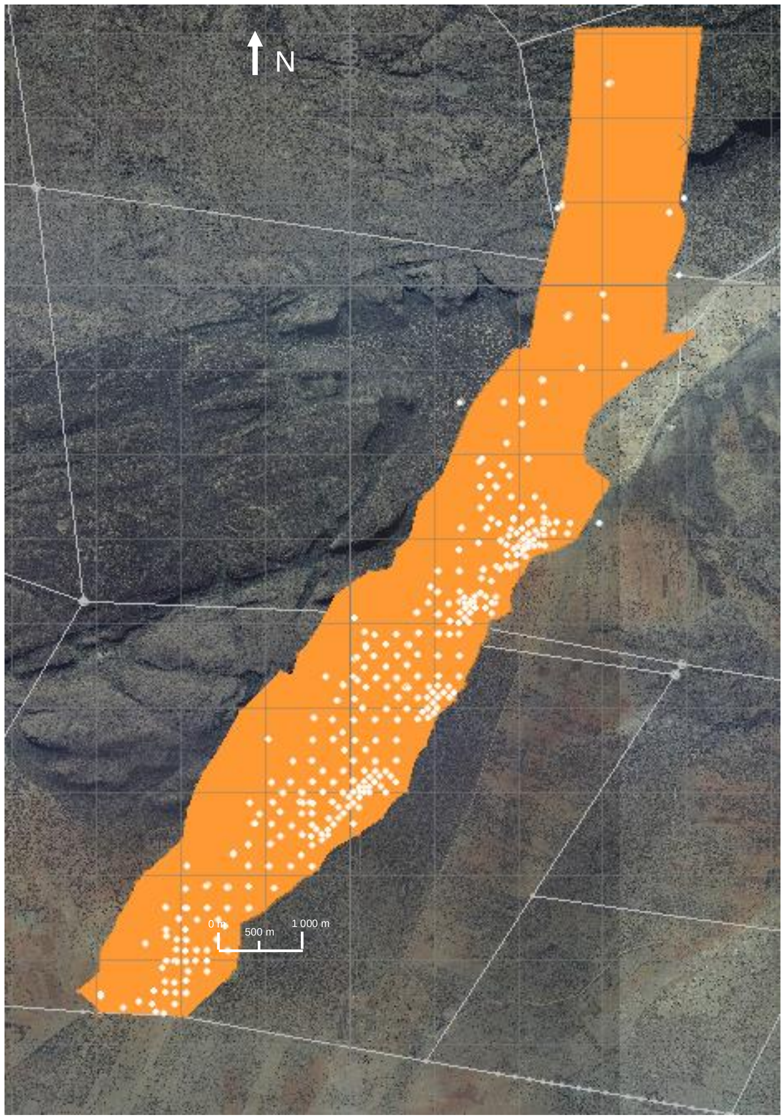
Figure 28: Drillholes that Intersected the F Zone Mineralisation



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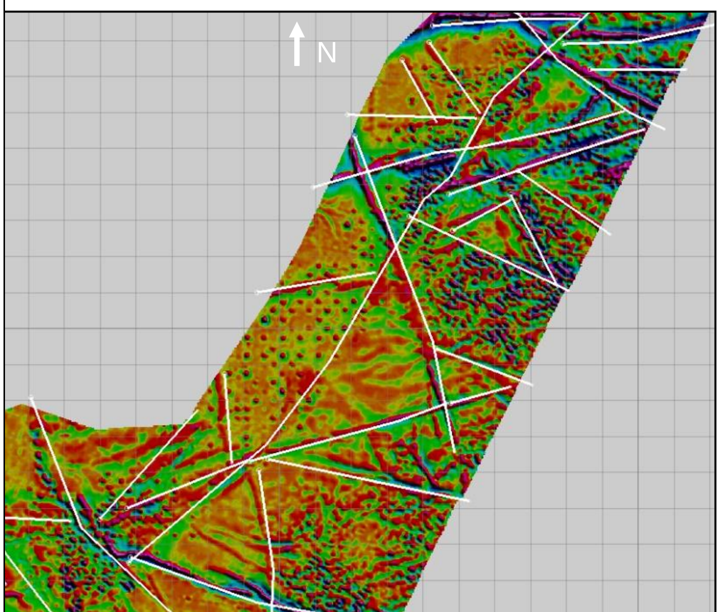
14.3 STRUCTURAL MODEL

The geological understanding and relationships, including structural configuration, forms the first phase and key aspect of the overall estimation process.

Aspects that were considered for the delineation of structural features are aeromagnetic data, stratigraphy, lithology and lastly mineralisation.

Figure 29 shows aeromagnetic data that was used as a first step in identifying the major structures. This is only an indication as these images show the structures that exists mainly in the disconformable Waterberg Sediments that overlay the main mineralisation zones.

Figure 29: Initial Delineated Structures



The main consideration for delineating the structures are the strategraphic units or lithological units. The Super F Zones are characterised by up to 100 m thick mineralisation that do occur as lenses on specific horisons that is not correlatable acoross the entire orebody, but along specific zones and directions. Depending on the section viewed, these lenses might appear to show faults, but in reality it is different lenses along specific zones at different elevations. The mineralisation is therefore not the best indication of faults, but rather the larger lithological units. Figure 30 shows that the major lithological units were used rather than the correlation of the mineralisation. The disconformable contact between the Waterberg sediments and the main mineralisation zone, base contact of the basement rocks serve as a first indication of potential faults (Figure 31).

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Figure 30: Diagram Showing the Main Lithological Units used for Structural Interpretation

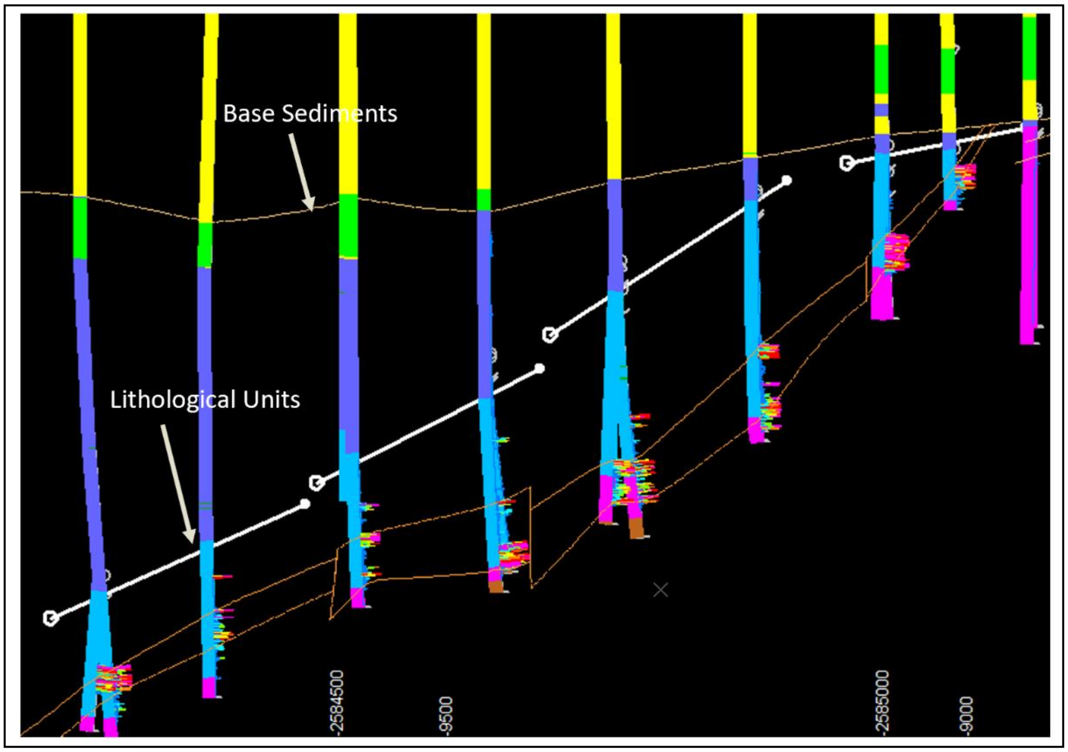

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Figure 31: Diagram showing Structural Relationships

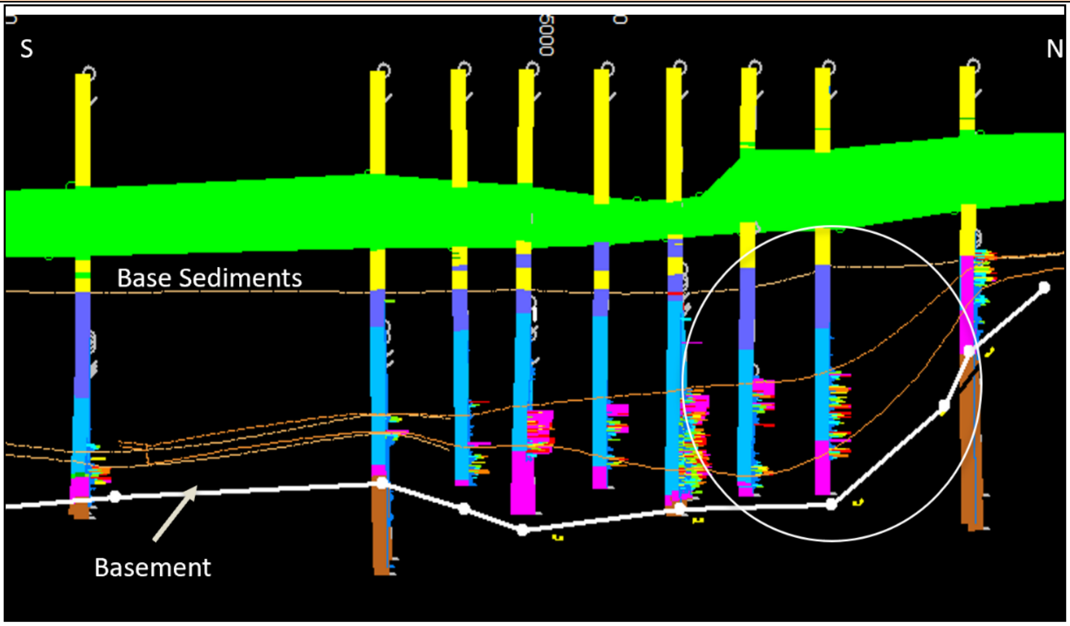

Figure 32 shows in yellow the final modelled structures. There are numerous intrusives found in the Waterberg sediments that do not extend into the mineralised zones below.

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Figure 32: Diagram Showing the Delineated Faults for the Project Area

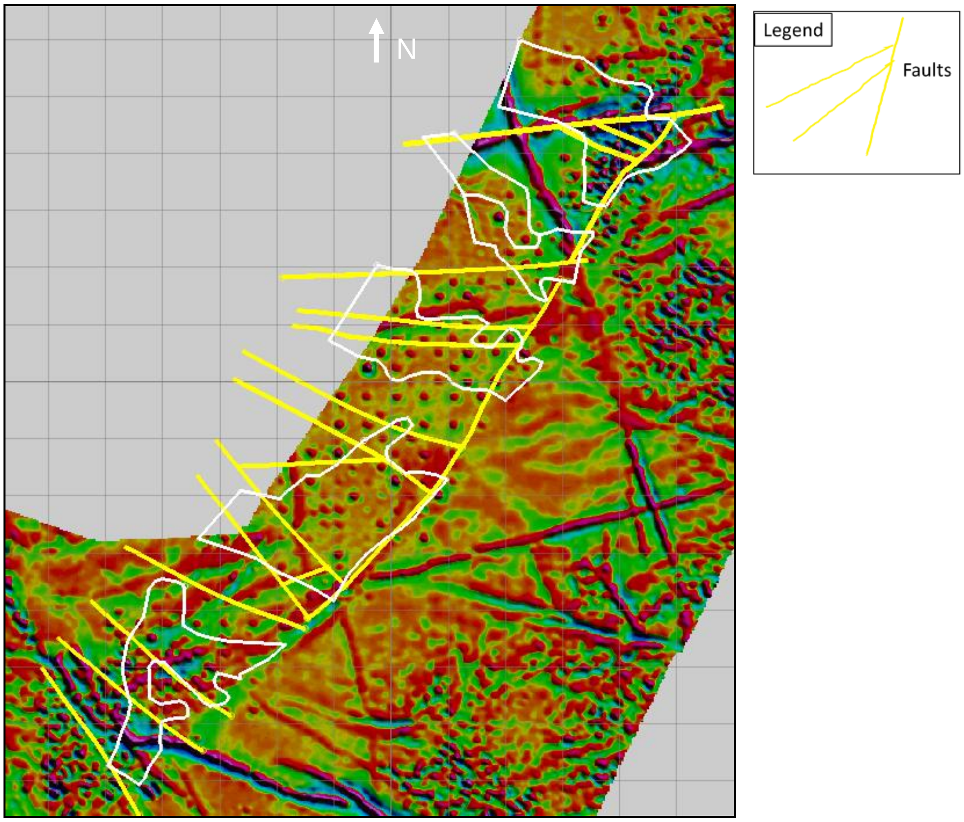

Figure 33 shows the top contact of the T Zone and Figure 34 shows the top contact for the F Zone.

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Figure 33: Wireframe Showing the Top of the T Zone

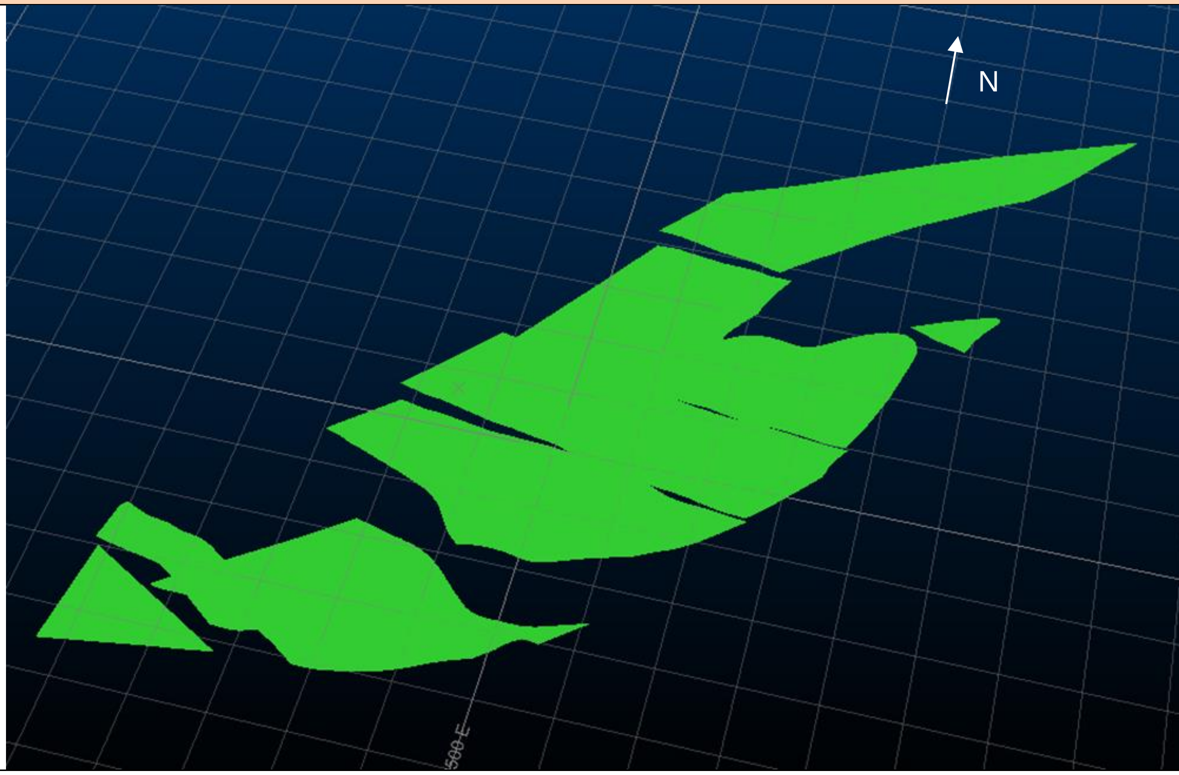

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Figure 34: Wireframe Showing the Top of the F Zone

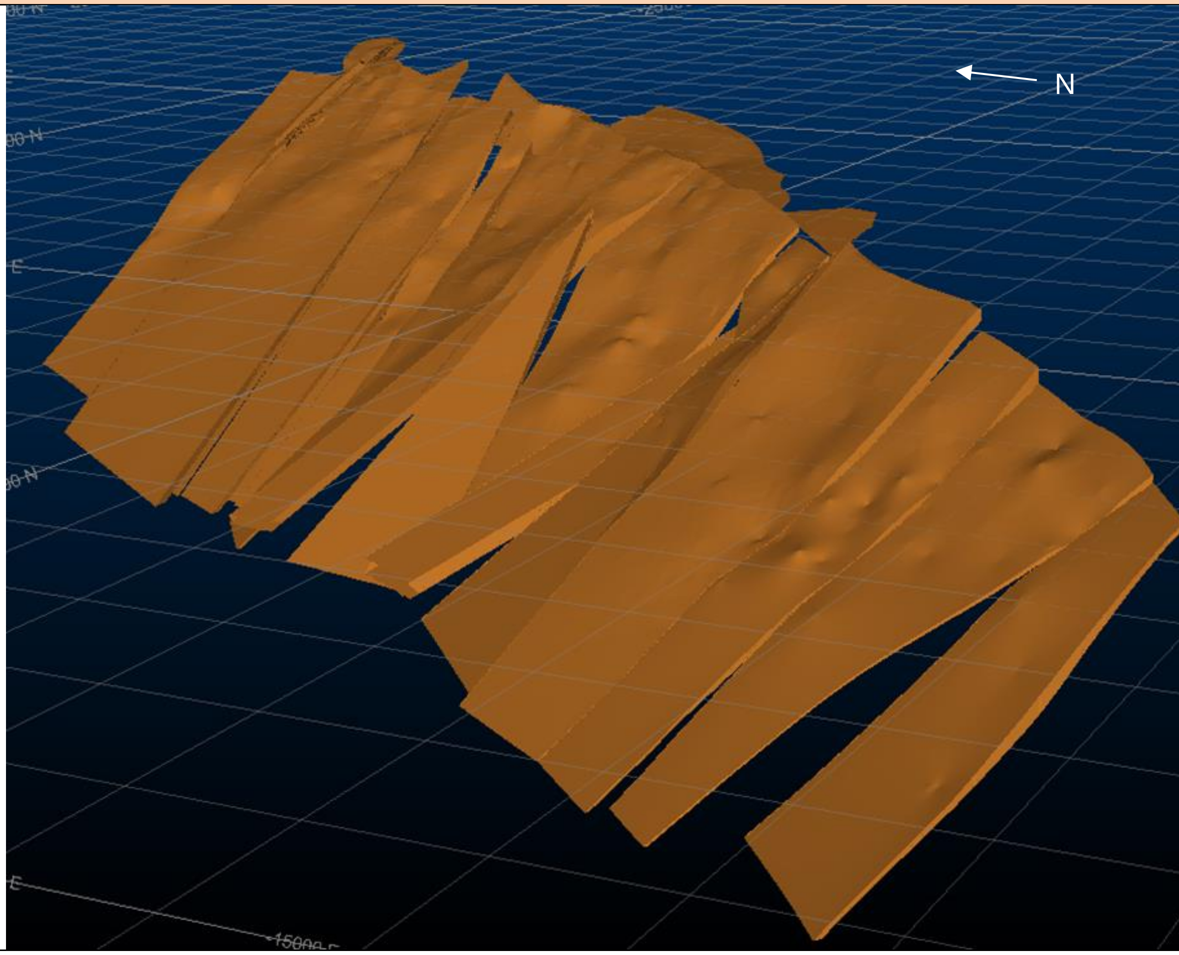

Figure 35 shows a strike section (south-west to north-east) of the spatial relationship between the T Zone and F Zone. The T Zone is on average 380 m above the F Zone. The TZ is at the base of the T Zone, with the T1 immediately above the TZ unit. The T0, along strike direction, is close to the T1 unit in the north-east and opens to as much as 100 m and closes again to the south-west (Figure 35). The T0 is not developed in the south western portion (the down faulted block). Figure 36 shows that on a dip section the different units are parallel, maintaining similar distances apart.

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Figure 35: Strike Section Showing the Spatial Relationship between T Zone (TZ/T1/T0) and F Zone

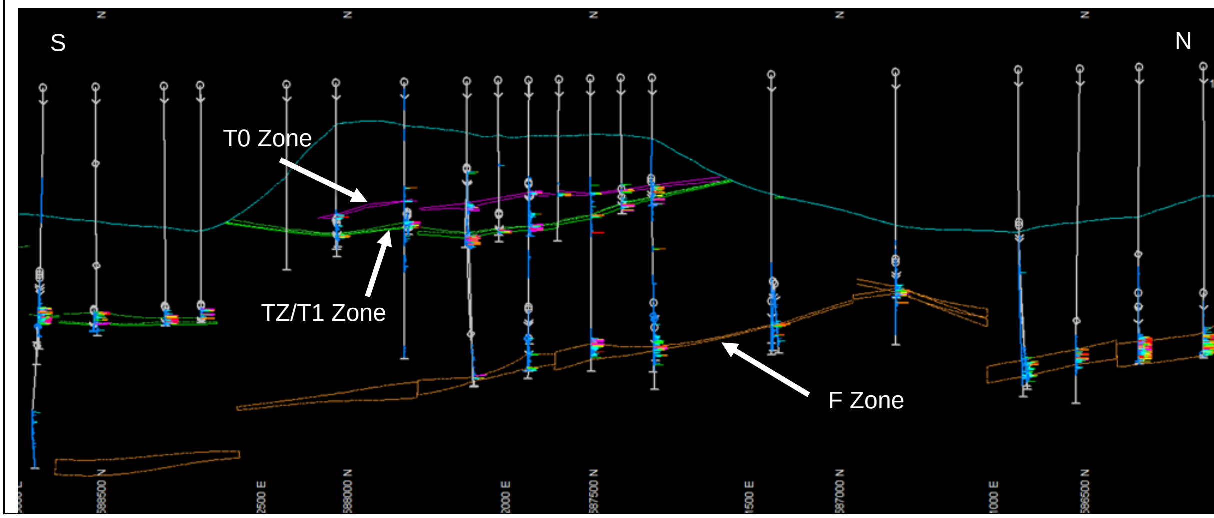
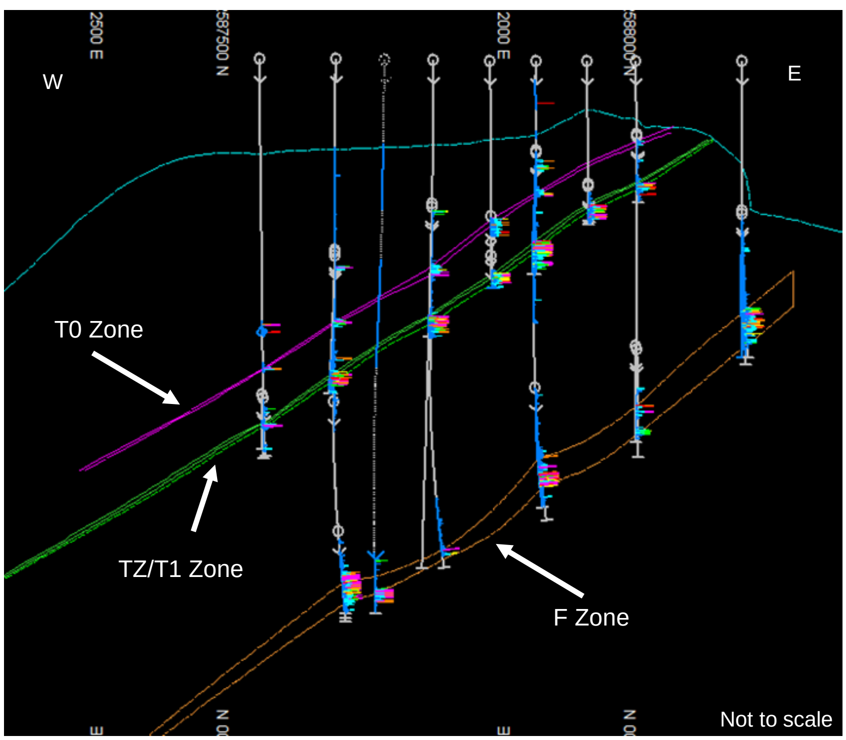


Figure 36: Dip Section (West – East) Showing the T Zone and F Zone Spatial Relationship



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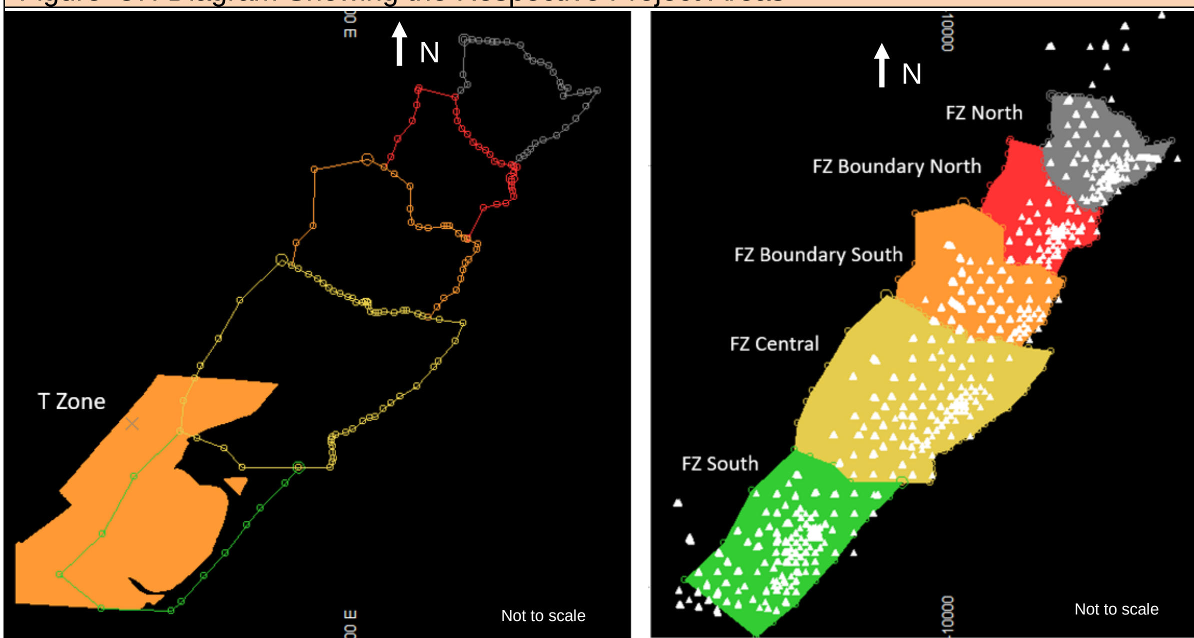
14.4 PROJECT AREAS

For practical reasons the F Zone was divided into smaller project areas as can be seen in Figure 37, to handle the large spatial areas and block model size (number of cells etc). The project boundaries were used as soft boundaries that include data from either side.

Figure 37: Diagram Showing the Respective Project Areas



14.5 GEOLOGICAL DOMAINS

The F Zone, consisting of the FP and FH packages, was modelled as a single unit as no clear distinct individual units could be correlated across the project area. The T Zone has three distinct units, TZ, T1 and T0, based on mineralised and lithological characteristics.

The project area consists of distinct zones of mineralisation that vary in different parts of the project area. Geological domains based on various geological features including thickness of the mineralisation zones, mineralisation distribution within the zone, lithological changes and structural controls were defined.

The F Zone varies from thick (20 m – 60 m), well mineralised and continuous mineralisation (Super F Zones) to intermediate thickness (10 m – 20 m) less continuous to thin zones with scattered lower mineralisation. The T Zone is generally thinner (5 m – 10 m) with higher grades than the F Zone.

Table 16 shows the different parameters for respective domains for F Zone.

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For the F Zone, a total of 17 domains were delineated. These are labelled 1 through 14 and then 16 through 18. There is no Domain 15.

Figure 38 shows the geological domains defined for the F zone.

Figure 38: Geological Domains of the F Zone

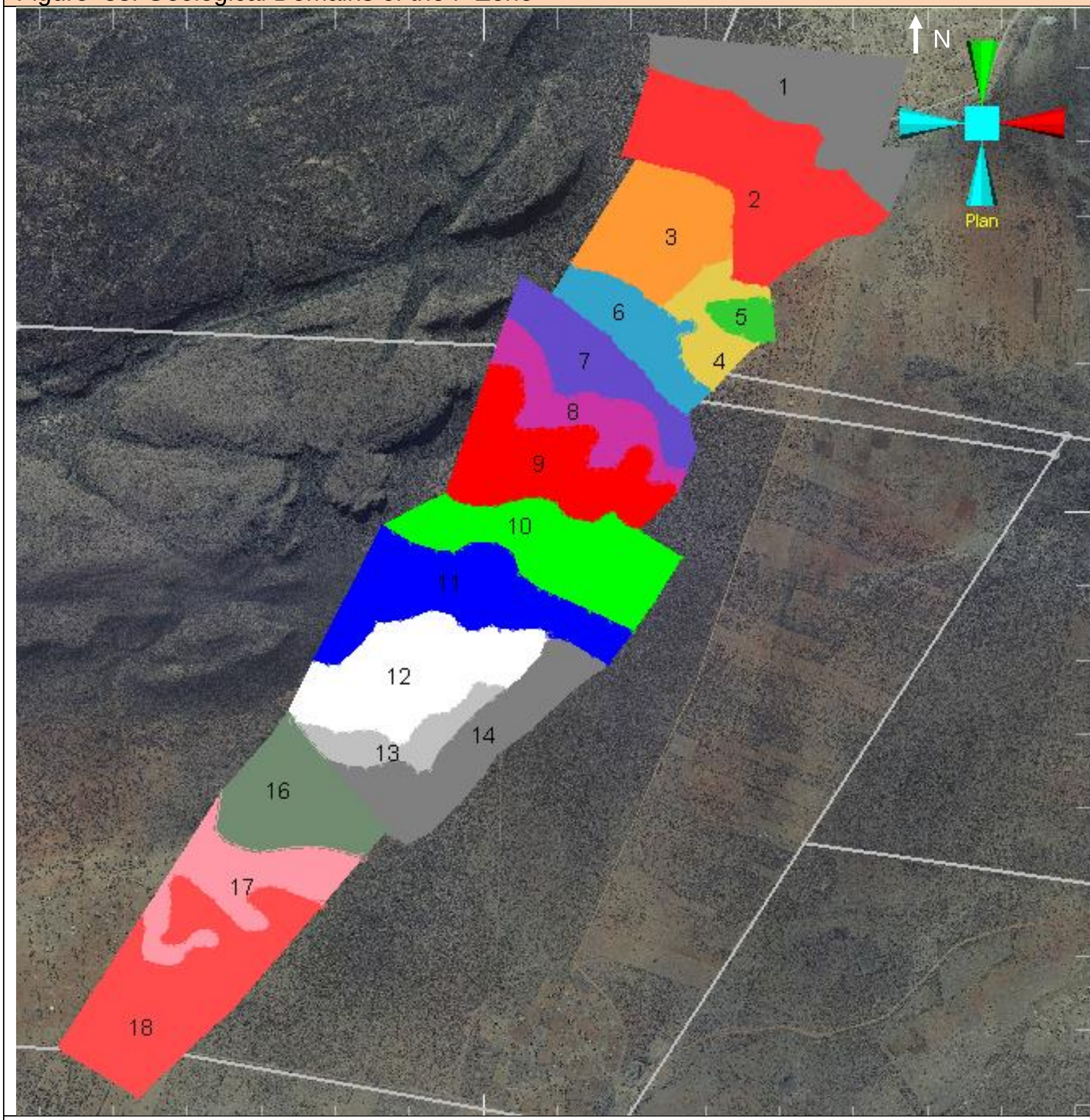

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Table 16: F Zone Geological Domain Characteristics

Project Area	Domain	Vertical Thichness	Grade	Metal	Pt:Pd
		m	g/t	mg/t	
North	1	37	0.85	29.2	0.52
*North	2	51	2.25	116.0	0.42
North	3	52	1.47	75.0	0.49
Boundary North	4	17	2.57	39.0	0.63
Boundary North	5	42	2.06	78.0	0.55
*Boundary North	6	65	1.81	131.0	0.49
Boundary North	7	35	1.82	60.0	0.46
Boundary South	8	31	1.40	27.0	0.54
*Boundary South	9	66	1.76	57.0	0.47
Boundary South	10	11	1.28	14.2	0.74
Central	11	55	0.97	55.2	0.54
*Central	12	97	2.10	196.4	0.43
Central	13	31	3.54	48.1	0.51
Central	14	11	1.21	12.7	0.54
South	16	17	1.17	21.3	0.61
*South	17	32	2.29	67.5	0.54
South	18	31	1.22	30.4	0.62
* Super F Zone - Domains					

** There is no domain 15
*** Grades are from composite drillhole intersections at 0 g/t cut-off

As a result, five domains were identified for the TZ for the TZ unit (Figure 39), three domains for the T1 unit (Figure 40) and four domains for the T0 unit (Figure 41).

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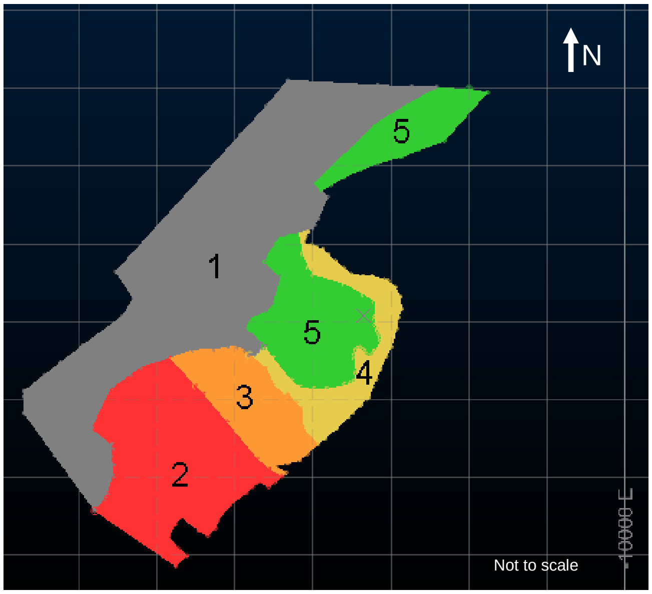
Figure 39: Geological Domains – TZ (Bottom Unit of the T Zone)



Domain	Vertical Thickness	Grade PGE4	Metal PGE4	PT:PD
	m	g/t	mg/t	
1	5.1	0.98	5.4	0.80
2	8.4	3.96	34.2	0.60
3	3.9	3.56	13.1	0.90
4	5.1	1.33	7.4	0.95
5	7.1	3.79	27.1	0.62

*** Grades are from composite drillhole intersections at 0 g/t cut-off

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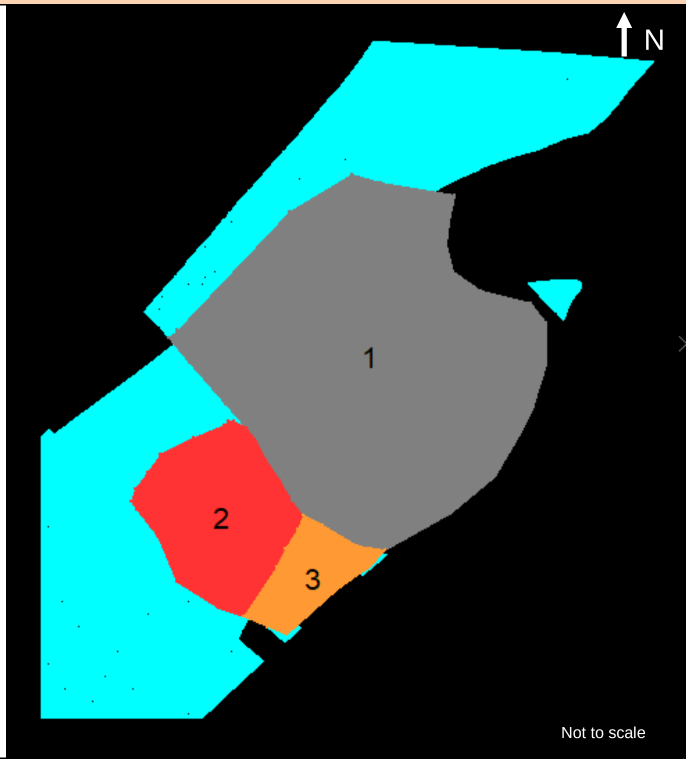
Figure 40: Geological Domains – T1 (Unit Immediately Above TZ)



Domain	Vertical Thickness	Grade 4E	Metal 4E	Pt:Pd
	m	g/t	mg/t	
1	4.5	0.49	2.8	0.69
2	17.5	1.09	19.3	0.65
3	12.1	0.47	6.3	0.92

*** Grades are from composite drillhole intersections at 0 g/t cut-off

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Figure 41: Geological Domains – T0 (Upper Unit of the T Zone)

Domain	Vertical Thickness	Grade 4E	Metal 4E	Pt:Pd
	m	g/t	mg/t	
1	3.7	1.63	6.7	0.71
2	12.8	2.28	25.1	0.67
3	4.4	1.20	5.3	0.75
4	9.1	1.92	17.2	0.64

*** Grades are from composite drillhole intersections at 0 g/t cut-off

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The thick well mineralised domains are referred to as Super F Zone Domains, which is also the main economic domains considered for mining (Figure 42).

Figure 42: Diagram Showing the Super F Zone Domains

14.6 PROBABILITY MODEL

The first step is to delineate the overall mineralised envelope or zone in which mineralisation occur. This was historically done by creating a wireframe on sections of the interpreted mineralised envelope. The current process uses indicators to delineate the mineralised envelope, basically on the same principles as a wireframe. From a Mineral Resource point of view the first step is to separate mineralised material from disseminated and barren material. If higher grade portions exist and have clear continuity between drillholes then a second envelope inside the overall envelope can be delineated etc.

It is important to understand the grade continuity of the orebody and the characteristics on all scales to eventually delineate and evaluate.

The initial drilling for the project area was on a 400 m drill spacing. Except for structural and other drill related issues all drillholes did intersect the mineralised zones over a strike length of more than 19 km. The current focus of the project extends over 8 km along strike and have more than 500 drillholes drilled. The variability of the mineralisation is the most important aspect to understand and then modelled and evaluated.

As the mineralisation is not continuous throughout each of the delineated F and T Zones and the portions that are mineralised can vary from top to bottom over various distances it was necessary to delineate a mineralised envelope within each zone. In this way poorly mineralised or un-mineralised portions were separated from well mineralised portions. An Indicator Kriging approach was used to estimate the mineralised envelope within each zone.

This procedure prevents smearing of high grades into areas which are not actually mineralised.

Figure 43 shows the discontinuous nature of the mineralisation.

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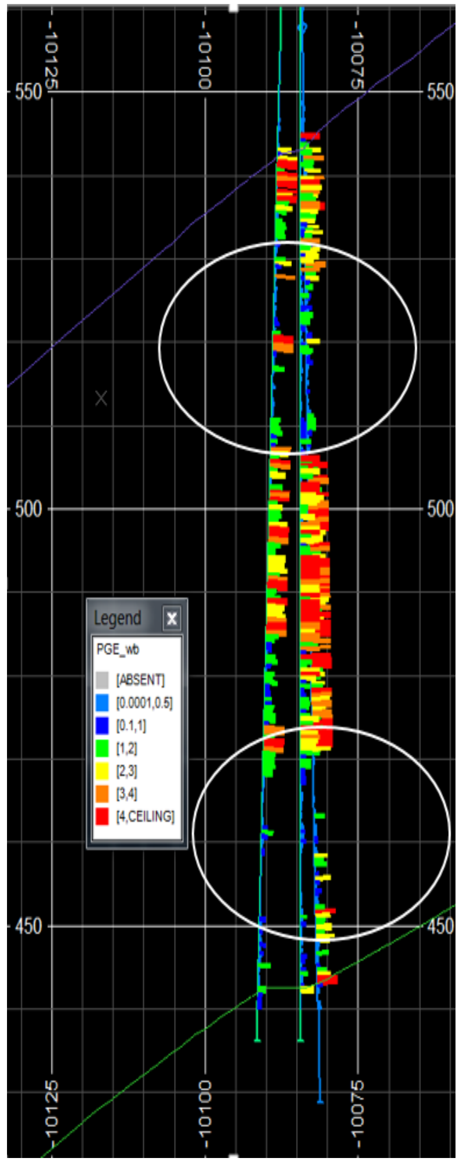
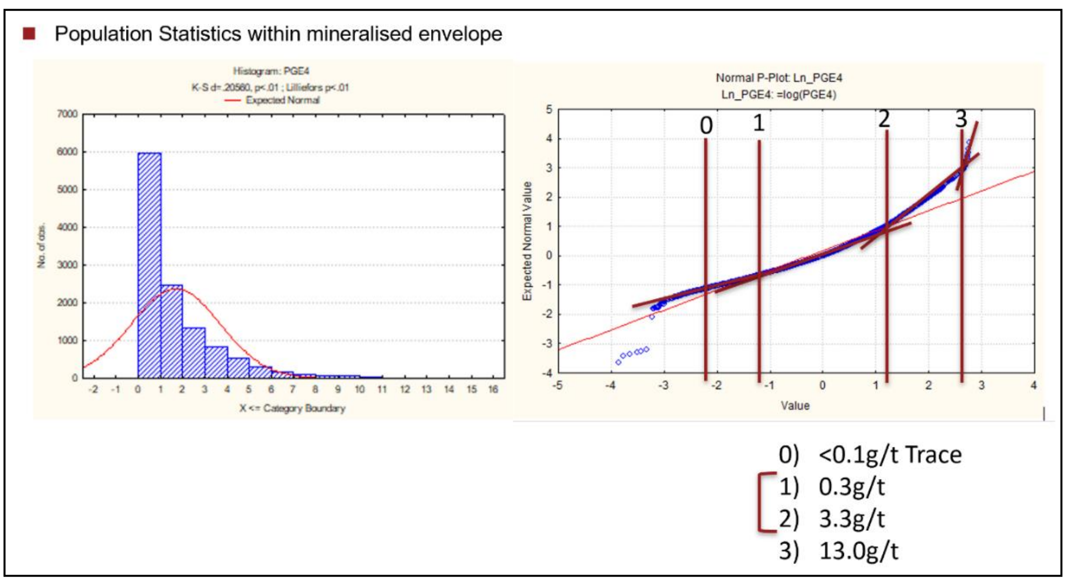
Figure 43: Discontinuous Nature of the Mineralised Zone



The grades do show a large variability over short distances i.e. deflection level of higher grades. Therefore, selecting any high cut-off would result in incorrect delineation, especially having drillholes further apart. The reality is that the orebody cannot be drilled at 5 m intervals to capture the higher variability and the application of a high cut-off grade. Therefore the aim is to determine with wider spaced drilling the appropriate cut-off to ensure continuity if possible. The fact that we have a relatively high variability on a close space basis points to the fact that this orebody will never be evaluated, from a practical point of view (close drill spacing 10 m or less), with a high selectivity at a high cut-off grade. To isolate high grades and evaluate separately would overstate grades at the T delineated volume. The high variability forces us to consider a wider range of grades to include and make it impossible to have isolated higher-grade portions delineated.

The second aspect of delineating the mineralised envelope is to consider a grade population that belongs together. If grade populations are split, then there is a huge risk that estimation between samples will be incorrect and not representative. The initial mineralised envelope should then represent a statistical population. Probability plots are useful to establish different populations of grade samples. Figure 44 shows a histogram and probability plot (PP) of grades. The PP Plot shows at least 5 grade populations. The first one is the trace values below detection limit (left of the 0 line, < 0.1 g/t 4E). The second population is between 0.1 g/t and 0.3 g/t 4E and these represent most probably the disseminated grades. The third population is between 0.3 g/t and 3.3 g/t 4E which represents most of the samples and therefore the main mineralisation group. The fourth population is the 3.3 g/t to 13 g/t 4E and represents a smaller high-grade population within the overall population. The last population is a small number of samples and most probably the outliers. The selection then of the cut-off to select for the delineation of the mineralised envelope should then be the 0.3 g/t cut-off. The 3.3 g/t 4E cut-off is not a continuous envelope and is contained within the larger 0.3 g/t 4E envelope. Further, the average grade of the mineralised samples is below 3 g/t 4E and selecting a cut-off close to the average would overstate grades for delineated volumes.

Figure 44: Histogram and Probability Plots of 4E Showing Different Grade Populations



A 1 g/t 4E cut-off grade was selected as representative of the mineralised envelope within each specific F and T Zones.

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14.6.1 CODING OF INDICATORS

All samples are flagged with either a 0 (waste) or 1 (ore) to indicate waste or mineralised zone respectively. Samples greater than 1 g/t PGE4 are flagged as mineralised as shown in Table 15 below. The 0.111 value is below cut-off (Table 17), is included because on either side the samples are above cut-off and the length are less than the 2 m which is the inclusive waste distance criteria or internal dilution that cannot be separately mined.

Table 17: Coding of samples

BHID	FROM	TO	PGE4	Flag
WB008D2	490	490.25	0.071	0
WB008D2	490.25	490.5	0.05	0
WB008D2	490.5	490.75	0.07	0
WB008D2	490.75	491	0.06	0
WB008D2	491	491.25	0.06	0
WB008D2	491.25	491.5	0.06	0
WB008D2	491.5	491.75	1.98	1
WB008D2	491.75	492	0.111	1
WB008D2	492	492.25	2	1
WB008D2	492.25	492.5	1.74	1
WB008D2	492.5	492.75	0.392	0
WB008D2	492.75	493	0.515	0
WB008D2	493	493.25	0.405	0
WB008D2	493.25	493.5	0.161	0
WB008D2	493.5	493.75	0.06	0

14.6.2 DENSITY

[SR 3.7 (iii)] [SR 3.7 (iv)]

Density was kriged for each block in the model similarly to grade. There are cases where density was not measured. As a result, there are some gaps in the data. The gaps were assigned values according to their lithology and an analysis to determine average values for each lithological unit. On average the density values for the F Zone is 2.95 t/m^3, TZ is 2.91 t/m^3, T1 is 2.88 t/m^3, and the T0 2.88 t/m^3.

The density values are considered by the QP to be appropriate for Bushveld type mineralisation.

14.6.3 COMPOSITE INDICATORS 1M

The indicators (0 and 1) are composited on a 1 m basis to ensure they have the same support.

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14.6.4 CREATE START MODEL (5X5X1)

After compositing the indicators, an indicator start model is created. This has the same origin as the flattened block model with block sizes of 5x5x1 m in the X, Y and Z direction respectively.

14.6.5 SETUP INDICATOR ESTIMATION PARAMETERS

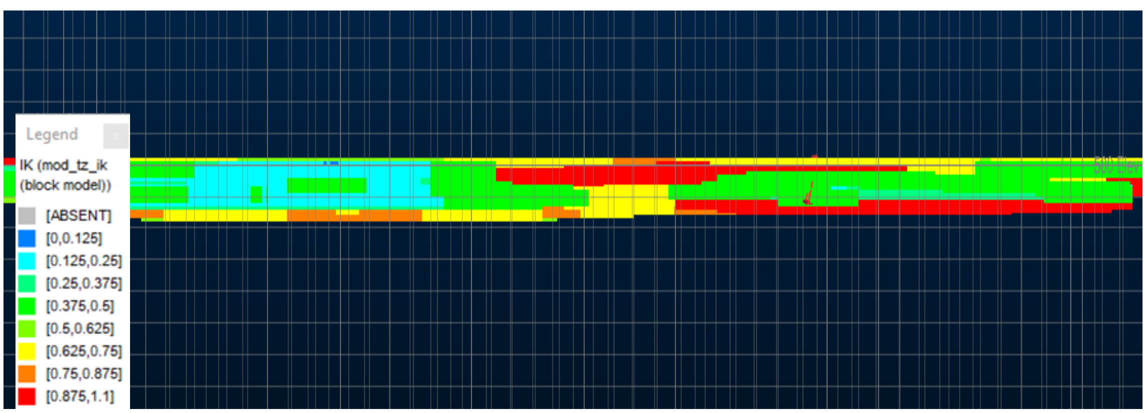
The Indicator estimation uses an Inverse Distance squared algorithm as the data has already been flagged as 0 and 1. The search ellipse was constrained to a single pass. The estimation parameters are summarised below:

Search distance			Minimum number of samples	Maximum number of samples	Max Key
X	Y	Z			
350	350	3	2	18	2

14.6.6 ESTIMATE INDICATORS

The flagged indicators are estimated using IDW to obtain a mineralised envelope (Figure 45).

Figure 45: Probability Model Example



14.6.7 CALCULATE EXPECTED PERCENTAGE ORE IN ENVELOPE FROM DRILLHOLE DATA

The expected amount of ore within the envelope is then calculated from the composited drillhole data. This calculated figure is used in determining the most appropriate probability selection (Table 18).

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Table 18: Table showing the volume relationship at specific probability level cut-offs		
Probability	Tonnage	Percentage of total tonnage
0	22330950	
0.05	22239600	99.59%
0.1	22152975	99.20%
0.15	21947125	98.28%
0.2	21632000	96.87%
0.25	21279150	95.29%
0.3	20779250	93.05%
0.35	19813950	88.73%
0.4	19183875	85.91%
0.45	18506000	82.87%
0.5	17126400	76.69%
0.55	15720925	70.40%
0.6	14509025	64.97%
0.65	13060800	58.49%
0.7	10966350	49.11%
0.75	9214300	41.26%
0.8	7386000	33.08%
0.85	5110600	22.89%
0.9	3498175	15.67%
0.95	2238500	10.02%
1	1097475	4.91%

14.7 ESTIMATION START MODEL

After the indicators are estimated and a mineralised envelope obtain, an initial (start) model for estimation is created applying the appropriate probability level (Figure 46).

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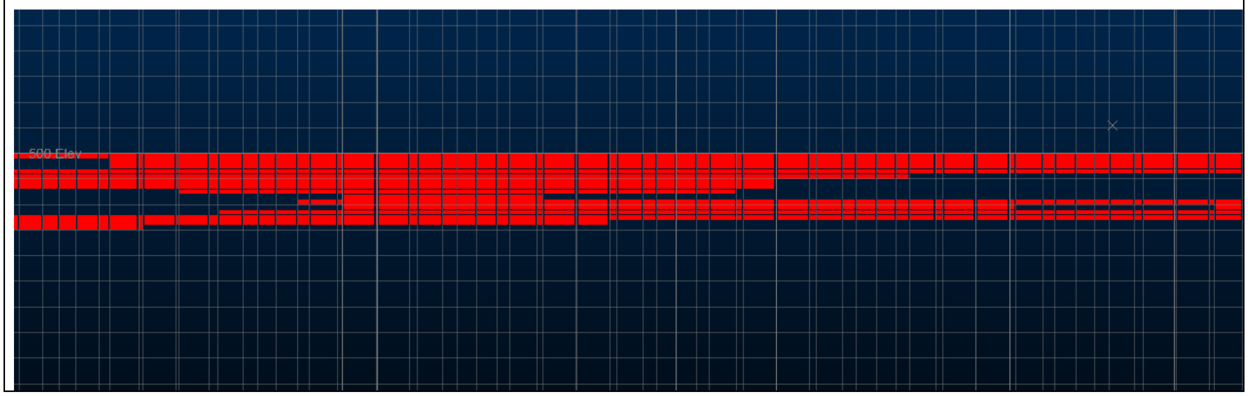
Figure 46: Estimation Start Model Derived from the Probability Model Example.



14.7.1 FLAG DRILLHOLE WITH FINAL START MODEL

Drillhole samples are coded using the Datamine “MOD2XYZ” process. The cells have the reef code and that is assigned to samples that lies within a specific cell.

14.8 COMPOSITE ORE INTERSECTIONS

The drillhole intersections for both the F and T Zone intersections were composited for 3PGE+Au (4E), Pt, Pd, Au, Cu, Ni and Density on a 1 m interval. The compositing utilised the weighting of density and sample length.

14.9 HISTOGRAMS AND PROBABILITY PLOTS

A detailed statistical analysis showed typically skewed distributions for most of the elements to be assessed. The data was thus capped using probability and log probability plots to reduce the variability in the populations for each domain.

14.10 OUTLIER ANALYSIS

The histogram and probability plots were used to determine the values to be top-cap (values greater than the top-cap value are set to the top-cap value) for the various domains. The maximum column in Table 19 represents the top-cut values applied for the T Zone and the F Zone.

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Table 19: Top-cut values applied for the T Zone and F Zone

Parameter	TZ	T1	T0	FZ North	FZ Boundary North	FZ Boundary South	FZ Central	FZ South
Density	3.22	3.24	3.15	3.71	3.36	3.25	3.48	3.30
Pt	6.00	2.80	5.50	4.50	4.50	3.40	6.00	4.80
Pd	10.00	6.00	8.00	8.00	7.00	7.80	11.00	9.70
Rh	0.20	0.12	0.25	0.22	0.25	0.17	0.35	0.36
Au	4.00	1.40	2.50	0.60	0.80	0.70	0.70	0.76
Ni	0.30	0.36	0.24	0.55	0.60	0.40	0.44	0.30
Cu	0.80	0.55	0.50	0.35	0.30	0.30	0.30	0.15
PGE4	12.00	10.00	15.00	14.00	13.00	9.50	16.00	14.50

14.11 DESCRIPTIVE STATISTICS

Detailed descriptive statistics were completed on the composited data flagged within the start model (Table 20). Each domain was analysed as well as the entire dataset for each mineralised layer

Table 20: Descriptive Statistics for the T and F Zones

Parameter	Number of Samples	Min	Max	Av	Var	Stdev	CoV
T ZONE - TZ							
Density	1105	2.616	3.22	2.91	0.006	0.075	0.03
Pt	1105	0.010	6.00	1.24	1.300	1.140	0.92
Pd	1105	0.010	10.00	2.10	4.461	2.112	1.00
Rh	1105	0.001	0.20	0.03	0.002	0.039	1.17
Au	1105	0.010	4.00	0.93	0.724	0.851	0.92
Ni	1078	0.006	0.30	0.10	0.005	0.072	0.74
Cu	1078	0.005	0.80	0.19	0.033	0.181	0.94
PGE4	1105	0.045	12.00	4.13	10.986	3.315	0.80
T ZONE - T1							
Density	496	2.707	3.24	2.88	0.009	0.093	0.03
Pt	496	0.005	2.80	0.72	0.370	0.608	0.84
Pd	496	0.006	6.00	1.24	1.306	1.143	0.92
Rh	496	0.001	0.12	0.02	0.000	0.020	0.99
Au	496	0.003	1.40	0.31	0.099	0.314	1.01
Ni	494	0.003	0.36	0.06	0.003	0.058	0.98
Cu	494	0.003	0.55	0.10	0.013	0.115	1.16
PGE4	496	0.024	10.00	2.30	3.859	1.964	0.85
T ZONE - T0							
Density	486	2.677	3.15	2.88	0.004	0.065	0.02
Pt	486	0.010	5.50	0.95	0.930	0.964	1.01
Pd	486	0.020	8.00	1.53	2.430	1.559	1.02
Rh	486	0.001	0.25	0.04	0.002	0.044	1.14
Au	486	0.010	2.50	0.47	0.270	0.520	1.11
Ni	463	0.004	0.24	0.08	0.003	0.056	0.73

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Cu	463	0.001	0.50	0.16	0.018	0.133	0.85
PGE4	486	0.061	15.00	2.98	8.574	2.928	0.98
FZ North							
Density	4350	2.515	3.71	2.96	0.003	0.059	0.02
Pt	4349	0.010	4.50	0.75	0.320	0.565	0.76
Pd	4349	0.007	8.00	1.79	1.846	1.359	0.76
Rh	4349	0.001	0.22	0.04	0.001	0.032	0.77
Au	4349	0.001	0.60	0.14	0.011	0.106	0.75
Ni	4263	0.009	0.55	0.19	0.007	0.083	0.44
Cu	4263	0.000	0.35	0.09	0.004	0.062	0.68
PGE4	4349	0.036	14.00	2.73	4.214	2.053	0.75
FZ Boundary North							
Density	2955	2.546	3.36	2.96	0.005	0.073	0.02
Pt	2955	0.010	4.50	0.68	0.361	0.601	0.89
Pd	2955	0.010	7.00	1.43	1.417	1.190	0.83
Rh	2955	0.001	0.25	0.04	0.001	0.033	0.91
Au	2955	0.001	0.80	0.13	0.013	0.112	0.87
Ni	2955	0.008	0.60	0.19	0.008	0.087	0.45
Cu	2955	0.001	0.30	0.09	0.003	0.057	0.65
PGE4	2955	0.040	13.00	2.28	3.664	1.914	0.84
FZ Boundary South							
Density	3544	2.645	3.25	2.95	0.005	0.073	0.02
Pt	3544	0.005	3.40	0.62	0.267	0.516	0.83
Pd	3544	0.005	7.80	1.36	1.248	1.117	0.82
Rh	3544	0.001	0.17	0.03	0.001	0.027	0.90
Au	3544	0.001	0.70	0.11	0.009	0.095	0.83
Ni	3228	0.005	0.40	0.17	0.004	0.066	0.38
Cu	3228	0.001	0.30	0.07	0.003	0.051	0.72
PGE4	3544	0.021	9.50	2.12	2.761	1.661	0.78
FZ Central							
Density	7106	2.605	3.48	2.95	0.004	0.067	0.02
Pt	7103	0.005	6.00	0.72	0.441	0.664	0.92
Pd	7103	0.005	11.00	1.66	2.179	1.476	0.89
Rh	7103	0.001	0.35	0.04	0.002	0.039	1.00
Au	7103	0.001	0.70	0.11	0.010	0.099	0.87
Ni	6708	0.005	0.44	0.17	0.004	0.065	0.38
Cu	6708	0.000	0.30	0.06	0.002	0.049	0.82
PGE4	7103	0.021	16.00	2.53	4.970	2.229	0.88
FZ South							
Density	1459	2.699	3.30	2.97	0.006	0.079	0.03
Pt	1459	0.007	4.80	0.82	0.630	0.794	0.97
Pd	1459	0.005	9.70	1.48	2.420	1.556	1.05
Rh	1459	0.001	0.36	0.04	0.002	0.049	1.19
Au	1459	0.003	0.76	0.10	0.013	0.113	1.12
Ni	1459	0.002	0.30	0.12	0.002	0.044	0.38
Cu	1459	0.001	0.15	0.03	0.001	0.030	1.00
PGE4	1459	0.027	14.50	2.44	5.932	2.436	1.00

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14.12 VARIOGRAM MODELLING

Variograms are a useful tool for investigating the spatial relationships of samples. Variograms for 3PGE+Au (4E Grade), Pt, Pd, Rh, Au, Ni, Cu and Density were modelled for the estimation process.

Downhole variograms are modelled to obtain the short distance spatial variance that is also an indication of the expected nugget that should be applied for the planar variograms. Figure 47 show an example of a downhole variogram for the F Zone.

Figure 47: Downhole Variogram Example

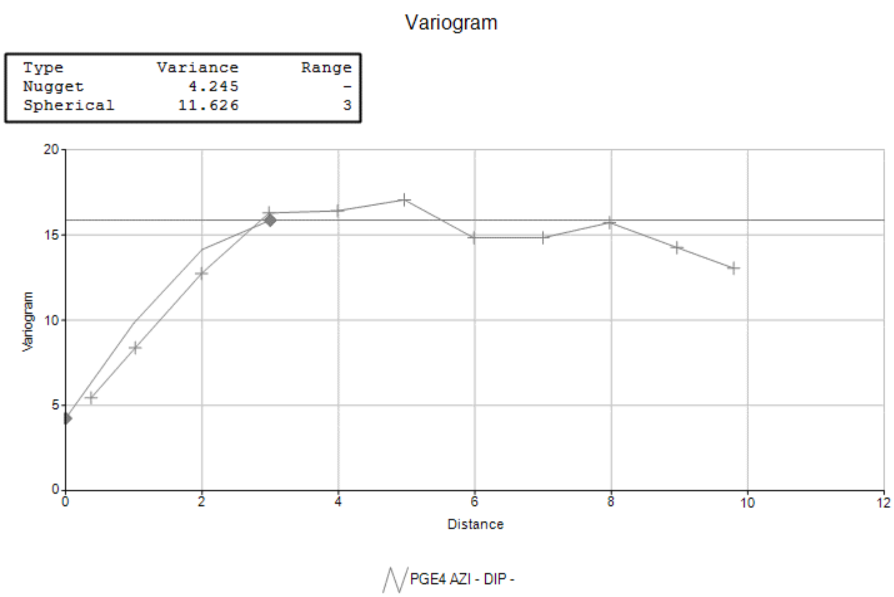

Figure 48 shows an example of an anisotropic planar variogram for the F Zone.

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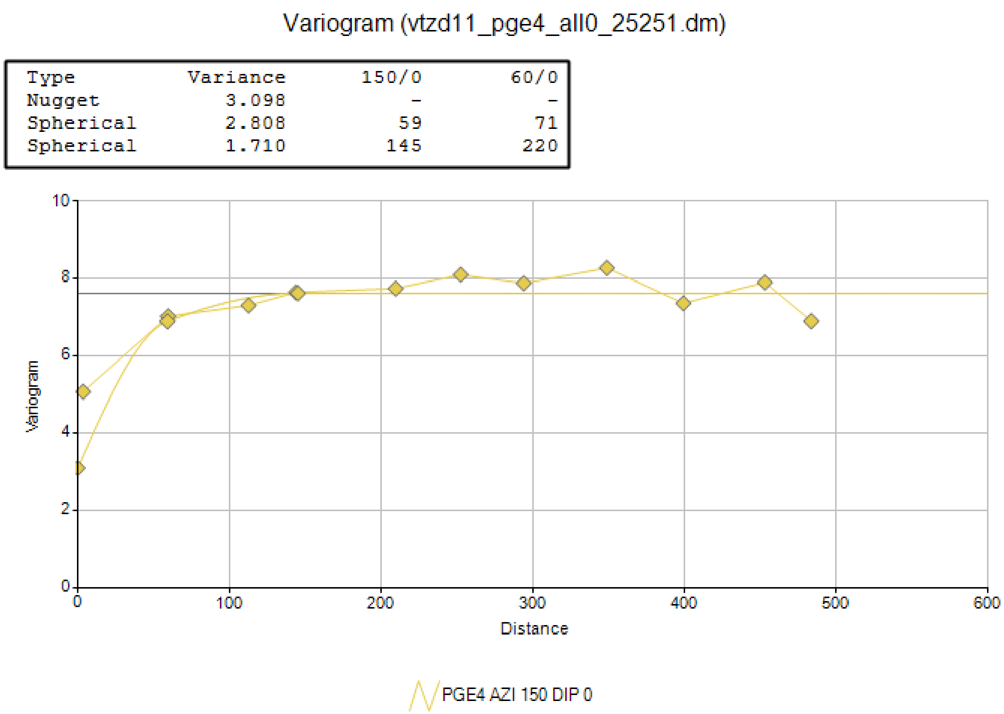
Figure 48: Example of a Variogram Model of the F Zone (4E).



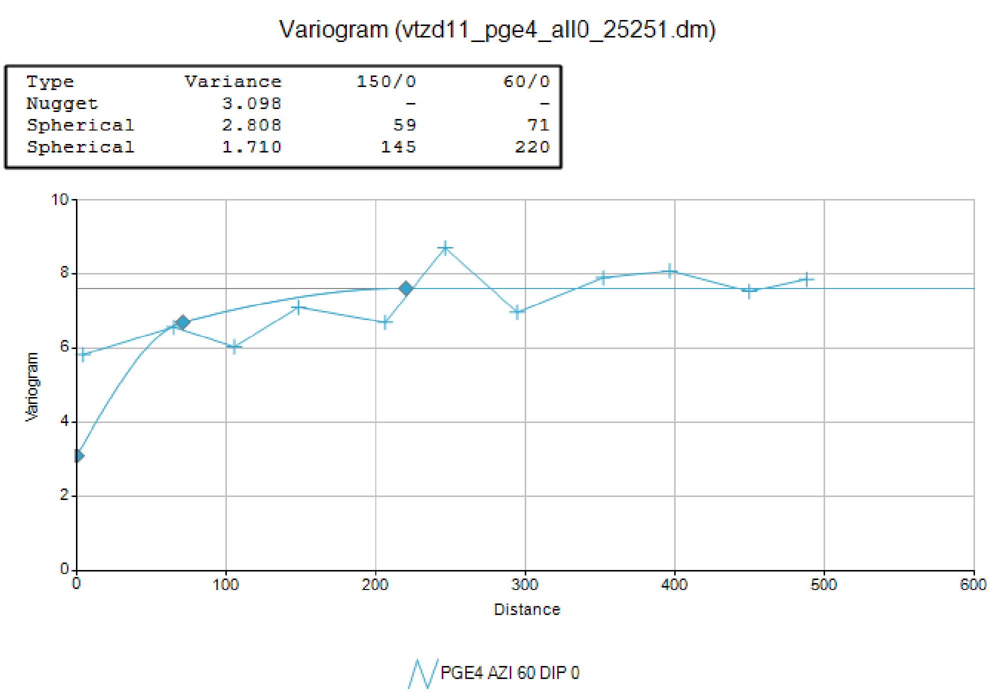


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Table 21 summarises the modelled variogram's parameters.

Table 21: Variogram Model Parameters

	Sill	Angle 1	Axis 1	Nugget %	Sill 1 %	X1 Range	Y1 Range	Z1 Range	Sill 2 %	X2 Range	Y2 Range	Z2 Range
T Zone - TZ												
Density	0.0060	60	3	33	100	274	274	3	100	145	225	3
Pt	1.1430	60	3	37	61	56	63	3	100	141	223	3
Pd	3.9270	60	3	52	80	60	69	3	100	146	231	3
Rh	0.0013	60	3	50	70	56	67	3	100	154	209	3
Au	0.6100	60	3	46	83	39	53	3	100	118	240	3
Ni	0.0040	60	3	25	25	71	88	3	100	143	235	3
Cu	0.0290	30	3	34	41	50	88	3	100	218	236	3
PGE4	7.6156	60	3	41	74	59	65	3	100	145	224	3
T Zone - T1												
Density	0.0033	30	3	29	67	144	152	3	100	406	400	5
Pt	0.1850	30	3	33	66	87	77	3	100	288	265	5
Pd	0.7350	30	3	27	53	90	77	3	100	281	230	5
Rh	0.0003	30	3	39	65	87	68	3	100	289	222	5
Au	0.0620	30	3	29	69	85	80	3	100	281	255	5
Ni	0.0005	30	3	37	77	133	91	3	100	336	288	5
Cu	0.0016	30	3	34	60	116	148	3	100	289	350	5
PGE4	1.8050	30	3	39	61	87	79	3	100	289	278	5
T Zone - T0												
Density	0.0037	0	3	25	50	105	136	3	100	265	315	5
Pt	0.1130	30	3	36	65	72	83	3	100	230	271	5
Pd	0.1950	30	3	35	50	77	93	3	100	220	284	5
Rh	0.0001	30	3	36	72	76	82	3	100	245	263	5
Au	0.0170	30	3	29	65	69	84	3	100	218	272	5
Ni	0.0013	30	3	33	73	74	89	3	100	217	254	5
Cu	0.0044	30	3	33	75	60	88	3	100	228	302	5
PGE4	0.7610	30	3	33	67	75	84	3	100	214	271	5
F Zone - North												
Density	0.0035	47	3	39	83	100	100	5	100	350	350	5
Pt	0.3070	47	3	42	82	72	53	3	100	244	305	5
Pd	1.7010	47	3	34	78	81	56	3	100	231	326	5
Rh	0.0010	47	3	42	79	76	60	3	100	218	322	5
Au	0.0100	47	3	40	80	73	84	3	100	225	306	5
Ni	0.0070	47	3	43	71	65	86	3	100	227	308	5
Cu	0.0040	47	3	25	75	71	101	3	100	221	348	5
PGE4	4.0160	47	3	39	83	88	55	3	100	234	325	5
F Zone - Boundary North												
Density	0.0053	30	3	40	80	100	100	3	100	314	335	5

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Pt	0.3120	30	3	42	64	97	86	3	100	286	252	5
Pd	1.1722	30	3	36	86	101	90	3	100	291	254	5
Rh	0.0009	30	3	42	79	76	60	3	100	285	270	5
Au	0.0107	30	3	36	73	103	110	3	100	290	275	5
Ni	0.0071	30	3	43	71	103	122	3	100	315	251	5
Cu	0.0031	30	3	25	75	99	119	3	100	281	257	5
PGE4	3.2466	30	3	39	68	104	100	3	100	291	245	5
F Zone - Boundary South												
Density	0.0052	30	3	40	80	100	100	3	100	314	335	5
Pt	0.2356	30	3	42	43	116	99	3	100	375	267	5
Pd	1.1501	30	3	36	61	118	92	3	100	371	245	5
Rh	0.0006	30	3	40	55	112	121	3	100	369	265	5
Au	0.0084	30	3	38	75	103	110	3	100	369	252	5
Ni	0.0039	30	3	33	62	116	102	3	100	370	287	5
Cu	0.0026	30	3	29	49	100	94	3	100	283	196	5
PGE4	2.3209	30	3	39	63	114	100	3	100	369	245	5
F Zone - Central												
Density	0.0045	0	3	25	25	150	94	3	100	255	244	5
Pt	0.4019	0	3	31	58	96	93	3	100	248	194	5
Pd	2.0830	0	3	34	68	100	93	3	100	261	225	5
Rh	0.0014	0	3	34	59	109	92	3	100	250	209	5
Au	0.0091	0	3	33	56	141	99	3	100	295	264	5
Ni	0.0041	0	3	34	58	97	96	3	100	296	245	5
Cu	0.0023	0	3	34	41	109	95	3	100	214	193	5
PGE4	4.6709	0	3	34	51	97	91	3	100	257	215	5
F Zone - South												
Density	0.0035	0	3	39	83	100	100	5	100	280	240	5
Pt	0.4700	0	3	47	47	114	62	3	100	254	170	5
Pd	1.8752	0	3	34	42	116	65	3	100	293	193	5
Rh	0.0019	0	3	27	28	112	110	3	100	236	209	5
Au	0.0108	0	3	27	27	134	72	3	100	281	236	5
Ni	0.0020	0	3	50	50	115	95	3	100	262	253	5
Cu	0.0008	0	3	42	43	103	143	3	100	240	267	5
PGE4	4.4656	0	3	34	37	109	63	3	100	280	200	5

14.13 GLOBAL MEAN MODEL

Simple Kriging (SK) using a global mean was used to estimate in areas where there is insufficient data and the model needs to be extrapolated into these areas. The SK model was generally applied in the Inferred Mineral Resource category. Global means were calculated for several block sizes/ de-clustered data orientations. Based on this exercise an appropriate global mean was selected for use in the SK estimation.

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SK was generally used for the second and third search radius while Ordinary Kriging (OK) was used for the first search radius.

14.14 GRADE ESTIMATION

Estimation was carried out using Datamine Studio^{TM} ver21 and Minesoft's geostatistical package 'RES ver4'.

Grade parameters estimated were estimated PGE4 (combined Pt, Pd, Rh, Au), Pt, Pd, Rh, Au, Cu, Ni and Density, using Ordinary (OK) and Simple Kriging (SK).

The following applies to the Mineral Resource area and was undertaken using Minesoft (Pty) Ltd.'s 'RES' geostatistical program. The following parameters were used in the kriging process:

- 25 m x 25 m x 1 m block size,
- 3D estimation was conducted
- Search ellipses aligned with the variogram ranges.
- Minimum number of Samples 18
- Maximum number of samples 30
- Interpolation methods – Ordinary and Simple Kriging,

14.15 MODEL VALIDATION

The models are validated based on several parameters. A Visual validation comparing drillhole grades to block model grades, swath plots, search volumes, number of samples used in an estimate, distance from samples that represent the variogram ranges, kriging efficiency and slope of regression plots are all used to validate the estimation process.

14.16 ROTATE BACK TO ROTATED PLANE

The kriged models are then subdivided into smaller cells 5x5x1m, maintaining the parent cell grades. These cell centers are then projected back to the rotated plane as can be seen in Figure 49.

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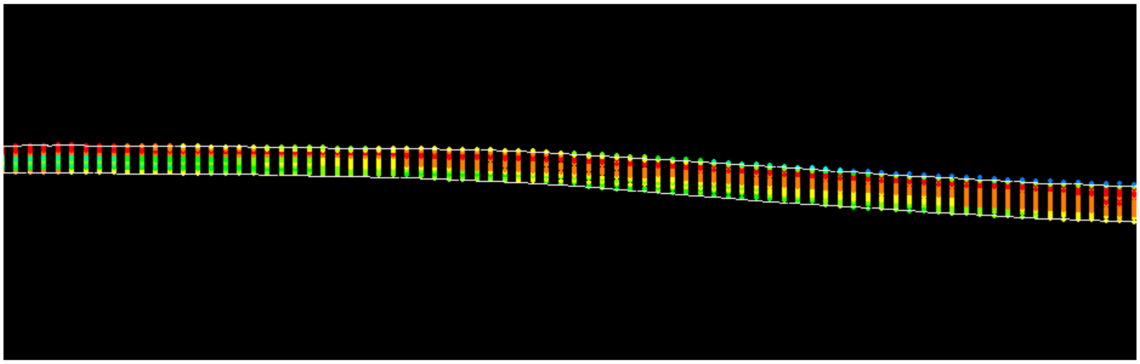
Figure 49: Example of Cell Centers Projected Back to Rotated Wireframe.



14.17 ROTATE BACK TO ORIGINAL 3D SPACE

The 5x5x1 m cell centers are back rotated to the original 3D plane (Figure 50). The cell centers are then converted to a block model and represents the final *in-situ* Mineral Resource model (Figure 51).

Figure 50: Example of the Back Rotated Cell Centers to original 3D Space.

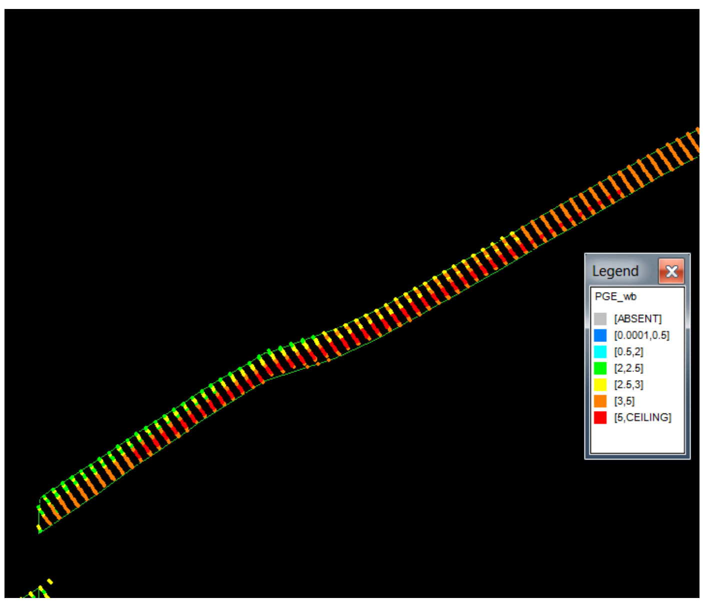


Figure 51: Example of the Final *In-situ* Mineral Resource Model.

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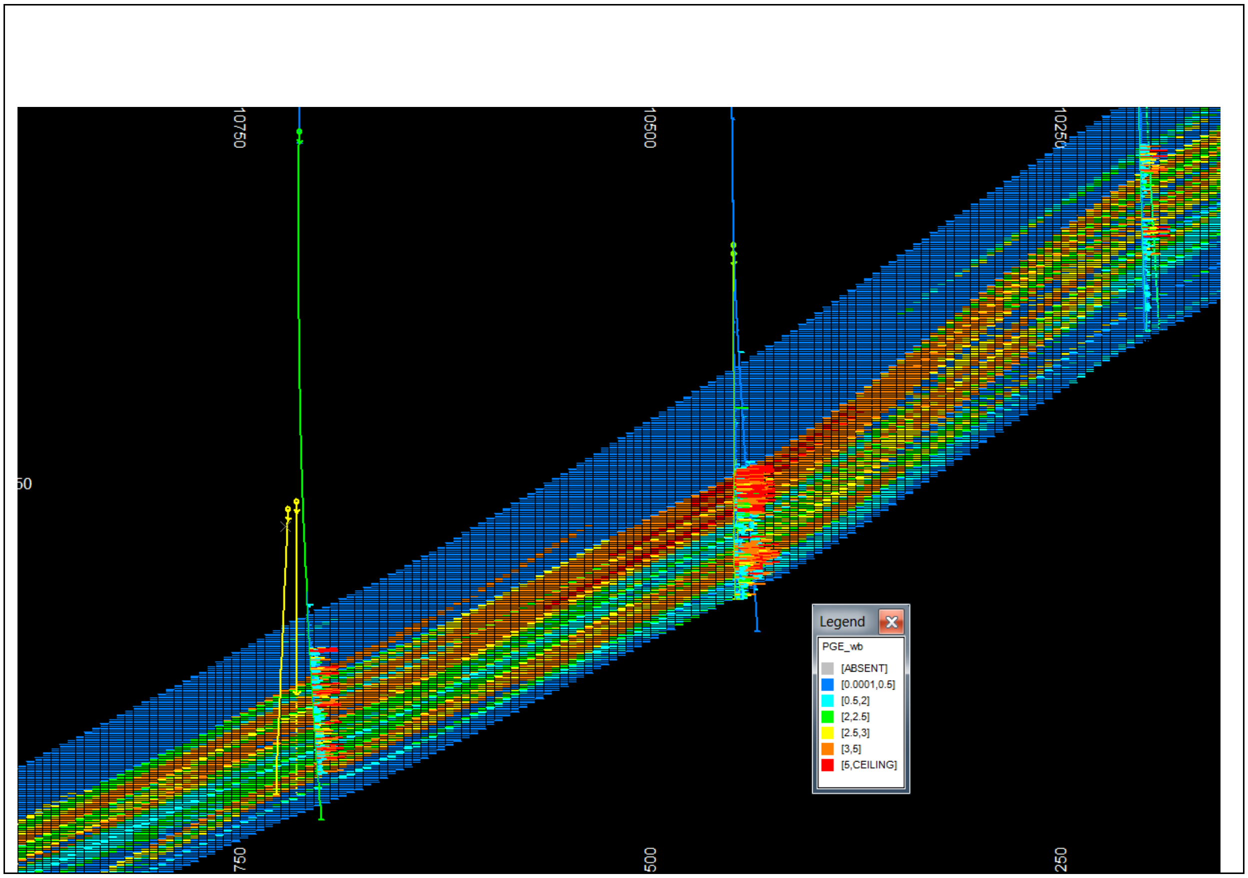

14.18 CONVERSION TO PLANNED MINERAL RESOURCE MODEL

[SR 3.1 (vii)] [SR 3.1 (viii)]

The *in-situ* Mineral Resource model does have in places 1 m thick ore envelopes and some scattered cells that will not be mined. The final Mineral Resource model is finalized using specific criteria to eliminate thin slices and scattered mineralisation, as well as ensure continuity.

The following parameters were considered creating the planned Mineral Resource model:

- A 2.0 g/t (4E) cut-off determined from economic parameters and a 2.5 g/t (4E) cut-off which is the preferred option for the DFS.
- 2.5 m minimum width (vertical), actual corrected width is close to 2 m.
- Inclusive waste (internal dilution) (grades need to be above the cut-off if waste portions are included). A 3 m was used for the T Zone units (TZ, T1 and T0) and 5 m for the thicker F Zones.
- Isolated/scattered cells are eliminated.
- Subtract fault losses

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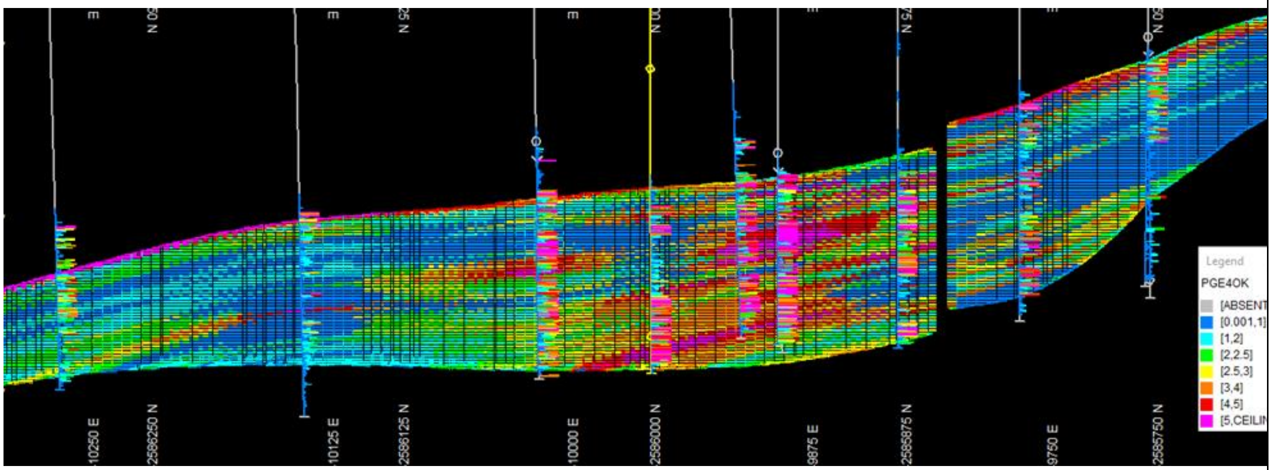
Figure 52 shows an example of the conversion from in-situ resouce model to the final planned resource model.

Figure 52: Diagram Showing the *In-situ* vs Planned Mineral Resource Model



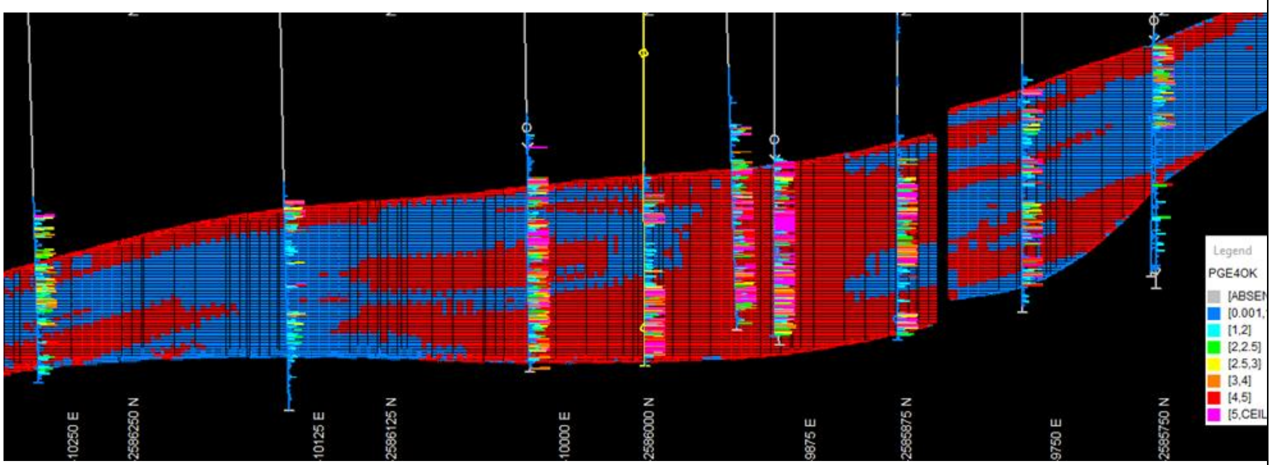


Figure 52 shows the initial overall vertical thickness of the delineated mineralised zones for the F and T Zones. Figures 53 to 57 show the Planned Mineral Resource model parameters at a 2.0 g/t cut-off (4E) and other applied parameters as discussed above. The plots represent a cumulative value in the vertical dimension for applied parameters.

Figure 53: Initial Vertical Thickness of Respective Mineralised Zones
T Zone - TZ

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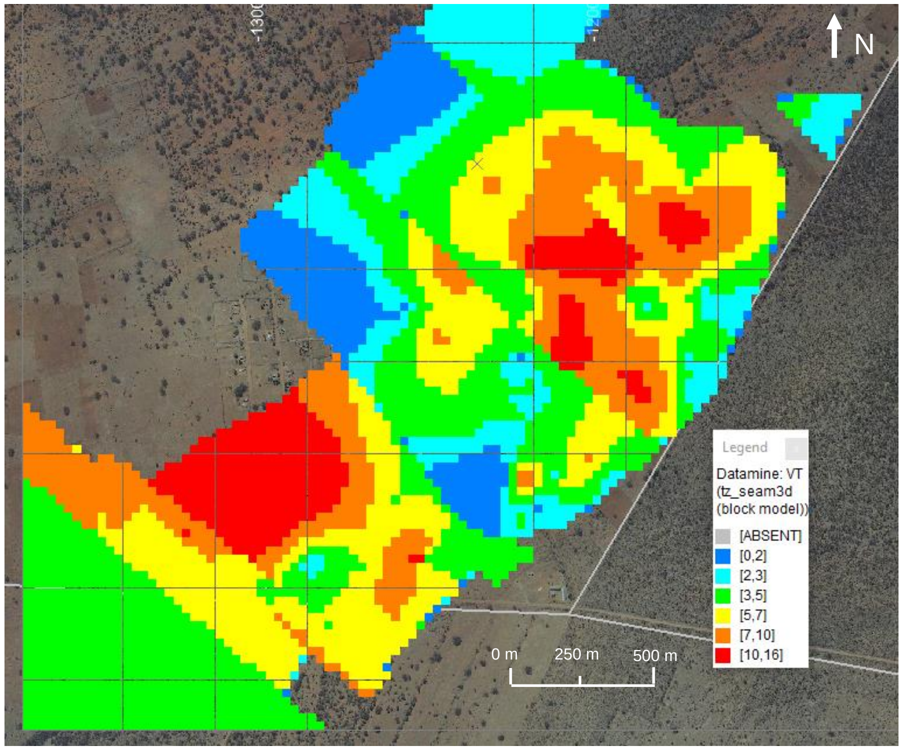
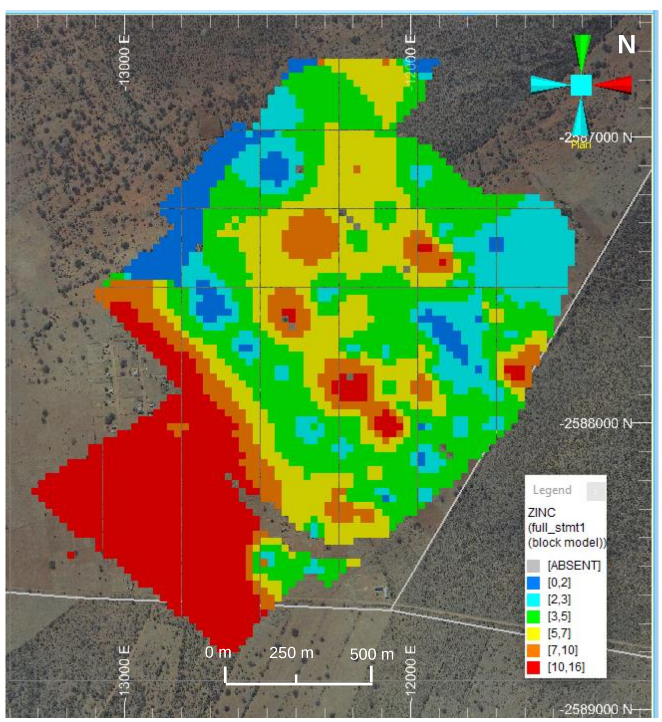
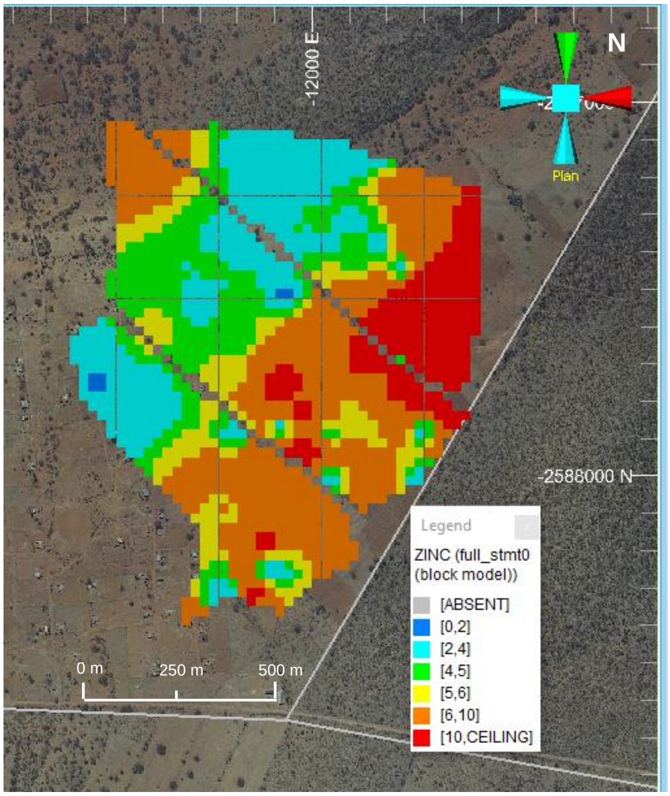


T Zone – T1



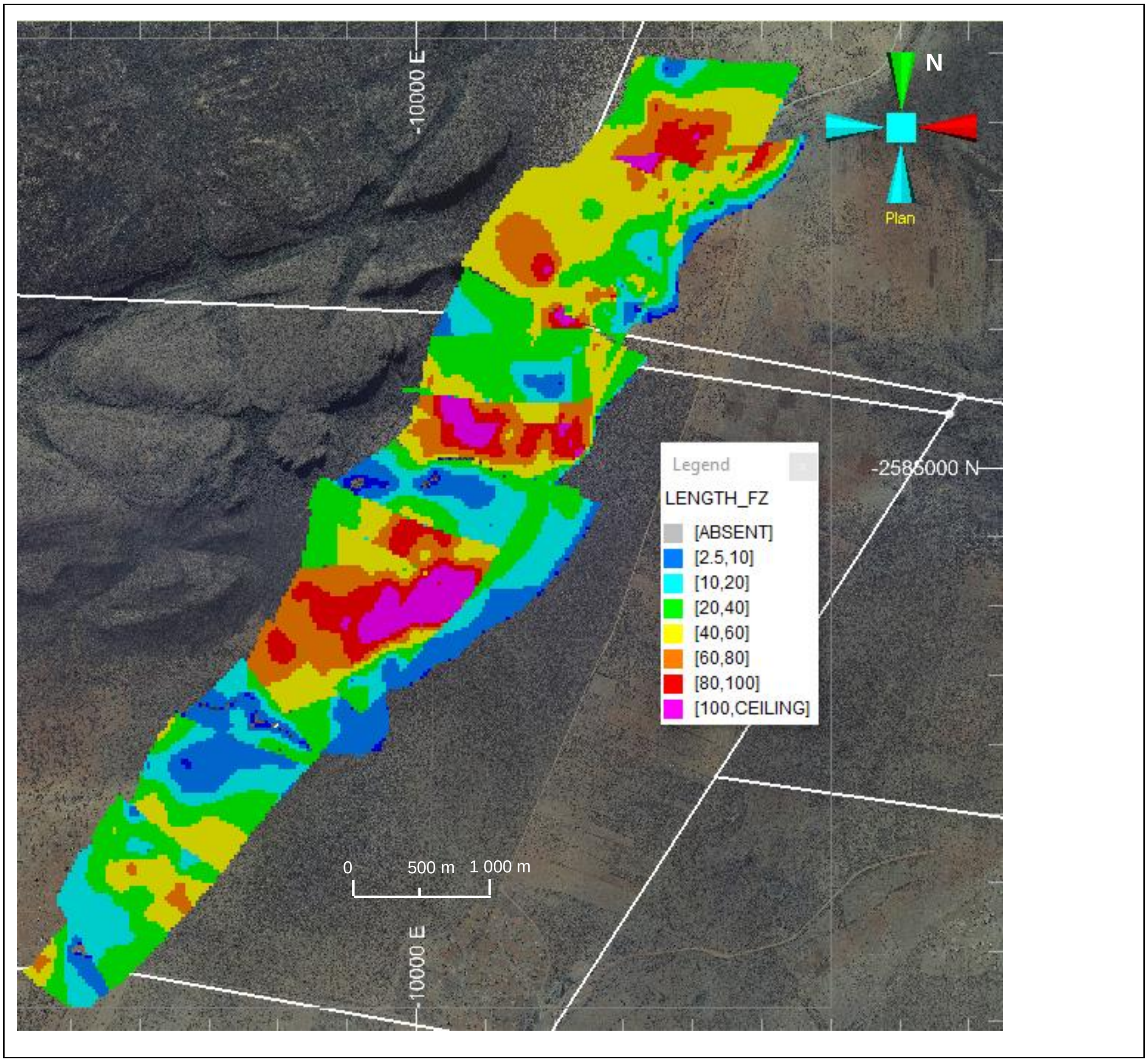
T Zone – T0

T


-12000 E
N
Plan
-2588000 N
Legend
ZINC (full_stmt0 (block model))
[ABSENT]
[0,2]
[2,4]
[4,5]
[5,6]
[6,10]
[10,CEILING]
0 m
250 m
500 m

F Zone

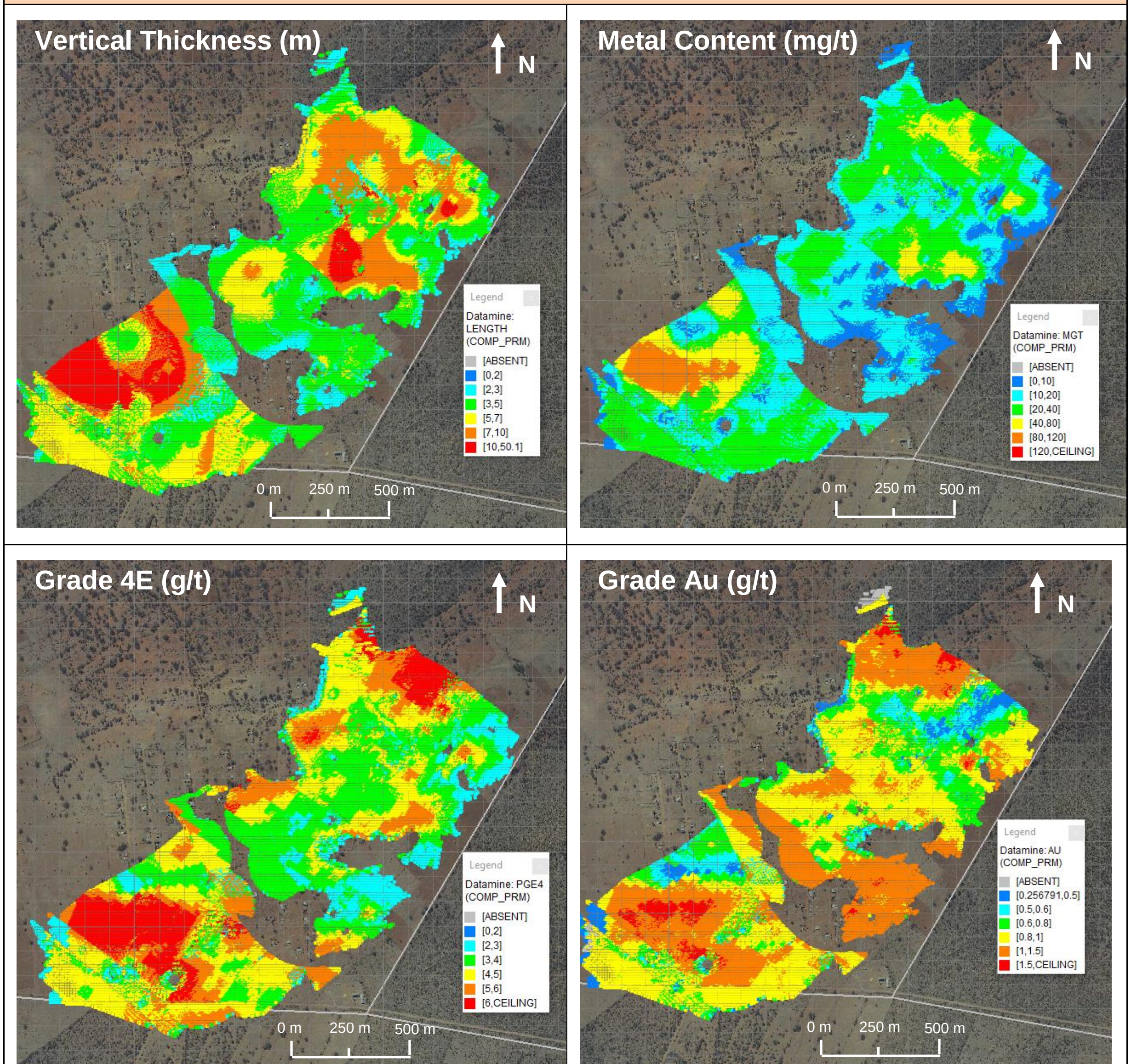
T



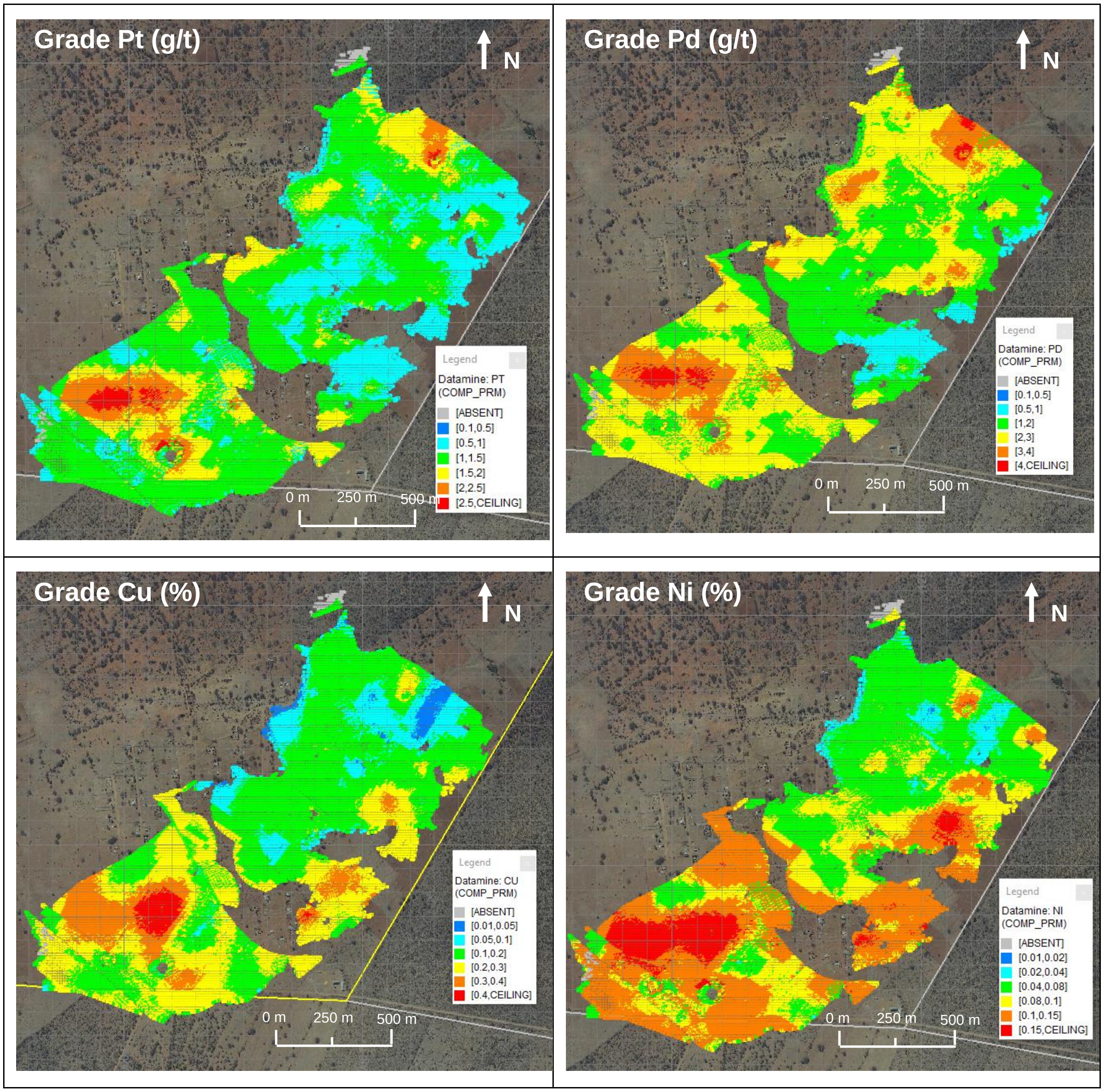
-10000 E
N
Plan
Legend
LENGTH_FZ
[ABSENT]
[2.5,10]
[10,20]
[20,40]
[40,60]
[60,80]
[80,100]
[100,CEILING]
-2585000 N
0
500 m
1 000 m
-10000 E

T

Figure 54: Planned Mineral Resource Model Plots (2.0 g/t Cut-off) for T Zone – TZ

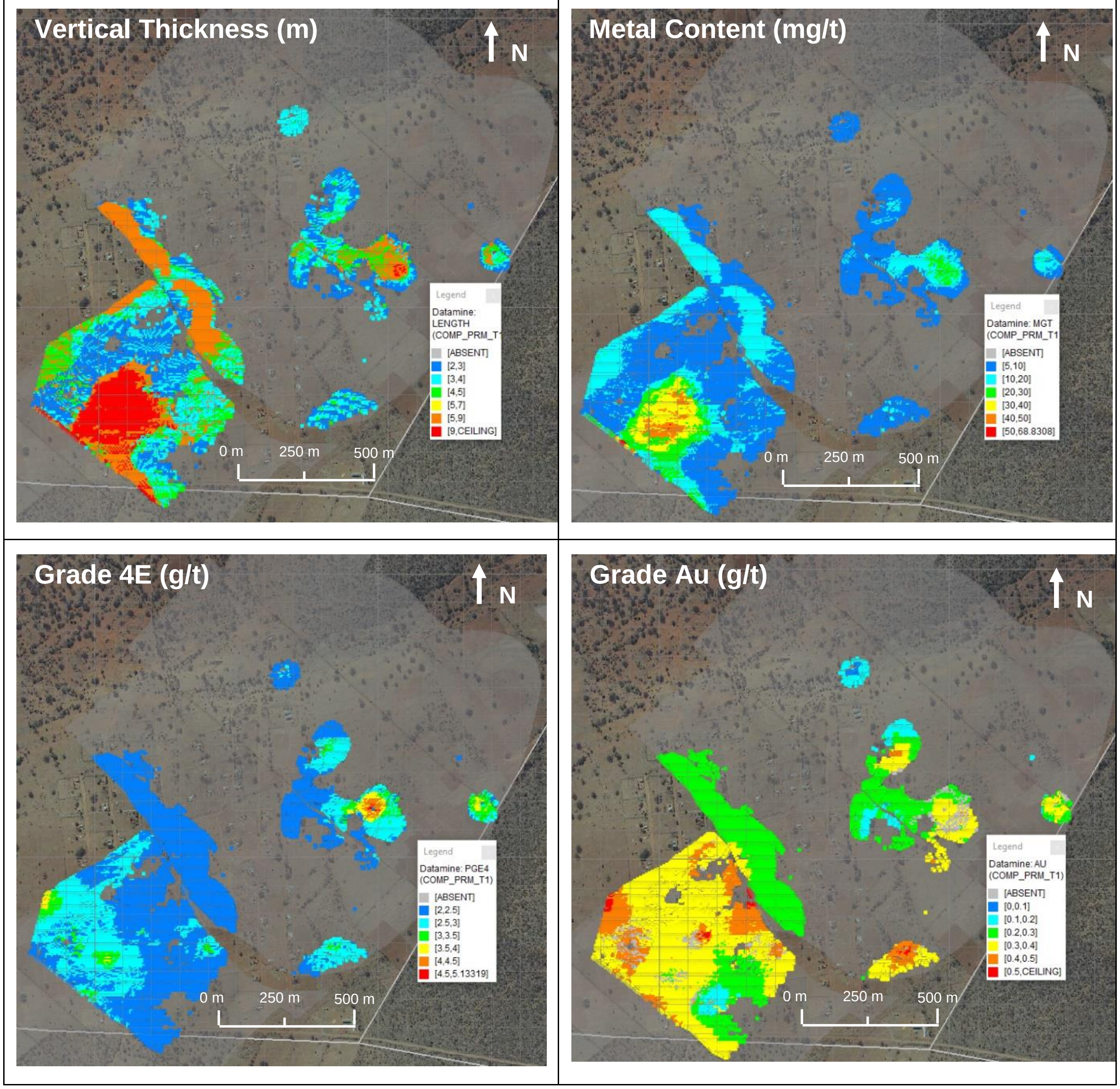


T

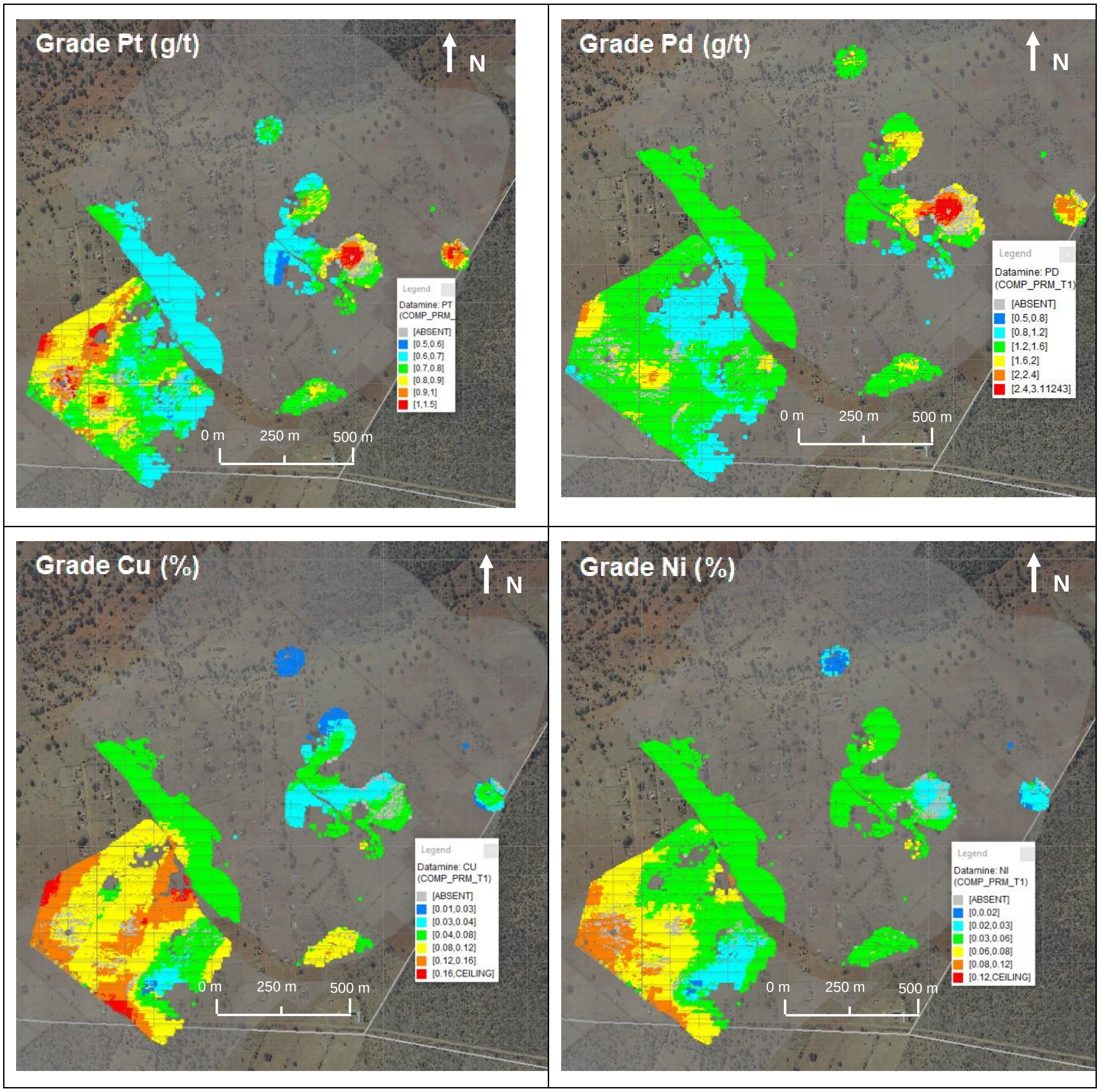

Grade Pt (g/t)
N
Legend
Datamine: PT (COMP_PRM)
[ABSENT]
[0.1,0.5]
[0.5,1]
[1,1.5]
[1.5,2]
[2,2.5]
[2.5,CEILING]
0 m
250 m
500 m
Grade Pd (g/t)
N
Legend
Datamine: PD (COMP_PRM)
[ABSENT]
[0.1,0.5]
[0.5,1]
[1,2]
[2,3]
[3,4]
[4,CEILING]
0 m
250 m
500 m
Grade Cu (%)
N
Legend
Datamine: CU (COMP_PRM)
[ABSENT]
[0.01,0.05]
[0.05,0.1]
[0.1,0.2]
[0.2,0.3]
[0.3,0.4]
[0.4,CEILING]
0 m
250 m
500 m
Grade Ni (%)
N
Legend
Datamine: NI (COMP_PRM)
[ABSENT]
[0.01,0.02]
[0.02,0.04]
[0.04,0.08]
[0.08,0.1]
[0.1,0.15]
[0.15,CEILING]
0 m
250 m
500 m

T

Figure 55: Planned Mineral Resource Model Plots (2.0 g/t Cut-off) for T Zone – T1

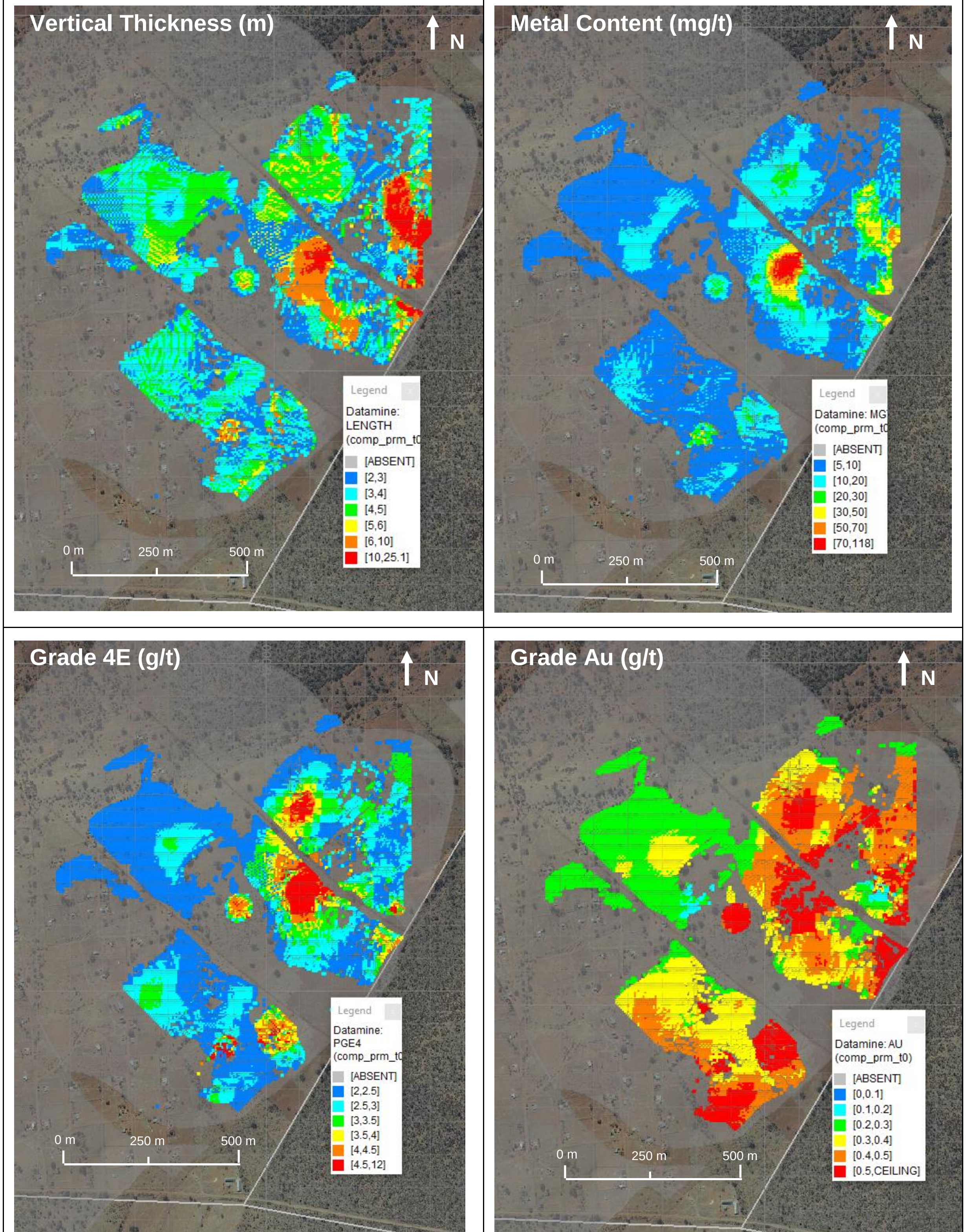


T

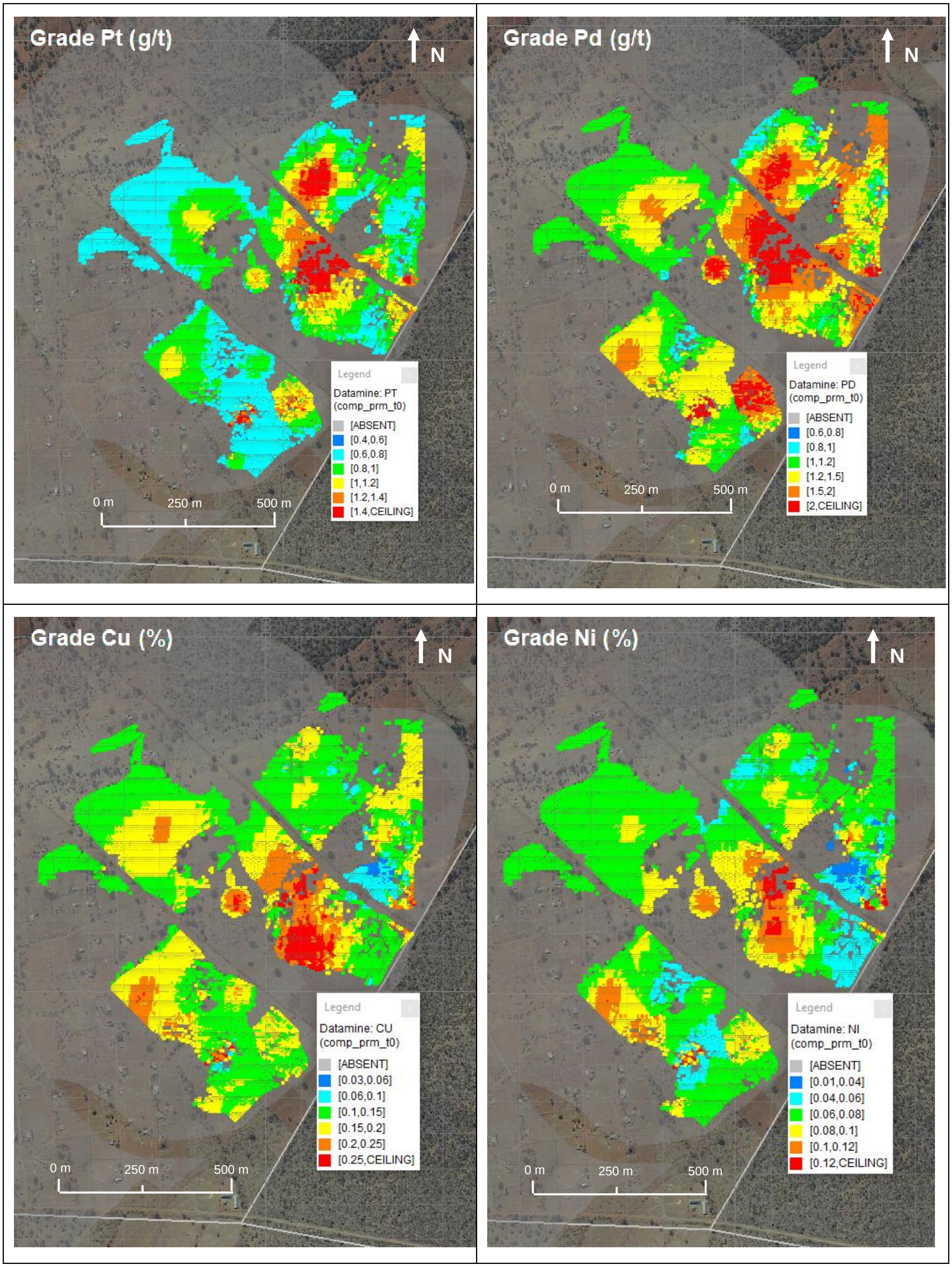

Grade Pt (g/t)
N
Legend
Datamine: PT
(COMP_PRM_
[ABSENT]
[0.5,0.6]
[0.6,0.7]
[0.7,0.8]
[0.8,0.9]
[0.9,1]
[1,1.5]
0 m
250 m
500 m
Grade Pd (g/t)
N
Legend
Datamine: PD
(COMP_PRM_T1)
[ABSENT]
[0.5,0.8]
[0.8,1.2]
[1.2,1.6]
[1.6,2]
[2,2.4]
[2.4,3.11243]
0 m
250 m
500 m
Grade Cu (%)
N
Legend
Datamine: CU
(COMP_PRM_T1)
[ABSENT]
[0.01,0.03]
[0.03,0.04]
[0.04,0.08]
[0.08,0.12]
[0.12,0.16]
[0.16,CEILING]
0 m
250 m
500 m
Grade Ni (%)
N
Legend
Datamine: NI
(COMP_PRM_T1)
[ABSENT]
[0,0.02]
[0.02,0.03]
[0.03,0.06]
[0.06,0.08]
[0.08,0.12]
[0.12,CEILING]
0 m
250 m
500 m

T

Figure 56: Planned Mineral Resource Model Plots (2.0 g/t Cut-off) for T Zone – T0

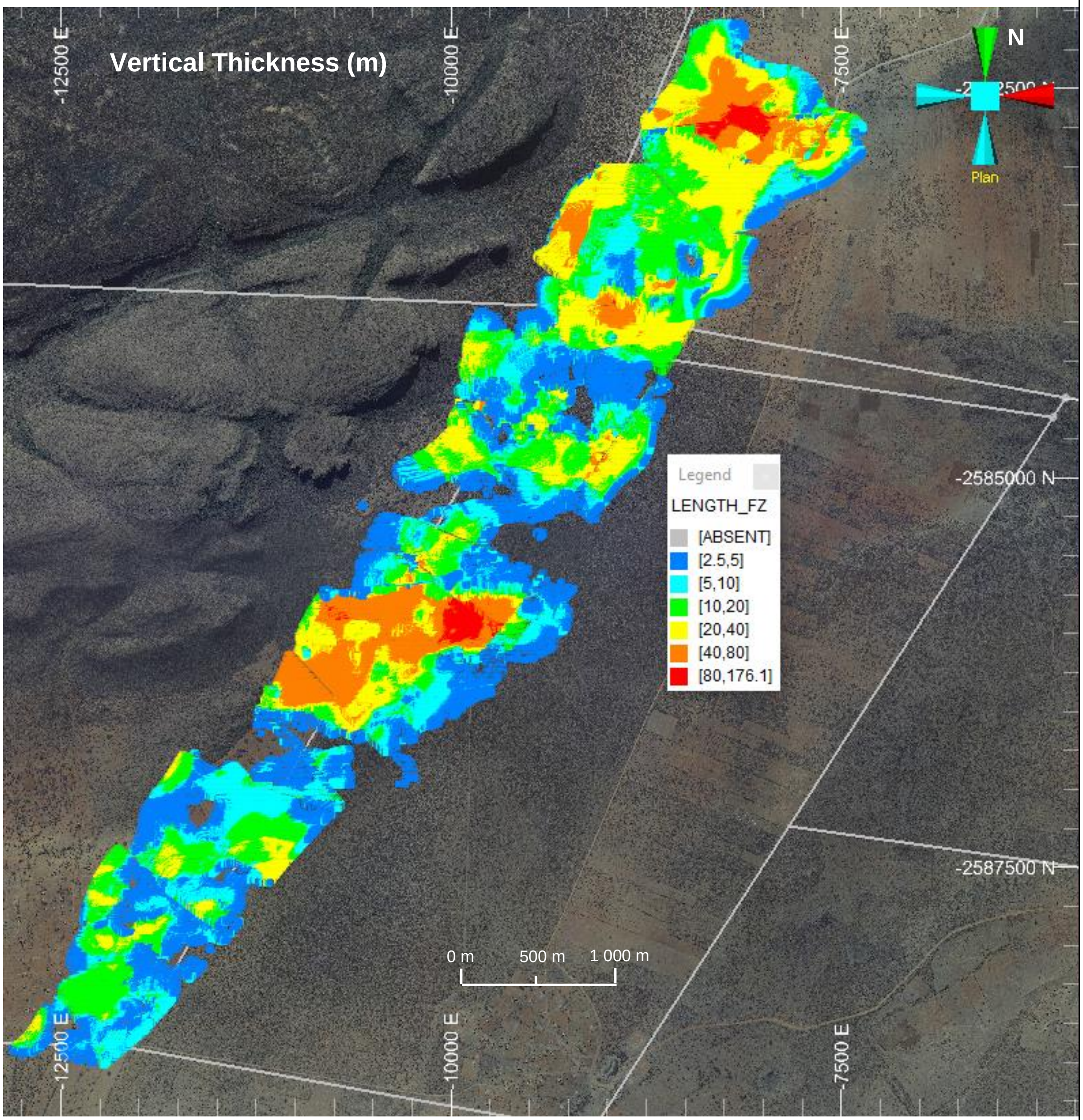


T

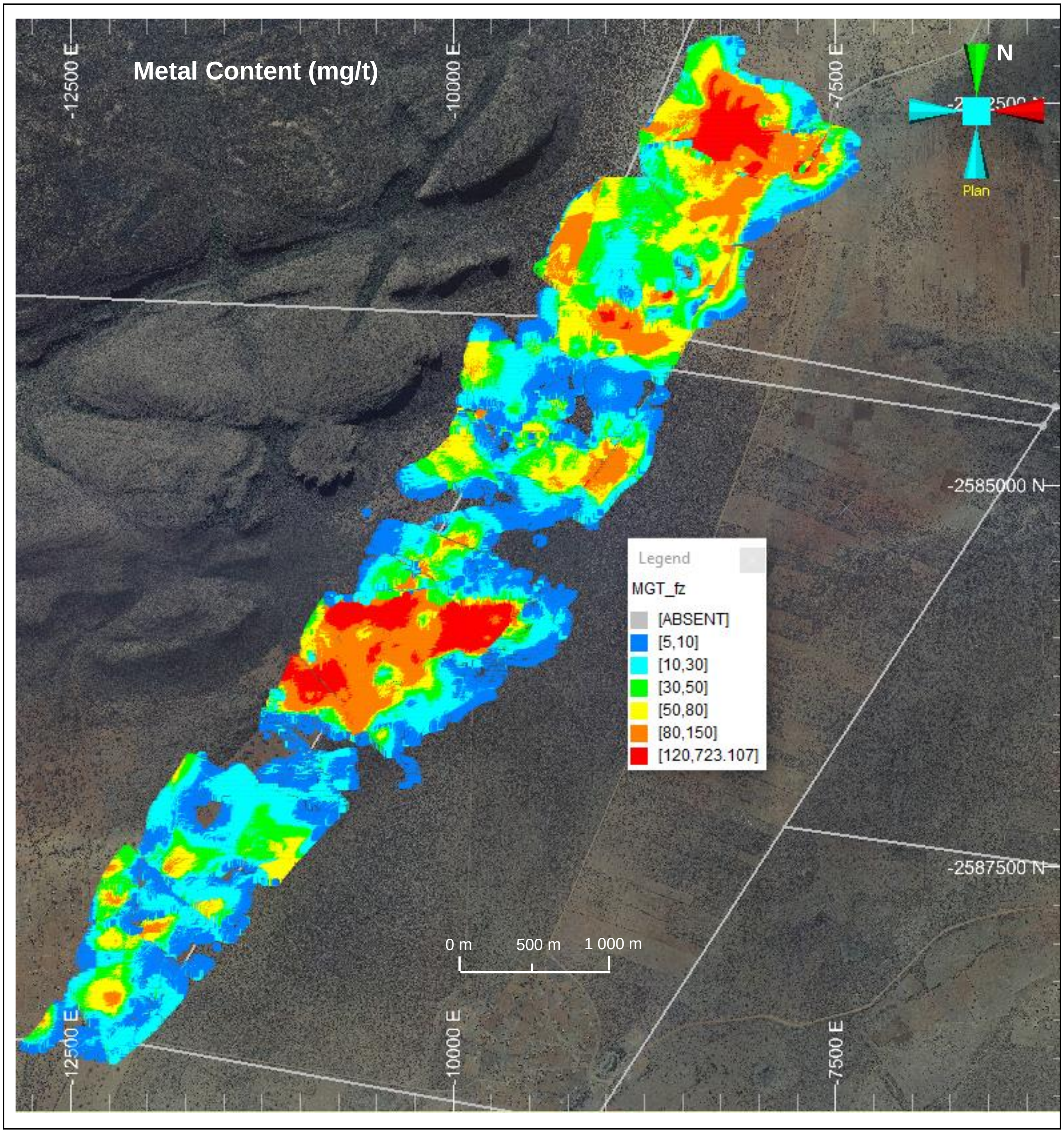

Grade Pt (g/t)
N
Legend
Datamine: PT (comp_prm_t0)
[ABSENT]
[0.4,0.6]
[0.6,0.8]
[0.8,1]
[1,1.2]
[1.2,1.4]
[1.4,CEILING]
0 m
250 m
500 m
Grade Pd (g/t)
N
Legend
Datamine: PD (comp_prm_t0)
[ABSENT]
[0.6,0.8]
[0.8,1]
[1,1.2]
[1.2,1.5]
[1.5,2]
[2,CEILING]
0 m
250 m
500 m
Grade Cu (%)
N
Legend
Datamine: CU (comp_prm_t0)
[ABSENT]
[0.03,0.06]
[0.06,0.1]
[0.1,0.15]
[0.15,0.2]
[0.2,0.25]
[0.25,CEILING]
0 m
250 m
500 m
Grade Ni (%)
N
Legend
Datamine: NI (comp_prm_t0)
[ABSENT]
[0.01,0.04]
[0.04,0.06]
[0.06,0.08]
[0.08,0.1]
[0.1,0.12]
[0.12,CEILING]
0 m
250 m
500 m

T

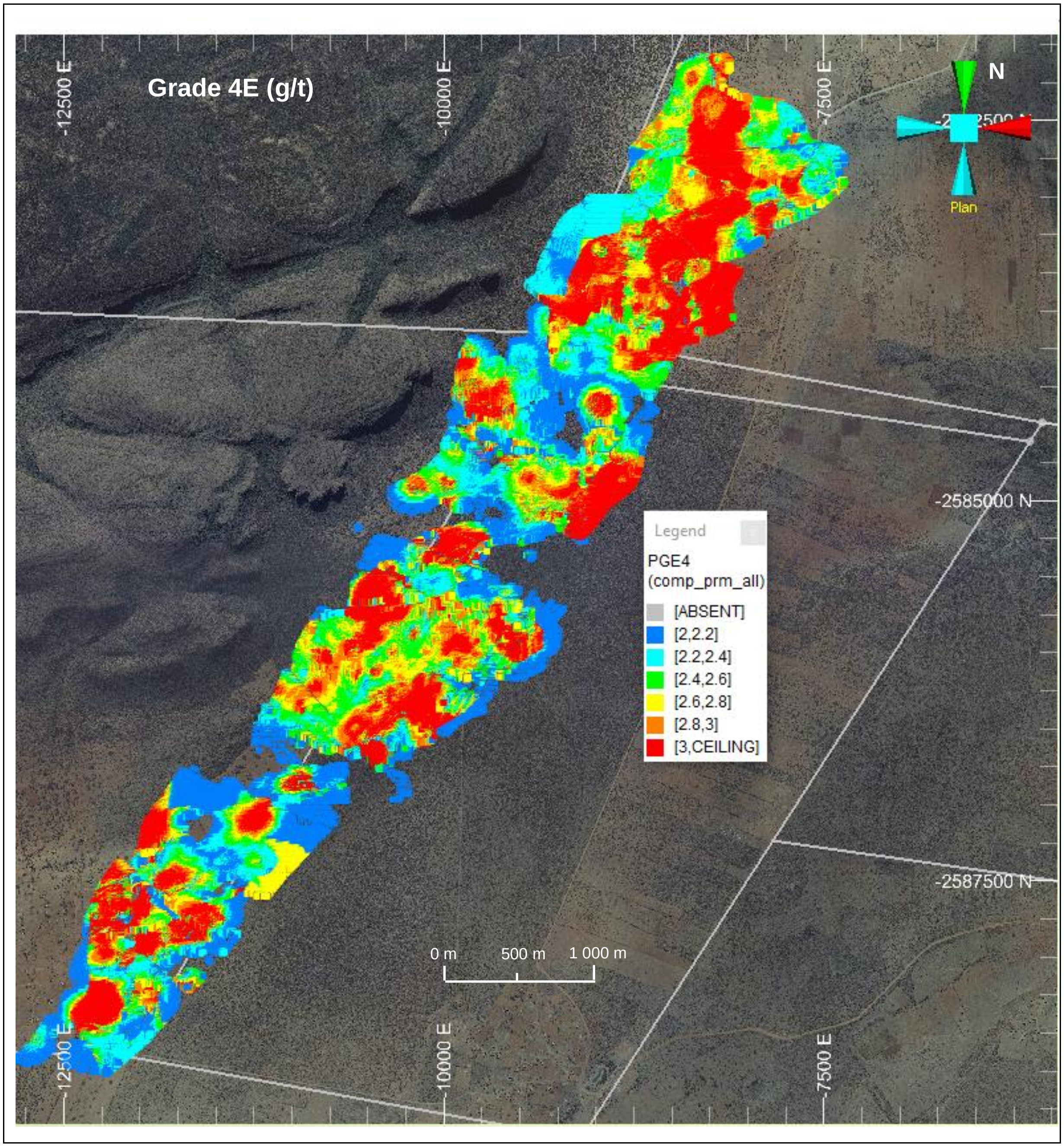
Figure 57: Planned Mineral Resource Model Plots (2.0 g/t Cut-off) for F Zone



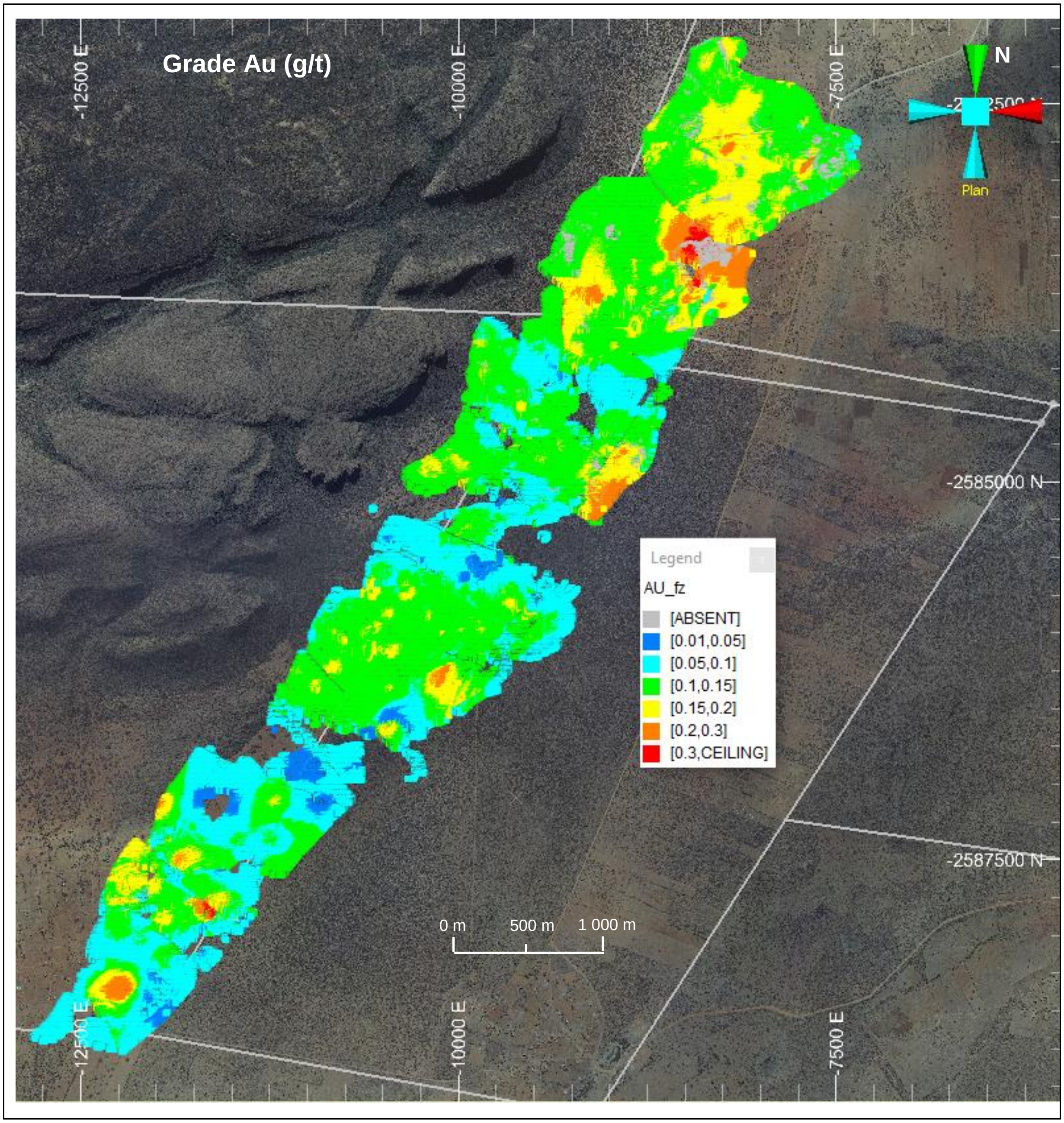
T


Metal Content (mg/t)
-12500 E
-10000 E
-7500 E
N
Plan
-2585000 N
-2587500 N
Legend
MGT_fz
[ABSENT]
[5,10]
[10,30]
[30,50]
[50,80]
[80,150]
[120,723.107]
0 m
500 m
1 000 m

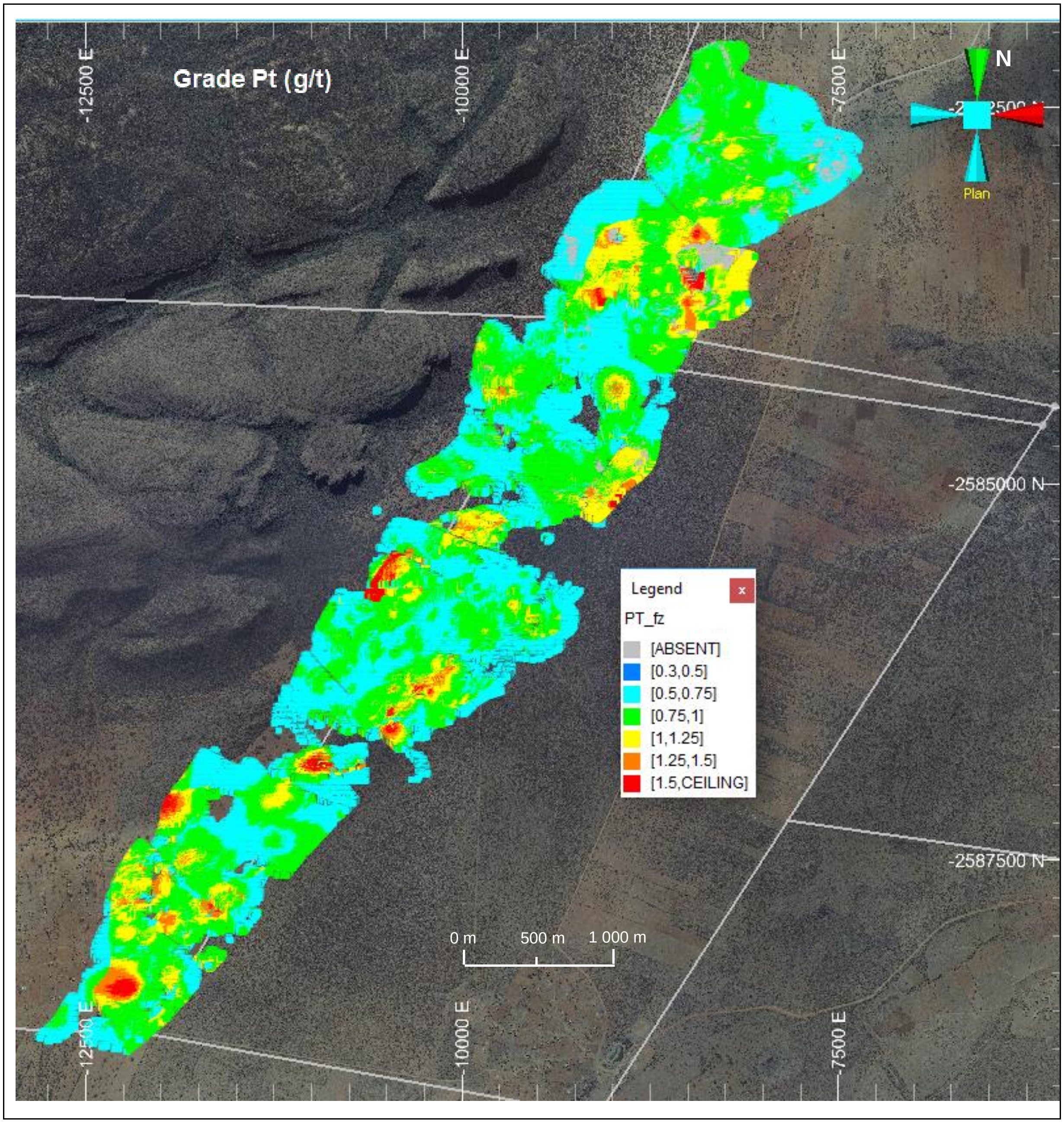
T


Grade 4E (g/t)
-12500 E
-10000 E
-7500 E
N
Plan
-2585000 N
-2587500 N
Legend
PGE4
(comp_prm_all)
[ABSENT]
[2,2.2]
[2.2,2.4]
[2.4,2.6]
[2.6,2.8]
[2.8,3]
[3,CEILING]
0 m
500 m
1 000 m

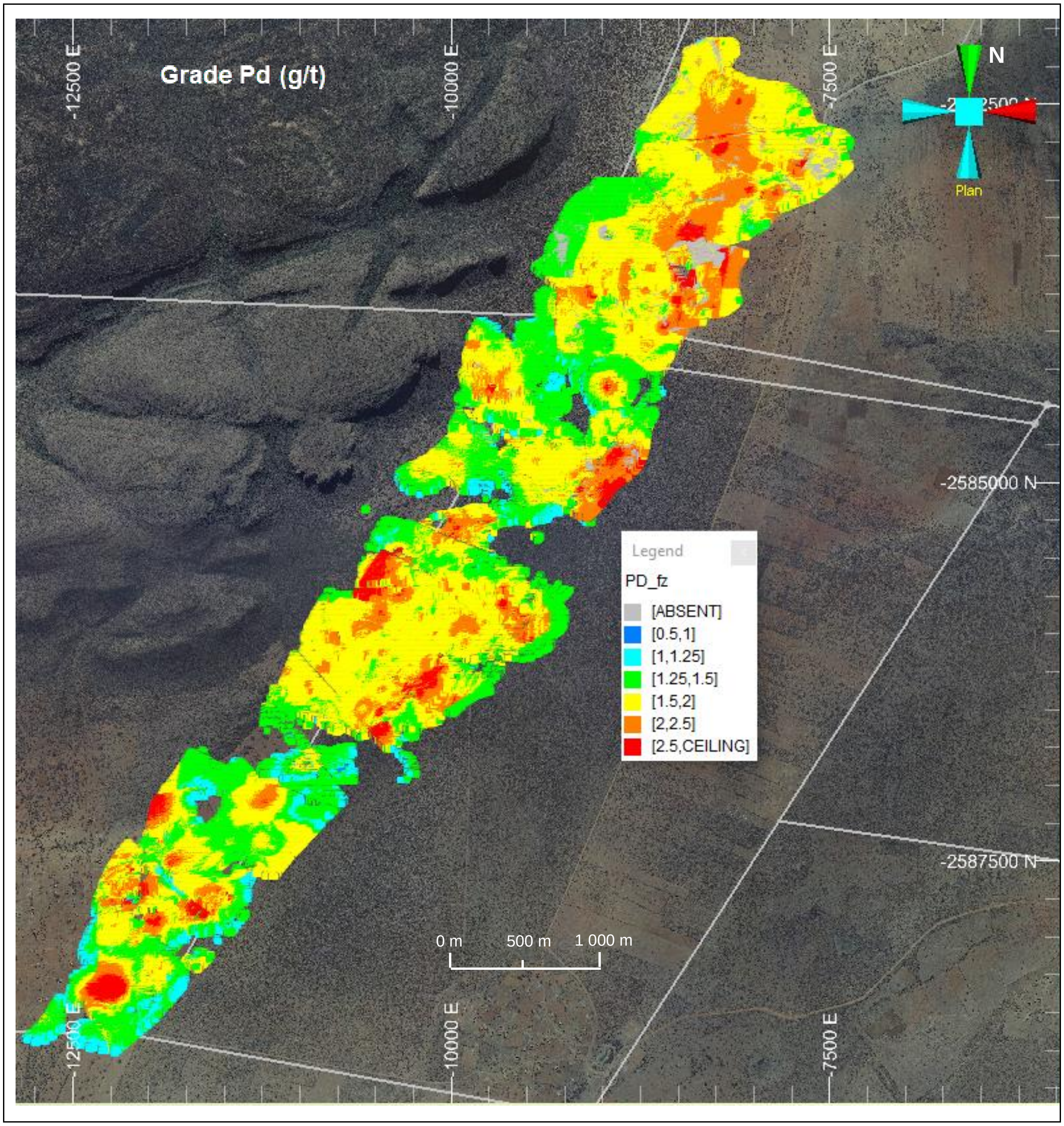
T


Grade Au (g/t)
-12500 E
-10000 E
-7500 E
N
Plan
-2585000 N
-2587500 N
Legend
AU_fz
[ABSENT]
[0.01,0.05]
[0.05,0.1]
[0.1,0.15]
[0.15,0.2]
[0.2,0.3]
[0.3,CEILING]
0 m
500 m
1 000 m

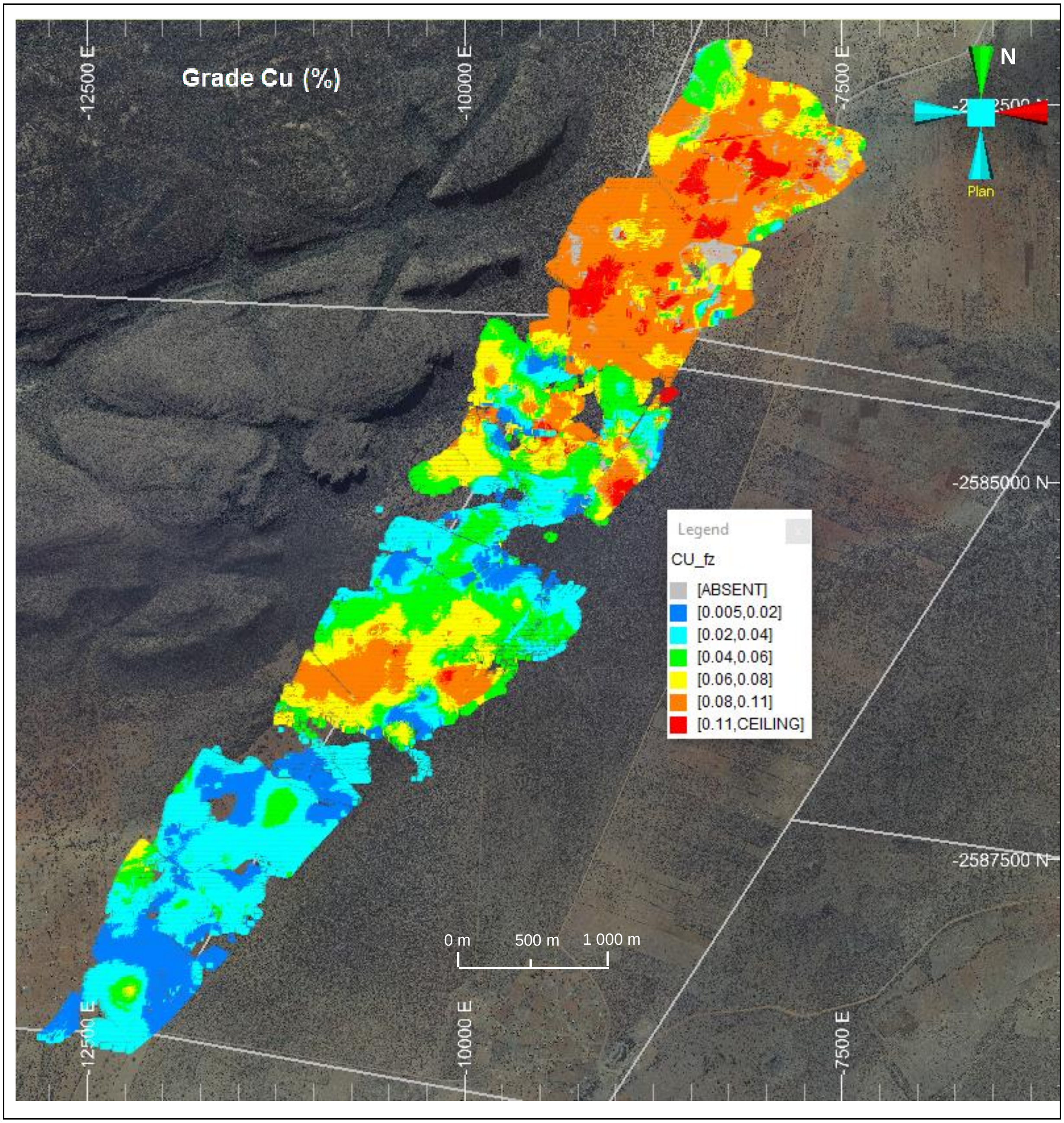
T


Grade Pt (g/t)
-12500 E
-10000 E
-7500 E
N
Plan
-2585000 N
-2587500 N
Legend
PT_fz
[ABSENT]
[0.3,0.5]
[0.5,0.75]
[0.75,1]
[1,1.25]
[1.25,1.5]
[1.5,CEILING]
0 m
500 m
1 000 m

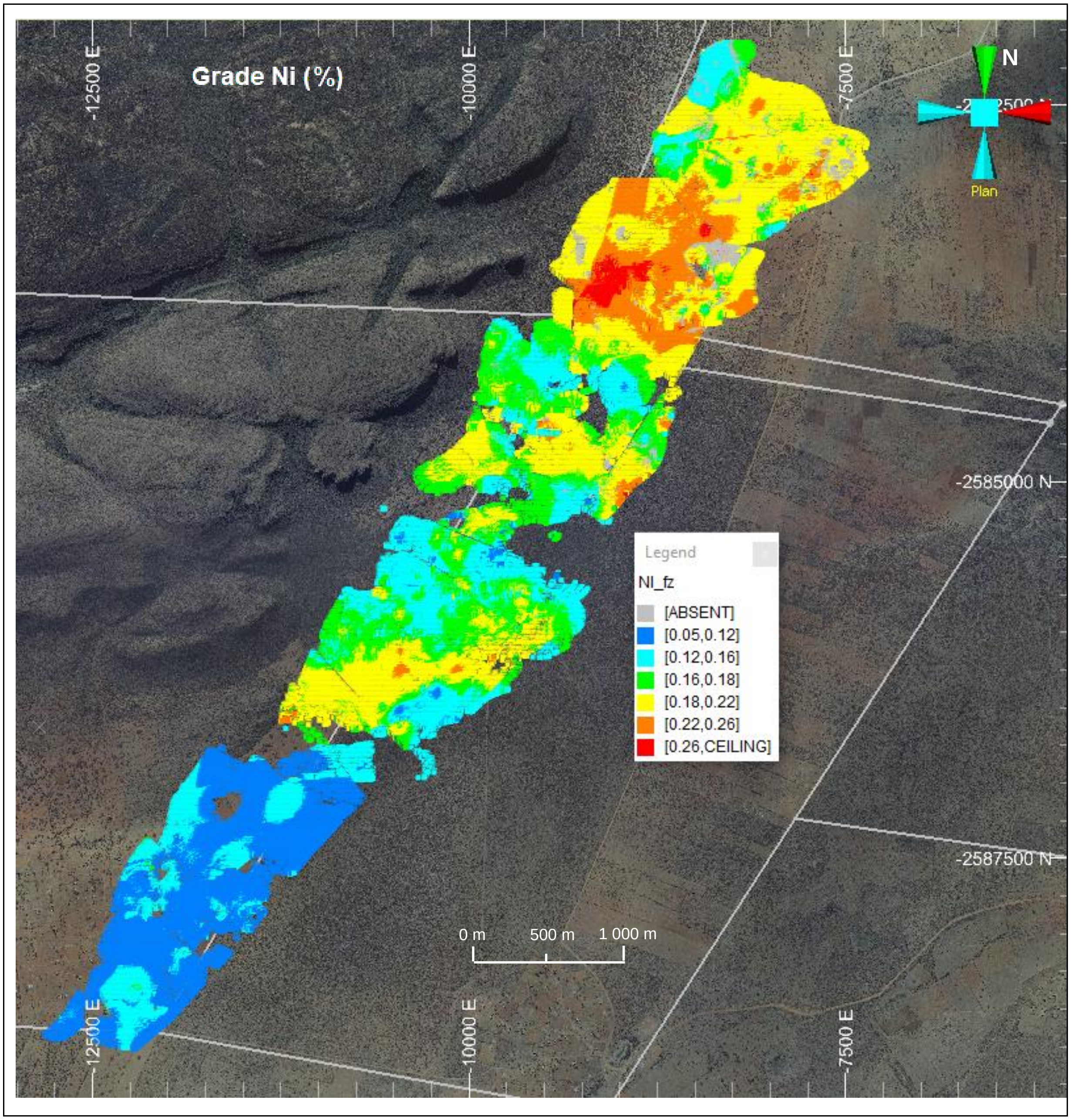
T


Grade Pd (g/t)
-12500 E
-10000 E
-7500 E
N
Plan
-2585000 N
-2587500 N
Legend
PD_fz
[ABSENT]
[0.5,1]
[1,1.25]
[1.25,1.5]
[1.5,2]
[2,2.5]
[2.5,CEILING]
0 m
500 m
1 000 m

T


Grade Cu (%)
-12500 E
-10000 E
-7500 E
N
Plan
-2585000 N
-2587500 N
Legend
CU_fz
[ABSENT]
[0.005,0.02]
[0.02,0.04]
[0.04,0.06]
[0.06,0.08]
[0.08,0.11]
[0.11,CEILING]
0 m
500 m
1 000 m

T



14.19 MINERAL RESOURCE CLASSIFICATION

[SR 3. (vi)]

CJM considers that within the T and F Zones there are areas that can be classified as Inferred, Indicated and Measured Mineral Resources. The primary criteria differentiating these areas is the spacing of drillhole data, confidence in the kriging estimate which is derived from the kriging efficiencies and regression slope values. Infill drilling has increased the confidence in the structure and the perceived continuity of the layering of mineralisation within each Zone. The data is of sufficient quality and the geological understanding and interpretation are considered appropriate for this level of Mineral Resource classification. The Mineral Resource was classified according to the criteria below.

- Sampling – QA and QC
  - Measured: high confidence, no problem areas,
  - Indicated: high confidence, some problem areas with low risk,
  - Inferred: some aspects might be of medium to high risk.
- Geological Confidence
  - Measured: high confidence in the understanding of geological relationships, continuity of geological trends and enough data,
  - Indicated: good understanding of geological relationships,
  - Inferred: geological continuity not established.
- Number of Samples Used to Estimate a Specific Block
  - Measured: at least eight drillholes within semi-variogram range and minimum of twenty-seven 1 m composited samples,
  - Indicated: at least four drillholes within semi-variogram range and a minimum of twelve 1m composite samples,
  - Inferred: less than three drillholes within the semi-variogram range.
- Distance to Sample (Semi-variogram Range)
  - Measured: at least within 60% of semi-variogram range,
  - Indicated: within semi-variogram range,
  - Inferred: further than semi-variogram range.
- Kriging Efficiency
  - Measured: > 60%,
  - Indicated: 20 – 60%,
  - Inferred: < 20%.
- Regression Slope
  - Measured: >90%
  - Indicated: 60 – 90%
  - Inferred: <60%

Figures 58 and 59 show the Indicated and Inferred Mineral Resource categories for the F and T Zones respectively.

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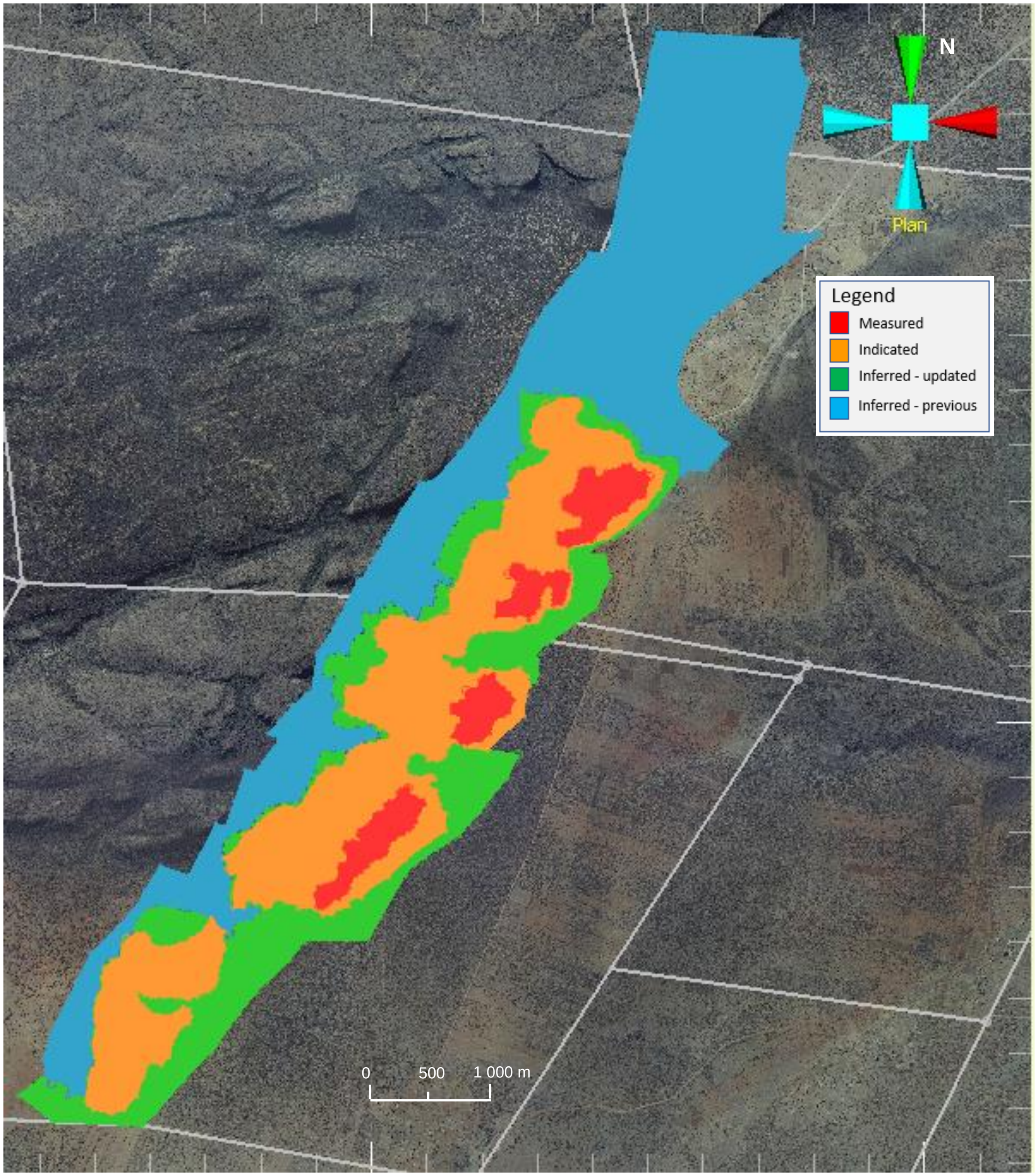
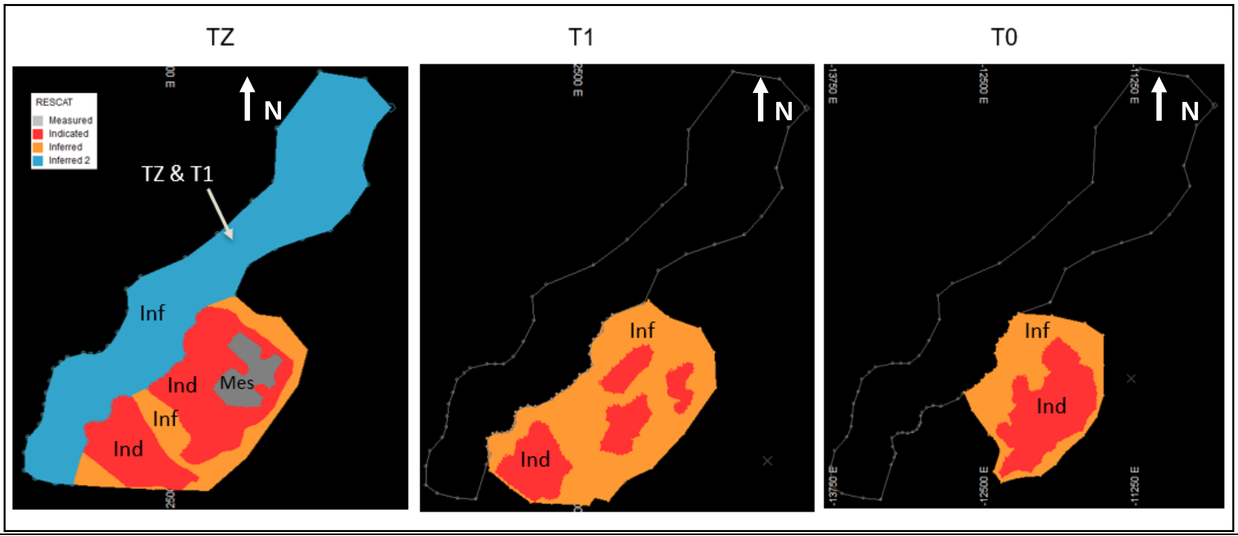
Figure 58: Mineral Resource Categories for the F Zone



T

Figure 59: Mineral Resource Categories for the TZ, T1 and T0 Zones



The classification of the Mineral Resource estimate was underlain in accordance with requirements and guidelines of The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (The SAMREC Code) (2016). The reconciliation of the SAMREC Code classification with the CIM Standards (2014) indicates that the criteria for classification and the classes of Mineral Resource are compatible. The CIM 2014 standard adds a condition that further exploration could reasonably be expected to upgrade the Inferred Mineral Resource to Indicated Mineral Resource. The Mineral Resource reported here meets the requirements of the current CIM standard.

It should be noted that an Inferred Mineral Resource has a degree of uncertainty attached. No assumption can be made that any part or all of mineral deposits in this category will ever be converted into Mineral Reserves.

14.20 MINERAL RESOURCE REPORTING

[SR 9.1 (I)]

Metal contents and block tonnages were accumulated and formed the basis for reporting the Mineral Resource estimate. The results are presented in Table 15.

Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.
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There is no guarantee that all or any part of the Mineral Resource will be converted to a Mineral Reserve.

The independent Qualified Person responsible for the Mineral Resource estimate in this report is Charles Muller. Mr Muller is a geologist with some 30 years' experience in mine and exploration geology, Mineral Resource and Mineral Reserve estimation and project management in the minerals industry (especially platinum and gold). He is a practicing geologist registered with the South African Council for Natural Scientific Professions (Pr.Sci.Nat.) and is independent of Platinum Group Metals Ltd. and Waterberg JV Resources (Pty) Ltd as that term is defined in Section 1.5 of the Instrument.

Only Mineral Resources were estimated for this report. All Mineral Resources were classified as Indicated, Inferred and Measured Mineral Resources, according to the definitions of the SAMREC code and NI 43-101.

Inferred Mineral Resources were classified. However, no addition of the Inferred Mineral Resources to other Mineral Resource categories has taken place.

14.21 METAL GROUPINGS AND PROPORTIONS

4E (platinum, palladium, rhodium and gold) estimates of platinum, palladium, gold and rhodium are commonly used in SAMREC Mineral Resource estimates. The metal split for the T Zone is Pt:Pd:Rh:Au 29:50:1:20 and the F Zone Pt:Pd:Rh:Au 29:65:1:5.

14.22 EFFECT OF MODIFYING FACTORS

Modifying factors such as taxation, socio-economic, marketing or political factors were considered as disclosed in this report at a Resource assessment level. No environmental, permitting, legal or title factors that are not disclosed will affect the estimated Mineral Resource. Metallurgical, socioeconomic, community, political and metal marketing factors create no known current fatal impediments to the project.

These factors are considered in greater detail at a Mineral Reserve consideration level. The Resources may never be classified as Mineral Reserves or be upgraded. These Mineral Resources are being considered in the on-going DFS.

15. MINERAL RESERVE ESTIMATES

There are no reserves as determined in this report. There can be no assurance the mineral resources have economic viability.

16. MINING METHODS

The mining method will be determined in the ongoing DFS. For the purpose of cut-off determination mining costs where assumed to be bulk underground methods like the PFS.

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17. RECOVERY METHODS

The final recovery methods will be determined in the ongoing DFS. For the purpose of costs for the cut-off determination a standard floatation recovery of 82% was assumed with a smelter payability of 85% on the 4E.

18. PROJECT INFRASTRUCTURE

The project infrastructure was outside the scope of this mineral resource study although there are no impediments known to potential economic extraction as required for the mineral resources.

19. MARKET STUDIES AND CONTRACTS

The market studies are outside the scope of this study other than assumptions from the PFS for cut-off determination.

20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

The Environmental Studies are outside the scope of this report. A Mining Right has been applied for and consultation on social environmental matters are ongoing.

21. CAPITAL AND OPERATING COST

This is outside the scope of this report.

22. ECONOMIC ANALYSIS

This is outside the scope of this report, other than for the determination of cut-off grades and the potential must exist for economic extraction as provided in the mineral resource calculations. There can be no assurance that mineral resources will be upgraded to a higher category or reserves. Mineral resources do not have demonstrated economic viability.

23. ADJACENT PROPERTIES

[SR 1.4 (i)]

Numerous mineral deposits were outlined along the Northern Limb of the Bushveld Complex. The T Zone on the Waterberg Project is in a different position in the Northern Limb geology as reported for the other deposits and the T Zone have distinctively different metal ratios with elevated gold values compared to the reported other deposit grades. The F Zone has some similarities to the other Northern Limb deposits in metal prill splits, however there may be distinct differences in the geological units containing the mineralisation.

23.1 THE PAN PALLADIUM

The historical Pan Palladium on the most northern farm on Platreef outcrop has reported Mineral Resources of 50 Mt at 1.19 g/t (2PGE+Au), 0.07% Ni, 0.21% Cu (Pan Palladium Annual T

Report, 2003). The qualified person for this report, was unable to verify the information on which it is based. It is noted that this estimate is not necessarily indicative of the mineralisation on the property that is the subject of this technical report.

23.2 MOGALAKWENA MINE

Some 60 km south of the project is the world's largest opencast platinum mine, Mogalakwena Mine (formerly Potgietersrust Platinum Mine), which mines the Platreef and produced 1.098 Moz PGM's in 2017. The latest Mineral Resource and Reserve statement for Mogalakwena Mine is available on the website www.angloplatinum.com and Anglo Platinum Annual Report 2017.

23.3 AKANANI PROJECT

Akanani Project, majority held by Lonmin, is down dip of the Anglo Platinum Mogalakwena Mine, is an exploration project with studies continuing to develop it into a viable operation. Information pertaining to this project including the latest Mineral Resource and Reserve statement are available on the Lonmin website (www.lonmin.com).

23.4 BOIKGANTSHO PROJECT

Located on the Northern Limb of the Bushveld Complex, and adjacent to Anglo Platinum's Mogalakwena Mine, this project was acquired through a land acquisition by Atlatsa Resources (formerly Anooraq Resources) in 2000 and a joint venture with Anglo Platinum in 2004. Historically, exploration drilling was conducted at the project site which has led to the estimate of Indicated and Inferred Mineral Resources. A preliminary economic assessment was completed in 2005; the results of this work showed that the project warrants further investigation.

This project now belongs to Anglo Platinum following a 2013 asset sale.

23.5 HARRIET'S WISH AND AURORA PROJECTS

Sylvania Resources is undertaking exploration activities on the extreme northern end of the Northern Limb on the farm Harriet's Wish which is adjacent to and contiguous with the southern boundary of the Waterberg Project. According to Sylvania, the northern portion of Harriet's Wish is covered by the Waterberg Sediments and the drillholes have intersected PGM mineralisation with descriptions like that of mineralisation found in the Waterberg Project. The author has not been able to verify this data. No Mineral Resource or Reserve was declared. (www.sylvaniaplatinum.com)

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23.6 PLATREEF PROJECT (IVANPLATS)

The Platreef Project, is jointly owned by Ivanplats (90%) and a Japanese consortium of Itochu Corporation; Japan Oil, Gas and Metals National Corporation (JOGMEC) and JGC Corporation (10%). The Platreef Project is a recently discovered underground deposit of thick, PGM-nickel-copper mineralisation on the southern end of the Northern Limb of the Bushveld Complex (close to Mokopane). The Platreef Project hosts the southern sector of the Platreef on three contiguous properties: Turfspruit, Macalacaskop and Rietfontein. Recently the Flatreef was intersected by a vertical shaft at approximately 750 m deep.

Ivanplats has delineated a large zone of mineralisation within the Platreef, which essentially comprises a steeply-dipping, near-surface mineralised area and a gently-dipping to sub horisontal (<15º) deeper zone from approximately 700 m depth downward to 1500 m (the "Flatreef"). Ivanhoe has completed a feasibility study and is sinking an exploration shaft. The mineralisation is considered open for expansion along the southern and western boundaries of the Platreef deposit. The northernmost property, Turfspruit, is contiguous with, and along strike from, Anglo Platinum's Mogalakwena group of properties and mining operations. A Mineral Resource and a Mineral Reserve were declared. (www.ivanplats.com)

24. OTHER RELEVANT DATA AND INFORMATION

To the best of the author's knowledge there is no other relevant data or information, the omission of which would make this report misleading.

25. INTERPRETATION AND CONCLUSIONS

Additional infill drilling in the Indicated Mineral Resource category areas, resulted in portions of the Mineral Resources being upgraded to the Measured Mineral Resources category.

The Estimation was undertaken using best practices in terms of geostatistics.

The objectives in terms of adherence to the Scope of this Study were met in that an updated Mineral Resource model was produced. An objective of converting Indicated mineral resources from the previous estimates to the higher confidence of Measured was also completed. Cut-offs using previous estimates of costs and recoveries from the PFS were utilized for this resource estimate with updated price decks.

The delineation of the F Zone and T Zone units was advanced due to better understanding of the geology. The T Zone was divided into three distinct layers, TZ, T1 and T0.

The database used for this estimate consisted of 437 drillholes and 585 deflections. The mineralisation is considered open down-dip and along strike to the north.

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The Waterberg Project represents one of the largest discoveries of PGE mineralisation in recent history. Metallurgical work completed to date at Mintek along with previously published Pre-Feasibility Study adds to the confidence in this discovery.

The Measured and Indicated Mineral Resources are at an appropriate level of confidence to be considered in the ongoing Definitive Feasibility Study for mine planning.

26. RECOMMENDATIONS

It is recommended that the Mineral Resources Reported be considered in the ongoing DFS for the Waterberg Project. The Indicated and Measured Mineral Resources are of a confidence interval appropriate for mine planning and consideration in the DFS. Further work drilling work could be capable of converting the Inferred Mineral Resources to a higher category but at this time it is likely that future drilling may be focused on other areas and items like geotechnical characteristics for mine planning or detailed metallurgical work. A budget for the DFS is in progress so no specific budget is recommended here. Based on the Mineral Resource estimate here it is recommended that the DFS and ongoing Mining Right Application work continue.

T

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DATE AND SIGNATURES PAGE

[SR 9.1 (iii)]

The date of this report is 22 October 2018. The effective date of the Mineral Resources reported herein is the 27 September 2018

CJ Muller

B.Sc. (Hons), Pr. Sci. Nat.

APPENDIX 1: SET POINT QA/QC FROM 2010 TO JANUARY 2018

Excel spreadsheets containing the assay results of all QC samples were prepared and graphs plotted for each sample type. Table 1 lists each Excel file and what they contain.

Table 1 – List of Excel Spreadsheets prepared for assessment purposes.

File Name	Description	Comments
WaterbergSetPointVsBureauVeritasUmpireSamples.xlsx	Umpire results where Set Point is the primary laboratory and Bureau Veritas is the umpire laboratory.	In the first tab of the Excel workbook, the umpire elements have a suffix of C1 e.g. Pt_C1 whilst the primary lab element is Pt. There are distribution graphs and scatter plots for each element.
WaterbergBureauVeritas_UmpireQAQCAssays.xlsx	Inserted blind CRM's and laboratory CRM's for Bureau Veritas Umpire batches.	Z score plots done for each element.
SetPointVsGenalysis_20141203_V3 BWS.xlsx	Umpire results where Set Point is the primary lab and Genalysis is the Umpire laboratory	In the first tab of the Excel workbook, the umpire elements have a suffix of C1 e.g. Pt_C1 whilst the primary lab element is Pt. There are distribution graphs and scatter plots for each element.
BV_QAQC_201800130.xlsx	Bureau Veritas inserted blind CRM's, Laboratory CRM's, pulp and coarse reject duplicates where Bureau Veritas is the primary laboratory	Note that the exceptions that would have resulted in the field standard Z score graphs to plot way off scale were moved to the bottom of the FLDSTD Z score compilation. Ones highlighted in yellow are either outside the reef zone and therefore not repeated or only one element is outside acceptable limits. Those highlighted in blue were repeated. Comments and original results for these samples are included in a QC exceptions tab at the end of the workbook.
Set Point Field Blanks_20180130.xlsx	Inserted blind blanks sent to Set Point where Set Point is the primary laboratory	

File Name	Description	Comments
SETPOINT_InsertedBlind_CRMs_20180130.xlsx	Inserted blind CRM's sent to Set Point where Set Point is the primary laboratory	Note that the exceptions that would have resulted in the field standard Z score graphs to plot way off scale were moved to the bottom of the FieldCRM's spreadsheet
SETPOINT_LabQAQC_Duplicates_20180130.xlsx	Laboratory preparation and pulp duplicates where Set Point is the primary laboratory	HARD calculated and scatter plots.
SETPOINT_LabQAQC_CRMs_20180130.xlsx	Inserted laboratory CRM's for Set Point where Set Point is the primary laboratory	
WaterbergQAQCExceptions.xlsx	A list of all exceptions identified to date for field inserted standards and blanks. And inserted duplicates	

Table 2 lists the number of samples for each sample type. Note that these are only samples that already have assay results in the Sable database. Note that these figures are for all QC samples, not only Set Point

Table 2 – The number of samples for each sample type and their percentage of the total samples.

Sample Type	Number of Samples	Percentage of Total
FLDSTD	15 726	8%
REASSAY	121	0%
FLDBLK	15 827	8%
UMPIRE	1 568	1%
PRIMARY	157 516	83%
TOTAL	190 758	100%

The inserted field standards (FLDSTD) and blanks (FLDBLK) are a combined 16% of the total samples. This more than the pre-requisite amount of 10% as defined by industry best practices. The REASSAY samples are the ones where the original results failed. Repeats were not requested at the time of reports being finalised. Pulps were located and re-submitted to Set Point. These results where compared to the originals in a report which is available if required. Results were comparable.

RESULTS OF INSERTED BLIND STANDARDS SENT TO SET POINT

The results of the inserted blind standards are contained in the file SETPOINT_InsertedBlind_CRMs_20180130.xlsx where Set Point was the primary laboratory. There are 14,987 QC samples in total.

The data is in the first tab called “FieldCRM’s”. The QC status for each element is provided with a status of PASS if the reported value is within 3 standard deviations from the expected value or FAIL if the results is outside 3 standard deviations from the expected value. The Z-score was calculated for each element of each sample. The Z-score’s formula is (the reported value – the mean)/ the standard deviation.

No samples were excluded from the spreadsheet. Exceptions identified are discussed in the sections Analysis of Au, Pt, Pd, Cu and Ni. Different types of exceptions were colour coded so that they can be identified by anyone looking at the spreadsheet.

Table 3 lists the number of failures outside 3 standard deviations from the expected value for each element that exist within the dataset. The total of 462 failures in Table 3 is higher than the actual number of failed samples as there is some duplication where samples have two or more elements that fail.

Table 3 - The number of failures for each element for inserted field standards

Element	Number of failures	Number of unexplained or unresolved errors	Total failures as a percentage of total QC 14,987 samples
Platinum (Pt)	41	5 (also part of the 8 Au failures) and 3 new failures	0.27%
Palladium (Pd)	39	7 (also part of Au and Pt failures) and 1 new Failure	0.26%
Gold (Au)	148	8	0.97%
Nickel (Ni)	115	8 (also part of Au, Pt and Pd failures)	0.76%
Copper (Cu)	119	8 (also part of Au, Pt and Pd failures)	0.79%
Total	462	12	<1%

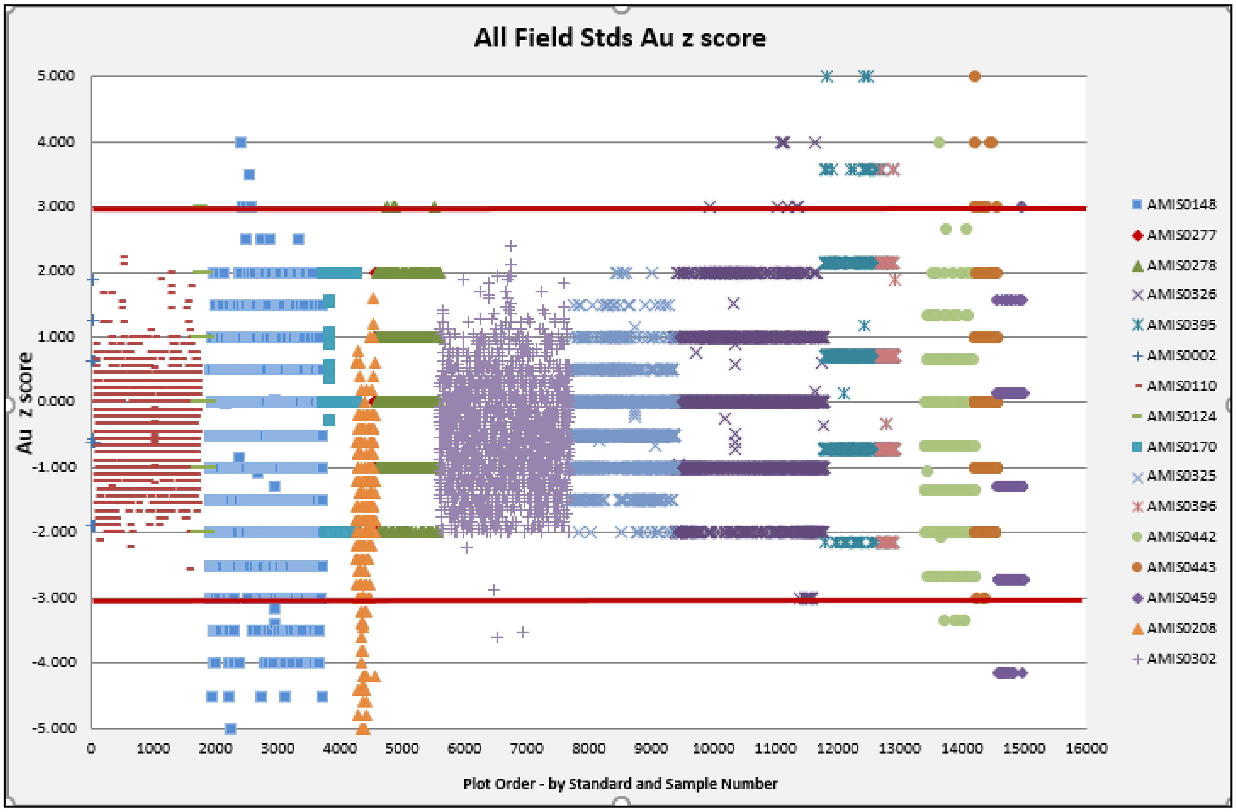
Analysis of Au

Of the 148 Au results that failed (results are outside 3 standard deviations from the expected value), 26 are AMIS0459 and the certified mean is less than 10 times detection. AMIS0459 is not suitable for use as an Au standard. 39 Au results for AMIS0208 failed. This was queried with AMIS at the time. Email correspondence is available if required. Their investigation did not provide any probable explanation. Waterberg JV Resources stopped using this standard after that. 74 AMIS0148 standards that failed for Au are very close to the 3 standard deviation limits. It appears that rounding may be a factor. 9 Au results that failed remain. They were highlighted in yellow and are all listed on the exceptions list. Samples failed for all elements, not just Au (AMIS0442). Of these samples, sample O212286 appears to be incorrectly recorded as AMIS0442. It is highlighted in blue as unresolved on the exception list as Edwin Matiwane must verify which standard was inserted. The second AMIS0442 sample O212474 has values like AMIS0395. The field verified that is was AMIS0442. This is also highlighted on the exception list as unresolved. The pulp needs to be located and the sample re-assayed. Sample P59620 (AMIS0278) only fails for Au. The pulp was not located for re-assay. Sample O158208 (AMIS0326) is a possible sample swap. It was not repeated as it was outside the reef zone. Sample O212486 (AMIS0326) has values like AMIS0442. The field confirmed that it was AMIS0326. It is highlighted in blue on the exception list as unresolved. 1 sample O149747 (AMIS0396) failed for both Au and Pt. It was re-assayed as O190683 in batch MOK/16/00095. Results were confirmed. Sample O178842 (AMIS0148) has values for a blank. It was not re-assayed as it is outside the reef zone.

The other 3 are AMIS0302 which is an Au only standard. Of these 3 samples (all on the exception list), there was no need for repeats for sample O138474 as it was outside the reef zone, the pulp for sample O138832 could not be located and sample O154145 was re-assayed as sample O190708 which then passed.

Figure 1 is the Z-score graph for Au. The comments made above explain the samples that plot outside a Z-score of -3 or 3.

Figure 1 – Z-score graph for Au Set Point inserted blind standards



In line with the points made above explaining the exceptions plotting outside acceptable Z-score limits of <-3 or >3, most of the results are acceptable. All Au failures account for 0.97% of all 14,987 QC samples assayed.

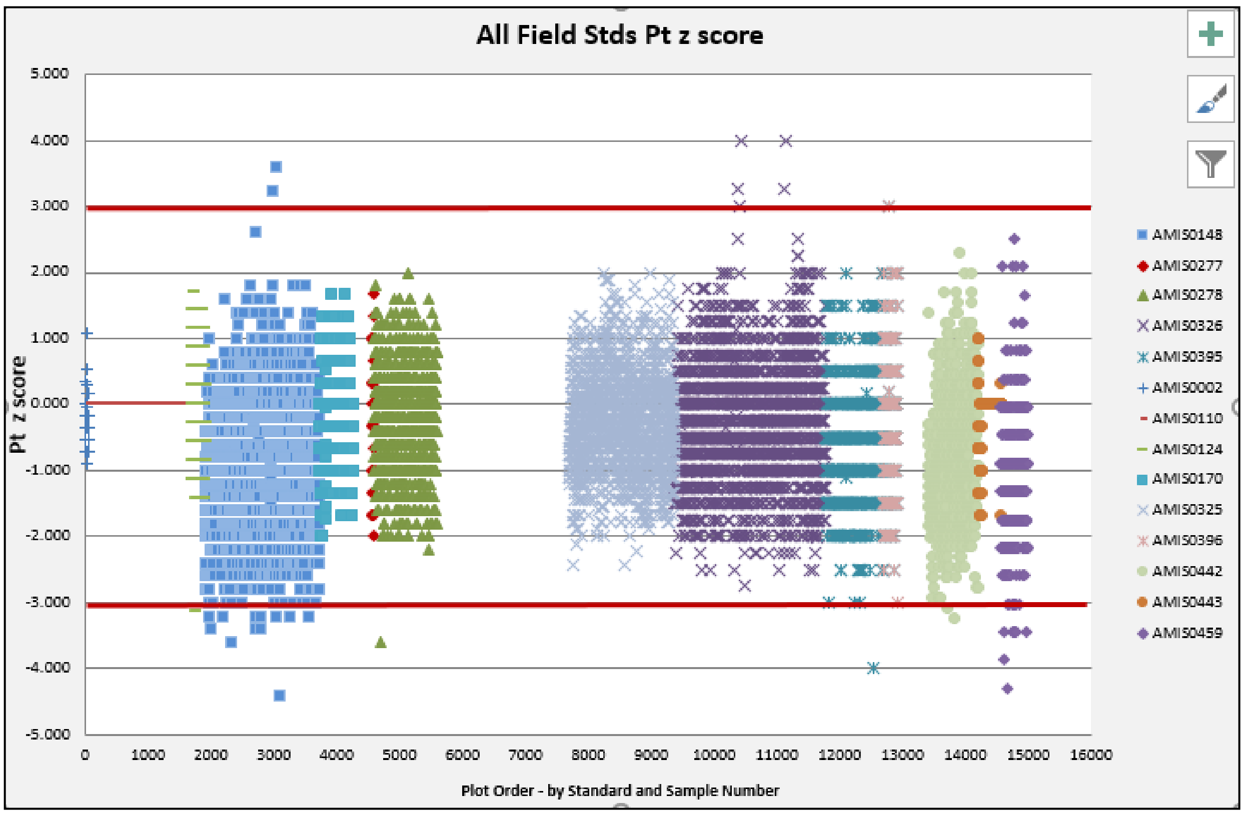
Analysis of Pt

There are 39 Pt results that failed. 6 samples were discussed in the previous Analysis of Au section (O178842, O158208, O212486, O149747, O212286 and O212474). 5 of these remain unresolved. There are 3 additional samples that also remain unresolved. Sample O227250 (AMIS0443) is a recent result. Repeats were requested. Sample O219350 (AMIS0443) has results for AMIS0326. Edwin Matiwane is to confirm what standard was inserted. Sample O182182 (AMIS0395) had results that looked like AMIS0326. Repeats done show the same results. The sample is outside the reef zone. Sample O212274 (AMIS0395) has values like AMIS0442. Results were confirmed by Pd spikes. The field confirmed that it is AMIS0395. A possible explanation is that AMIS is packaging the wrong standard in the packet.

The remaining 29 failures were highlighted in blue in the FieldCRM's tab. Pt results are within 0.01 to 0.05 g/t of the 3 standard deviations limit. This may be due to rounding or due to limits of the standards not being correct. 13 are AMIS0148 and 8 are AMIS0459.

Figure 2 is the Z-score graph for Set Point inserted blind standards for Pt.

Figure 2 – Z Score graph for inserted blind standards sent to Set Point for Pt.



In line with the points made above explaining the exceptions plotting outside acceptable Z-score limits of <-3 or >3, most of the results are acceptable. All Pt failures account for 0.27% of all 14,987 QC samples assayed.

Analysis of Pd

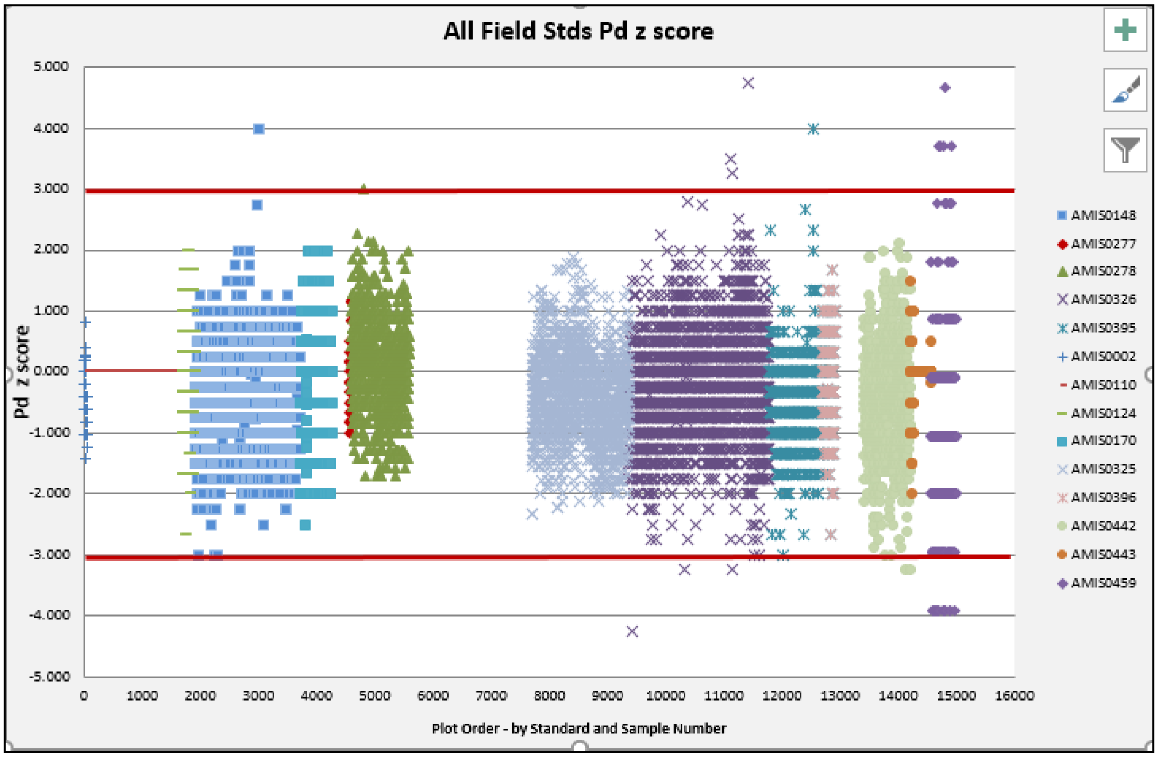
There are 39 Pd failures for Set Point inserted blind standards. 8 samples have already been discussed in the Au and Pt sections (highlighted in yellow on the FieldCRM's spreadsheet. A further 5 samples were highlighted in blue in the Pt analysis as having results outside 3 standard deviations from the expected value due to rounding or due to the certified values for the standards being incorrect. There are 20 additional samples (highlighted in green) where Pd results are just outside the 3 standard deviations limit. This may be due to problems with the standard itself or due to rounding. Set Point reports to 2 decimal places and the standards have limits of up to 4 decimal places.

This is particularly true for AMIS0459 (14 of the 20 samples where the Pd reported for example is 0.20 g/t and the minimum acceptable limit is 0.2095 g/t). Sample O208503 (AMIS0326) only fails for Pd and was not repeated as it was outside the reef zone.

Sample O107536 (AMIS0396) was re-assayed as O189572 in MOK-16-00095. Results were confirmed. The results for 4 samples were accepted as only Pd fails. Results were accepted (O107536, O195747 and O102639). These were highlighted in pink in the FieldCRM's spreadsheet.

Figure 3 is the Z-score graph for Set Point inserted blind standards for Pd.

Figure 3 – Z Score graph for inserted blind standards sent to Set Point for Pd.



In line with the points made above explaining the exceptions plotting outside acceptable Z score limits of <-3 or >3, most of the results are acceptable. All Pd failures account for 0.29% of all 14,987 QC samples assayed.

Analysis of Cu

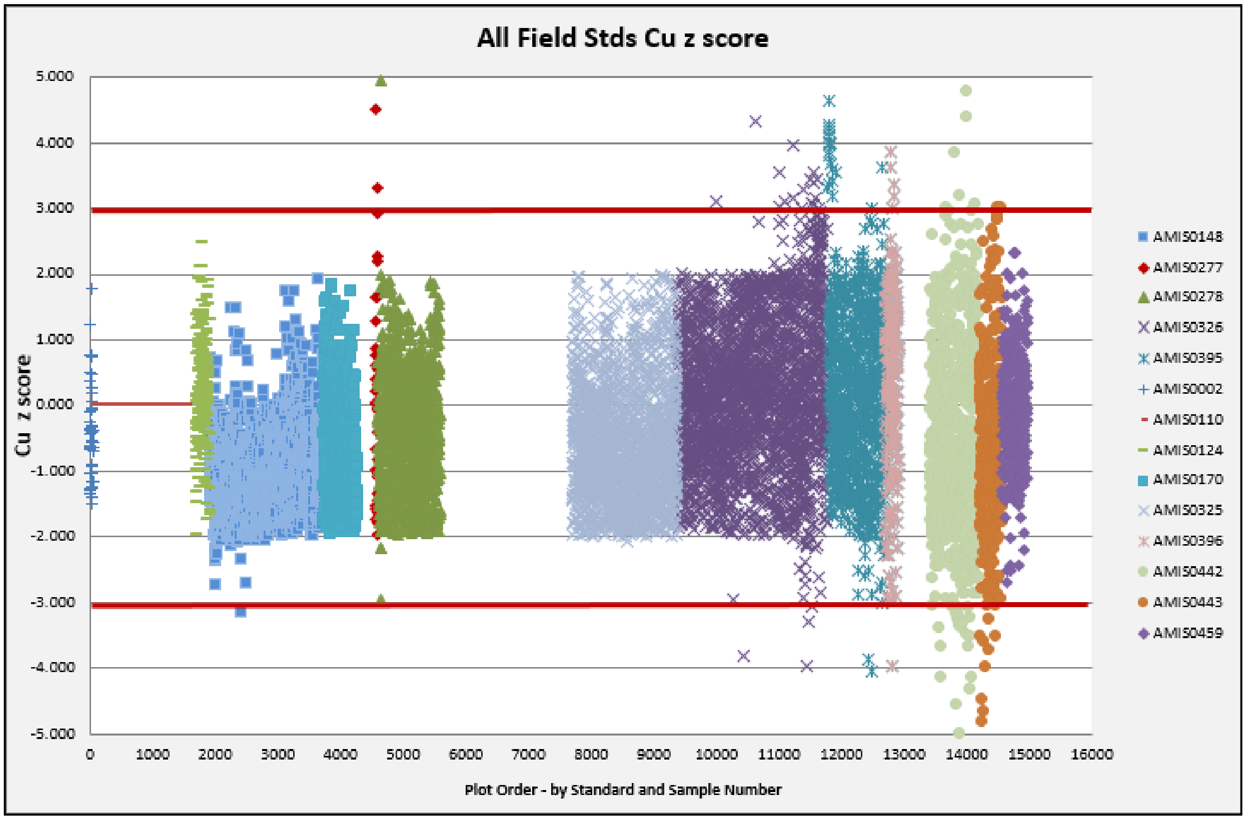
119 samples have Cu results that have Z-Scores less than -3 or greater than 3 (i.e. they fail). 8 samples were discussed in the Pt, Pd or Au sections. 41 samples (highlighted in purple) are ± 10 ppm from the upper or lower limits. These results were accepted. Samples highlighted in light purple were queried with the laboratory. Sample O153486 (AMIS0326) is outside the reef zone. Sample O199972 (AMIS0326) was not repeated as it is outside the reef zone. Sample O210367 (AMIS0326) was queried with the laboratory. Repeats did pass, but it appears that the results were not updated in the database. The database should be checked. Sample O187941 (AMIS0395) did have repeats done which also failed. The sample is outside the reef zone. Sample O145553 (AMIS0396) was repeated as O190669 in MOK/16/00095. Results were confirmed.

Sample O187098 (AMIS0442) was repeated. Results were confirmed. The sample is outside of the reef zone. Sample O188582 (AMIS0442) results were included in a report sent to AMIS. AMIS could not confirm why Cu and Ni results were failing. Results for Cu plot outside acceptable limits for 19 samples. Waterberg JV Resources stopped using the standard. AMIS0443 is a new standard. Cu fails for 9 samples. This should be monitored to see if a trend develops. This standard might also be defective in terms of Cu results being outside acceptable limits. Results highlighted in pale grey were accepted for 26 AMIS0395 samples, 8 AMIS0326 samples and 2 other samples (AMIS0277 and AMIS0278) as Cu is the only element that fails. There are a further 9 AMIS0442 samples and 5 AMIS0443 samples that fail for both Cu and Ni.

1 sample O217746 (AMIS0326) fails for both Cu and Ni. It was not repeated as it is outside the reef zone.

Figure 4 is the Z-score graph for Set Point inserted blind standards for Cu.

Figure 4 – Z-Score graph for inserted blind standards sent to Set Point for Cu.



In line with the points made above explaining the exceptions plotting outside acceptable Z score limits of <-3 or >3, most of the results are acceptable. All Cu failures account for 0.79% of all 14,987 QC samples assayed.

Analysis of Ni

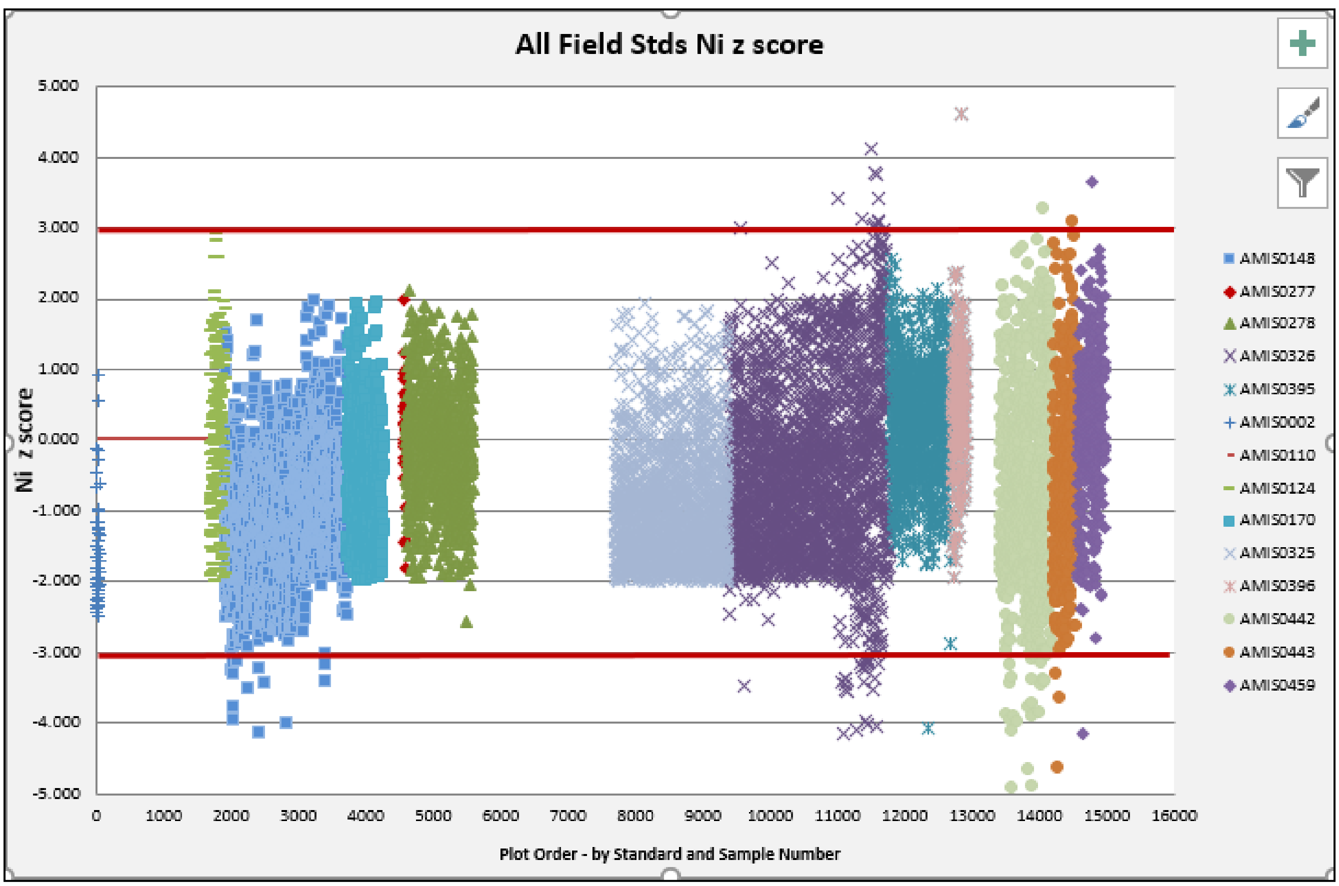
There a total of 115 samples where Ni results are having a Z-score <-3 or >3 i.e. results are outside acceptable limits. 8 are unresolved and are highlighted in yellow. These were discussed in the Au, Pt and Pd sections. 8 samples highlighted in purple had Cu that was at most within 10ppm of a Z-score of -3 or 3. Ni results for these samples do not plot within acceptable limits at all. Results were accepted as only Ni fails.

36 samples (highlighted in maroon) are within + 10 ppm from the Z-score upper (3) or lower (-3) limits. These results were accepted as only Ni fails. 12 samples are AMIS0148, 17 are AMIS0326, 6 are AMIS0442 and 1 is AMSI0443.

6 samples highlighted in light purple were queried with the laboratory and discussed under the Cu section.

Results highlighted in pale green were accepted for 6 AMIS0148 samples, 25 AMIS0326 samples, 2 AMIS0396 samples, 13 AMIS0442 samples as Ni is the only element that fails. There are a further 9 AMIS0442 samples and 5 AMIS0443 samples that fail for both Cu and Ni (not highlighted in the spreadsheet).

Figure 5 is the Z-score graph for Set Point inserted blind standards for Ni. Figure 5 – Z Score graph for inserted blind standards sent to Set Point for Ni.



In line with the points made above explaining the exceptions plotting outside acceptable Z score limits of <-3 or >3, most of the results are acceptable. All Ni failures account for 0.76% of all 14,987 QC samples assayed.

Analysis of Exceptions List for Set Point Inserted Field Standards

The list of all samples sent to Set Point that were identified during routine analysis as being outside acceptable limits (3 standard deviations from the expected value) are listed in the Exception List (WaterbergQAQCExceptions.xlsx).

During this quality assessment exercise, there was a time-consuming task of verifying and flagging all exceptions with colour coding for each QC sample type on the source data tab (FieldCRM's) extracted from the Sable database. This was reconciled against the Exceptions List to see what occurred at the time and explanations given in this report). The status of analysis (which ones are resolved and those that are not) was determined. Checks were done to see if there and any samples in the results dataset that were not picked up during routine QA/QC or previous total project extracts that should be added to the exceptions list. No additional results were identified which needed to be added to the Exception List.

Table 2 lists a summary of the statuses for the Set Point inserted field standards

Table 2 - A Summary of the Statuses for the Set Point Inserted Field Standards

Type of Exception	Quantity	% of total Exceptions
RESOLVED = 34 samples (29.91%)		
Sample Swaps	8	6.84%
Repeats pass for PGE's	5	4.27%
Repeats pass for base metals	13	11.11%
Results shifted in report. Corrected and amended report received	8	6.84%
DATABASE CORRECTED		
Called one standard but another standard inserted	51	43.59%
ACCEPTED = 19 samples (16.23%)		
Results confirmed but still do not pass PGE's within reef zone	3	2.56%
Results confirmed but still do not pass for base metals	11	9.40%
Outside reef zone. Repeats not required or repeats still fail for PGE's	5	4.27%
UNRESOLVED = 8 samples (6.84%)		
Pulps not located	1	0.85%
Edwin Matiwane to confirm what standard was inserted	3	2.56%
Awaiting feedback from the laboratory. Edwin Matiwane to follow up	4	3.41%
Total Exceptions in a dataset of 14,987 QC samples	117	0.65%

The pulps for 121 primary samples were located and their 6 standards that failed QA/QC were re-assayed as MOK/16/00095 and MOK/16/0096. A report was written which is available on the Waterberg JV Resources' server. Graphs were also plotted.

The exceptions list does not include all the failures described in the section's analysis of Pt, Pd, Au, Ni and Cu. Exceptions that were excluded are:

- Results are close to the upper or lower limits of 3 standard deviations from the expected value.
- Results where only one element fails (that is in an order of magnitude equivalent to the expected value).
- Results indicate that there is something specific to particular standards that have results outside acceptable limits. Results fall out of acceptable limits due to standards not having homogenous concentrations, or the expected values and standard deviations may not be correct. The results for these standards e.g. AMIS0442 were queried with AMIS. They did not find the same errors. The standards are not being used by Waterberg JV Resources now.

Observations of results for field standards sent to Set Point

Attention to detail and being systematic is necessary to really understand what is going on operationally, which may be affecting the quality of the results that are generated at the laboratory. The exceptions are less than 1% (results are outside acceptable limits of 3 standard deviations for expected values). It is possible in nature to get results that are outside these limits.

Exceptions caused by the laboratory (sample swaps (,6.84% of 117 exceptions), or exceptions such as lost prills (4.27%) or contamination (Cu/Ni 11.11%) have all been resolved.

43.59% of all exceptions are due to different standards being inserted by the field staff from the standard recorded on the sample sheet. This is an operational issue.

There only three samples (2.56% of 117 Exceptions or 0.02% of all 14,987 Samples) where repeat results confirmed the results i.e. the samples still failed. This is a very low number.

There are only 8 samples where the QC status is unresolved. This is 0.05% of all inserted standards. This is also a very low number.

Summary of Inserted Field Standards Sent to Set Point

The results for inserted standards for samples sent to Set Point are of high quality and that results for primary samples can be used with a high degree of confidence. Less than 1% of the 14,987 QC samples are outside acceptable limits of + 3 standard deviations from expected values. This is well within the guidelines set out by industry best practices.

RESULTS OF INSERTED BLIND BLANKS SENT TO SET POINT

The results of the inserted blind blanks are contained in the file Set Point Field Blanks_20180130.xlsx where Set Point was the primary laboratory. There are 15,180 QC samples in total. 3 types of blanks were used. They include:

- "BLANK" barren quartz material supplied by Set Point (14403 samples).
- "SAND" pool sand (4 samples).
- AMIS0415 blank silica powder (307 samples).
- AMIS0484 blank silica powder (467 samples).

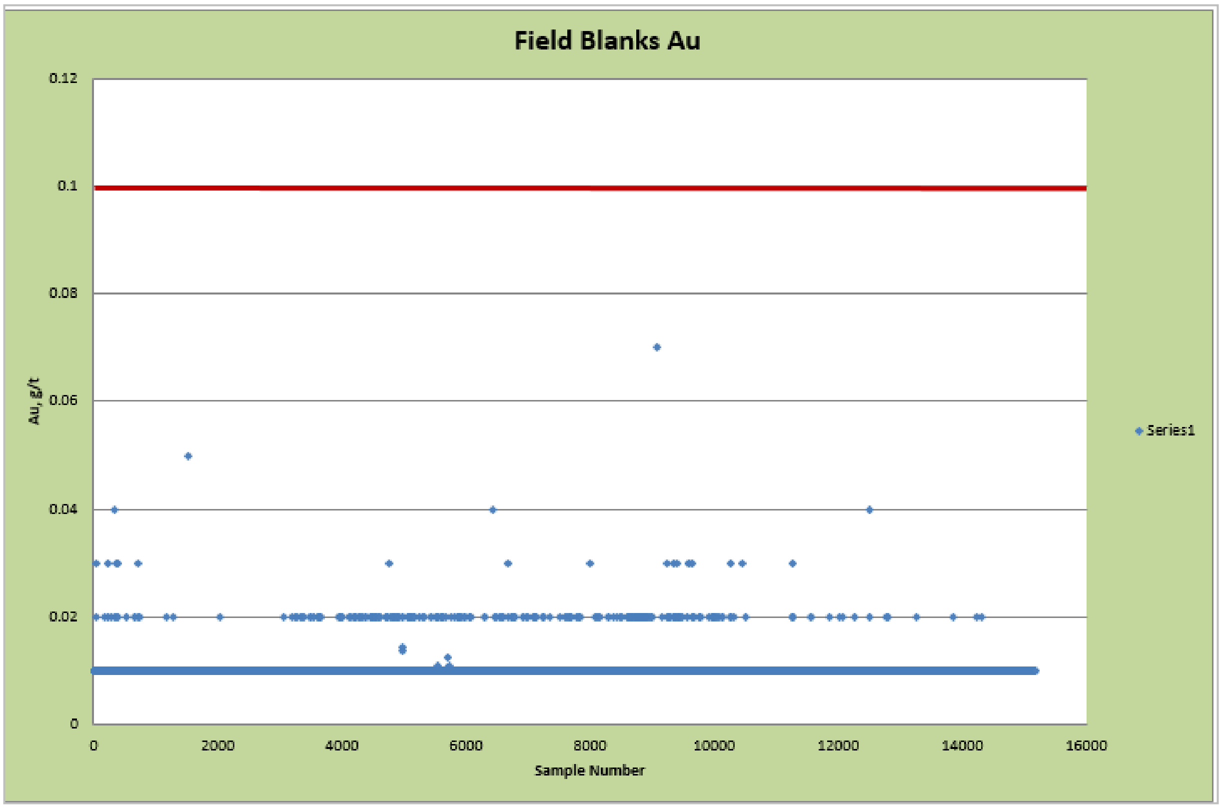
The data is presented in the tab FIELDBLANKS.

17 samples (0.11%) were removed from the plot range. They are at the bottom of the spreadsheet FIELDBLANKS highlighted in yellow. They all have results that are greater than 10 x detection limits (0.1 g/t for PGE's and 100 ppm for base metals) i.e. they fail. They are the only ones that remain after the others were resolved as recorded in the Exceptions List. All will be discussed in each of the following sections for each element.

Analysis of Au

Figure 6 is the graph for Set Point inserted blind blanks for Au.

Figure 6 – The graph for inserted blind blanks sent to Set Point for Au.



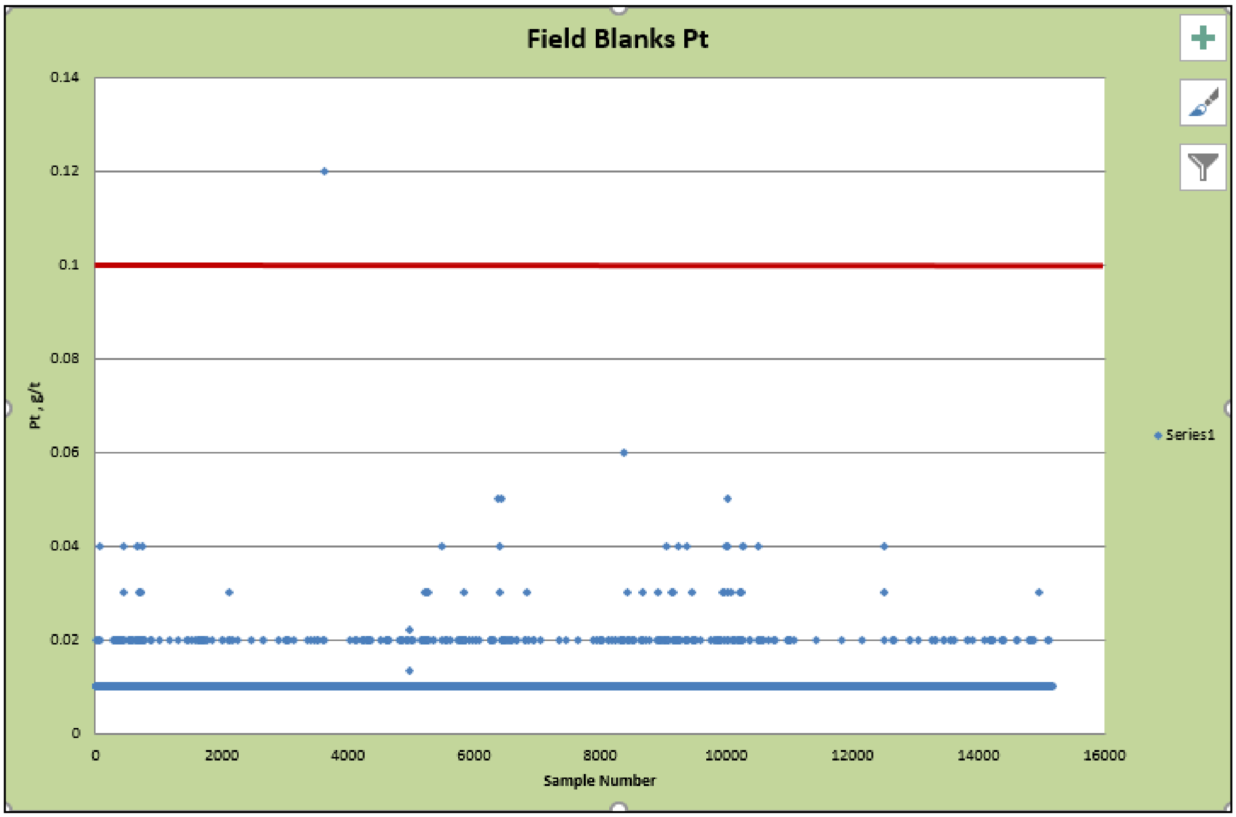
Results are acceptable as they are less than 10 x the detection limit or less than 0.1 g/t.

4 samples (0.03%) have Au results >0.1 g/t. Samples O49041 and O49005 were identified and are on the exceptions list. The pulps have not been located. Sample O209736 was identified and is on the exceptions list. It has values for AMIS0395. Results were confirmed by Pd spikes. Edwin Matiwane is to check what QC sample was inserted. The results for sample O220340 (AMIS0415) were confirmed when repeated.

Analysis of Pt

Figure 7 is the graph for Set Point inserted blind blanks for Pt

Figure 7 – The graph for inserted blind blanks sent to Set Point for Pt.



Results are acceptable as they are less than 10 x the detection limit or less than 0.1 g/t.

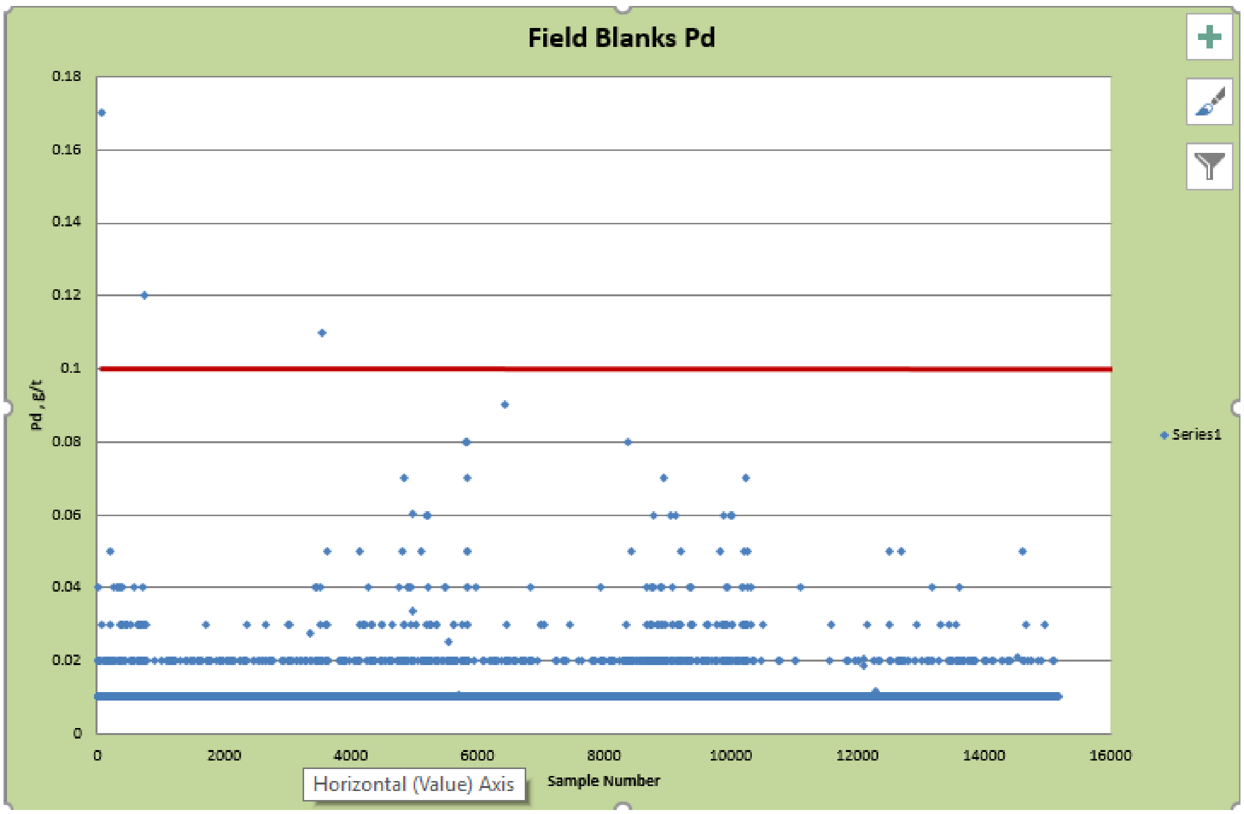
6 samples (0.04%) have Pt results >0.1 g/t. 4 samples were already mentioned in the Au section. Samples O49041 and O49005 were identified and are on the exceptions list. The pulps have not been located. Sample O209736 was identified and is on the exceptions list. It has values for AMIS0395. Results were confirmed by Pd spikes. Edwin Matiwane is to check what QC sample was inserted. Sample O130191 was repeated and the results were the same. The result is 0.12 g/t and is the only element that fails. The results for sample O220340 (AMIS0415) were confirmed when repeated.

Sample O130414 was re-assayed. The results were the same. It is possible that the incorrect sample was prepared.

Analysis of Pd

Figure 8 is the graph for Set Point inserted blind blanks for Pd

Figure 8 – The graph for inserted blind blanks sent to Set Point for Pd.



Results are acceptable as they are less than 10 x the detection limit or less than 0.1 g/t.

13 samples (0.08%) have Pd results >0.1 g/t. 4 samples were already discussed in the Au section Samples O49041 and O49005 were identified and are on the exceptions list. The pulps have not been located. Sample O209736 was identified and is on the exceptions list. It has values for AMIS0395. Results were confirmed by Pd spikes. Edwin Matiwane is to check what QC sample was inserted. The results for sample O220340 (AMIS0415) were confirmed when repeated.

Results are still being finalised for sample O228453. The results for sample O129268 were accepted as only Pd (0.11 g/t) was above 10 x the detection limit. Sample O218264 is not on the exceptions list. Pd (0.17 g/t) is the only element that fails.

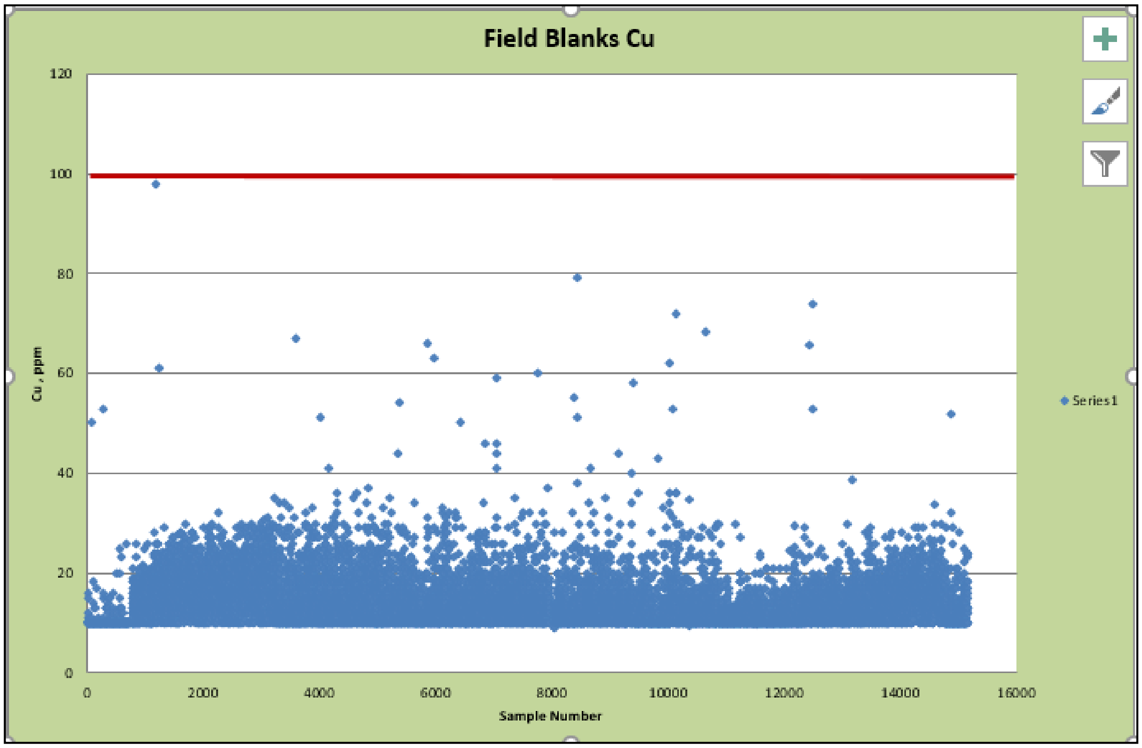
Sample O130414 was re-assayed as already mentioned in the Analysis of Pt section. The results were the same. It is possible that the incorrect sample was prepared.

The results for sample O155167 were queried with Set Point but there was a misunderstanding and there were no repeats done. Pd had a grade of 0.76 g/t. The same sample was submitted as sample O155167X as part of a NIS batch. A Pd of 0.88 g/t was reported. Results were accepted. It is possible that the incorrect sample was prepared. The incorrect sample was also prepared for sample O155239X where the results were confirmed when repeated. There is supporting email correspondence. There was no pulp available for a repeat of O167705. There is no evidence of a sample swap. The most likely cause is contamination. Pd is the only element that fails. Sample O110881 is outside the reef zone. Results are possibly due to contamination.

Analysis of Cu

Figure 9 is the graph for Set Point inserted blind blanks for Cu

Figure 9 – The graph for inserted blind blanks sent to Set Point for Cu.



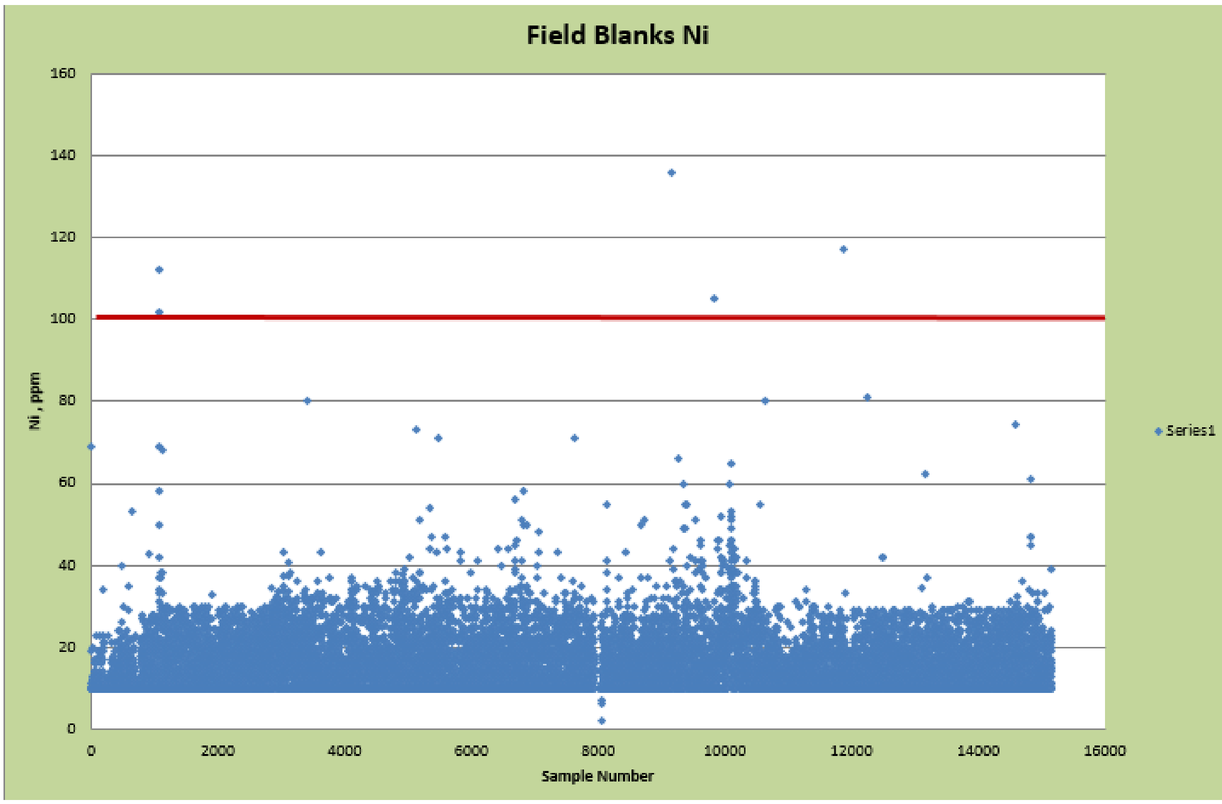
Results are acceptable as they are less than 10 x the detection limit or less than 100 ppm.

7 samples (0.05%) have results greater than 100 ppm. 3 samples were discussed in the Analysis of Au section (samples O220340, O209736 and O49005) and another 2 samples were discussed in the Analysis of Pt section (samples O167705 and O110881). Sample O216200 was not repeated as it is outside the reef zone. Possible causes are contamination, or the incorrect sample being prepared for base metals analysis. Sample O72744 was not repeated. It is a very old sample and only Cu is outside acceptable limits.

Analysis of Ni

Figure 10 is the graph for Set Point inserted blind blanks for Ni.

Figure 10 – The graph for inserted blind blanks sent to Set Point for Ni



Results are acceptable as they are less than 10 x the detection limit or less than 100 ppm.

18 samples (0.11%) have Ni > 100 ppm. 4 samples were discussed in the Analysis of Au section (samples O220340, O130414, O209736 and O49005) and another 2 samples were discussed in the Analysis of Pt section (samples O167705 and O110881). 2 samples were discussed in the Analysis of Cu section (samples O216200 and O72744).

Samples O224514 and O110857 were repeated and the results confirmed. Sample O129232 was not repeated as it is outside the reef zone. Sample O131406 was repeated and results were confirmed. It is outside the reef zone. Sample O163067 was re-analysed as sample O190719 in batch

MOK/16/00055. Results were confirmed. The most likely cause for these exceptions is that the incorrect samples were prepared for base metals analysis.

5 samples have Ni results between 112 and 136 ppm. They are retained within the plotted dataset. Samples G7205, O196600, O210866, O65478 and G7217 were not repeated. They are outside the reef zone. Sample O210866 was not repeated as Ni of 105 ppm was the only element outside acceptable limits.

Analysis of Exceptions List for Set Point Inserted Field Blanks

The list of all samples sent to Set Point that were identified during routine analysis as being outside acceptable limits (greater than 10 x the detection limit) are listed in the Exception List (WaterbergQAQCExceptions.xlsx).

Table 3 lists a summary of the statuses for the Set Point inserted field blanks.

Table 3 - A Summary of the Statuses for the Set Point Inserted Field Blanks

Type of Exception	Quantity	% of total Exceptions
RESOLVED = 14 samples (32.56%)		
Sample Swaps	5	11.62%
Repeats pass for PGE's	0	0%
Repeats pass for base metals	3	6.97%
Results reported incorrectly. Corrected and amended report received.	6	13.95%
DATABASE CORRECTED		
Samples recorded incorrectly by field staff	10	23.25%
ACCEPTED = 15 samples (34.88%)		
Only one element fails	2	4.65%
Results confirmed but still do not pass for base metals	6	13.95%
Outside reef zone. Repeats not required or repeats still fail for PGE's	3	6.97%
Incorrect sample prepared	3	6.97%
No pulp available for repeats	1	2.33%
UNRESOLVED = 4 samples (9.30%)		
Pulps not located	3	6.97%
Edwin Matiwane to confirm if a blank was inserted	1	2.33%
Awaiting feedback from the laboratory. Edwin Matiwane to follow up	1	2.33%
Total Exceptions in a dataset of 15,180 QC samples	43	0.28%

Observations of results for field blanks sent to Set Point

The total number of identified exceptions of 43 samples (0.28%) out of a dataset of 15,180 QC samples is low.

Sampling error where a standard is inserted instead of a blank has occurred for 10 samples (0.06% of all blank QC samples). That is very low.

There is a total of 17 samples where results were either accepted or where repeats confirmed previous results or where it was not possible to do repeats. These are the samples listed at the bottom of the FIELDBLANKS spreadsheet highlighted in yellow. 17 samples out of 15,180 QC samples is only 0.11%.

Operationally, there is very little evidence of contamination, sample swaps or the incorrect sample being prepared.

Summary of Inserted Field Blanks sent to Set Point

The results for inserted blank for samples sent to Set Point are of high quality and results for primary samples can be used with a high degree of confidence. Less than 0.11% of the 15,180 QC samples are outside acceptable limits (> 10 x detection). This is well within the guidelines set out by industry best practices.

RESULTS OF INSERTED LABORATORY PREPATION DUPLICATES SENT TO SET POINT

The results of the preparation duplicates (coarse rejects with sample type code LABCRD) are contained in the file SETPOINT_LabQAQC_Duplicates_20180130.xlsx where Set Point was the primary laboratory. There are 4,325 QC samples in total. The data is contained in the spreadsheet tab "LabPrepDuplicates". Duplicates are inserted into the sample stream (1 in every 20) in order to measure precision. Precision is defined as the closeness of agreement between independent assays obtained under similar conditions for the same sample. There are numerous statistical methods of measuring precision.

The statistic HARD was calculated for each element. The formula for HARD is:

(ABS (ORIG_PT-DUP_PT / 2) (which is the mean absolute difference)

________________________ X 100

ORIG_PT-DUP_PT /2 (the mean)

This equates to the relative mean absolute difference (RMD), expressed as a percentage. Preparation duplicates should have at least 90% of the duplicate pairs having HARD less than 20%. The limit of 20% is deemed to be acceptable as split samples (rock chips) are not homogeneous and there may also be a nugget effect.

Table 4 lists the percentage of duplicate pairs for each element that have a HARD less than or equal to 20%. Note that samples where results are less than 10 x detection limits were excluded as results close to detection limits show significant variability.

Table 4 – Percentage of duplicate pairs that have a HARD less than or equal to 20% for each element

Element	Total samples > 10 X detection limit	Number of samples with HARD <=20%	Percentage with HARD within 20%
Au	691	679	98%
Pt	1860	1838	99%
Pd	2237	2222	99%
Cu	2385	2382	99%
Ni	4013	4011	99%

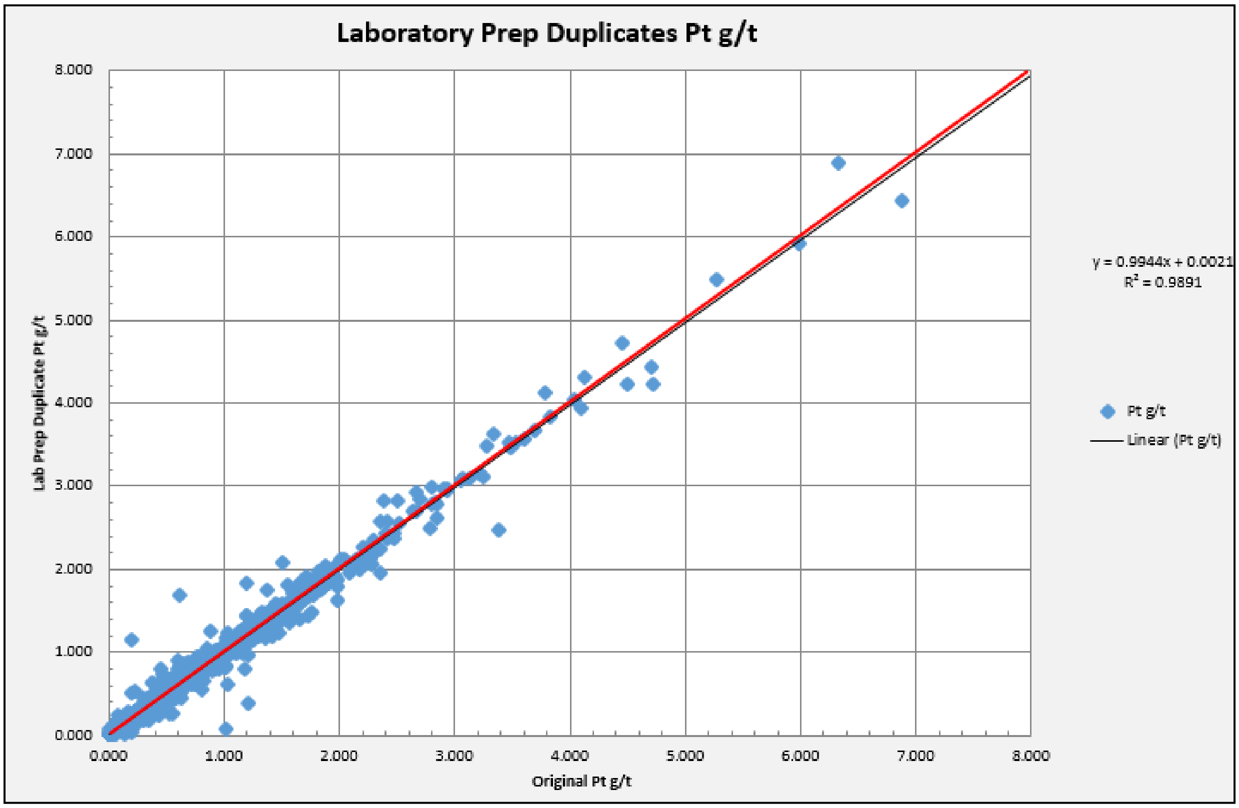
Table 4 shows that for all the elements that there is excellent precision for all the elements. This is not surprising as the laboratory does the checks for these duplicates and they make sure there is agreement.

Preparation duplicates were inserted into the sample stream since November 2013. 255 (5.89%) were found to be outside acceptable limits by the laboratory and repeated. Both the original results and the repeat results were reported. The repeat results were reported with a prefix of “Dupl-CRD- “. These results were included in the spreadsheet tab LabPulpDuplicates. They will be discussed in their own section.

Analysis of Pt

Figure 11 demonstrates the good correlation between the original Pt on the X axis and the duplicate Pt on the Y axis. R^2 is 0.98%.

Figure 11 – A scatter plot of Pt showing the correlation between the original and duplicate results.



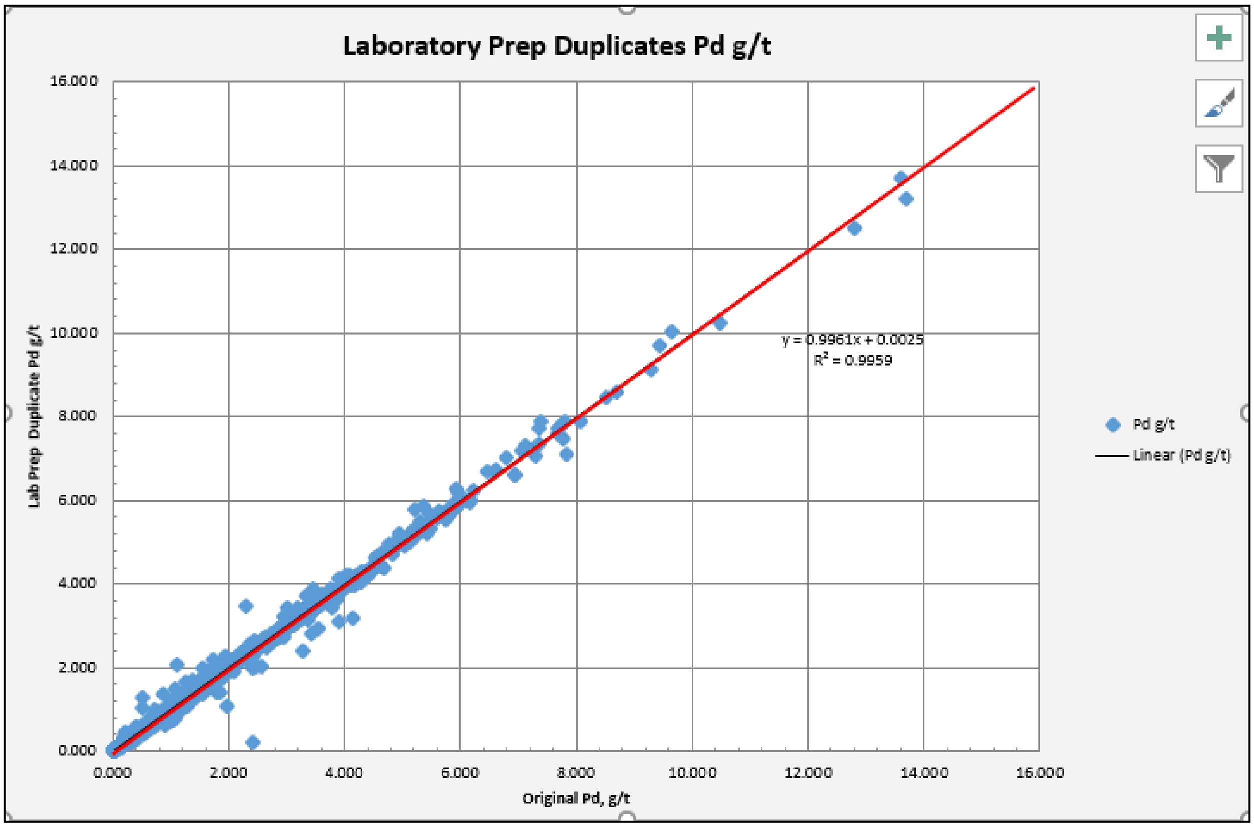
There are 32 exceptions (1.72%) where HARD is greater than or equal to 20% for Pt. Differences may be due to analytical error, natural variability, sample swaps, lost prills or leaking pots). 23 samples (1.23%) were identified by Set Point and repeated. The repeats were also reported with a prefix of Dupl-CRD-. The repeats will be discussed in their own section. The repeats have also been highlighted in yellow in the LabPulpDuplicates spreadsheet. Of the 8 remaining exceptions (highlighted in orange), 7 samples have grades between 0.07 and 0.3 g/t and HARD's between 20 and 26%. All 7 samples only have Pt that is outside acceptable limits. The other elements pass. There is one sample (O183980) that has a HARD of 48.14%. The 2 reported grades are 0.2 and 0.07 g/t. All other elements pass for this sample.

Results for Pt are deemed to be acceptable.

Analysis of Pd

Figure 12 demonstrates the good correlation between the original Pd on the X axis and the duplicate Pd on the Y axis. R^2 is 0.99%.

Figure 12 – A scatter plot of Pd showing the correlation between the original and duplicate results.



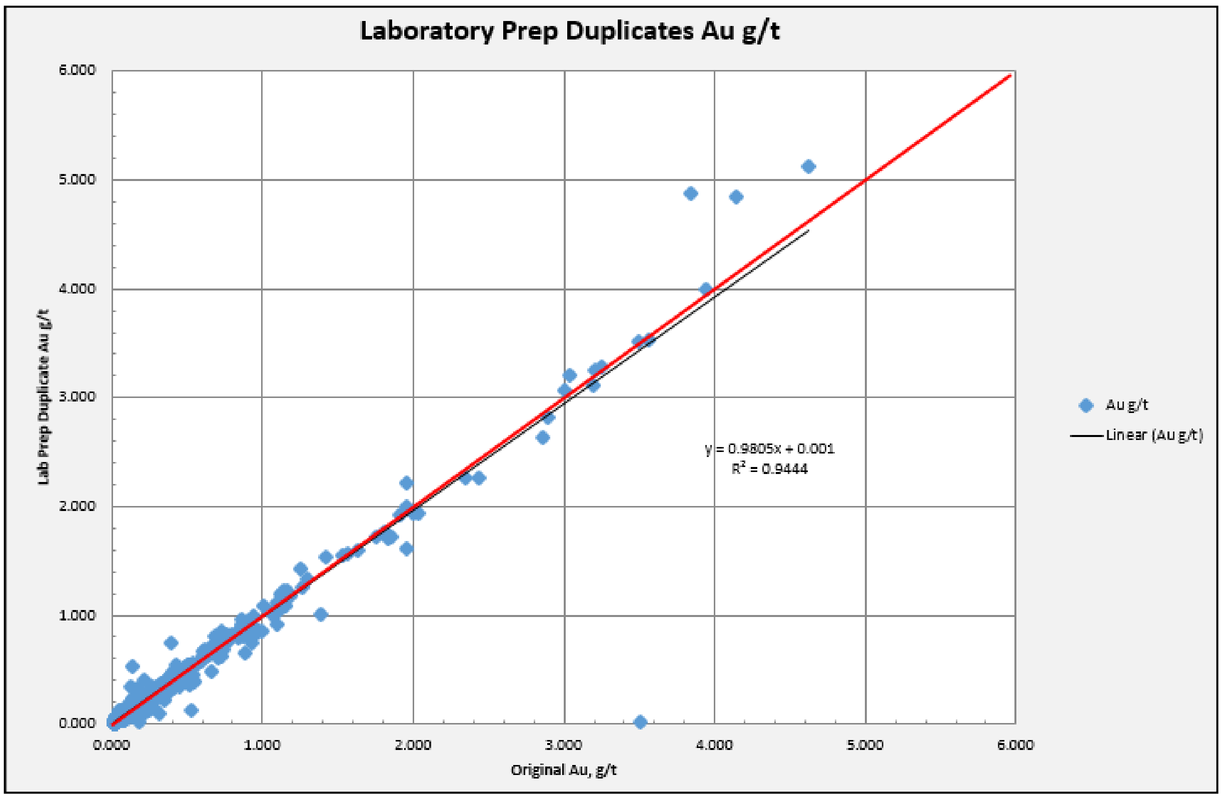
There are 16 exceptions (0.71%) where HARD is greater than or equal to 20% for Pd. Differences may be due to analytical error, natural variability, sample swaps, lost prills or leaking pots. 7 samples were discussed in the analysis of Pt section. 6 additional samples (0.27%) were identified by Set Point and repeated (highlighted in blue). The repeats were also reported with a prefix of Dupl-CRD-. The repeats will be discussed in their own section. The repeats have also been highlighted in blue in the LabPulpDuplicates spreadsheet. Of the 1 remaining exception, Sample O148847 (highlighted in yellow) was repeated twice and all three sets of results were reported in the LabPrepDuplicates spreadsheet. HARD for Pd is between 20 and 23% so it is a borderline exception. Only PD is outside acceptable limits. The other elements pass. The original Pd is 0.25 g/t and repeats have a Pd of 0.4 g/t.

Results for Pd are deemed to be acceptable.

Analysis of Au

Figure 13 demonstrates the good correlation between the original Au on the X axis and the duplicate Au on the Y axis. R^2 is 0.94%. R^2 is lower than R^2 for Pt or Pd as Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection.

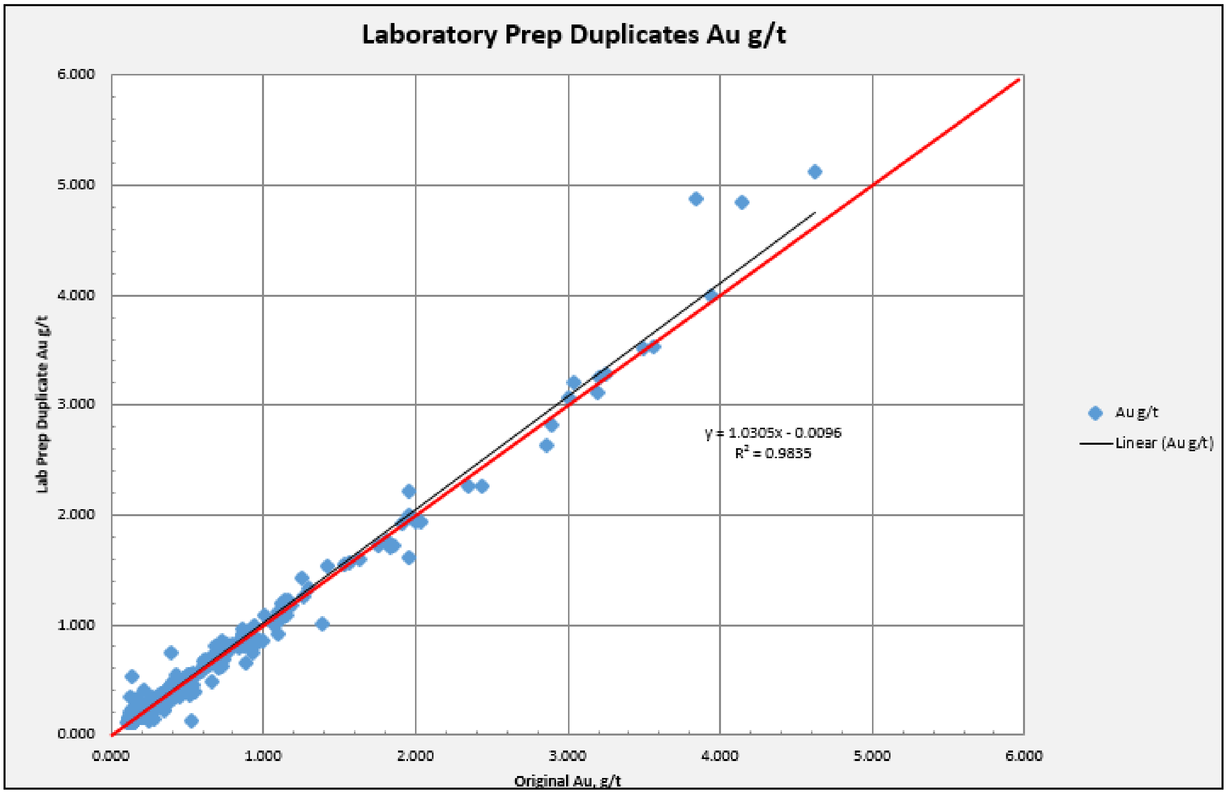
Figure 13 – A scatter plot of Au showing the correlation between the original and duplicate results.



When all samples with results < 0.1 g/t (less than 10 X detection) are removed R^2 increases to 0.98%.

Figure 14 represents a scatter plot of duplicate pairs with Au less than 10 X detection (0.1 g/t) removed.

Figure 14 - A scatter plot of Au showing the correlation between the original and duplicate results with Au < 0.1 g/t removed.



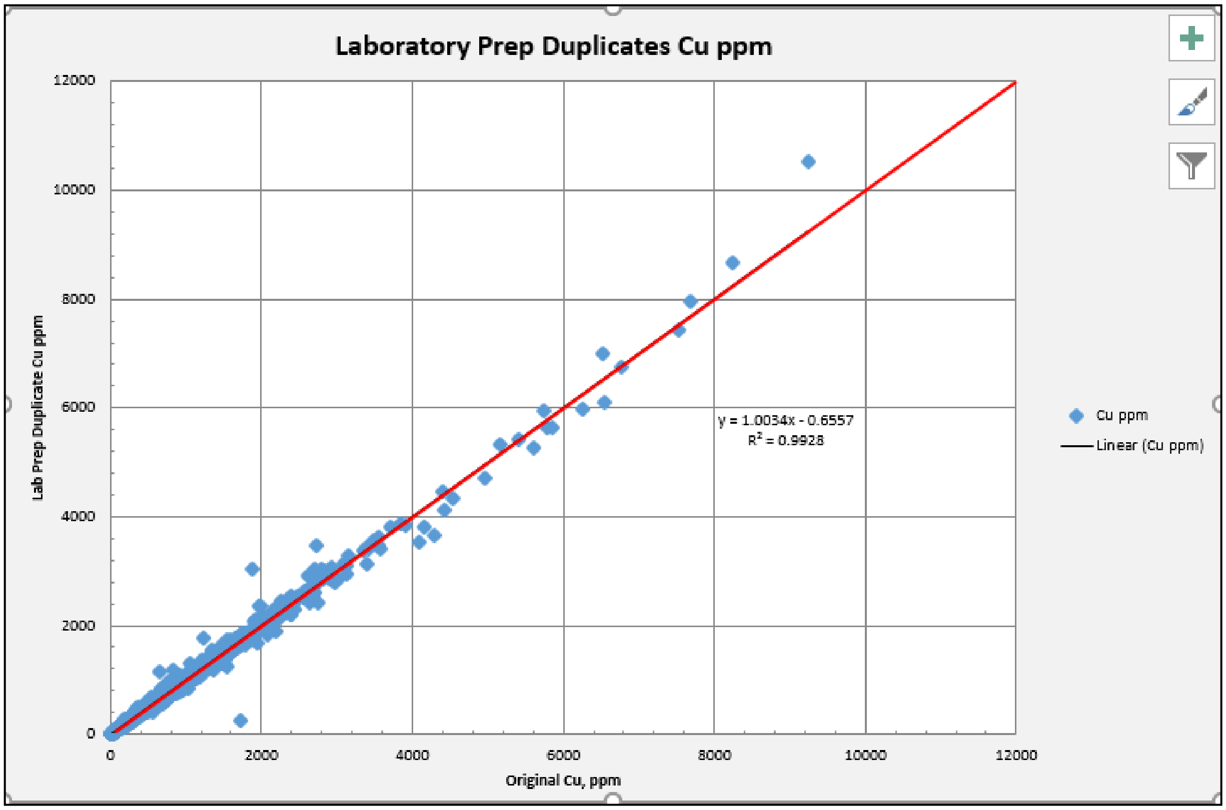
There are 19 exceptions (2.74%) where HARD is greater than or equal to 20% for Au. Differences may be due to analytical error, natural variability, sample swaps, lost prills or leaking pots). 3 samples were discussed in the analysis of Pt section. 13 additional samples (1.88%) were identified by Set Point and repeated (highlighted in green). The repeats were also reported with a prefix of Dupl-CRD-. The repeats will be discussed in their own section. 2 samples were not repeated. Sample O138474 has an original Au of 3.51 g/t and a duplicate pf 0.02 g/t. The rest of the elements are low grade; therefore, the duplicate is the most likely value and the original value may be an error in reporting or analysis. Sample O187001 has an original Au of 0.15 g/t and a duplicate Au of 0.08 g/t. HARD is 25%. All other elements pass.

Results for Au are deemed to be acceptable.

Analysis of Cu

Figure 15 demonstrates the good correlation between the original Cu on the X axis and the duplicate Cu on the Y axis. R^2 is 0.99%.

Figure 15 – A scatter plot of Cu showing the correlation between the original and duplicate results.



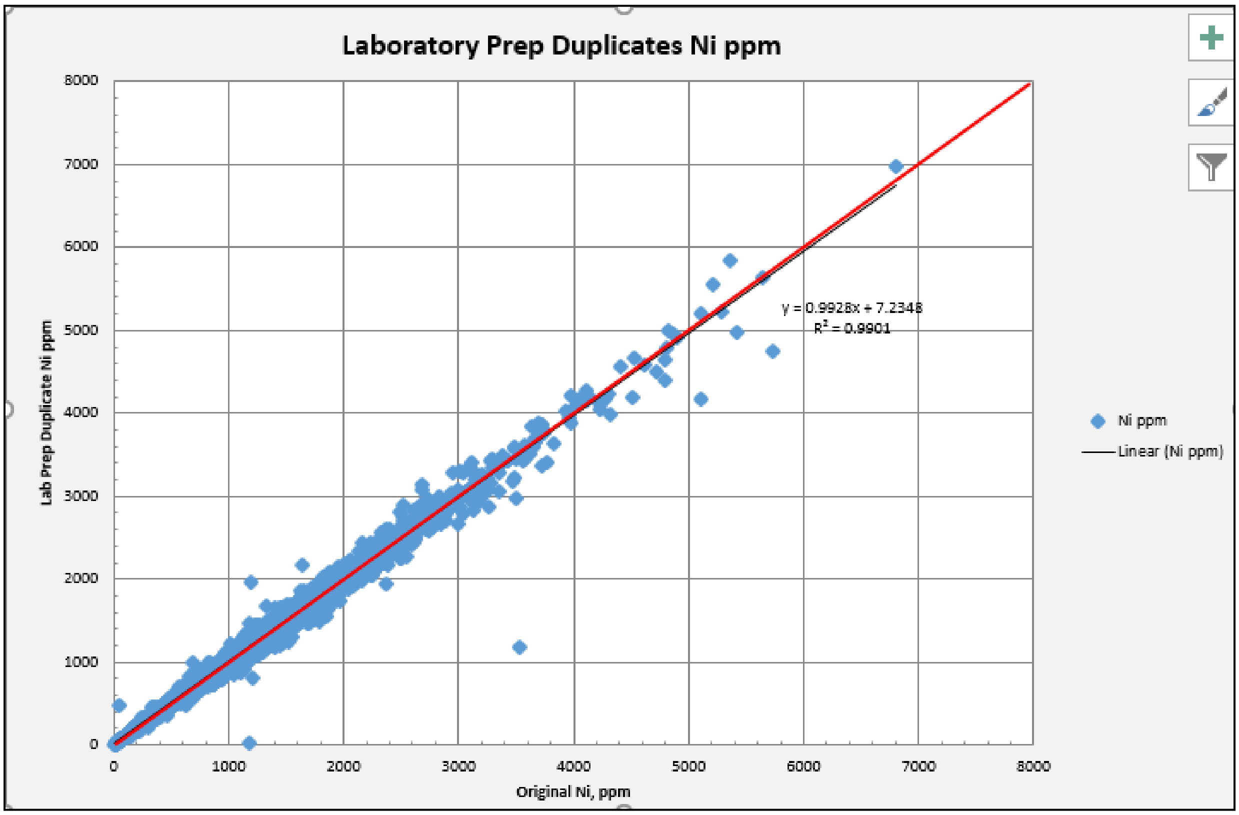
There are 3 exceptions (0.12%) where HARD is greater than or equal to 20% for Cu. Differences may be due to analytical error, natural variability or sample swaps All 4 samples were discussed in the analysis of Pt section.

Results for Cu are deemed to be acceptable.

Analysis of Ni

Figure 16 demonstrates the good correlation between the original Ni on the X axis and the duplicate Ni on the Y axis. R^2 is 0.99%.

Figure 16 – A scatter plot of Ni showing the correlation between the original and duplicate results.



There are 4 exceptions (0.01%) where HARD is greater than or equal to 20% for Ni. Differences may be due to analytical error, natural variability or sample swaps 3 samples were discussed in the analysis of Pt section. The fourth exception (sample O177735) has an original Ni of 1174 ppm and duplicate Ni of 18 ppm. Repeats were not done as the sample is not in the reef zone.

Results for Ni are deemed to be acceptable.

Analysis of the Exception list

7 preparation duplicates were identified (0.16 % of 4,324 samples) and added to the exception list (WaterbergQAQCExceptions.xlsx) in the spreadsheet tab DUPEXCEPTIONS.

Sample O208680 was repeated for PGE's and repeats passed. Both sets of results were reported. Sample O206186 was repeated for PGE's and the results replaced in the final report. Sample O208680 was repeated for PGE's which passed. Both sets of results reported. Sample O208700 failed for Pt. The final results for this sample pass. The sample was also repeated. Pt failed for the repeat. The original Pt (sample CRD-O208700) was 0.34 g/t and the repeat Pt (Dupl-CRD-O208700) was 0.47 g/t. Results were accepted as only Pt fails. Sample O213953 was repeated as Dupl-CRD-O213953 which passed for PGE's. Sample O213389 was repeated as Dupl-CRD-O213389 which passed for PGE's. Sample O218263 was queried with the laboratory. The incorrect provisional results were reported. The final report had the correct results.

RESULTS OF INSERTED LABORATORY PREPATION DUPLICATES SENT TO SET POINT THAT WERE REPEATED

255 (5.89%) preparation duplicates were repeated. Both sets of results were reported. Not much value is added by doing repeats as the repeats are pulps, not coarse rejects. Pulps are more homogenised and therefore should show better agreement. At least 90% of the repeats should have a HARD of less than 10%. The repeats have a "Dupl-CRD"- prefix. The results are in the SETPOINT_LabQAQC_Duplicates_20180130.xlsx spreadsheet in the LabPulpDuplicates tab. Not all elements were repeated. Either PGE's (132 samples) or base metals (123 samples) were repeated depending on which elements were failing.

Table 5 lists the percentage of duplicate pairs for each element that have a HARD less than or equal to 10%. Note that samples where results are less than 10 x detection limits were excluded as results close to detection limits show significant variability.

Table 5 – Percentage of samples (repeat preparation duplicates) that have a HARD less than or equal to 10% for each element

Element	Total samples > 10 X detection limit	Number of samples with HARD <=10%	Percentage with HARD within 10%
Au	66	52	79%
Pt	116	104	89%
Pd	124	121	97%
Cu	86	85	99%
Ni	124	123	99%

Table 5 shows that for all the elements that there is good precision for Pd, Cu and Ni. Au does not show a good percentage (only 79%) having HARD within 10% for duplicate pairs. This may be due to a nugget effect. Pt has 89% of duplicate pairs having a HARD within 10%. Interestingly, repeat results show less agreement than the original duplicate pairs. Only 36 preparation duplicate samples, did have PGE's outside acceptable limits (discussed in the sections above for each element and highlighted in the LabPulpDuplicates spreadsheet in various colours). The reasons for the remainder being repeated by the laboratory are not known.

As the repeats of the preparation duplicates are pulps, the samples will be plotted along with the other pulp duplicates.

RESULTS OF INSERTED LABORATORY PULP DUPLICATES SENT TO SET POINT

The results of the inserted pulp duplicates (sample type code LABDUP) are contained in the file SETPOINT_LabQAQC_Duplicates_20180130.xlsx where Set Point was the primary laboratory. There are 13,022 QC samples in total. The data is contained in the spreadsheet tab LabPulpDuplicates. Duplicates are inserted into the sample stream (1 in every 20) in order to measure precision.

The statistic HARD was calculated for each element. Pulp duplicates should have at least 90% of the duplicate pairs having HARD less than 10%. The limit of 10% is deemed to be acceptable as pulps were homogenised.

Table 6 lists the percentage of duplicate pairs for each element that have a HARD less than or equal to 10%. Note that samples where results are less than 10 x detection limits were excluded as results close to detection limits show significant variability.

Table 6 – Percentage of pulp duplicate pairs that have a HARD less than or equal to 10% for each element

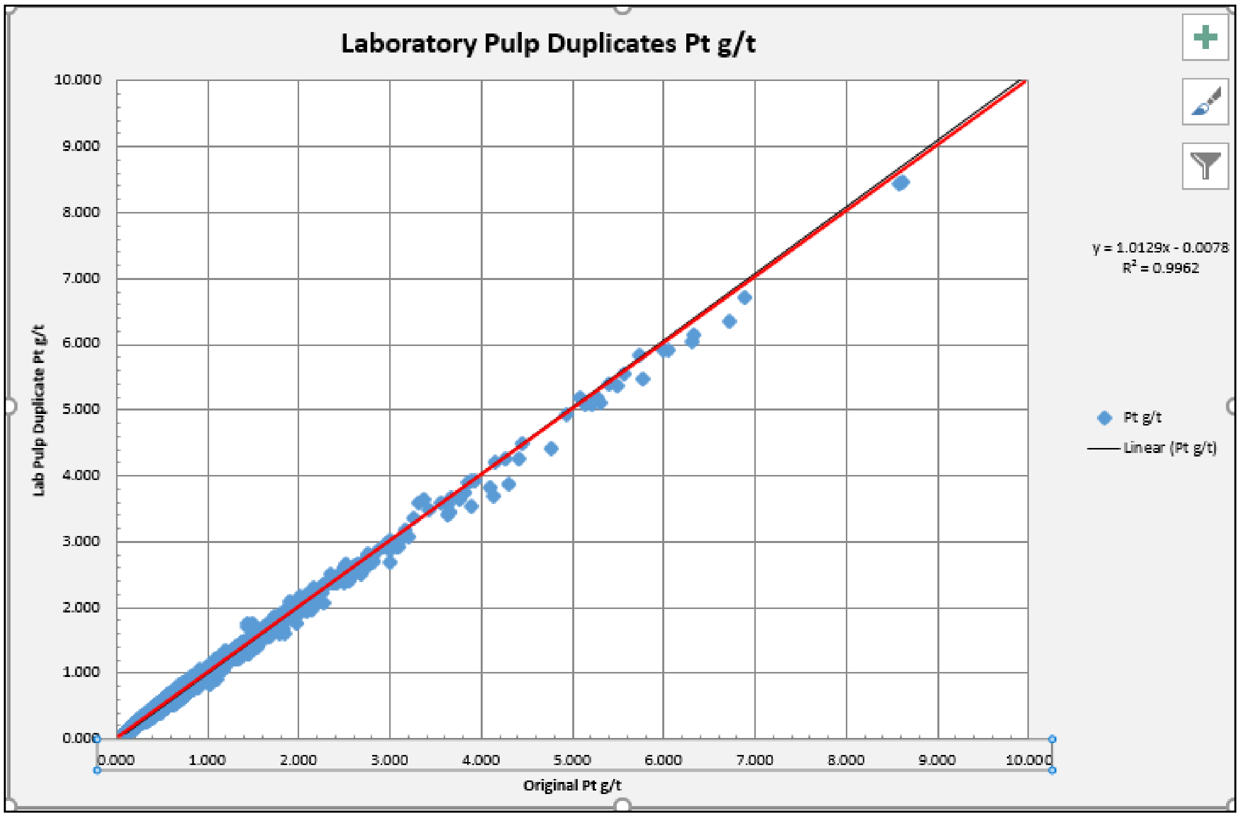
Element	Total samples > 10 X detection limit	Number of samples with HARD <=10%	Percentage with HARD within 10%
Au	1185	1100	93%
Pt	2845	2738	96%
Pd	3243	3223	99%
Cu	3092	3084	99%
Ni	5782	5768	99%

Table 6 shows that for all the elements that there is good precision for all the elements. This is not surprising as the laboratory does the checks for these duplicates and they make sure there is agreement.

Analysis of Pt

Figure 17 demonstrates the good correlation between the original Pt on the X axis and the duplicate Pt on the Y axis. R^2 is 0.99%.

Figure 17 – A scatter plot of Pt showing the correlation between the original and duplicate results with Pt <0.10 g/t removed



There are 94 exceptions (3.3%) where HARD is greater than 10% for Pt. Differences may be due to analytical error, natural variability, a nugget effect, sample swaps, lost prills or leaking/broken pots. Of these, 81 have HARD between 11% and 20% and grades are between 0.12 and 0.47 g/t which is well outside reef cut-off grades. One of these samples has a grade between 5.48 and 6.79 g/t. This pair has a HARD of 10.62%. Of the 13 remaining pairs with HARD greater than 20%, 6 have grades less than 0.80 g/t which is also outside reef cut-off grades.

Five of the duplicate pairs that do have grades > 1.21 g/t and HARD's > 20% were highlighted in turquoise. CRD-O205547 had been repeated as a pulp duplicate and had original grades between 1.5

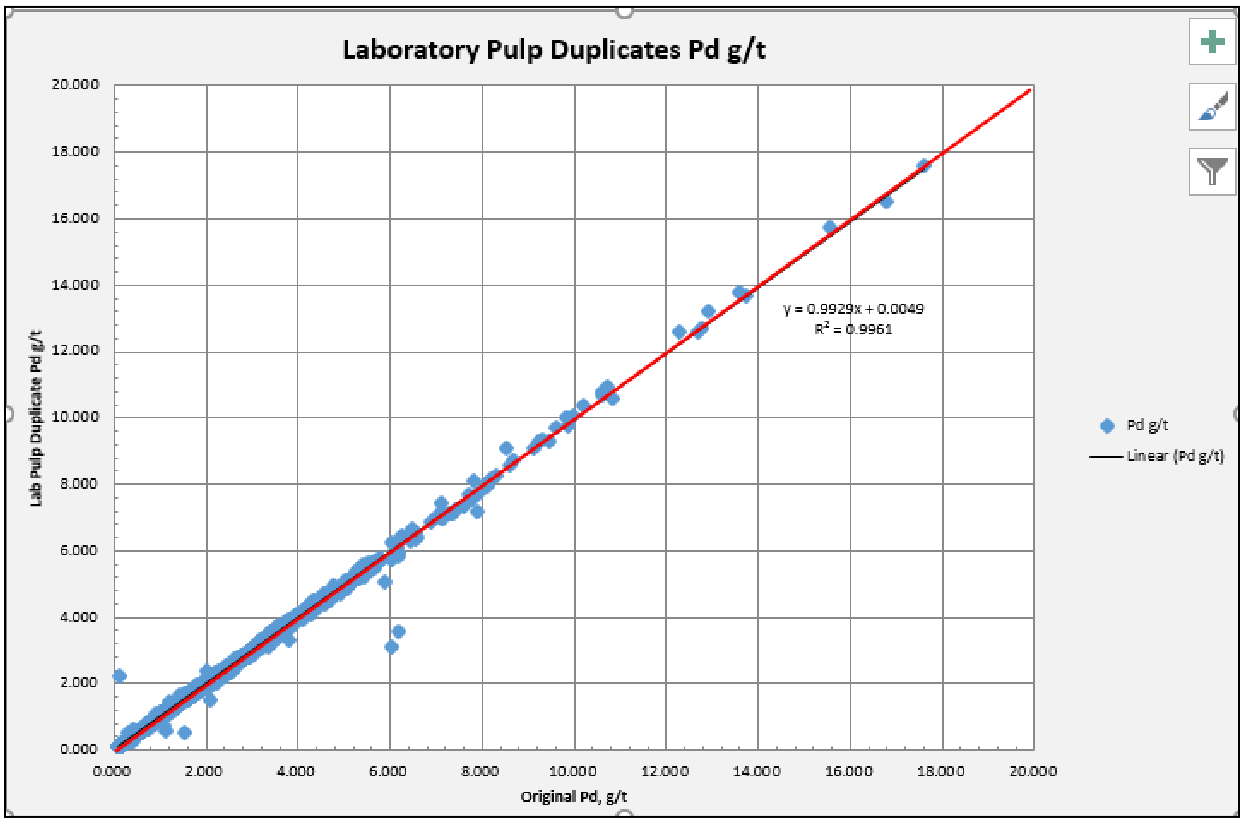
and 1.6 g/t, whereas the pulp repeat had a grade of 3.24 g/t. Both sets of results were reported. The other 5 pairs may be due to sample swaps or a nugget effect.

Results for Pt are deemed to be acceptable.

Analysis of Pd

Figure 18 demonstrates the good correlation between the original Pd on the X axis and the duplicate Pd on the Y axis. R^2 is 0.99%.

Figure 18 – A scatter plot of Pd showing the correlation between the original and duplicate results with grades < 0.10 g/t removed.



There are 20 exceptions (0.61%) where HARD is greater than 10% for Pd. Differences may be due to analytical error, natural variability, a nugget effect, sample swaps, lost prills or leaking pots. Of these, 12 pairs have a HARD between 10 and 20%. 10 of these pairs have Pd grades between 0.1 and 0.2 g/t. 1 sample (CRD-O143653) was a coarse reject that was repeated. Grades varied between 0.62, 1.68 and 1.01 g/t. Sample O136466 was highlighted in the Pt section and has Pd grades of 0.75 and 1.07 g/t.

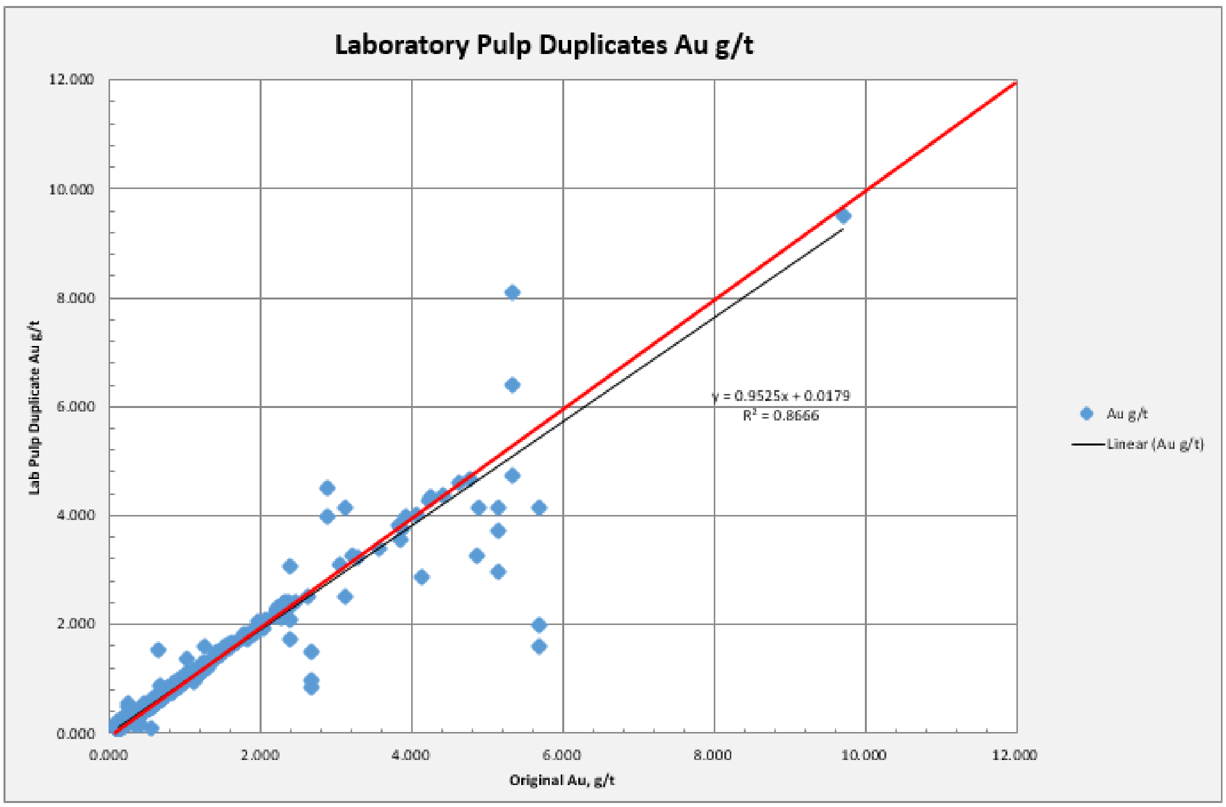
8 duplicate pairs (0.24%) have HARD values > 20%. 4 of these have grades that are between 0.29 and 0.63 g/t which is below a reef grade cut-off. 3 duplicate pairs were highlighted in purple. Samples O115282 and O131208 may be sample swaps. Sample O193670 has grades of 3.59 and 6.2 g/t. This may be due to a nugget effect. The last exception is highlighted in turquoise and it was discussed in the Pt section.

Results for Pd are deemed to be acceptable.

Analysis of Au

Figure 19 demonstrates the correlation between the original Au on the X axis and the duplicate Au on the Y axis with results <0.10 g/t removed. R^2 is 0.86%. R^2 is lower than R^2 for Pt or Pd as Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection.

Figure 19 – A scatter plot of Au showing the correlation between the original and duplicate results.



There is a high degree of scatter where results are > 2 g/t. This is due to a nugget effect.

There are 67 exceptions (5.65%) where HARD is between 10 and 20%. Grades are between 0.11 and 0.89 g/t for 55 of the pairs. This is well outside a reef cut-off grade. Of the remainder, two are highlighted in turquoise and were discussed in the Pt section. 10 duplicate pairs are highlighted in olive green. Au is the only element outside acceptable limits and grades are between 1.02 and 5.67 g/t. This is due to a possible nugget effect.

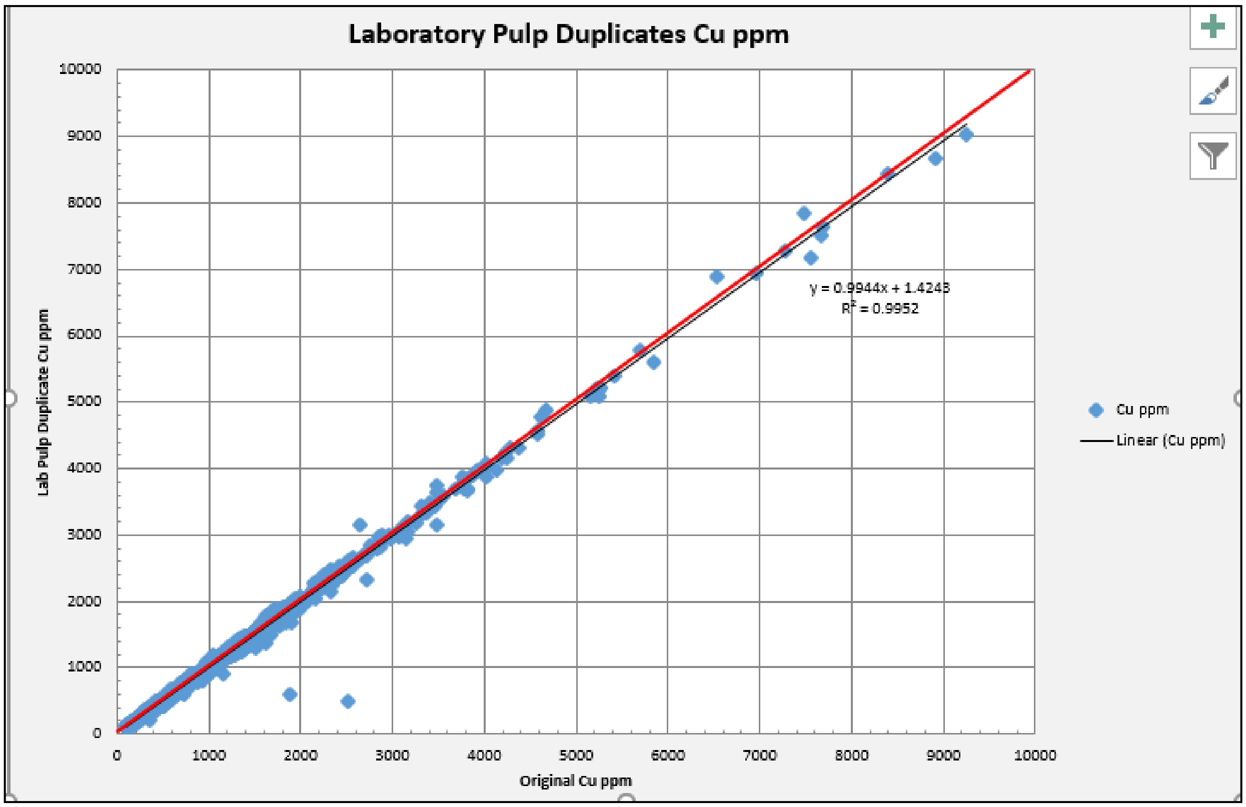
There 18 duplicate pairs (1.51 %) where HARD is > 20%.3 pairs highlighted in green are preparation duplicates that were repeated. Both sets of results were reported. Only Au is outside acceptable limits and grades are between 0.15 and 0.39 g/t. There are 5 other low-grade samples (0.10 to 0.54 g/t). The remaining 9 duplicate pairs (highlighted in olive green) only have Au which is outside acceptable limits. Au grades range from 0.84 to 12.40 g/t.

Results for Au are deemed to be acceptable.

Analysis of Cu

Figure 20 demonstrates the good correlation between the original Cu on the X axis and the duplicate Cu on the Y axis. R^2 is 0.99%.

Figure 20 – A scatter plot of Cu showing the correlation between the original and duplicate results with results < 10 X detection (< 100ppm) removed.



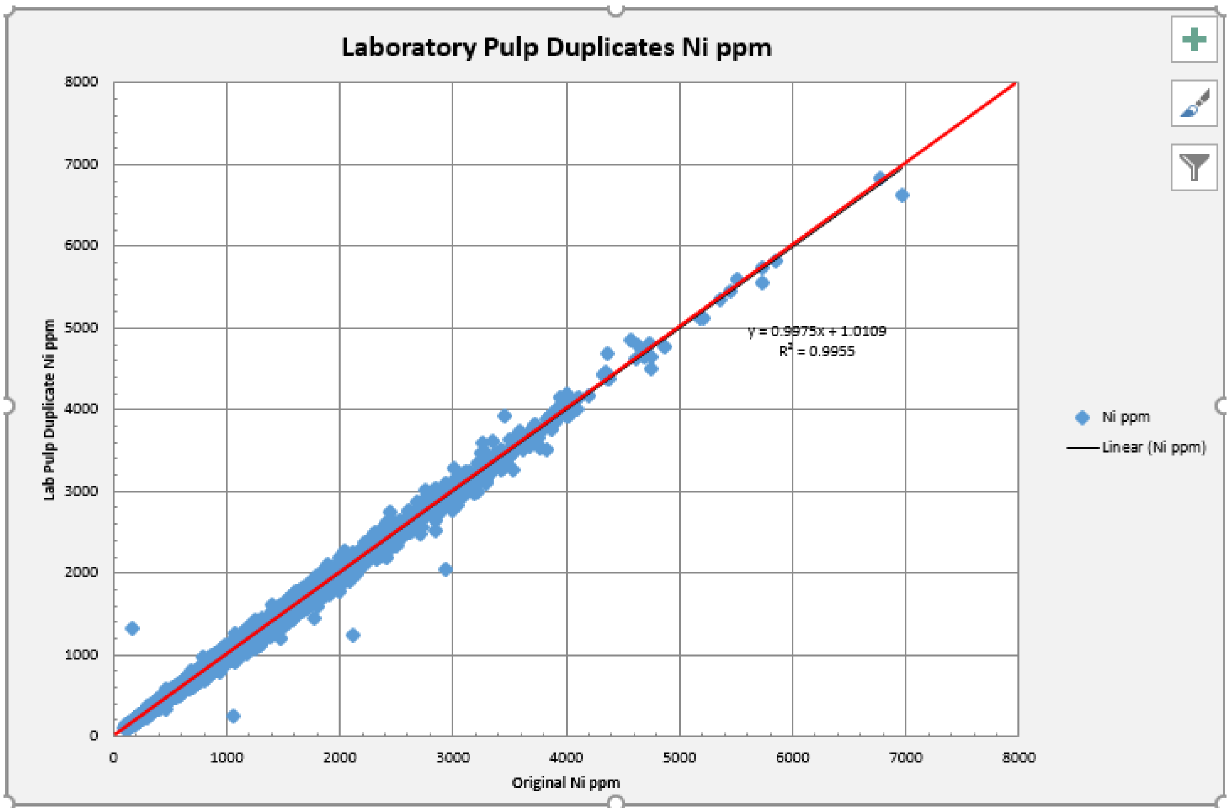
There are 8 exceptions (0.25%) where HARD is greater than 10% for Cu. Differences may be due to analytical error, natural variability or sample swaps. 3 of these have HARD's greater than 20%. These are possible sample swaps, or the incorrect sample being prepared.

Results for Cu are deemed to be acceptable.

Analysis of Ni

Figure 21 demonstrates the good correlation between the original Ni on the X axis and the duplicate Ni on the Y axis. R^2 is 0.99%.

Figure 21– A scatter plot of Ni showing the correlation between the original and duplicate results with results < 10 X detection (<100 ppm) removed.



There are 13 exceptions (0.22%) where HARD is greater than 10% but less than 20% for Ni. Differences may be due to analytical error, natural variability or sample swaps.

3 exceptions (0.05%) have a HARD greater than 20%. These are possible sample swaps.

Results for Ni are deemed to be acceptable.

Analysis of the Exception list

5 pulp duplicates were identified (0.04 % of 13,277 samples) and added to the exception list (WaterbergQAQCExceptions.xlsx) in the spreadsheet tab DUPEXCEPTIONS.

Dupl-O226777 was queried with the laboratory and it is recent job that has not been finalised. Dupl-O193165 had base metals with values after the decimal point. An amended report was received. Dupl-O213953 was queried and repeated. Repeats were acceptable. Incorrect results were reported for Dupl-O222934. An amended report was received. Dupl-O224295 had base metals that were incorrectly reported. An amended report was received.

RESULTS OF INSERTED LABORATORY STANDARDS FOR SET POINT

Standards inserted by the laboratory into the sample stream are presented in the Excel file SETPOINT_LabQAQC_CRMs_20180130.xlsx (LabStandards tab). Z-scores were calculated for each element. There are 14,531 QC samples in total.

The QC status for each element is provided with a status of PASS if the reported value is within 3 standard deviations from the expected value of FAIL if the results is outside 3 standard deviations from the expected value. The Z-score was calculated for each element of each sample.

No samples were excluded from the spreadsheet. Exceptions identified are discussed in the sections Analysis of Au, Pt, Pd, Cu and Ni. Different types of exceptions were colour coded so that they can be identified by anyone looking at the spreadsheet.

Table 7 lists the number of failures outside 3 standard deviations from the expected value for each element that exist within the dataset.

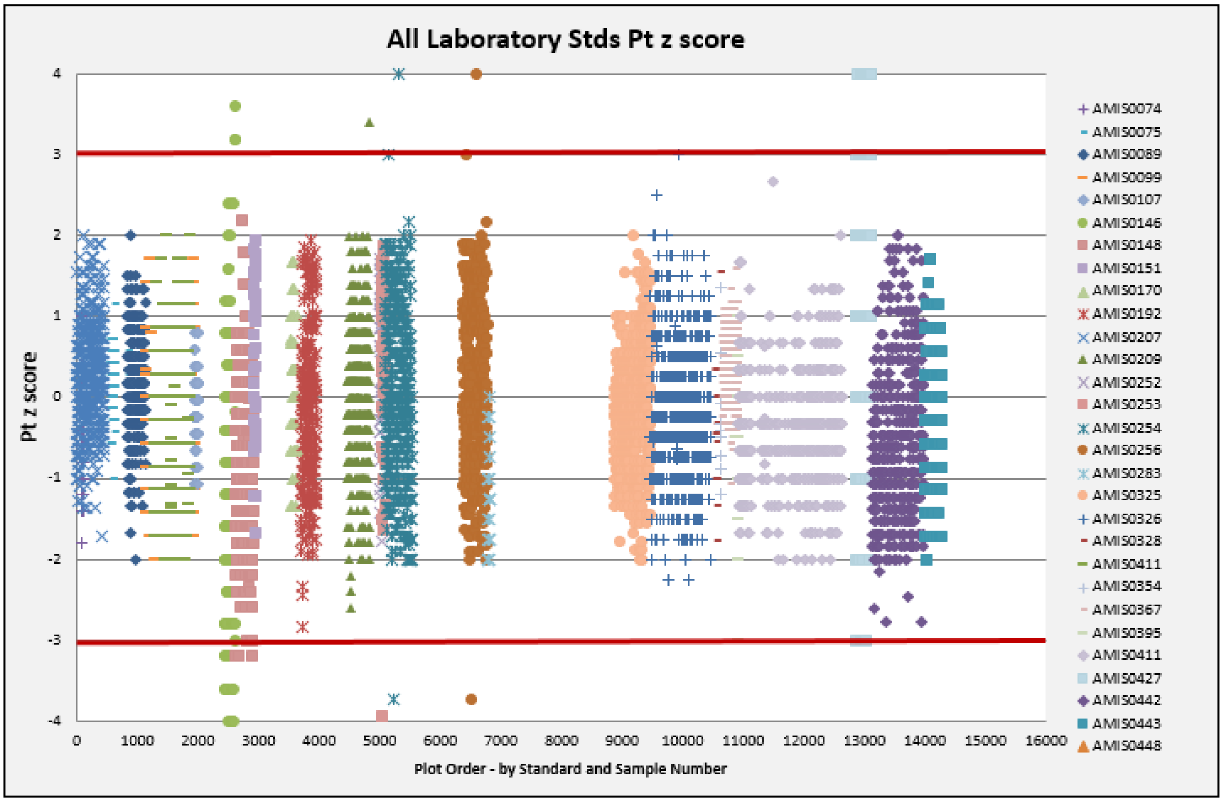
Table 7 - The number of failures for each element for inserted laboratory standards

Element	Number of failures	Number of unexplained or unresolved errors	Total failures as a percentage of total QC samples
Platinum (Pt)	95	4	1.36 % of 6983 samples
Palladium (Pd)	78	4	1.12 % of 6979 samples
Gold (Au)	37	2	0.49% of 7582 samples
Nickel (Ni)	11	4	0.23 %of 4740 samples
Copper (Cu)	11	11	0.23 % of 4741 samples
Total		25	Between 0.23 and 1.36%

Analysis of Pt

Figure 22 is the Z-score graph for Pt. The comments made below explain the samples that plot outside a Z-score of -3 or 3.

Figure 22 – Z-score graph for Pt Set Point inserted laboratory standards



Of the 95 Pt results that fail (1.36%), 32 (34%) belong to AMIS0146. Reported grades are between 1.15 and 1.21 g/t. The lower 3 standard deviation limit is 1.215 g/t. AMIS0146 is an internal standard used by Set Point. It is not certified reference material. 45 (47.37%) are AMIS0427. AMIS0427 is also an internal, non-certified standard. The upper 3 standard deviation limit is 0.51 g/t. 42 of these AMIS0427 standards have Pt grades just slightly higher than this limit ranging from 0.52 to 0.57 g/t.

Table 8 lists the remaining 18 exceptions (18.94%) with comments. All these exceptions were highlighted in yellow with a red font and the comments below have also been added to the spreadsheet LabStandards (file SETPOINT_LabQAQC_CRMs _20180130). 8 of them are standards that were recorded as another standard whilst a different standard was analysed. The results for 4 exceptions are just outside acceptable limits. There is 1 that may be a sample swap or a blank. 2 were accepted as only Pt fails. Pt and Pd was low for 3 samples.

Table 8 – A list of the remaining exceptions for Pt with comments

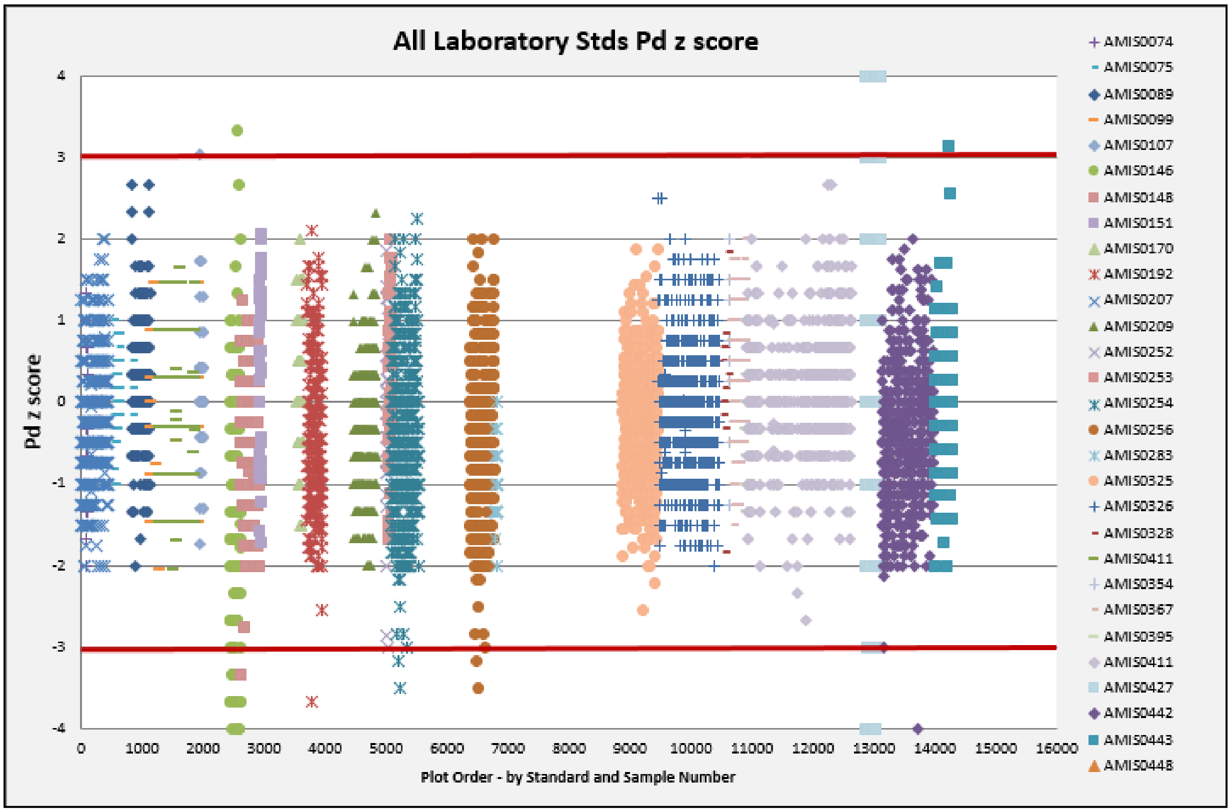
Sequence Number	Batch Number	Standard	Comments
2661	MOK-14-00310	AMIS0148	Pt is a borderline failure.
2666	MOK-14-00316	AMIS0148	Borderline fail for Pt and Au
2863	MOK-14-00562	AMIS0148	Results accepted, only Pt fails
2899	MOK-14-00586	AMIS0148	Borderline fail for Pt, other elements pass
2918	MOK-15-00129	AMIS0148	Actually AMIS0192.
4830	MOK-17-00058	AMIS0209	Borderline failure for Pt and Au. Pd passes.
5039	MOK-15-00179	AMIS0253	Pt and Pd low
6512	MOK-14-00380	AMIS0256	Pt and Pd low
6596	MOK-14-00562	AMIS0256	Only Pt fails
6610	MOK-15-00019	AMIS0256	Actually AMIS0192.
8888	MOK-13-00027	AMIS0325	Sample swap or a blank
11087	MOK-14-00279	AMIS0411	Actually AMIS0256
11534	MOK-15-00025	AMIS0411	Pt and Pd low
11751	MOK-15-00110	AMIS0411	Actually AMIS0209
11752	MOK-15-00110	AMIS0411	Actually AMIS0209
11754	MOK-15-00110	AMIS0411	Actually AMIS0209
11879	MOK-15-00182	AMIS0411	Possibly AMIS0256
14286	MOK-18-00433	AMIS0443	Possibly AMIS0442

Results for Pt are deemed to be acceptable.

Analysis of Pd

Figure 23 is the Z-score graph for Pd. The comments made below explain the samples that plot outside a Z-score of -3 or 3.

Figure 23 – Z-score graph for Pd Set Point inserted laboratory standards



There are 78 exceptions (1.12%) of the 6979 samples analysed for Pd. 10 exceptions (12.82%) were discussed in the Analysis of Pt section. They are highlighted in yellow with a red font. 33 (42%) are AMIS0146 where Pd is just outside acceptable limits. 29 (37%) are AMIS0427 where Pd is just outside acceptable limits. Both standards are not certified.

Table 9 lists 7 exceptions (8.97%) with comments. All these exceptions were highlighted blue and the comments below have also been added to the spreadsheet LabStandards (file SETPOINT_LabQAQC_CRMs_20180130.). Pd is a borderline failure for 3 samples, and only Pd fails for 4 samples.

Table 9 – A list of the remaining Pd exceptions with comments

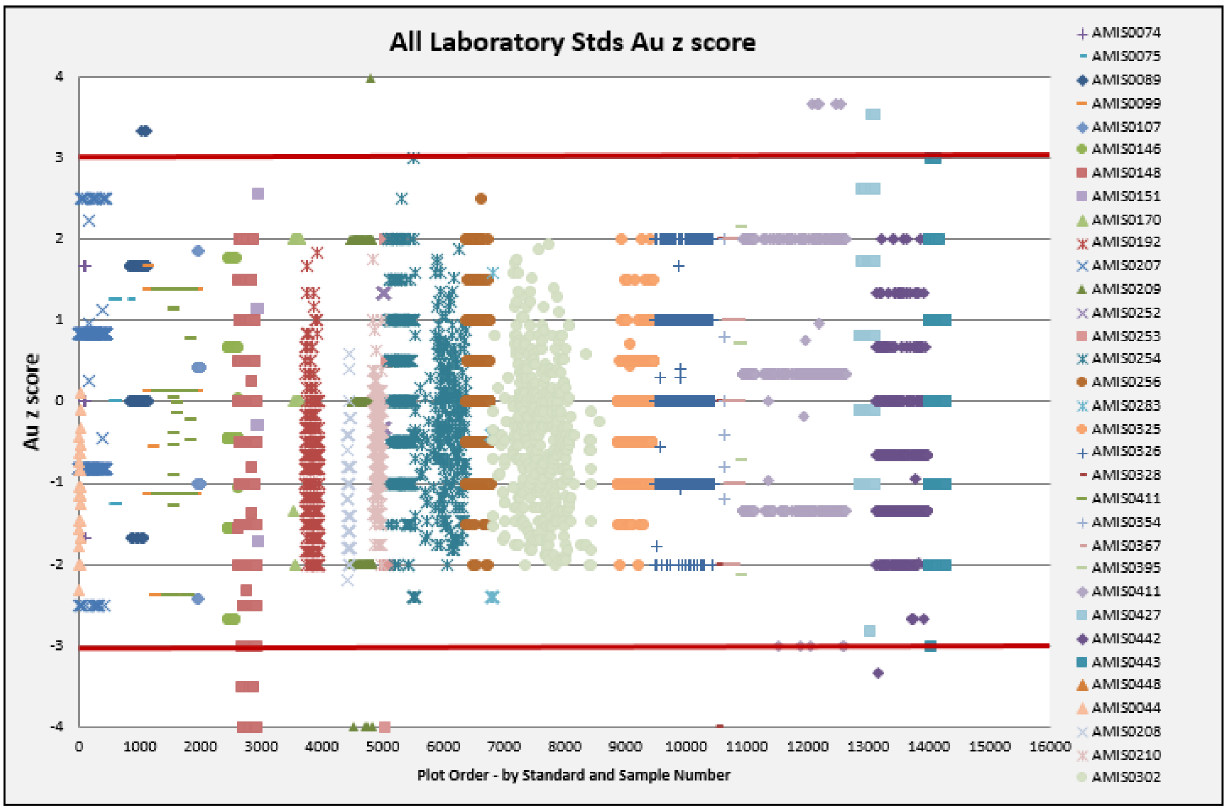
Sequence Number	Batch Number	Standard	Comments
902	MOK-14-00463	AMIS0089	Only Pd fails. Pt and Au pass
1954	Rep12-0502	AMIS0107	Pd is borderline failure due to rounding.
3781	MOK-15-00038	AMIS0192	Pd reported is low. Pt and Au pass.
6490	MOK-14-00358	AMIS0256	Pd is borderline failure due to rounding
13213	MOK-16-00102	AMIS0442	Pd reported is low. Pt and Au pass.
13731	MOK-17-00708	AMIS0442	Pd reported is low. Pt and Au pass.
14213	MOK-17-00708	AMIS0443	Pd is a borderline failure.

Results for Pd are deemed to be acceptable.

Analysis of Au

Figure 24 is the Z-score graph for Au. The comments made below explain the samples that plot outside a Z-score of -3 or 3.

Figure 24 – Z-score graph for Au Set Point inserted laboratory standards



There are 37 exceptions for Au that are outside acceptable limits. 6 samples (16.21%) were discussed in the Analysis of Pt section and are highlighted in yellow. 10 exceptions (27%) are AMIS0427 which is not certified. 7 AMIS0411 samples (18.91%) are borderline fails due to rounding. 7 AMIS0148 samples only fail for Au and results are between 0.76 and 0.77 g/t where the lower acceptable limit is 0.78 g/t. 2 AMIS0209 samples have results that are just above the upper acceptable limit due to rounding.

5 exceptions are listed in Table 10 with comments. They were highlighted in green and the comments were added to the spreadsheet LabStandards (file SETPOINT_LabQAQC_CRMs_20180130).

Table 10 – A list of the remaining Au exceptions with comments

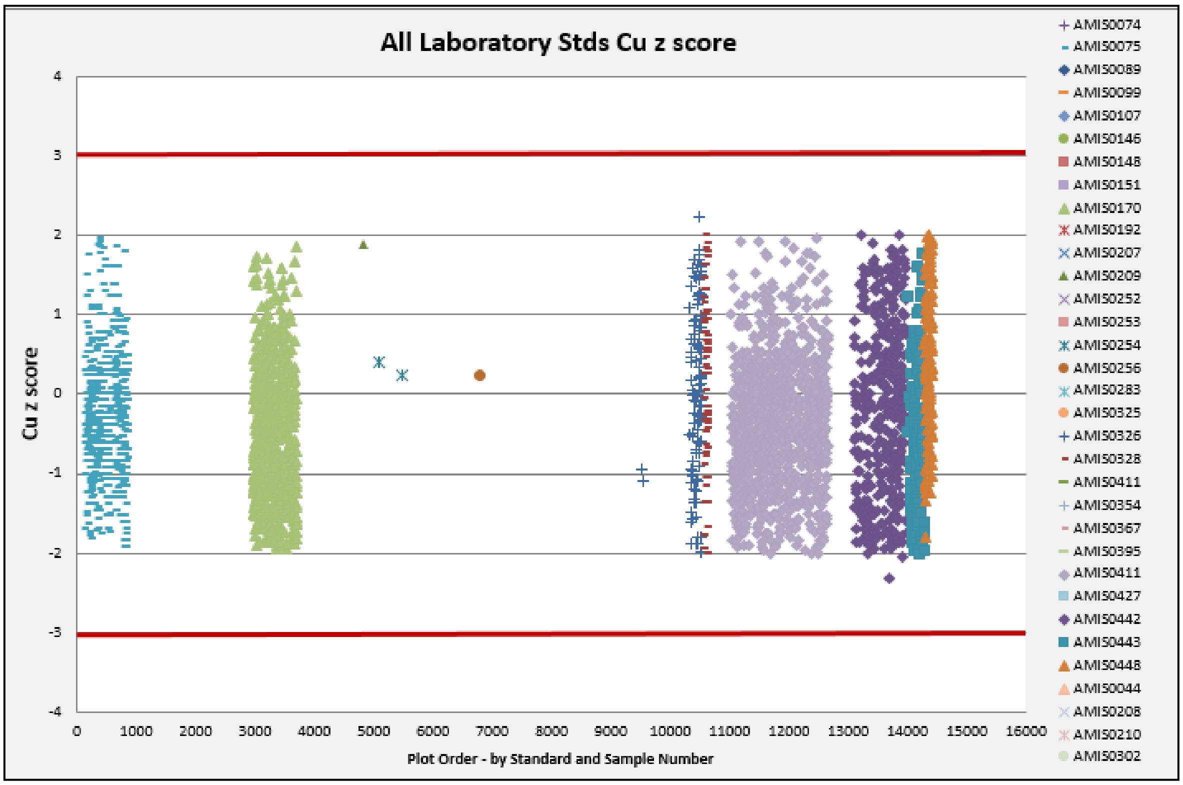
Sequence Number	Batch Number	Standard	Comments
6530	MOK-14-00425	AMIS0256	Au is low. Pt and Pd pass.
10530	MOK-16-00323	AMIS0328	Au reported is slightly high
10531	MOK-16-00032	AMIS0328	Borderline failure due to rounding
10869	MOK-15-00056	AMIS0367	Borderline failure
13170	MOK-16-0008	AMIS0442	Borderline failure due to rounding

Results for Au are deemed to be acceptable.

Analysis of Cu

Figure 25 is the Z-score graph for Cu. The comments made below explain the samples that plot outside a Z-score of -3 or 3.

Figure 25 – Z-score graph for Cu Set Point inserted laboratory standards



Most standards fall between a Z-score of -2 and 2. That is equivalent to two standard deviations from the expected value. This was queried with the laboratory and they have confirmed that their acceptable limits are two standard deviations for their own standards.

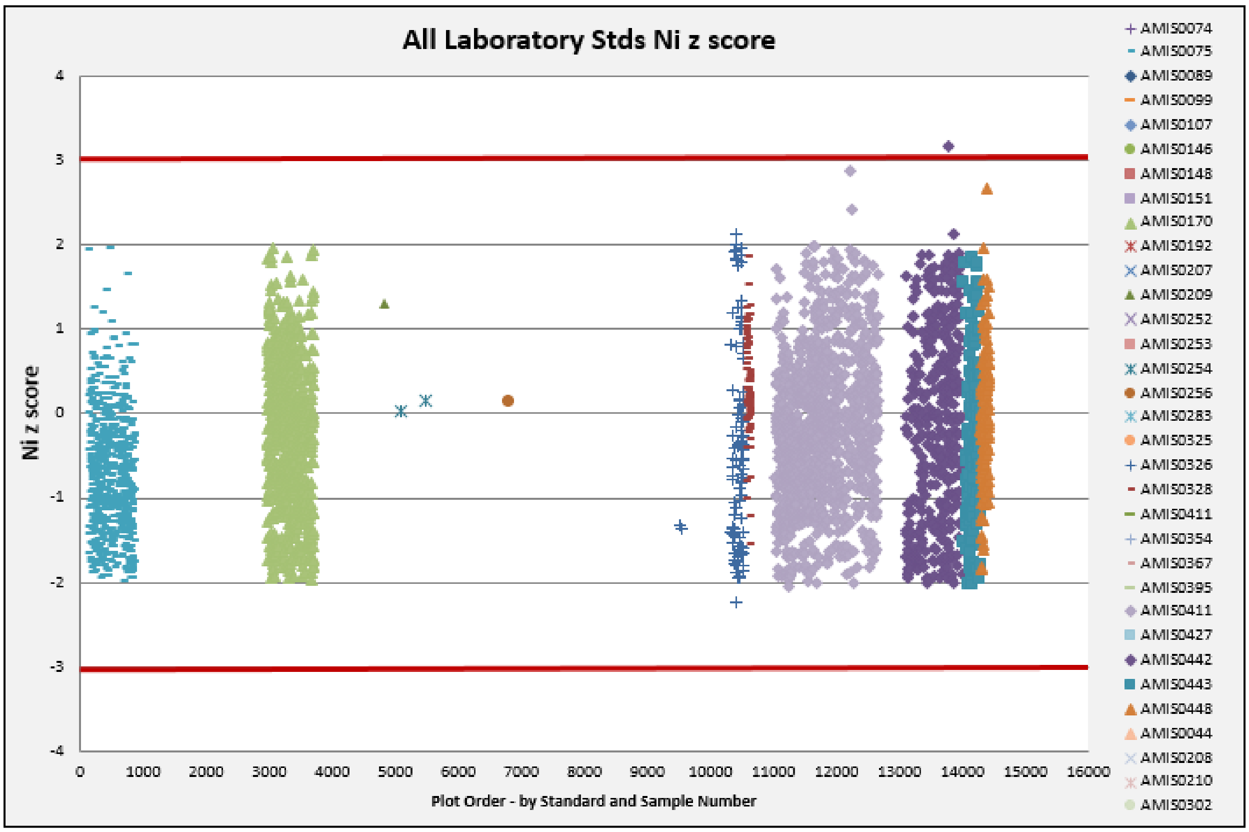
There 11 Cu exceptions (0.23%). They were highlighted in pink in the tab LabStandards belonging to the Excel spreadsheet SETPOINT_LabQAQC_CRMs _20180130. Results are due to possible sample swaps or analytical error.

Results for Cu are deemed to be acceptable.

Analysis of Ni

Figure 26 is the Z-score graph for Ni. The comments made below explain the samples that plot outside a Z-score of -3 or 3.

Figure 26 – Z-score graph for Ni Set Point inserted laboratory standards



There is a total of 11 Ni exceptions (0.23%) that are outside acceptable limits (< a Z-score of -3 or > a Z-score of 3). 7 of them were mentioned in the Analysis of Cu section and are highlighted in pink. There are an additional 4 exceptions (highlighted in orange) that may be due to sample swaps or analytical error.

RESULTS OF INSERTED LABORATORY BLANKS FOR SET POINT

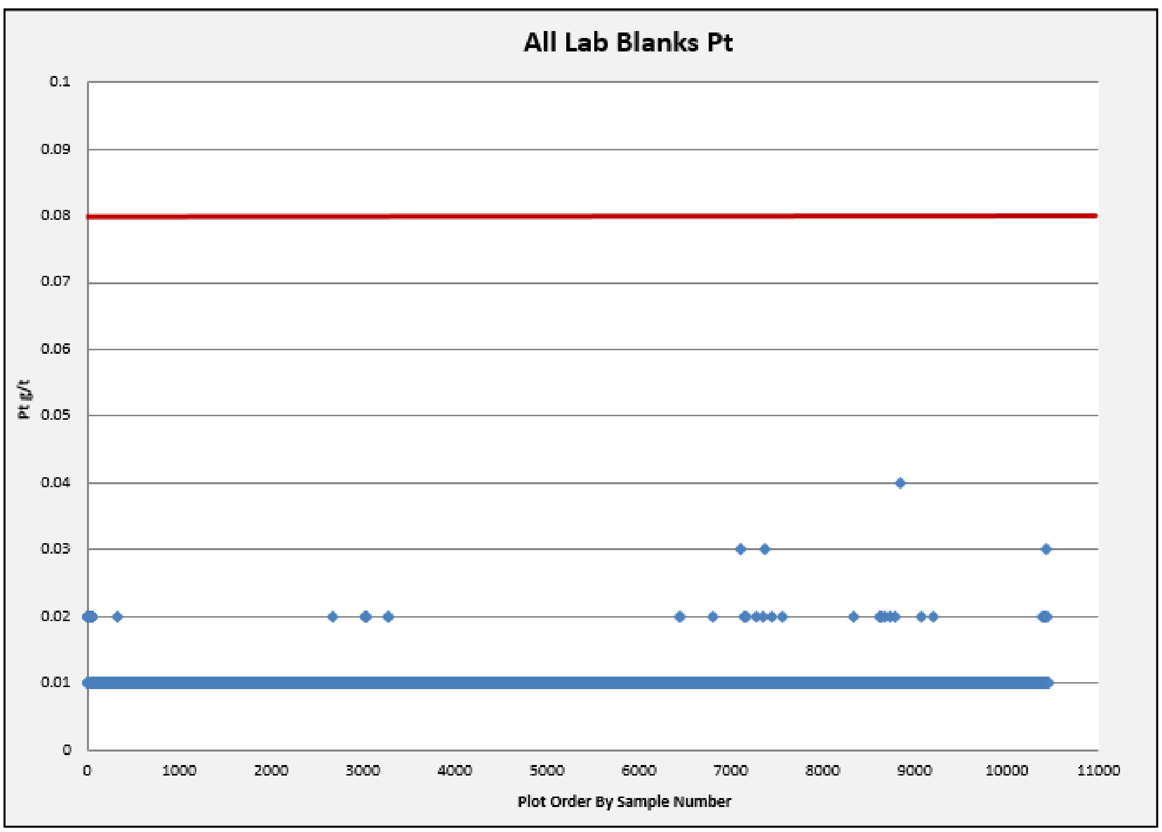
Blanks inserted by the laboratory into the sample stream are presented in the Excel file SETPOINT_LabQAQC_CRMs_20180130.xlsx (LabBlanks tab. There are 10,442 QC samples in total.

The QC status for each element is provided with a status of PASS if the reported value is within 10 X the detection limit or FAIL if the results is greater than 10 X the detection limit. Although 0.1 g/t is 10 X the detection limit for PGE's, a cut-off limit of 0.08 g/t was used. 10 X the detection limit for base metals is 100 ppm.

<u>Analysis of Pt</u>

Figure 27 is the graph for Set Point inserted laboratory blanks for Pt

Figure 27 – The graph for inserted Set Point laboratory blanks for Pt.

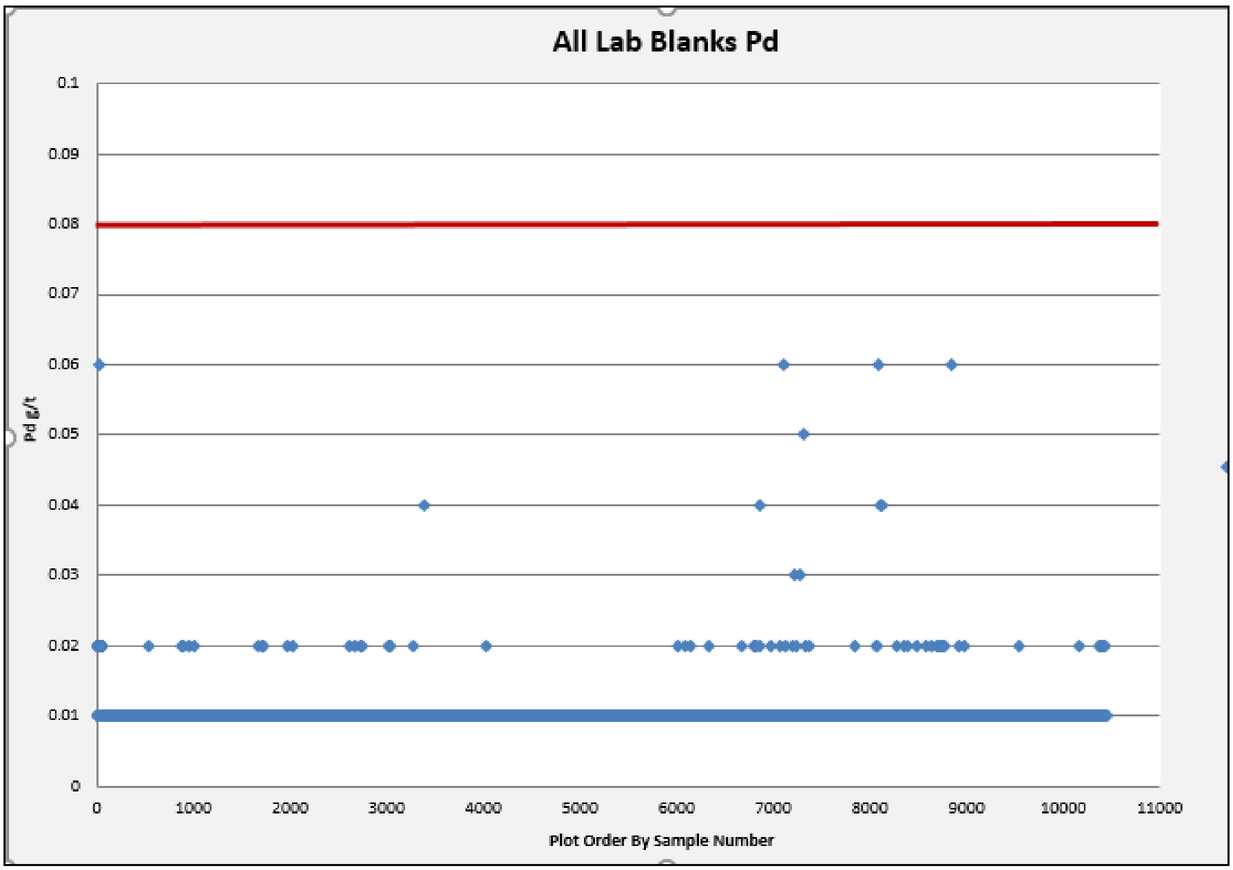


There are no exceptions, all blanks are less than or equal to 0.04 g/t for Pt. Results for Pt are deemed to be acceptable. The laboratory does not allow blanks to be reported that are greater than 0.08 g/t. It is assumed that they are repeated along with affected samples until an acceptable result is achieved.

Analysis of Pd

Figure 28 is the graph for Set Point inserted laboratory blanks for Pd

Figure 28 – The graph for inserted Set Point laboratory blanks for Pd

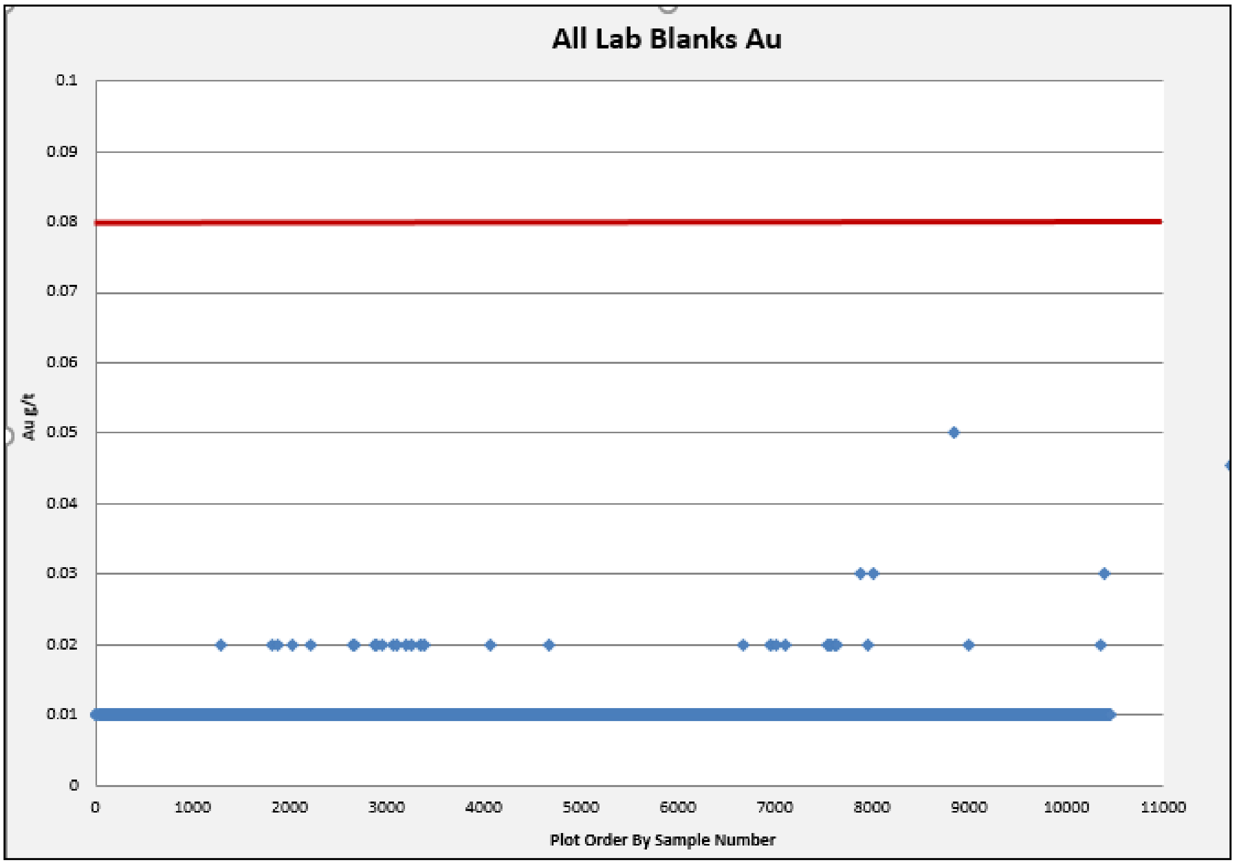


There are no exceptions, all blanks are less than or equal to 0.06 g/t for Pd. Results for Pd are deemed to be acceptable. The laboratory does not allow blanks to be reported that are greater than 0.08 g/t. It is assumed that they are repeated along with affected samples until an acceptable result is achieved.

Analysis of Au

Figure 28 is the graph for Set Point inserted laboratory blanks for Au

Figure 28 – The graph for inserted Set Point laboratory blanks for Au

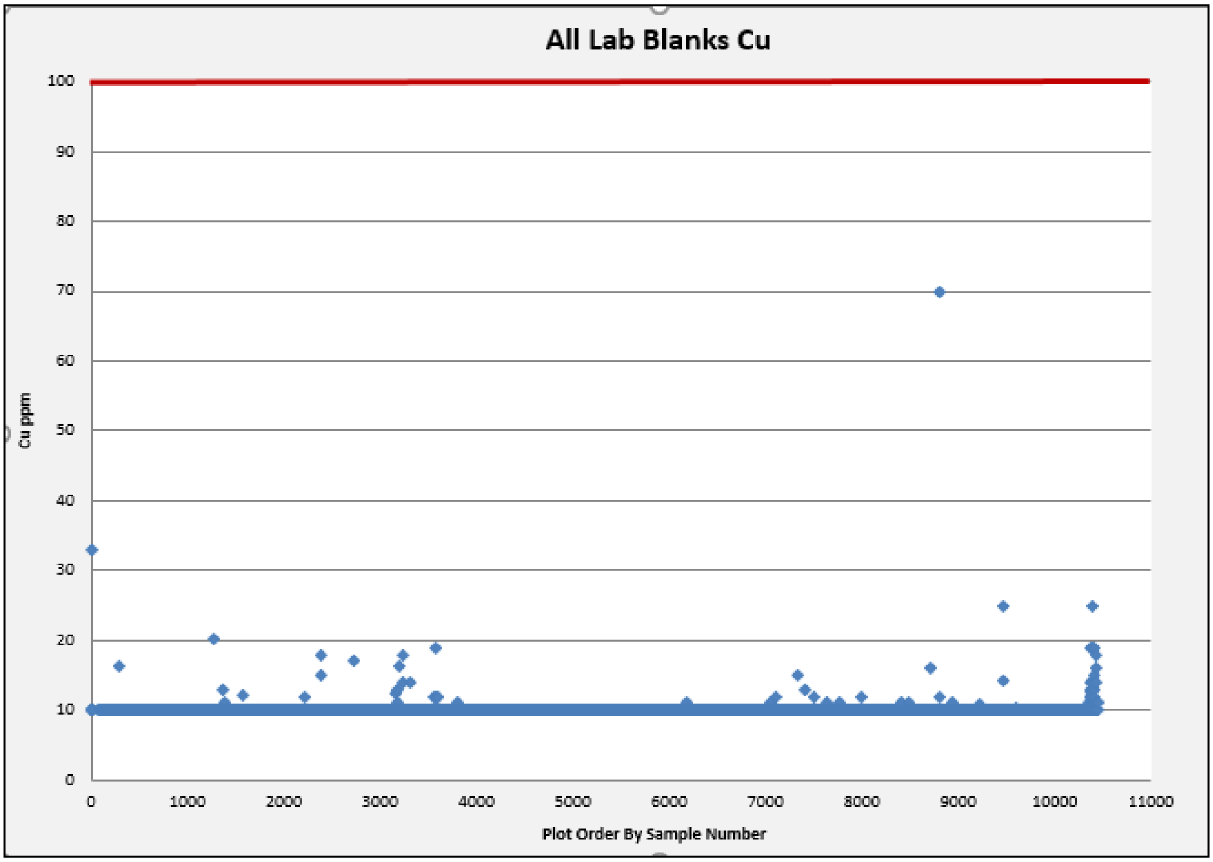


There are no exceptions, all blanks are less than or equal to 0.05 g/t for Au. Results for Au are deemed to be acceptable. The laboratory does not allow blanks to be reported that are greater than 0.08 g/t. It is assumed that they are repeated along with affected samples until an acceptable result is achieved.

Analysis of Cu

Figure 29 is the graph for Set Point inserted laboratory blanks for Cu

Figure 29 – The graph for inserted Set Point laboratory blanks for Cu

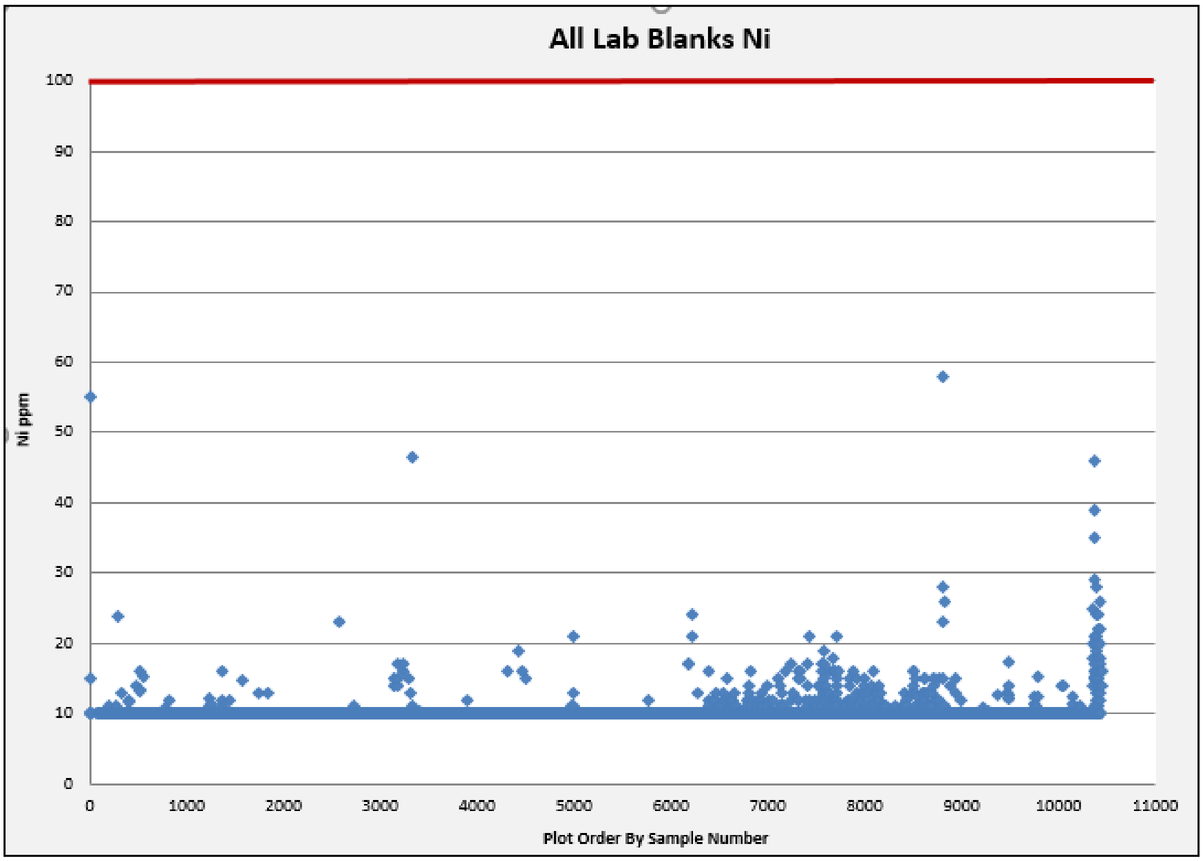


All the blanks have results less than 40 ppm with 2 exceptions (1 of 70 ppm and 1 of 217 ppm – Ni also fails for this sample). These exceptions are possibly due to contamination or a sample swap. Results for Cu are deemed to be acceptable. The laboratory does not allow blanks to be reported that are greater than 100 ppm for Cu. It is assumed that they are repeated along with affected samples until an acceptable result is achieved.

Analysis of Ni

Figure 30 is the graph for Set Point inserted laboratory blanks for Ni

Figure 30 – The graph for inserted Set Point laboratory blanks for Ni



All the blanks have results less than 640 ppm with 1 exception (972 ppm – Cu also fails for this sample). This exception is possibly due to contamination. Results for Ni are deemed to be acceptable. The laboratory does not allow blanks to be reported that are greater than 100 ppm for Ni. It is assumed that they are repeated along with affected samples until an acceptable result is achieved.

APPENDIX 2: SET POINT QA/QC REPORTED DURING 2018

Table 1 lists the number of samples for each sample type analysed during 2018.

Table 1 – The number of samples for each sample type analysed during 2018.

Sample Type Code	Description	Number of samples	Percentage of Total
PRIMARY	Primary samples	21,962	65%
FLDSTD	Inserted blind field standards	2,256	7%
FLDBLK	Inserted blind field blanks	2,167	6%
LABBLK	Blanks inserted by the laboratory	1,719	5%
LABSTD	Standards inserted by the laboratory	2,452	7%
LABCRD	Coarse reject duplicates inserted by the laboratory	1,162	3%
LABDUP	Pulp duplicates inserted by the laboratory.	2,284	7%
Total		34,002	100%

The proportion of each QC sample type relative to the number of primary samples is adequate and complies with accepted industry best practices.

SET POINT RESULTS FOR FIELD STANDARDS (CERTIFIED REFERENCE MATERIALS)

Analytical standards/Certified Reference Materials (CRM's) were used to assess the accuracy and possible bias of assay values for the elements Pt, Pd, Au, Cu and Ni.

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A selection of standards including some made from Bushveld Complex mineralisation is used in all sample submissions. These CRMs were purchased from commercial African Mineral Standards (AMIS), Johannesburg. AMIS0442, AMIS0443 and AMIS459 were used as blind standards.

Tolerance limits are set at three standard deviations from the certified mean value of the reference material:

- If two consecutive standards (CRM) in a batch are outside two standard deviations, the batch will be submitted for re-assay from the CRM prior to the failed CRM until the CRM after the second failed CRM.
- If a single CRM is outside of three standard deviations, the samples will be re-assayed including those samples from the CRM prior to the failed CRM until the next CRM thereafter.

A failed standard is considered cause for re-assay if it falls within a determined economic mining cut for either T- or F-Zone. Analysis of any fails is conducted, and the appropriate action is undertaken. In general, the compliance with the certified values is good; however, there is some evidence of sample swapping, although this is minimal. This may be reduced or eradicated by a change in laboratory procedure regarding sample labelling and tray labelling.

Z-scores are calculated for each blind inserted standard and plotted on graphs for each element.

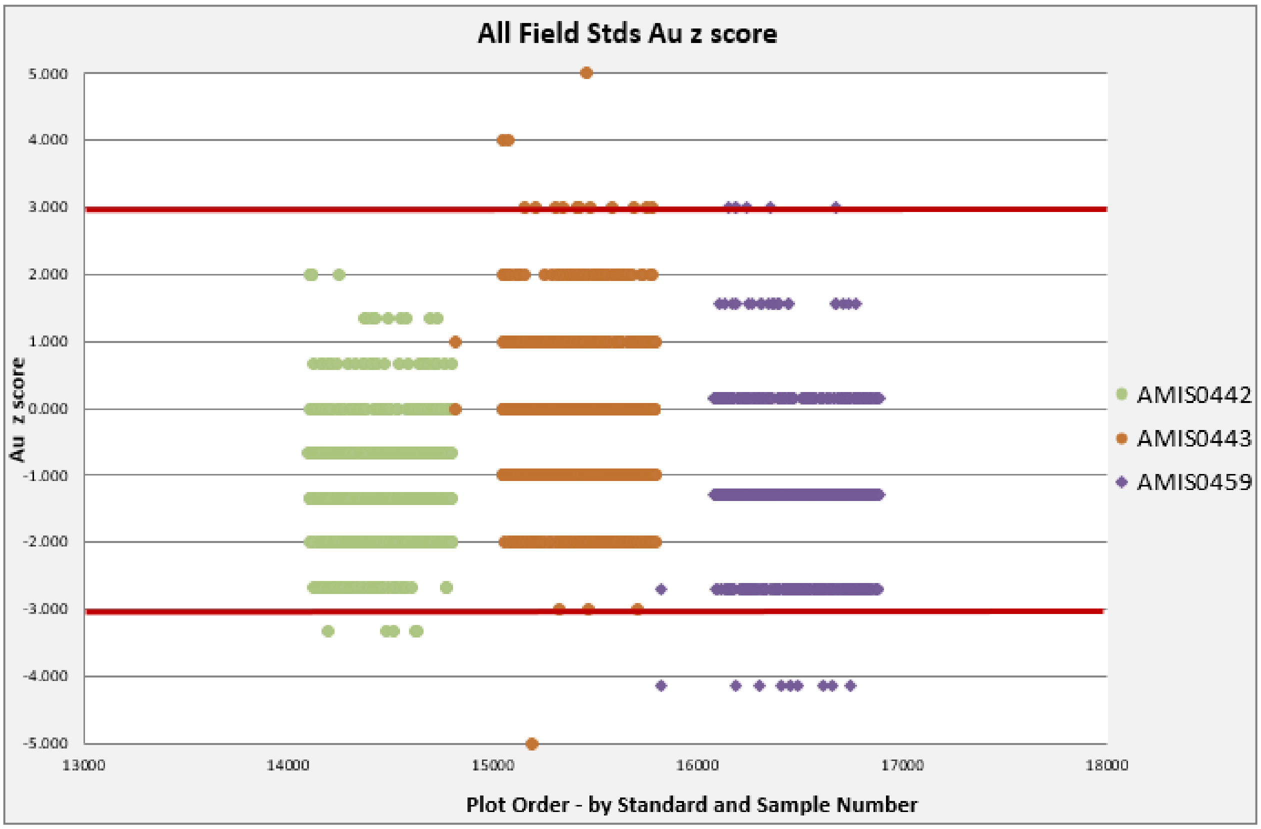
A z-score indicates how many standard deviations an element is from the mean. A z-score can be calculated from the following formula. $z = (X - \mu) / \sigma$ where z is the z-score, X is the value of the element, μ is the population mean, and σ is the standard deviation.

The graphs allow all the standards to be plotted on the same graph. The benefit is that the performance of all standards inserted can be compared simultaneously.

Analysis of Au for Set Point Inserted Blind Standards

Figure 1 is the Z-score graph for Au. The comments made above explain the samples that plot outside a Z-score of -3 or 3.

Figure 1 – Z-Score graph for inserted blind standards sent Set Point for Au. analysed during 2018.



23 Au results (1% of 2,256 samples) are outside acceptable limits (results are outside 3 standard deviations from the expected value with Z-Scores <-3 or >3). This low number of exceptions is well within accepted norms according to industry best practices. Table 2 lists the exceptions for each of inserted standards as well as the number of samples that are outside acceptable limits.

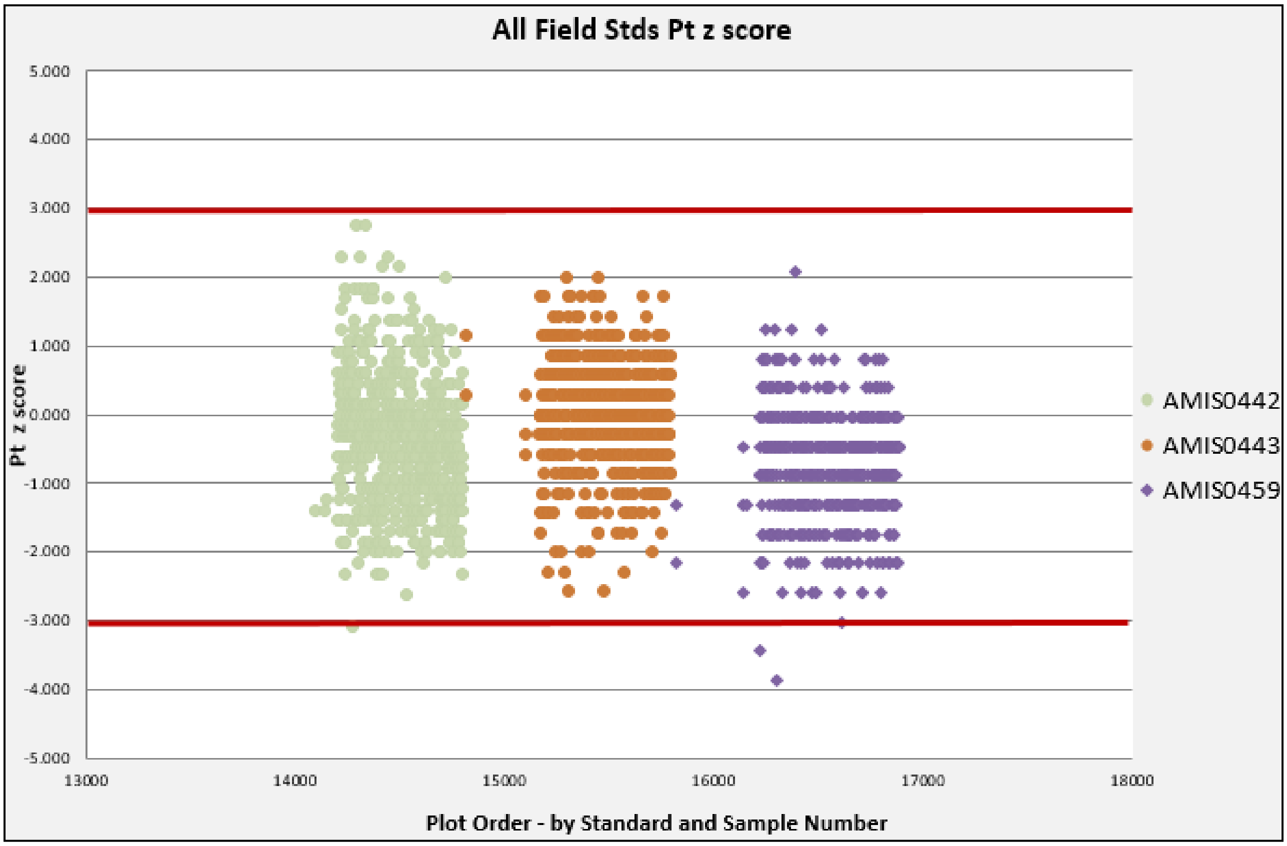
Table 2 – List of exceptions identified for Au with comments

Number of samples	Standard (CRM)	Comments
5	AMIS0442	The laboratory reports to two decimal places (0.28 g/t) whereas the lower three standard deviation limit of 0.285 g/t has three decimal places.
1	AMIS0442	Sample O240275 fails for Au and Pd. The result is on the Exceptions List and was queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
2	AMIS0443	Two samples have reported values of 0.18 g/t whilst the upper 3 standard deviation limits are 0.17 g/t. Only Au fails.
1	AMIS0443	Sample O234630 was queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
3	AMIS0443	Samples O229213, O239247 and O238294 only fail for Au. The other elements pass.
2	AMIS0443	Samples O230083, O232734 were queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
9	AMIS0459	The certified mean is less than 10 times detection. AMIS0459 is not suitable for use as an Au standard.

Analysis of Pt for Set Point Inserted Blind Standards

Figure 2 is the Z-score graph for Set Point inserted blind standards for Pt. The comments made above explain the samples that plot outside a Z-score of -3 or 3.

Figure 2 – Z-Score graph for inserted blind standards sent Set Point for Pt analysed during 2018.



The results for AMIS0442, AMIS0443 and AMIS0459 are all acceptable. 10 Pt results (0.44% of 2,256 samples) are outside acceptable limits (results are outside 3 standard deviations from the expected value with Z-Scores <-3 or >3). This low number of exceptions is well within accepted norms according to industry best practices. Table 3 lists the exceptions for each of inserted standards as well as the number of samples that are outside acceptable limits.

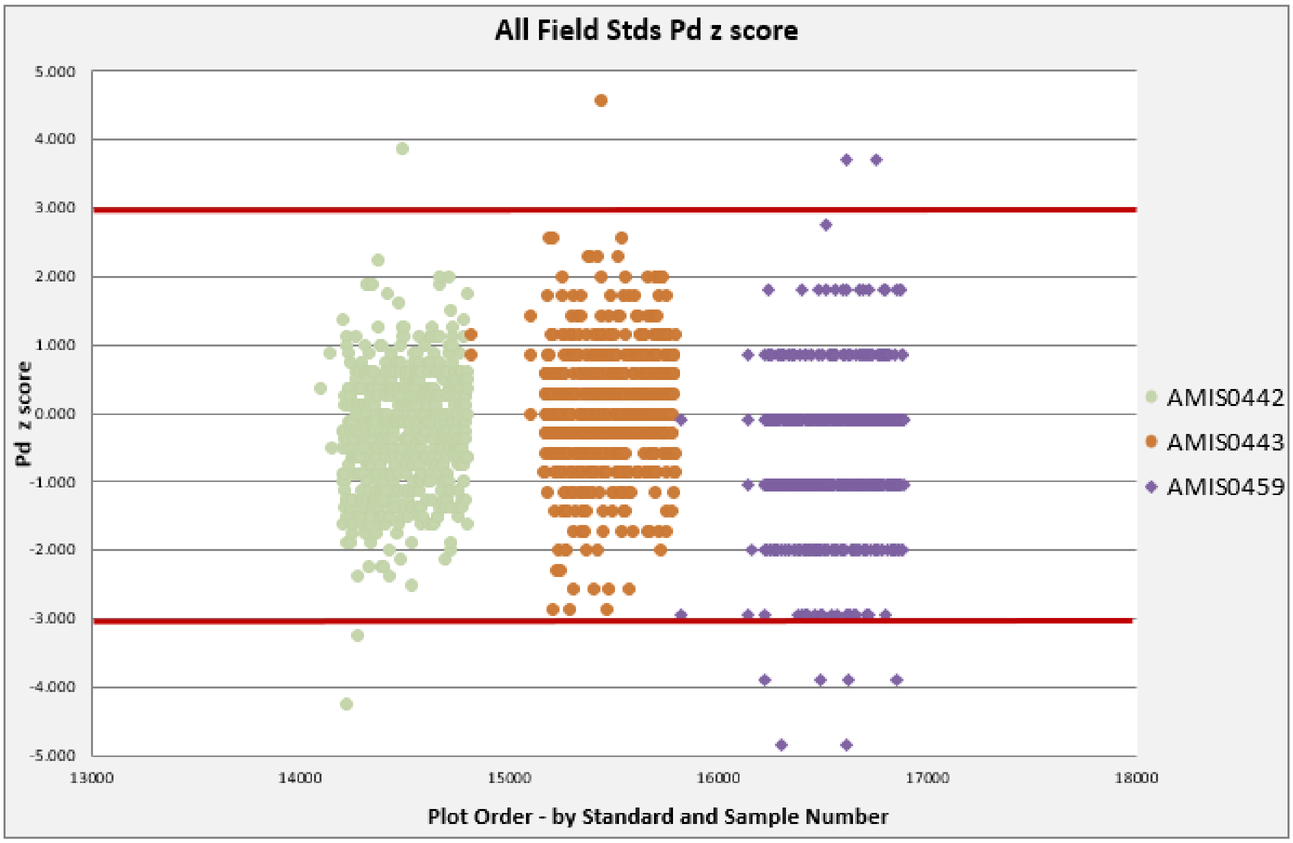
Table 3 – List of exceptions identified for Pt with comments

Number of samples	Standard (CRM)	Comments
1	AMIS0442	The laboratory reports to two decimal places (1.91/t) _ whereas the lower three standard deviation of 1.915 g/t has three decimal places.
2	AMIS0443	Samples O234630, O232734, were queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
2	AMIS0443	Samples O239792 and O234666 fails for all elements except Au. Results indicate that there are most likely AMIS0459 and the incorrect standard was recorded on the sample sheet. Original sachets need to be checked to confirm which standard was bagged.
1	AMIS0443	Sample O229134 was queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
1	AMIS0459	Sample O236929 was not picked up as an exception and not queried with the laboratory.
1	AMIS0459	Sample O242726 results are just outside 3 standard deviations for Au, Pt and Pd.
2	AMIS0459	Samples O231782 and O229134 were identified as exceptions and queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.

Analysis of Pd for Set Point Inserted Blind Standards

Figure 3 is the Z-score graph for Set Point inserted blind standards for Pd. The comments made above explain the samples that plot outside a Z-score of -3 or 3.

Figure 3 – Z-Score graph for inserted blind standards sent Set Point for Pd analysed during 2018.



The results for AMIS0442, AMIS0443 and AMIS0459 are all acceptable. 18 Pd results (0.78% of 2,256 samples) are outside acceptable limits (results are outside 3 standard deviations from the expected value with Z-Scores <-3 or >3). This low number of exceptions is well within accepted norms according to industry best practices. Table 4 lists the exceptions for each of inserted standards as well as the number of samples that are outside acceptable limits.

Table 4 – List of exceptions identified for Pd with comments

Number of samples	Standard (CRM)	Comments
3	AMIS0442	Samples O230023, O232019, O240275 were queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
2	AMIS0443	Samples O234630, O230083 were queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
2	AMIS0443	Samples O239792 and O234666 fail for all elements except Au. Results indicate that there are most likely AMIS0459 and the incorrect standard was recorded on the sample sheet. The original sachets need to be checked to confirm which standard was bagged.
1	AMIS0443	Sample O238879 only fails for Pd. The other elements pass.
2	AMIS0459	Samples O236929 and O238246 were not picked up as exceptions and not queried with the laboratory.
1	AMIS0459	Sample O242726 results are just outside 3 standard deviations for Au, Pt and Pd.
3	AMIS0459	Samples O231782, O239155 and O229134 were identified as exceptions and queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
4	AMIS0459	Samples O242575, O242798, O247460 and O250857 only fail for Pd. The other elements pass. Results are just outside acceptable limits of 3 standard deviations.

Analysis of Cu for Set Point Inserted Blind Standards

Figure 4 is the Z-score graph for Set Point inserted blind standards for Cu. The comments made above explain the samples that plot outside a Z-score of -3 or 3.

Figure 4 – Z-Score graph for inserted blind standards sent Set Point for Cu analysed during 2018.

The results for AMIS0442, AMIS0443 and AMIS0459 are all acceptable. 12 Cu results (0.53% of 2,256 samples) are outside acceptable limits (results are outside 3 standard deviations from the expected value with Z-Scores <-3 or >3). This low number of exceptions is well within accepted norms according to industry best practices. Table 5 lists the exceptions for each of inserted standards as well as the number of samples that are outside acceptable limits.

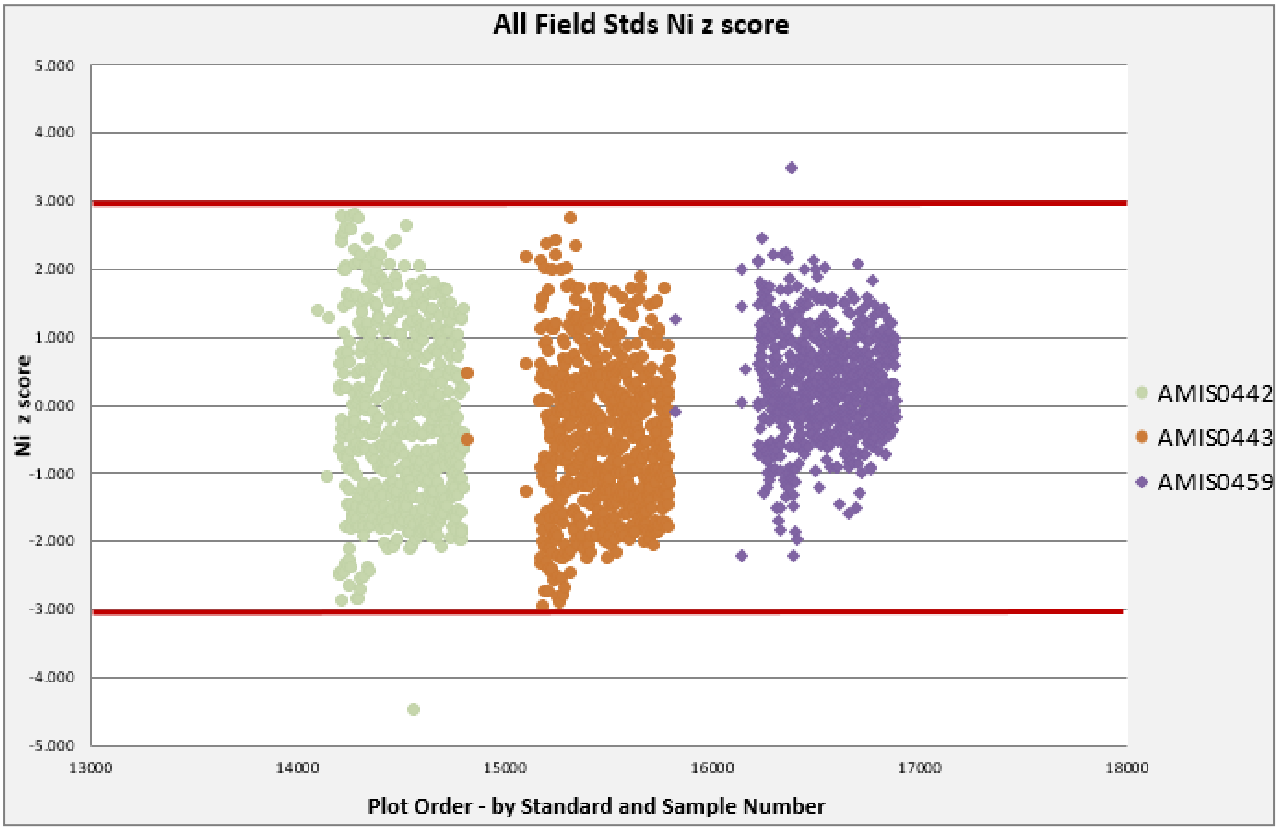
Table 5 – List of exceptions identified for Cu with comments

Number of samples	Standard (CRM)	Comments
1	AMIS0442	Sample O231065, were queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
1	AMIS0442	Sample O242839 was not identified as an exception or followed up with the laboratory. Both Cu and Ni are outside acceptable limits of 3 standard deviations.
3	AMIS0443	Samples O234630, O232353 and O240754 were queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
2	AMIS0443	Samples O239792 and O234666 fail for all elements except Au. Results indicate that there are most likely AMIS0459 and the incorrect standard was recorded on the sample sheet. The original sachets need to be checked to confirm which standard was bagged.
3	AMIS0443	Samples O230552, O232829 and O234163 only fail for Cu. The other elements pass.
1	AMIS0459	Sample O234690 fails for both Cu and Ni. It was not picked up as an exception or queried with the laboratory.
1	AMIS0459	Sample O236220 was identified as an exception and queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.

Analysis of Ni for Set Point Inserted Blind Standards

Figure 5 is the Z-score graph for Set Point inserted blind standards for Ni. The comments made above explain the samples that plot outside a Z-score of -3 or 3.

Figure 5– Z-Score graph for inserted blind standards sent Set Point for Ni analysed during 2018.



The results for AMIS0442, AMIS0443 and AMIS0459 are all acceptable. 7 Ni results (0.31% of 2,256 samples) are outside acceptable limits (results are outside 3 standard deviations from the expected value with Z-Scores <-3 or >3). This low number of exceptions is well within accepted norms according to industry best practices. Table 6 lists the exceptions for each of inserted standards as well as the number of samples that are outside acceptable limits.

Table 6 – List of exceptions identified for Ni with comments

Number of samples	Standard (CRM)	Comments
1	AMIS0442	Sample O242839 was not identified as an exception or followed up with the laboratory. Both Cu and Ni are outside acceptable limits of 3 standard deviations.
2	AMIS0443	Samples O234630 and O240754 were queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.
2	AMIS0443	Samples O239792 and O234666 fail for all elements except Au. Results indicate that there are most likely AMIS0459 and the incorrect standard was recorded on the sample sheet. The original sachets need to be checked to confirm which standard was bagged.
1	AMIS0459	Sample O234690 fails for both Cu and Ni. It was not picked up as an exception or queried with the laboratory.
1	AMIS0459	Sample O236220 was identified as an exception and queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.

RESULTS OF INSERTED BLIND BLANKS SENT TO SET POINT IN 2018

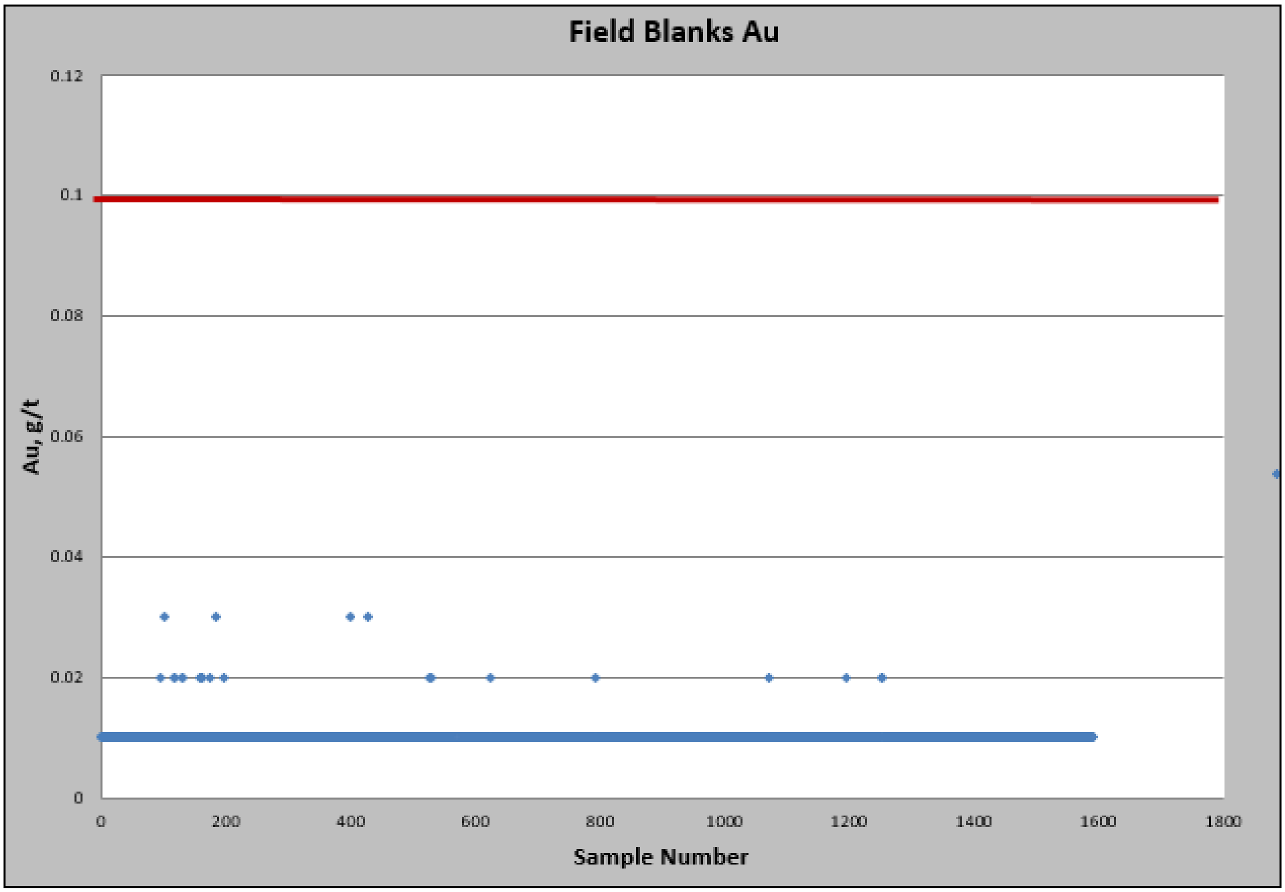
The insertion of blanks provides an important check on the laboratory practices, especially potential contamination or sample sequence miss-ordering. Blanks consist of a selection of Transvaal Quartzite (devoid of platinum, palladium, copper and nickel mineralisation) of a mass like that of a normal core sample and AMIS0484. The blanks being used are always noted to track its behaviour and trace metal content. The plotted graphs have a warning limit, which is equal to ten times the blank background.

In general, the failure rate is deemed not to have a material effect on the data, with more than 99% of the assays falling within acceptable limits.

Analysis of Au for Blind Blanks sent to Set Point during 2018

Figure 6 is the graph for Set Point inserted blind blanks for Au.

Figure 6 – The graph for inserted blind blanks sent to Set Point for Au during 2018.

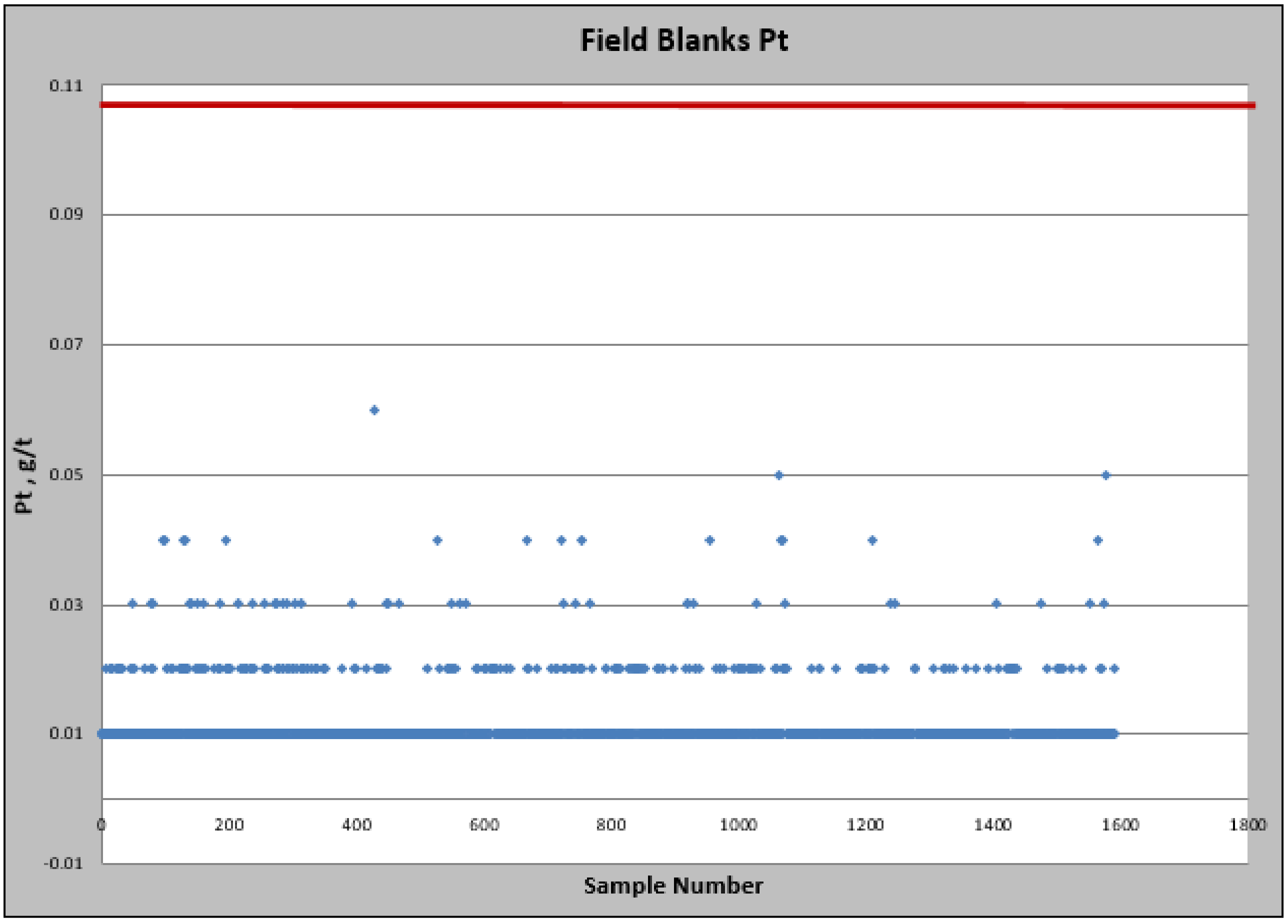


There are no exceptions. All results are less than 0.1 g/t (10 times the detection limit).

Analysis of Pt for Blind Blanks sent to Set Point during 2018

Figure 7 is the graph for Set Point inserted blind blanks for Pt. during 2018

Figure 7 – The graph for inserted blind blanks sent to Set Point for Pt.

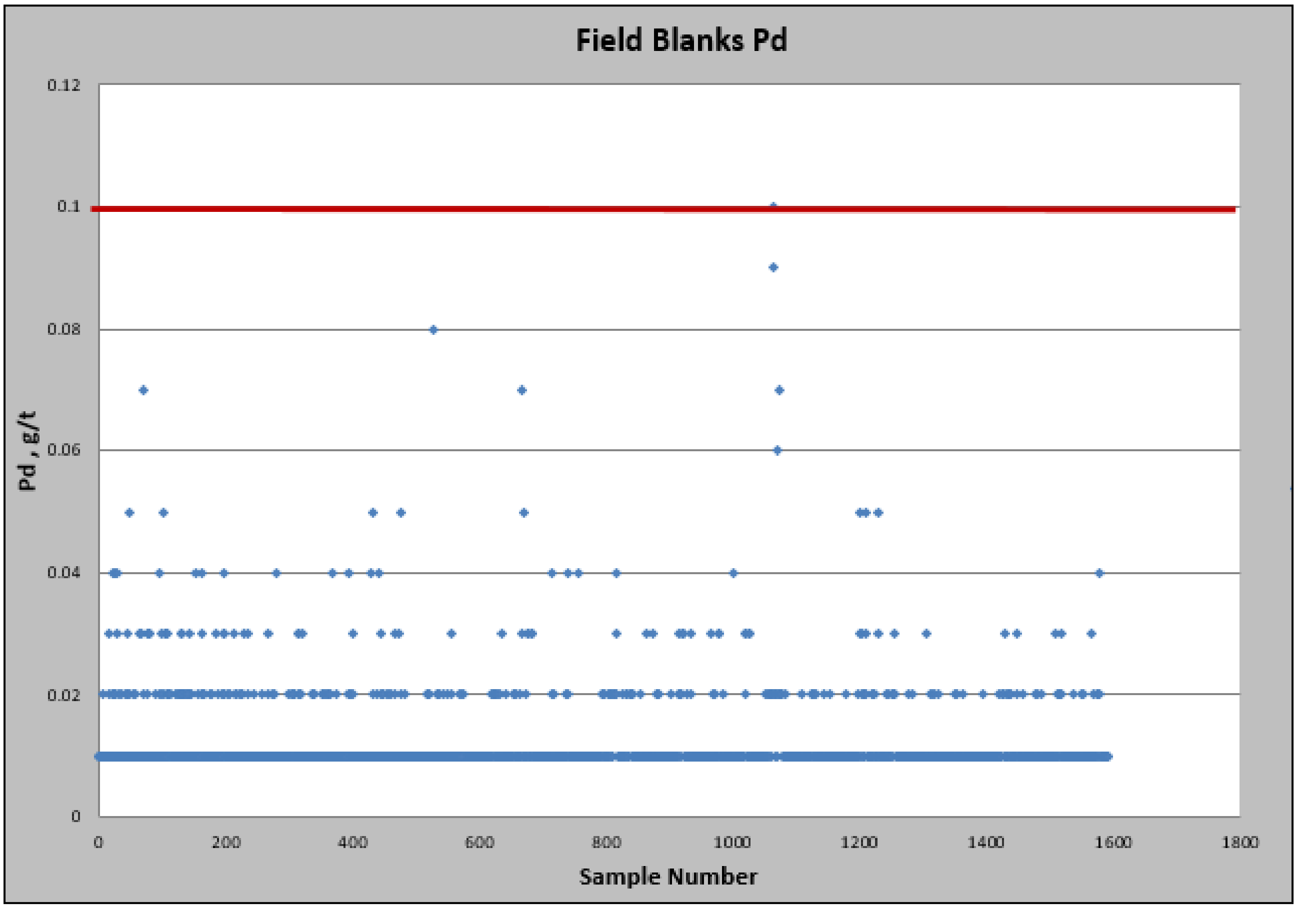


There are no exceptions. All results are less than 0.1 g/t (10 times the detection limit).

Analysis of Pd for Blind Blanks sent to Set Point during 2018

Figure 8 is the graph for Set Point inserted blind blanks for Pd.

Figure 8 – The graph for inserted blind blanks sent to Set Point for Pd.

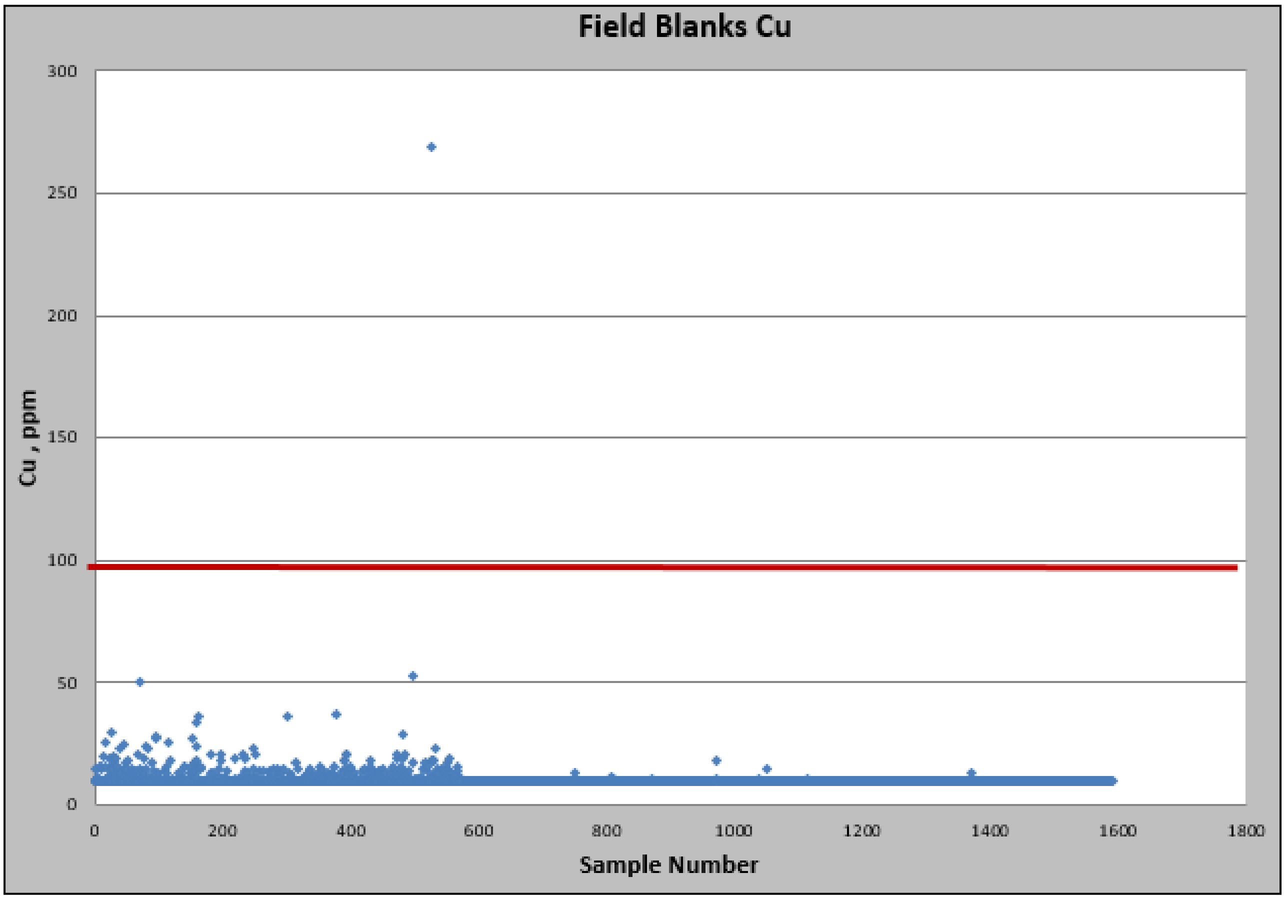


There are no exceptions. All results are less than 0.1 g/t (10 times the detection limit).

Analysis of Cu for Blind Blanks sent to Set Point during 2018

Figure 9 is the graph for Set Point inserted blind blanks for Cu.

Figure 9 – The graph for inserted blind blanks sent to Set Point for Cu.

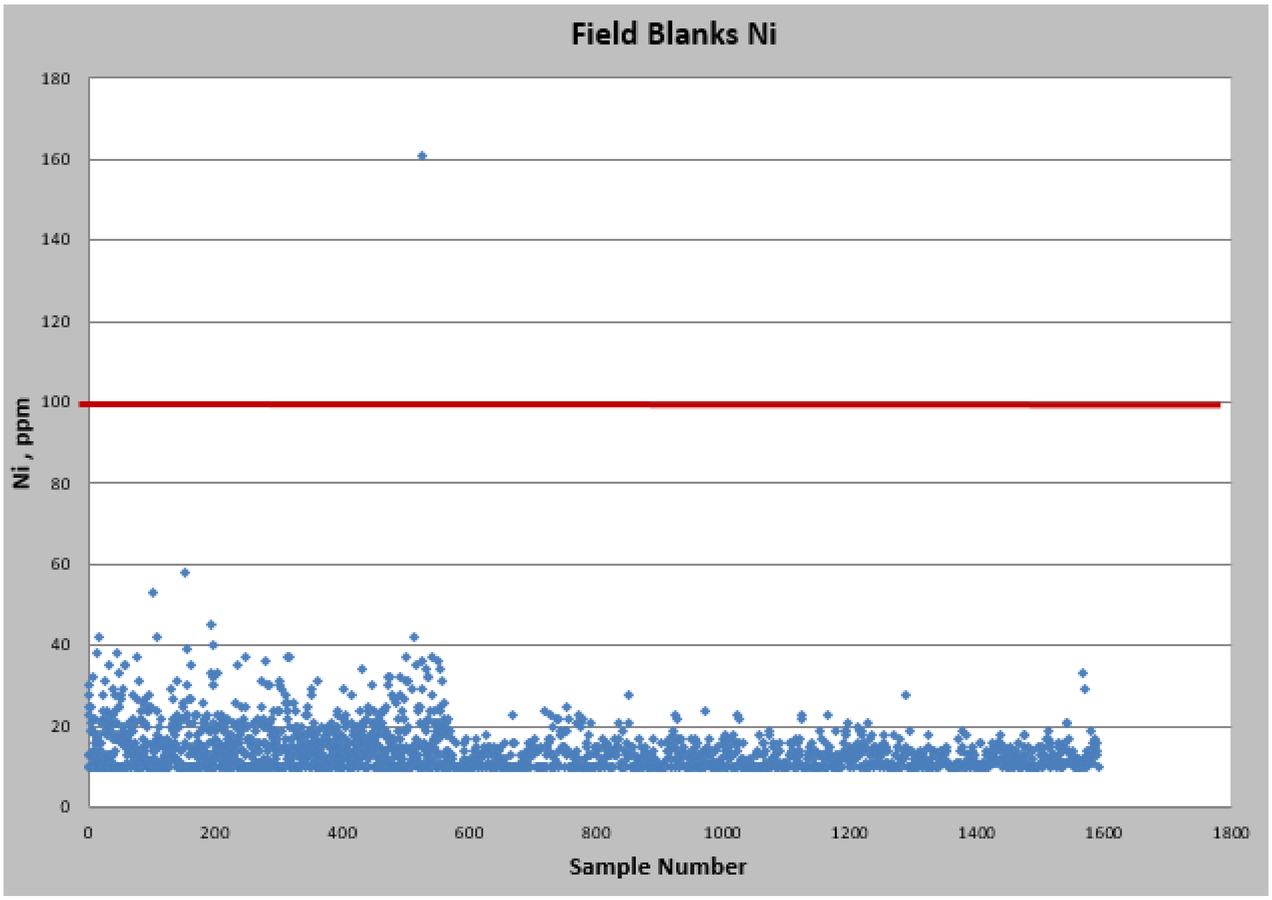


There is one exception, sample O250219 with a Cu result of 269 ppm. This was queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.

Analysis of Ni for Blind Blanks sent to Set Point during 2018

Figure 10 is the graph for Set Point inserted blind blanks for Ni.

Figure 10 – The graph for inserted blind blanks sent to Set Point for Ni.



There is one exception, sample O250219 with a Ni result of 161 ppm. This was queried with the laboratory. Follow up is required to get the results of the investigation and if repeat results are acceptable then a final report is required.

RESULTS OF INSERTED LABORATORY PREPARATION DUPLICATES SENT TO SET POINT DURING 2018

The laboratory was asked to regularly assay coarse reject samples as a duplicate sample to monitor analytical precision. Coarse reject duplicates were created by the laboratory by routinely making a sample from the coarse reject of every 20th sample and assigning it the same sample number as its duplicate pair, with the addition of a prefix CRD.

The original analysis vs. the duplicate analysis showed minimal irregular values. This indicates minimal sample swapping.

Duplicates are inserted into the sample stream in order to measure precision. Precision is defined as the closeness of agreement between independent assays obtained under similar conditions for the same sample. There are numerous statistical methods of measuring precision.

The statistic HARD was calculated for each element. The formula for HARD is:

(ABS (ORIG_PT-DUP_PT / 2) (which is the mean absolute difference)
________________________ X 100
ORIG_PT+DUP_PT /2 (the mean)

This equates to the relative mean absolute difference (RMD), expressed as a percentage. Preparation duplicates should have at least 90% of the duplicate pairs having HARD less than 20%. The limit of 20% is deemed to be acceptable as split samples (rock chips) are not homogeneous and there may also be a nugget effect. Table 7 lists the percentage of coarse reject duplicate pairs that have a HARD less than or equal to 20% for each element.

Table 7 – Percentage of coarse reject duplicate pairs that have a HARD less than or equal to 20% for each element

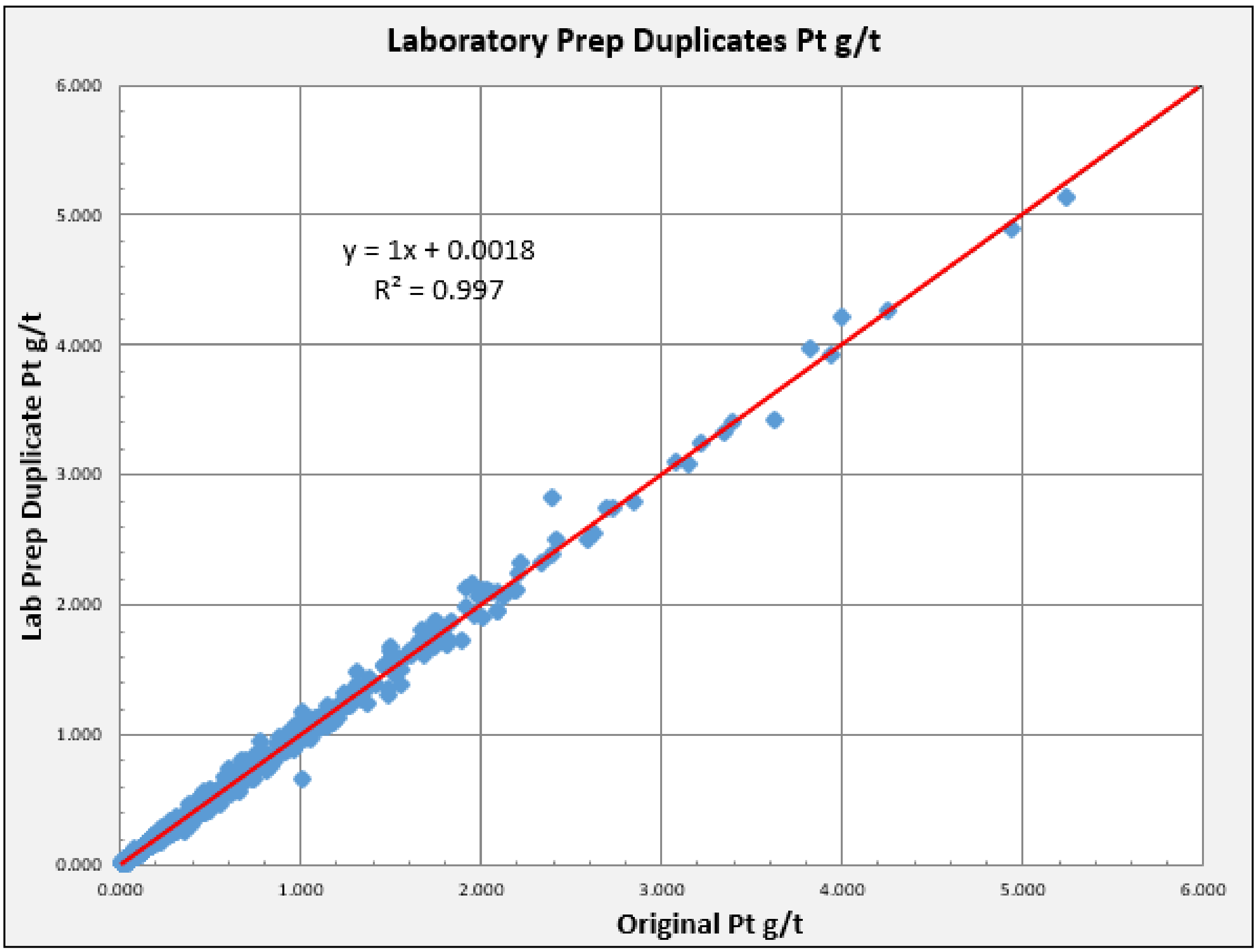
Element	Total samples > 10 X detection limit	Number of samples with HARD <=20%	Percentage with HARD within 20%
Au	260	259	99%
Pt	616	615	99%
Pd	699	696	99%
Cu	724	723	99%
Ni	1172	1172	100%

Table 7 shows that for all the elements that there is excellent precision for all the elements.

Analysis of Pt for Preparation Duplicates sent to Set Point during 2018

Figure 11 demonstrates the good correlation between the original Pt on the X axis and the duplicate Pt on the Y axis. R^2 is 0.9997%.

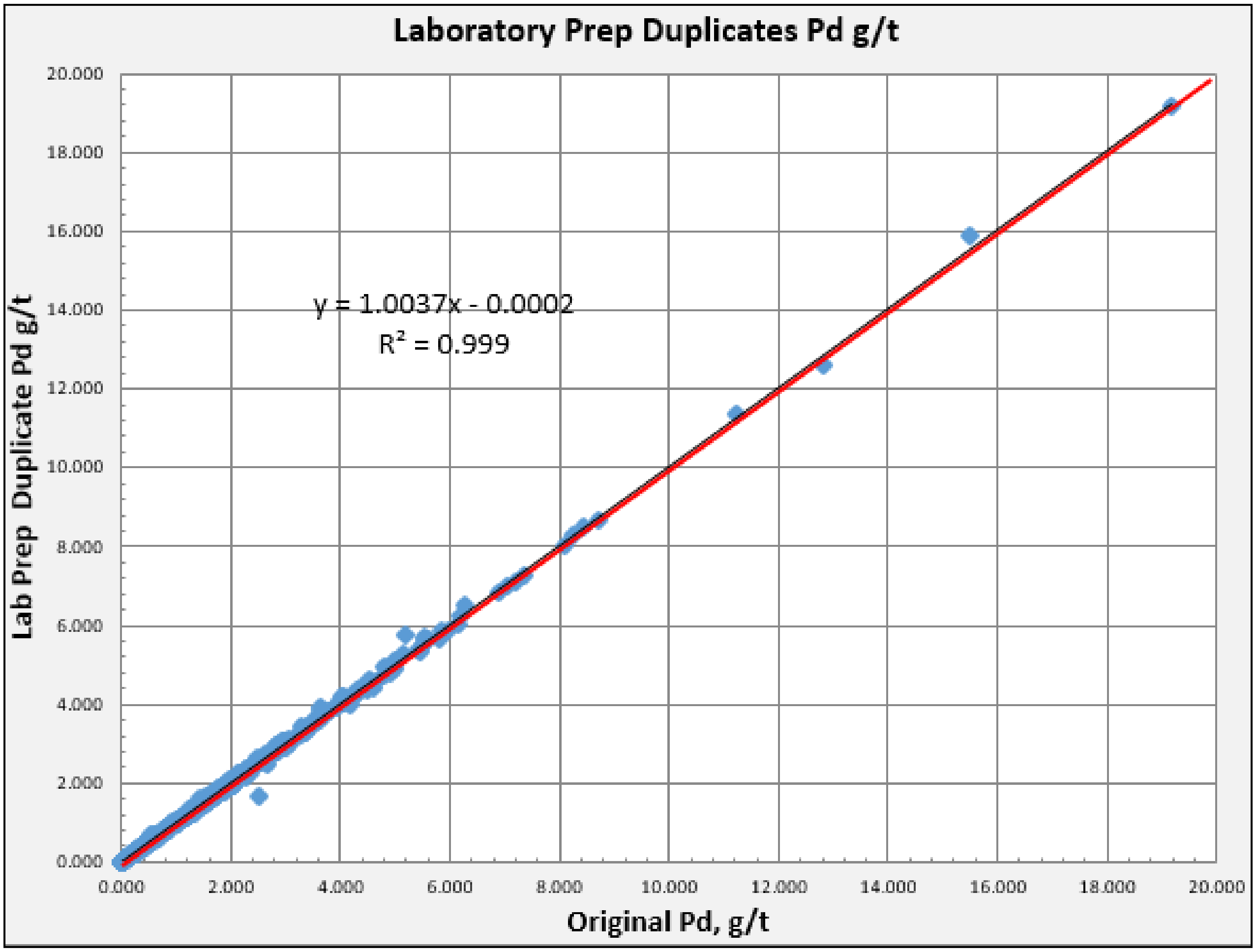
Figure 11 – A scatter plot of Pt showing the correlation between the original and preparation duplicate results.



Analysis of Pd for Preparation Duplicates sent to Set Point during 2018

Figure 12 demonstrates the good correlation between the original Pd on the X axis and the duplicate Pd on the Y axis. R^2 is 0.9999%.

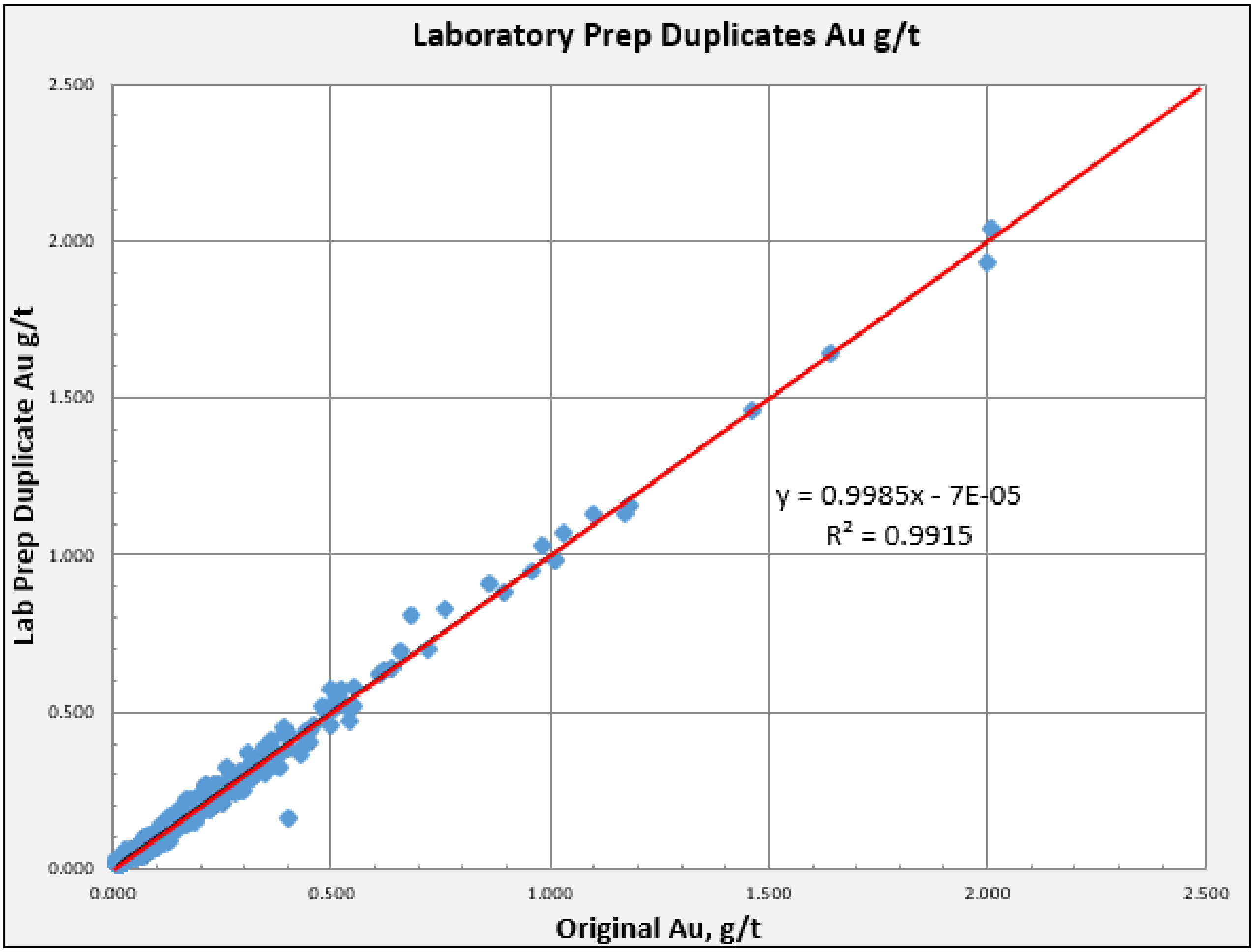
Figure 12 – A scatter plot of Pd showing the correlation between the original and preparation duplicate results.



Analysis of Au for Preparation Duplicates sent to Set Point during 2018

Figure 13 demonstrates the good correlation between the original Au on the X axis and the duplicate Au on the Y axis. R^2 is 0.9915%.

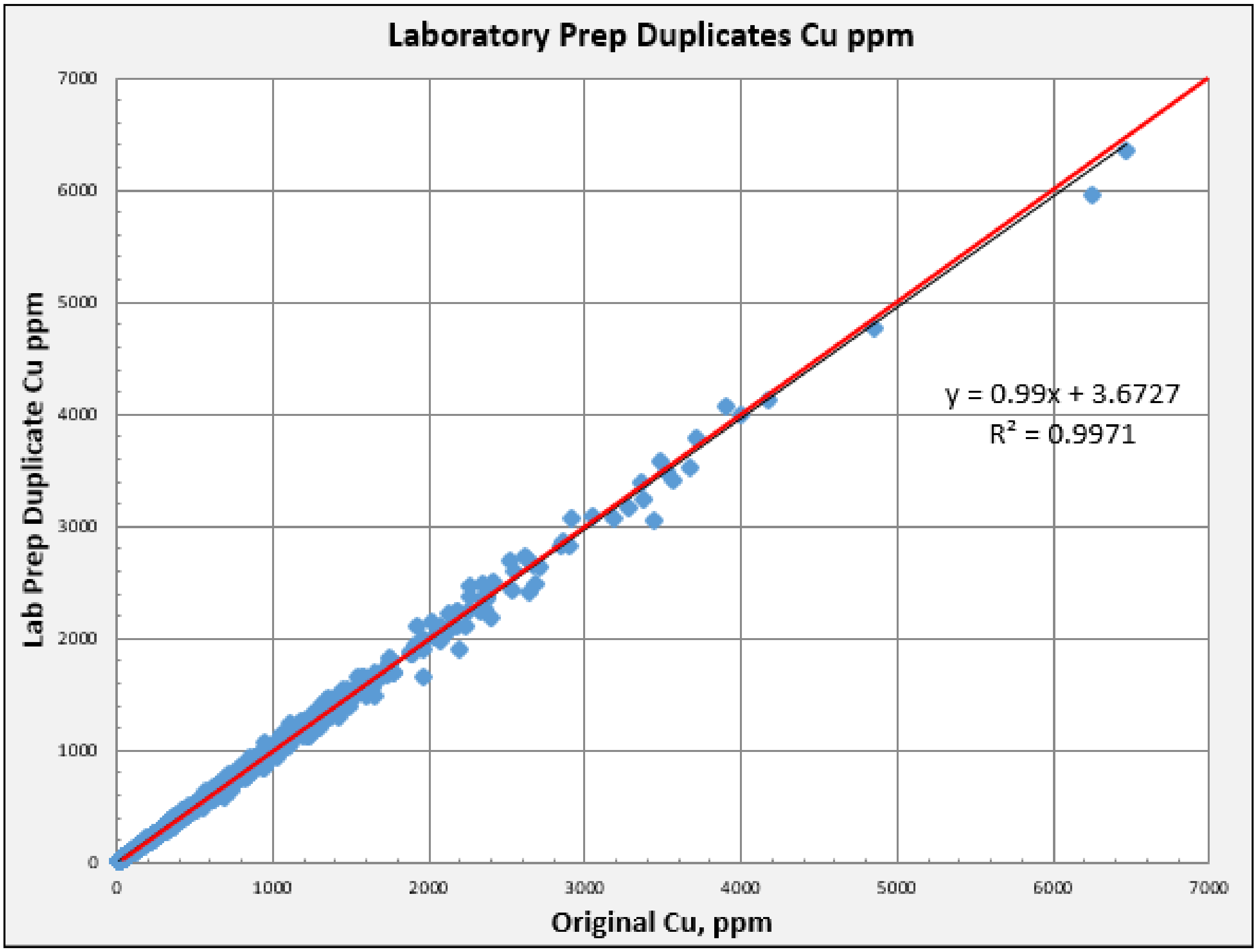
Figure 13 – A scatter plot of Au showing the correlation between the original and preparation duplicate results.



Analysis of Cu for Preparation Duplicates sent to Set Point during 2018

Figure 14 demonstrates the good correlation between the original Cu on the X axis and the duplicate Cu on the Y axis. R^2 is 0.9971%.

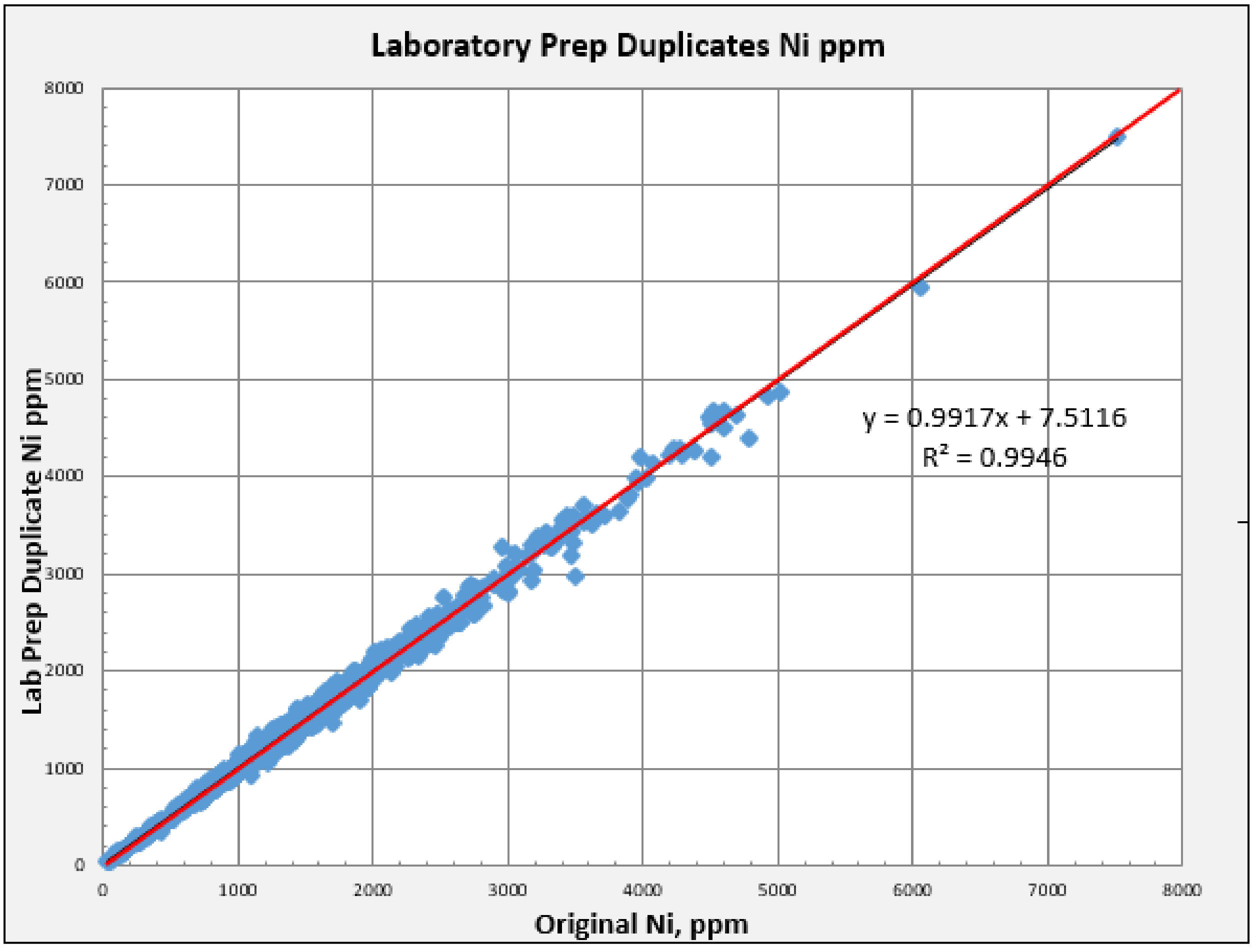
Figure 14 – A scatter plot of Cu showing the correlation between the original and preparation duplicate results.



Analysis of Ni for Preparation Duplicates sent to Set Point during 2018

Figure 15 demonstrates the good correlation between the original Ni on the X axis and the duplicate Ni on the Y axis. R^2 is 0.9946%.

Figure 15 – A scatter plot of Ni showing the correlation between the original and preparation duplicate results.



RESULTS OF INSERTED LABORATORY PULP DUPLICATES SENT TO SET POINT DURING 2018

Quality control in the form of laboratory pulp duplicates is also done on a routine basis with random samples (1 in every 20th sample) selected and split once pulps are prepared for each batch submitted. The pulp duplicates are inserted into the sample stream and given a prefix of "Dupl-" for reporting purposes. The statistic HARD was calculated for each element. Laboratory pulp duplicates should have at least 90% of the duplicate pairs having HARD less than 10%. The limit of 10% is deemed to be acceptable as pulps were homogenised.

Table 8 lists the percentage of duplicate pairs for each element that have a HARD less than or equal to 10%. Note that samples where results are less than 10 x detection limits were excluded as results close to detection limits show significant variability. Not all inserted pulp duplicates are analysed for all elements. They are either analysed for PGE's or for base metals.

Table 8 – Percentage of laboratory pulp duplicate pairs that have a HARD less than or equal to 10% for each element for samples sent to Set Point during 2018

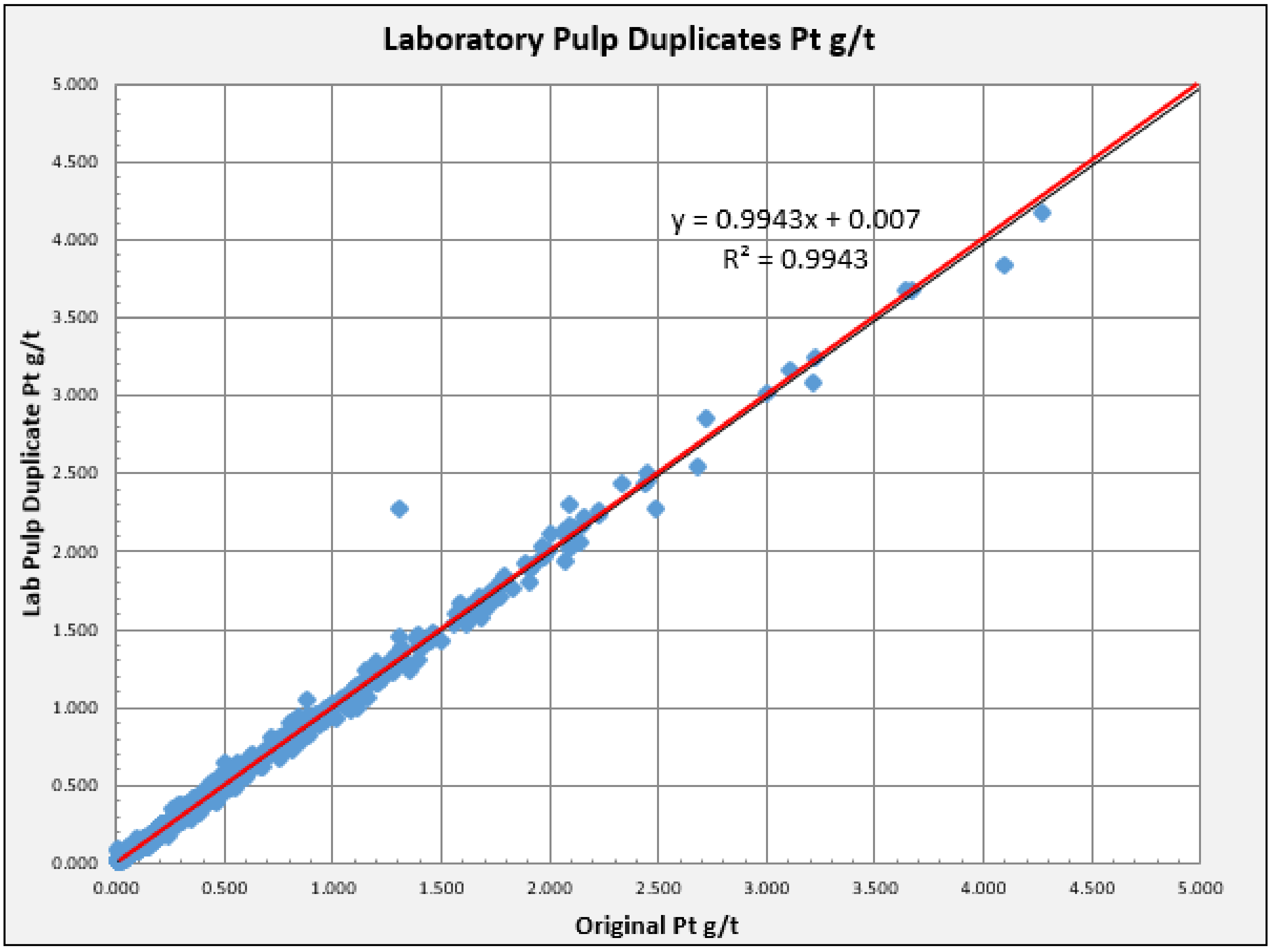
Element	Total samples > 10 X detection limit	Number of samples with HARD <=10%	Percentage with HARD within 10%
Au	260	243	93%
Pt	616	593	96%
Pd	699	686	98%
Cu	724	721	99%
Ni	1172	1171	99%

Table 8 shows that for all the elements that there is good precision for all the elements. The percentage of Au samples with HARD within 10% is 93% which is slightly lower than for the other elements. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection.

Analysis of Pt for Laboratory Pulp Duplicates sent to Set Point during 2018

Figure 16 demonstrates the good correlation between the original Pt on the X axis and the duplicate Pt on the Y axis. R^2 is 0.9943%.

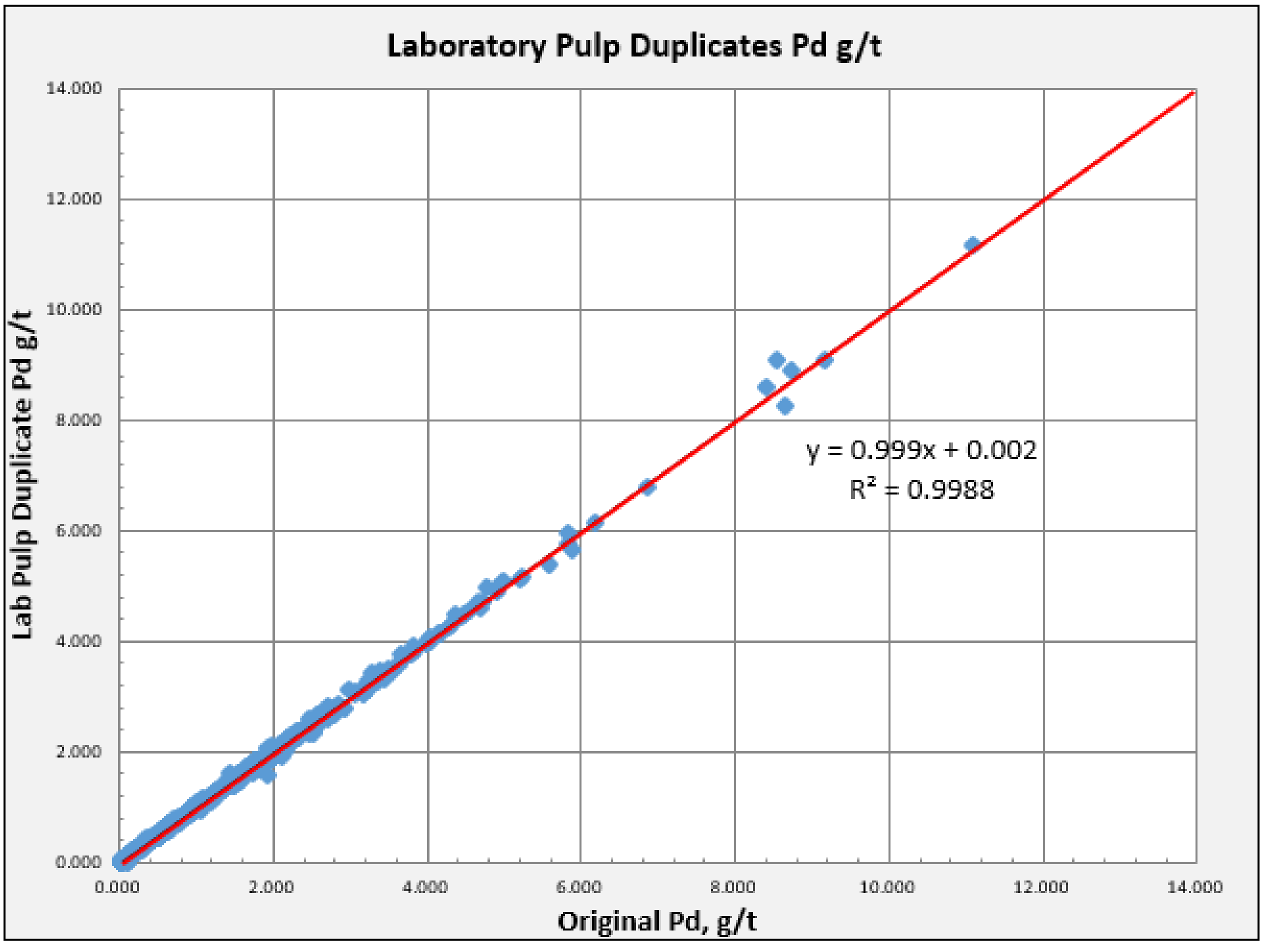
Figure 16 – A scatter plot of Pt showing the correlation between the original and laboratory pulp duplicate results.



Analysis of Pd for Laboratory Pulp Duplicates sent to Set Point during 2018

Figure 17 demonstrates the good correlation between the original Pd on the X axis and the duplicate Pd on the Y axis. R^2 is 0.9988%.

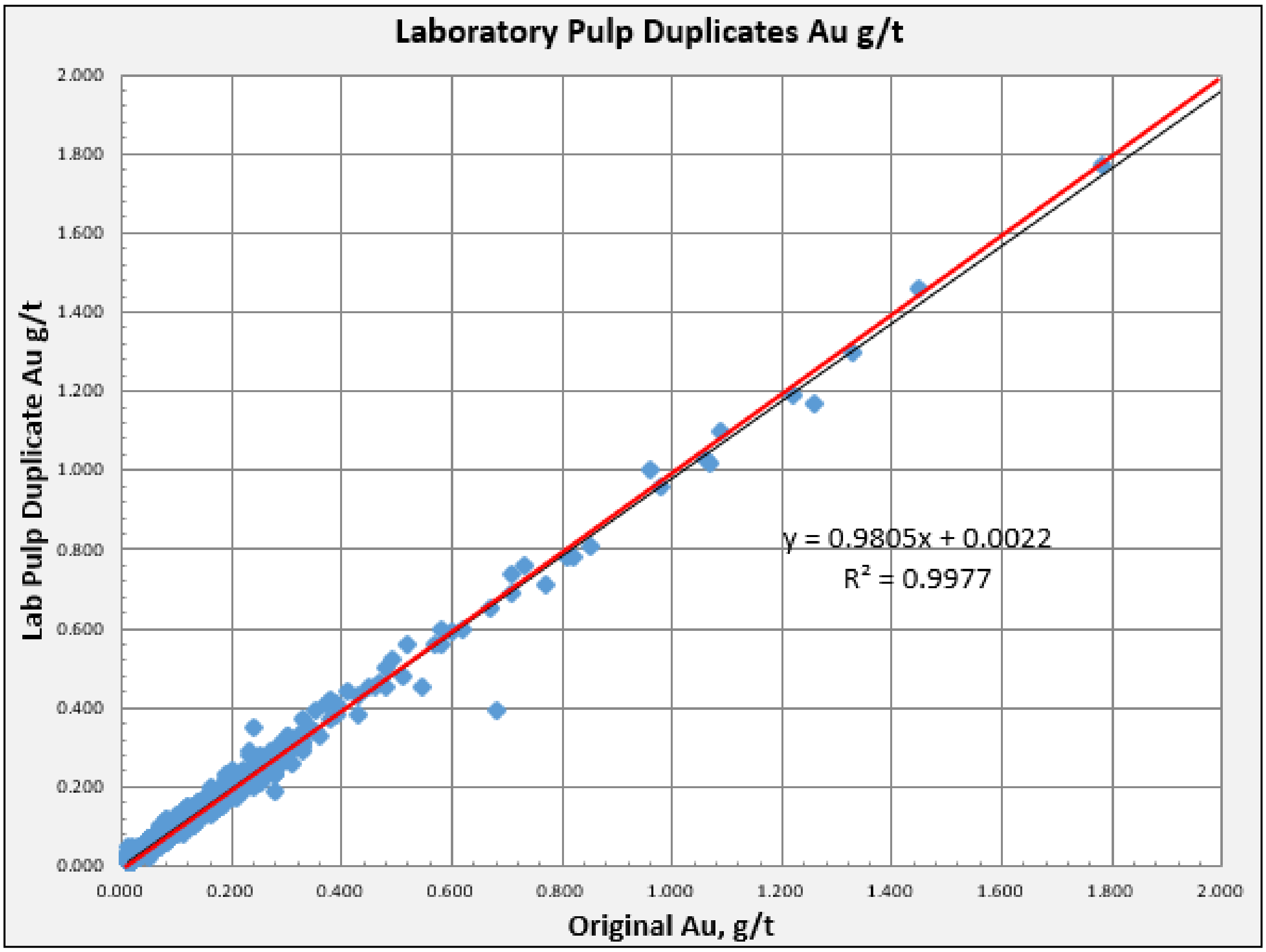
Figure 17 – A scatter plot of Pd showing the correlation between the original and pulp duplicate results.



Analysis of Au for Laboratory Pulp Duplicates sent to Set Point during 2018

Figure 18 demonstrates the good correlation between the original Au on the X axis and the duplicate Au on the Y axis. R^2 is 0.9977%.

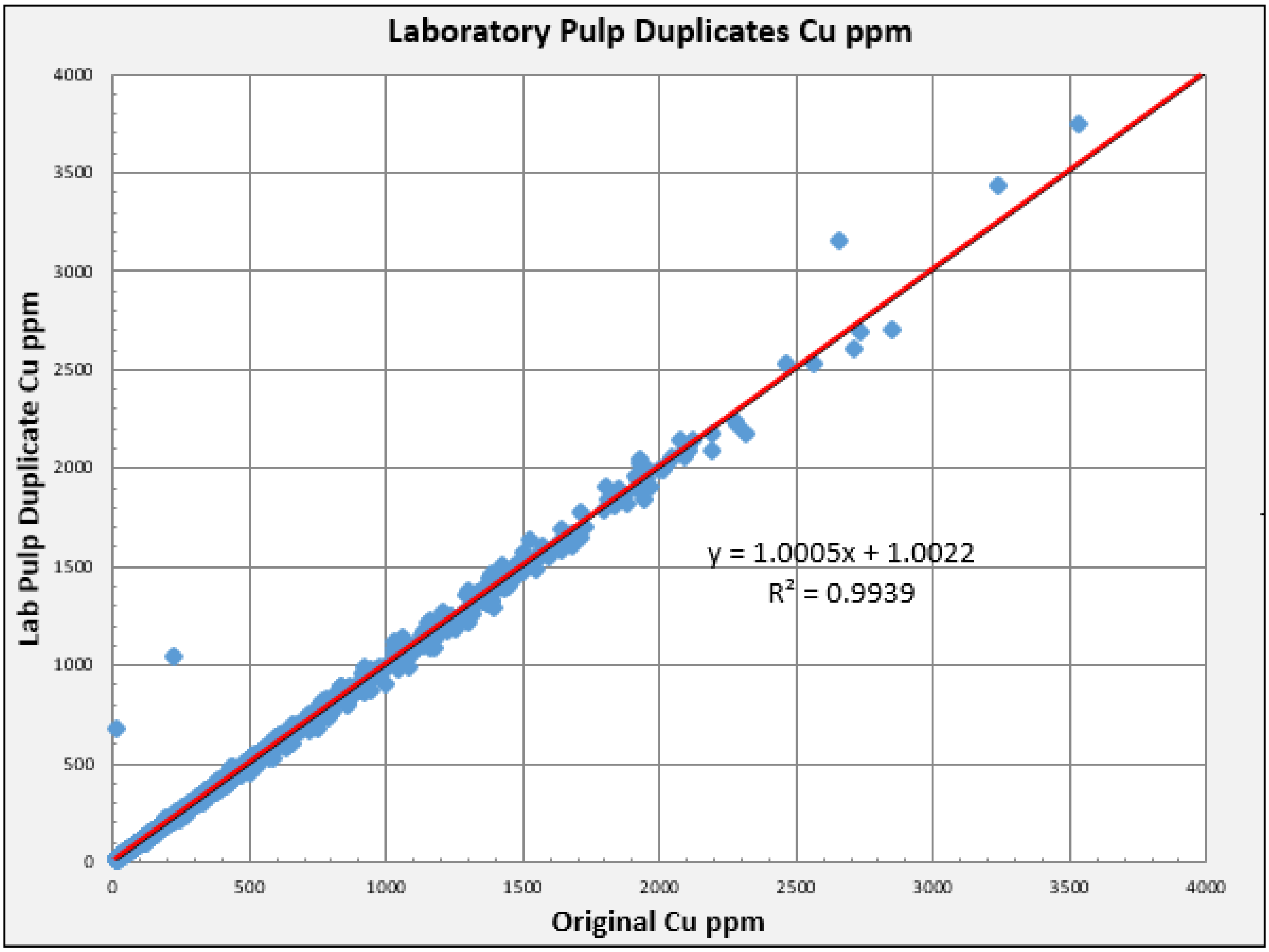
Figure 18 – A scatter plot of Au showing the correlation between the original and pulp duplicate results.



Analysis of Cu for Laboratory Pulp Duplicates sent to Set Point during 2018

Figure 19 demonstrates the good correlation between the original Cu on the X axis and the duplicate Cu on the Y axis. R^2 is 0.9939%.

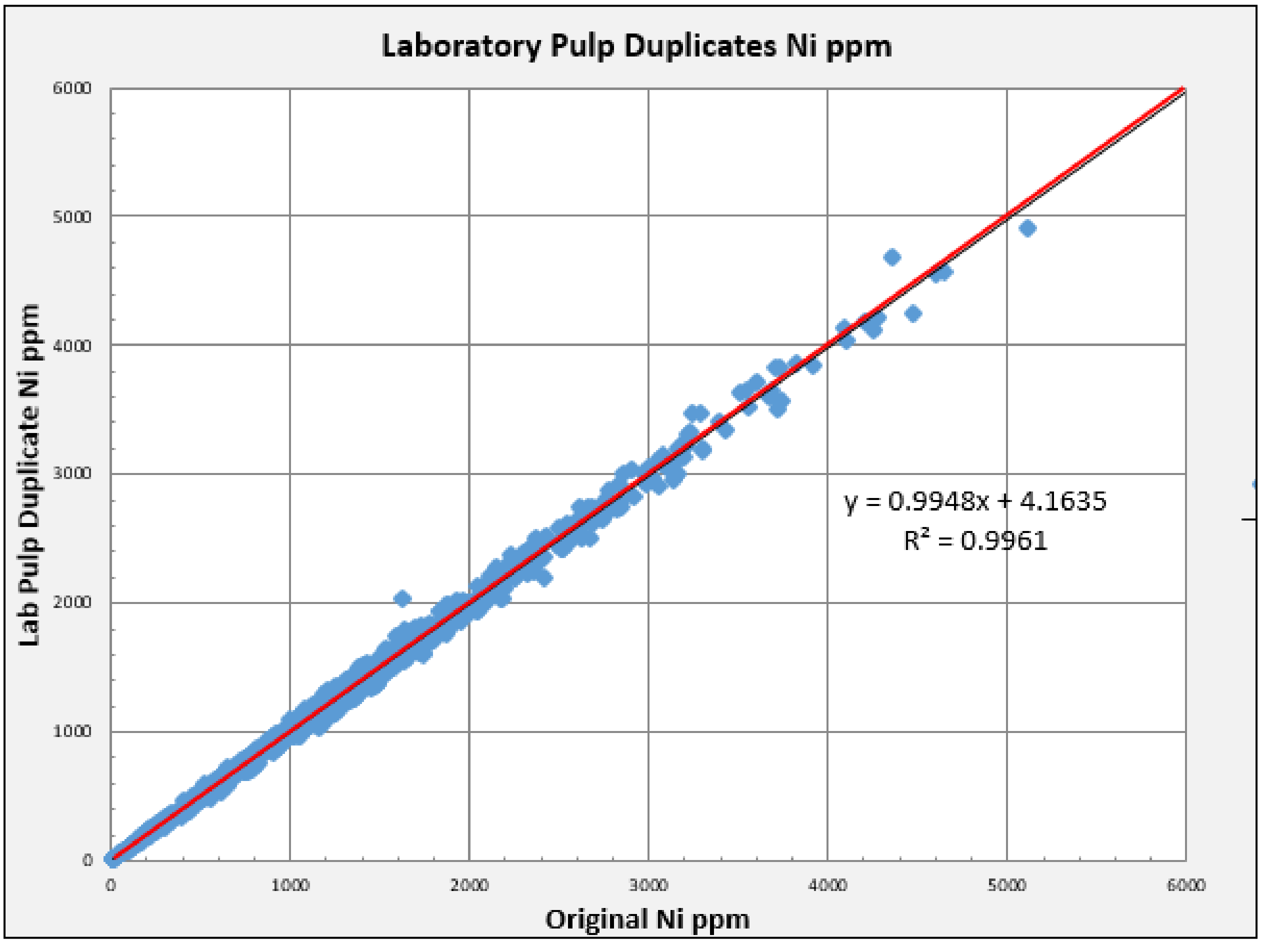
Figure 19 – A scatter plot of Cu showing the correlation between the original and pulp duplicate results.



Analysis of Ni for Laboratory Pulp Duplicates sent to Set Point during 2018

Figure 20 demonstrates the good correlation between the original Ni on the X axis and the duplicate Ni on the Y axis. R^2 is 0.9961%.

Figure 20 – A scatter plot of Ni showing the correlation between the original and pulp duplicate results.



SET POINT LABORATORY INSERTED STANDARDS FOR SAMPLE BATCHES ANALYSED IN 2018

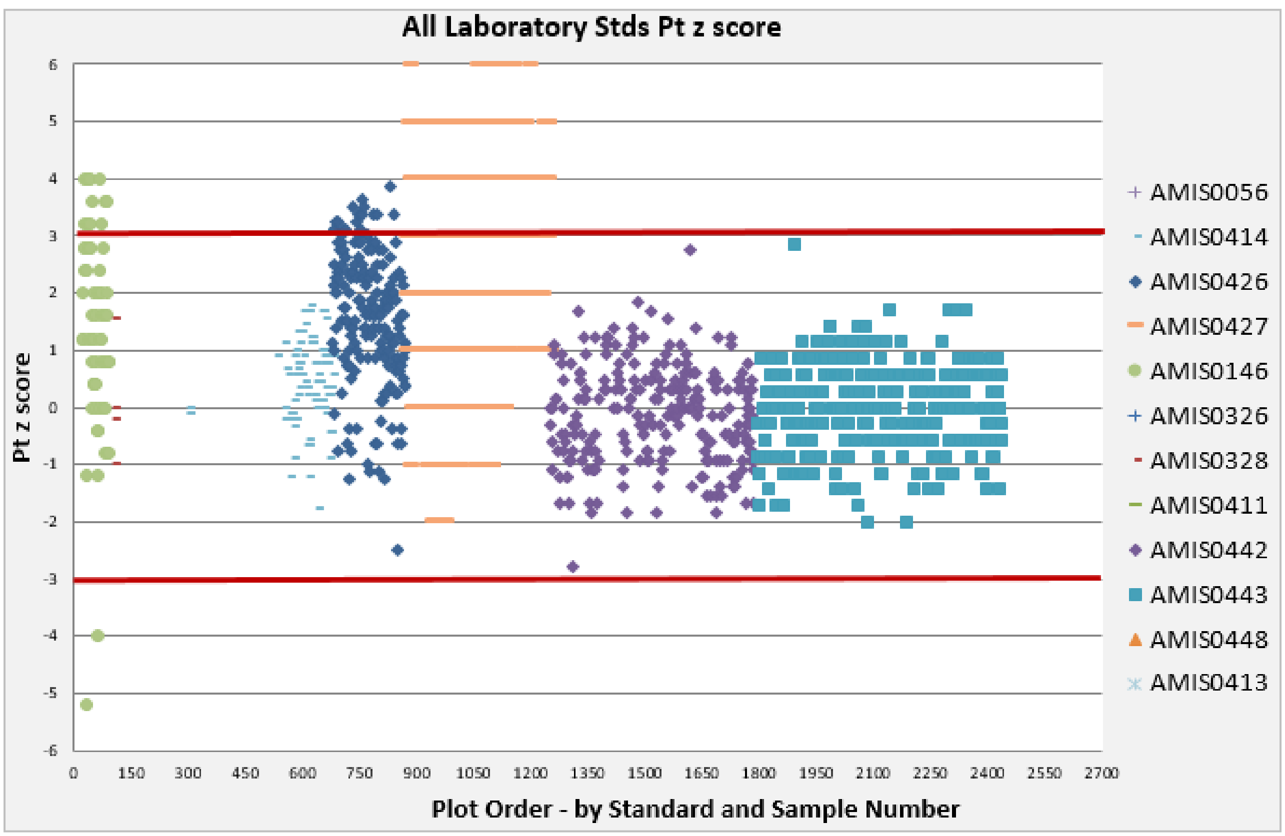
The laboratory inserts their own standards (CRM's) into the sample stream for their own quality control purposes. They are also included in the assay reports.

The value of each reported element is compared to the expected value for that element. The result is assigned a status of "pass" if the reported value is within 3 standard deviations from the expected value or "fail" if the result is outside 3 standard deviations from the expected value. A Z-score was calculated for each element of each sample for plotting purposes. Results must plot between a Z-score range of -3 and 3 to be acceptable.

Analysis of Pt of Set Point Laboratory Inserted Standards during 2018

Figure 21 is the Z-score graph for Pt. No results are outside acceptable limits of Z-scores <-3 or >3.

Figure 21 – Z-score graph for Pt Set Point inserted laboratory standards



16 AMIS0146 samples have Z-scores outside acceptable limits (< -3 and >3). AMIS0146 is not a certified reference material. It is utilised for Set Point's internal quality control purposes.

17 AMIS0426 samples have Z-scores outside acceptable limits (< -3 and >3). AMIS0426 is not a certified reference material. It is utilised for Set Point's internal quality control purposes.

138 AMIS0427 samples have Z-scores outside acceptable limits (< -3 and >3). AMIS0427 is not a certified reference material. It is utilised for Set Point's internal quality control purposes.

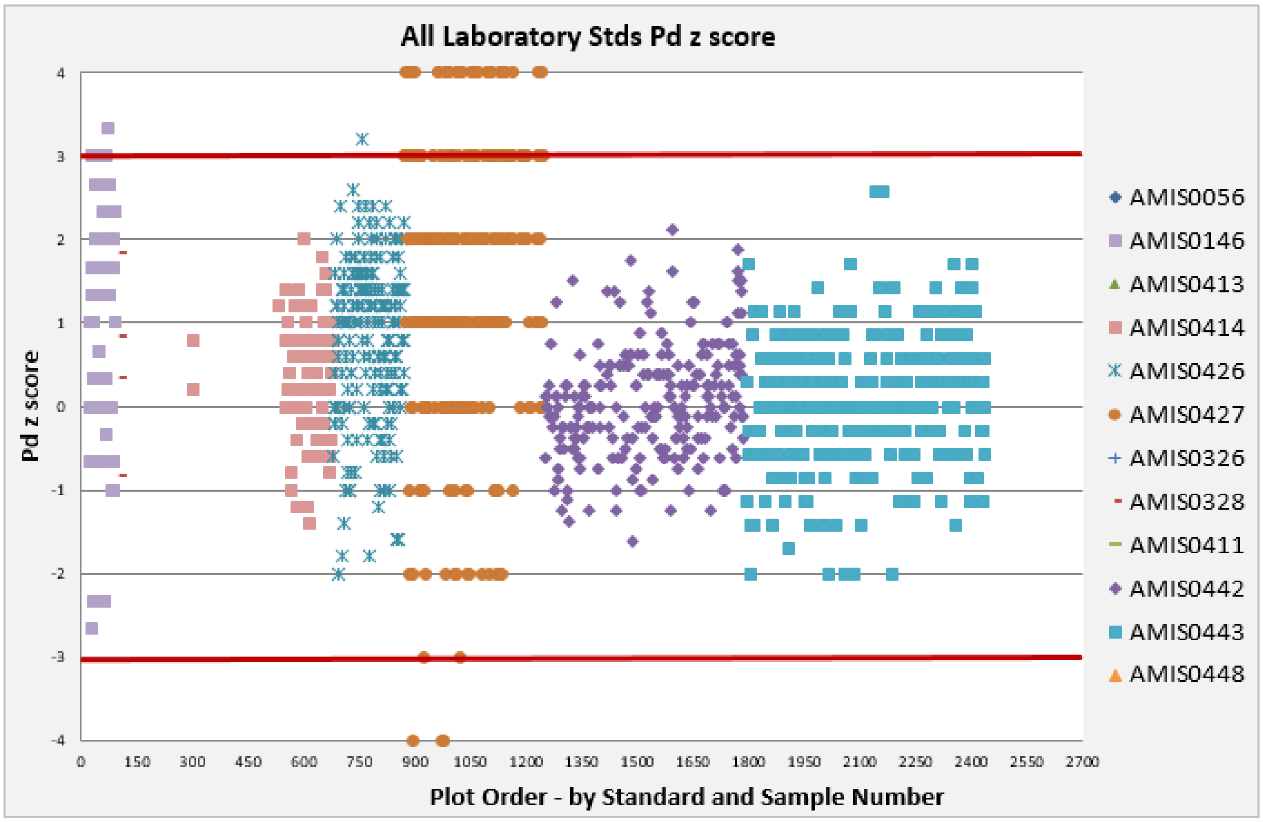
2 AMIS0443 samples have Z-scores outside acceptable limits (< -3 and >3). They may be sample swaps or incorrectly labelled samples.

The majority of the results fall within acceptableZ-score limits (< -3 and >3).

Analysis of Pd of Set Point Laboratory Inserted Standards during 2018

Figure 22 is the Z-score graph for Pd. No results are outside acceptable limits of Z-scores <-3 or >3.

Figure 22 – Z-score graph for Pd Set Point inserted laboratory standards



2 AMIS0146 samples have Z-scores outside acceptable limits (< -3 and >3). AMIS0146 is not a certified reference material. It is utilised for Set Point's internal quality control purposes.

1 AMIS0426 samples has a Z-score outside acceptable limits (< -3 and >3). AMIS0426 is not a certified reference material. It is utilised for Set Point's internal quality control purposes.

104 AMIS0427 samples have Z-scores outside acceptable limits (< -3 and >3). AMIS0427 is not a certified reference material. It is utilised for Set Point's internal quality control purposes.

4 AMIS0443 samples have Z-scores outside acceptable limits (< -3 and >3). They may be sample swaps or incorrectly labelled samples.

The majority of the results fall withing acceptable limits (< -3 and >3).

Analysis of Au of Set Point Laboratory Inserted Standards during 2018

Figure 23 is the Z-score graph for Au. No results are outside acceptable limits of Z-scores <-3 or >3.

Figure 23 – Z-score graph for Au Set Point inserted laboratory standards

5 AMIS0146 samples have Z-scores outside acceptable limits (< -3 and >3). AMIS0146 is not a certified reference material. It is utilised for Set Point's internal quality control purposes.

20 AMIS0426 samples has a Z-score outside acceptable limits (< -3 and >3). AMIS0426 is not a certified reference material. It is utilised for Set Point's internal quality control purposes.

24 AMIS0427 samples have Z-scores outside acceptable limits (< -3 and >3). AMIS0427 is not a certified reference material. It is utilised for Set Point's internal quality control purposes.

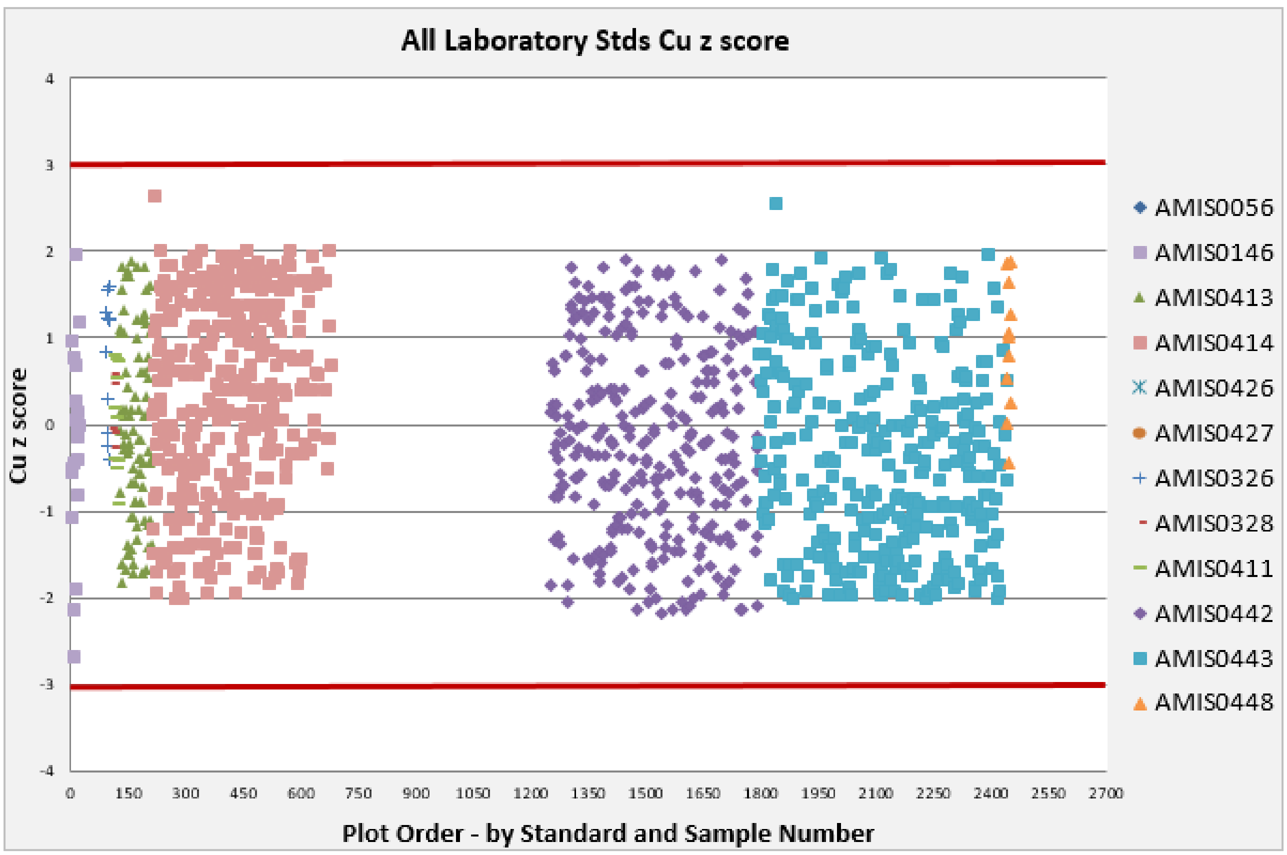
2 AMIS0443 samples have Z-scores outside acceptable limits (< -3 and >3). They may be sample swaps or incorrectly labelled samples.

The majority of the results fall withing acceptable limits (< -3 and >3).

Analysis of Cu of Set Point Laboratory Inserted Standards during 2018

Figure 24 is the Z-score graph for Cu. Most results are with acceptable limits of Z-scores <-3 or >3. 1 AMIS0146, 1 AMIS0442 and 1 AMIS0443 samples are outside acceptable limits. This may be due to sample swaps or miss-labelling.

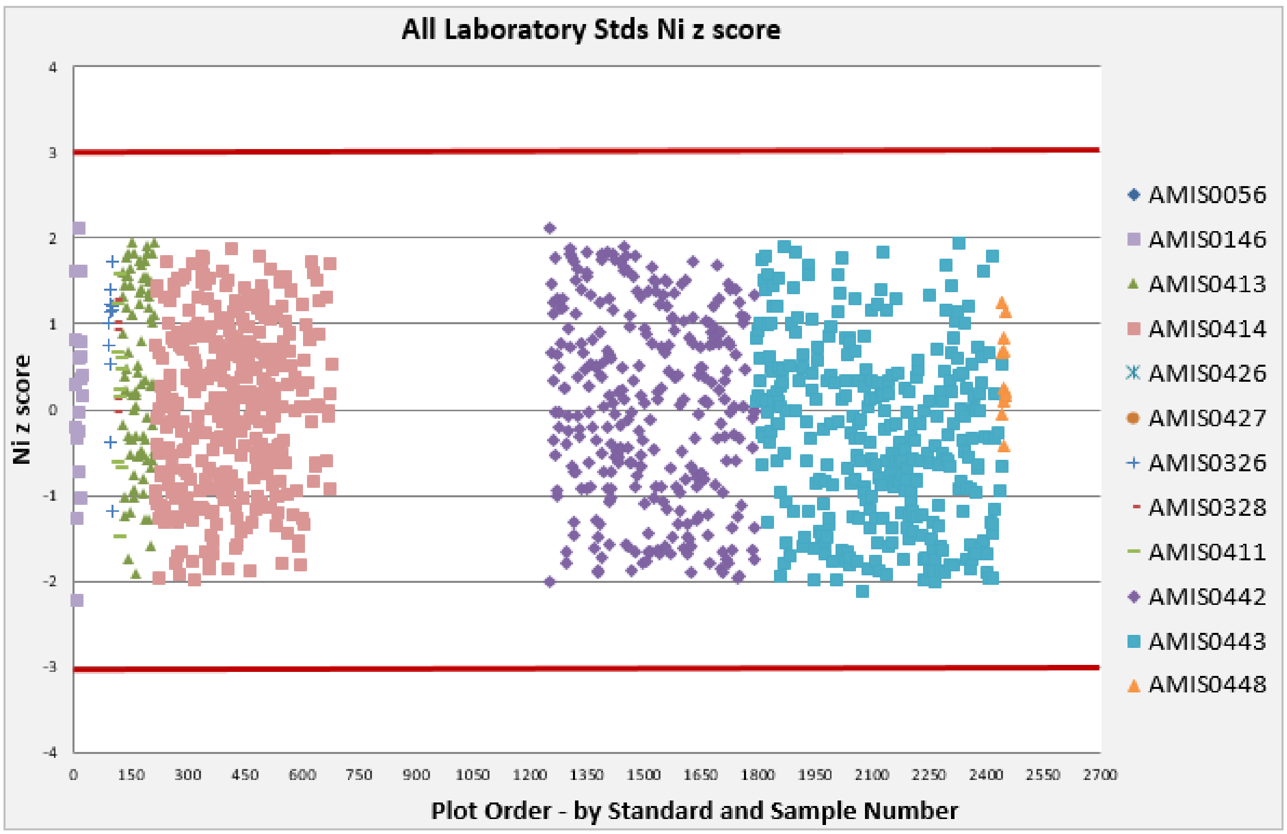
Figure 24 – Z-score graph for Cu Set Point inserted laboratory standards



Analysis of Ni of Set Point Laboratory Inserted Standards during 2018

Figure 25 is the Z-score graph for Ni. Most results are either acceptable limits of Z-scores <-3 or >3. 1 AMIS0146 and 1 AMIS0442 samples are outside acceptable limits. This may be due to sample swaps or miss-labelling.

Figure 25– Z-score graph for Ni Set Point inserted laboratory standards



SET POINT LABORATORY INSERTED BLANKS ANALYSED DURING 2018

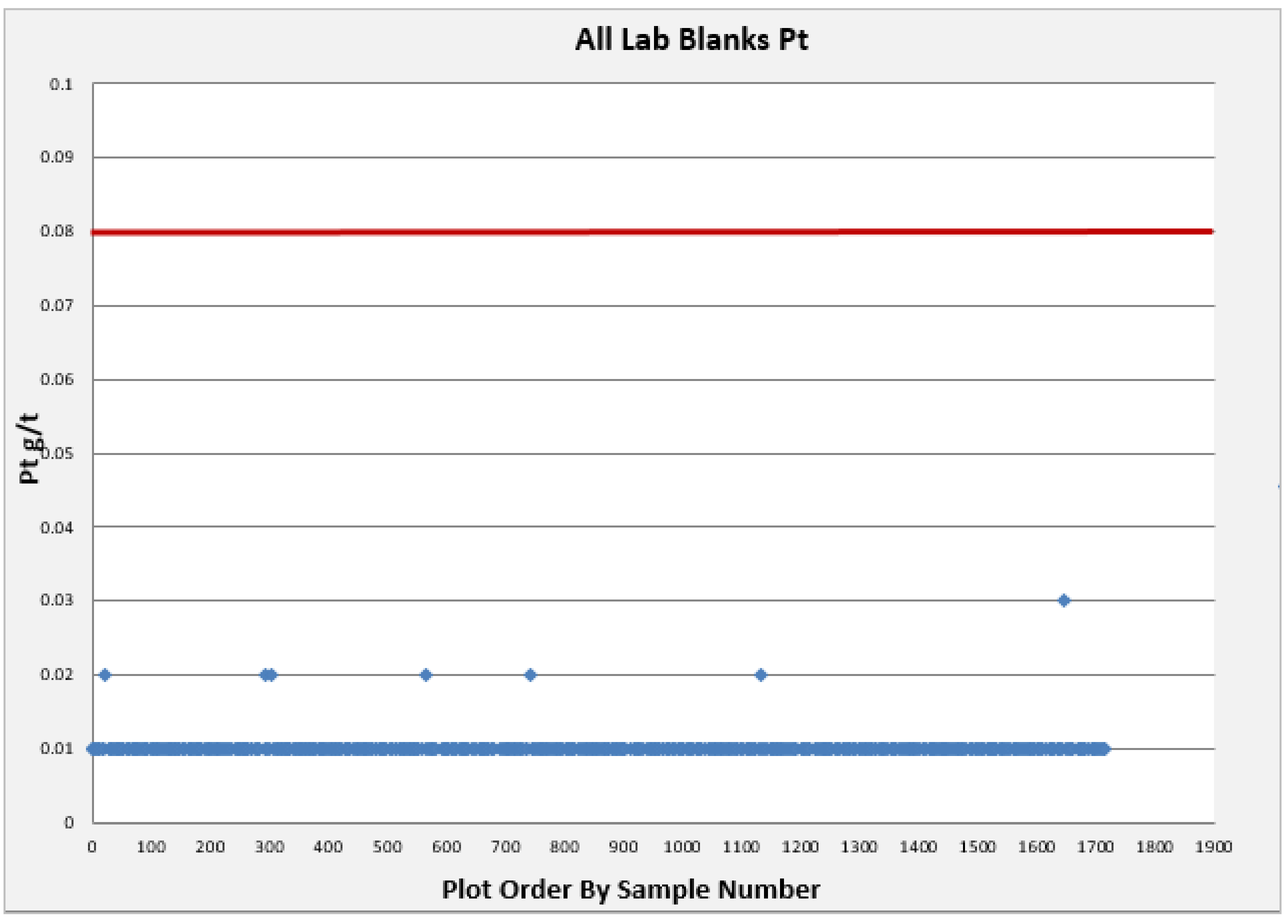
The laboratory inserts their own blanks into the sample stream for their own quality control purposes. They are also included in the assay reports. The graphs have a warning limit, which is equal to ten times the blank background.

In general, the failure rate is deemed not to have a material effect on the data, with more than 90% of the assays falling within acceptable limits.

Analysis of Pt for Set Point Laboratory Inserted Blanks Analysed during 2018

Figure 26 is the graph for Set Point inserted laboratory blanks for Pt. No blanks are greater than 10 x the detection limit.

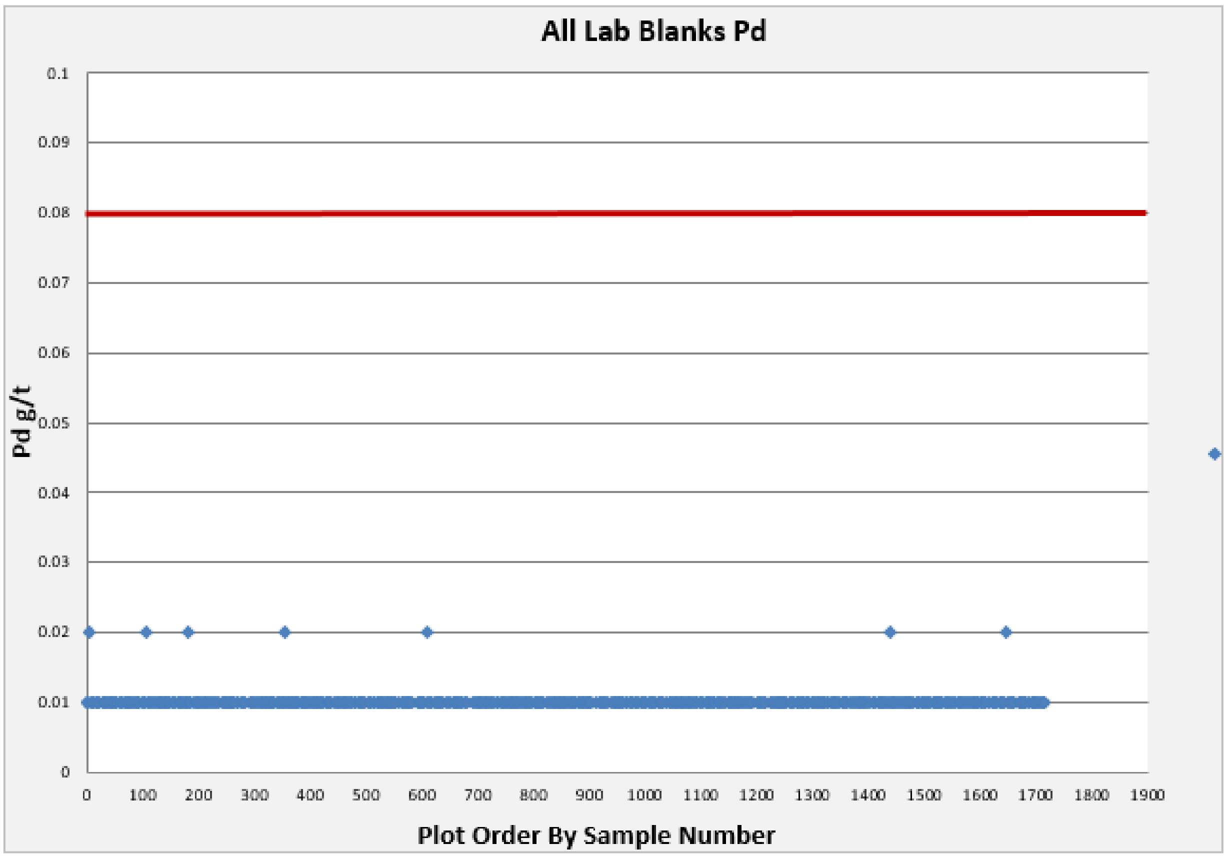
Figure 26 – The graph for inserted Set Point laboratory blanks for Pt.



Analysis of Pd for Set Point Laboratory Inserted Blanks Analysed during 2018

Figure 27 is the graph for Set Point inserted laboratory blanks for Pd. No blanks are greater than 10 x the detection limit.

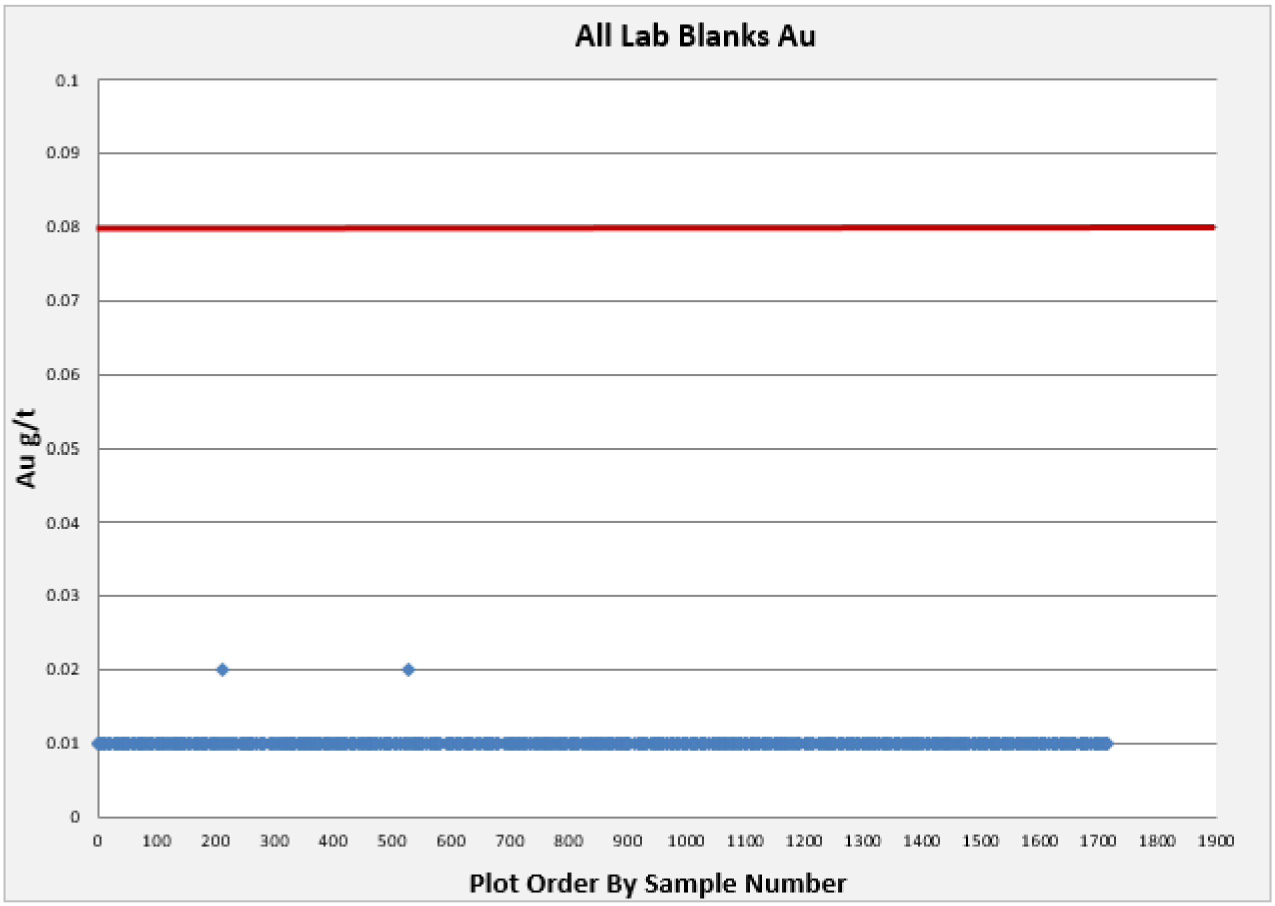
Figure 27 – The graph for inserted Set Point laboratory blanks for Pd.



Analysis of Au for Set Point Laboratory Inserted Blanks Analysed during 2018

Figure 28 is the graph for Set Point inserted laboratory blanks for Au. No blanks are greater than 10 x the detection limit.

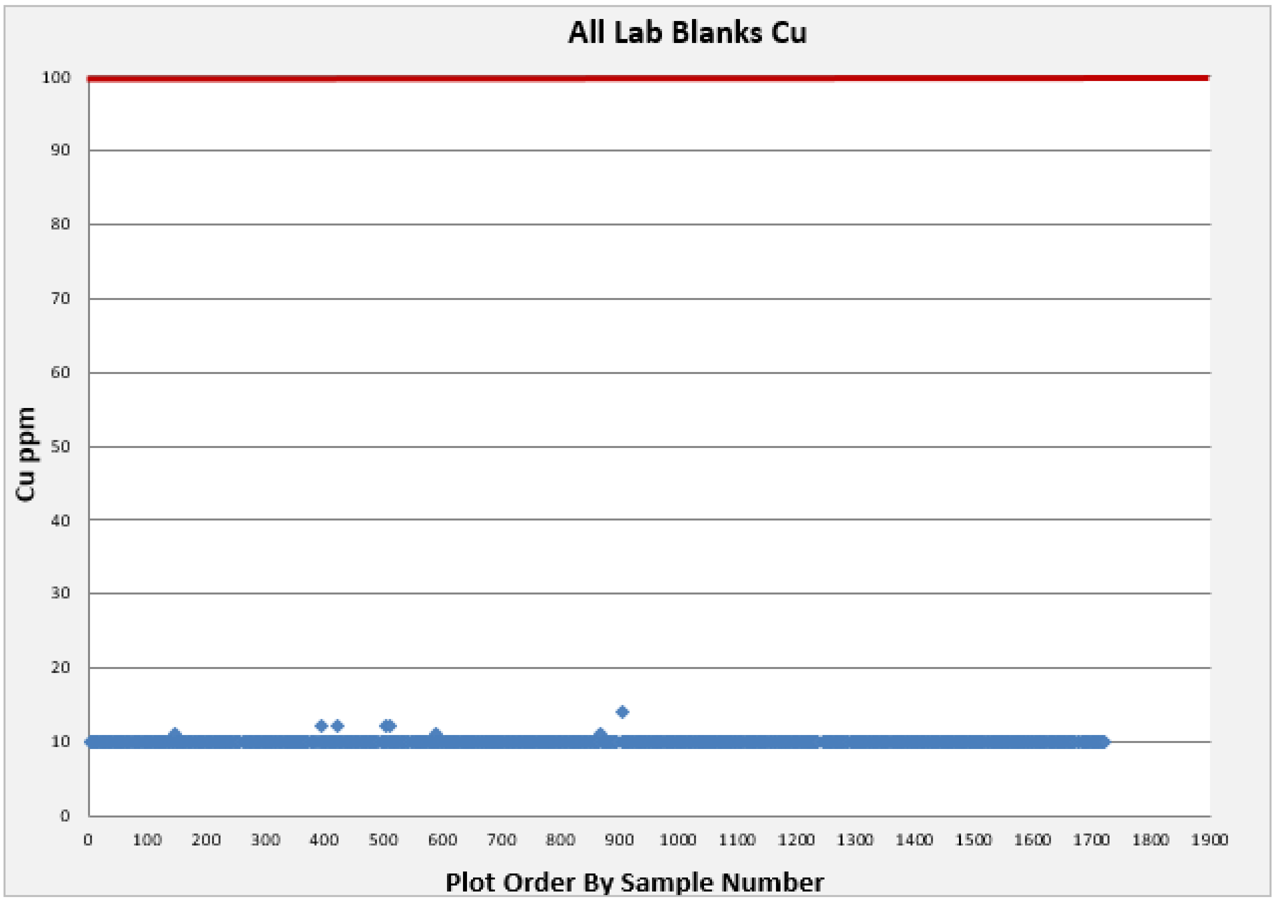
Figure 28 – The graph for inserted Set Point laboratory blanks for Au.



Analysis of Cu for Set Point Laboratory Inserted Blanks Analysed during 2018

Figure 29 is the graph for Set Point inserted laboratory blanks for Cu. No blanks are greater than 10 x the detection limit.

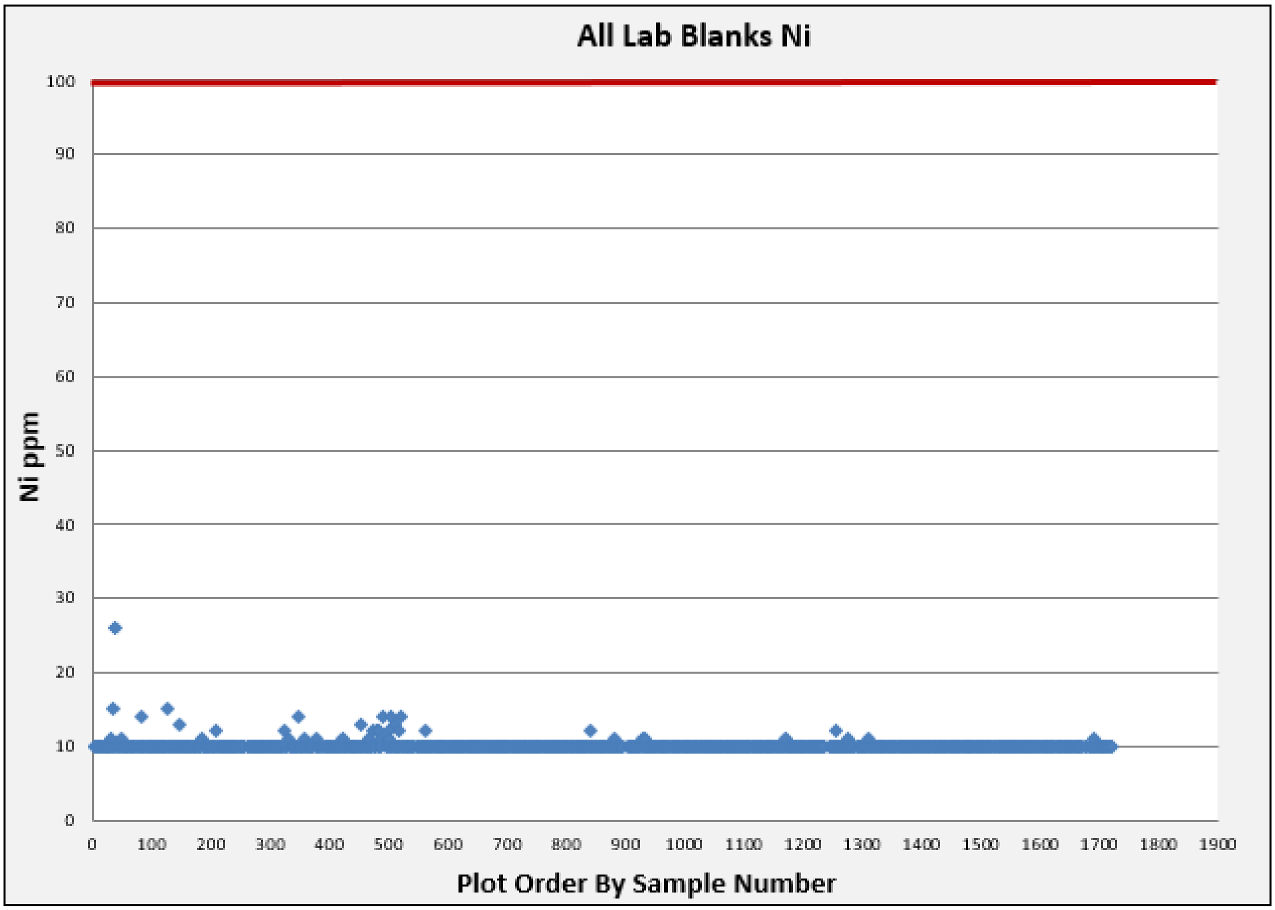
Figure 29 – The graph for inserted Set Point laboratory blanks for Cu.



Analysis of Ni for Set Point Laboratory Inserted Blanks Analysed during 2018

Figure 30 is the graph for Set Point inserted laboratory blanks for Ni. No blanks are greater than 10 x the detection limit.

Figure 30 – The graph for inserted Set Point laboratory blanks for Ni.



APPENDIX 3: BUREAU VERITAS QA/QC

RESULTS OF INSERTED BLIND STANDARDS SENT TO BUREAU VERITAS

Analytical standards/Certified Reference Materials (CRM's) were used to assess the accuracy and possible bias of assay values for Pt and Pd. Rh and Au were monitored where data for the standards were available, but standards were not failed on Rh and Au alone.

639 inserted blind standards were analysed at Bureau Veritas. Standards inserted are AMIS0326, AMIS0395 and AMIS0442. Note that 32 exceptions were excluded from the graphical plots for display purposes. Table 1 lists the sample that were excluded with comments for each exception.

Table 1 – Inserted Blind standards excluded from graphical plots for presentation purposes.

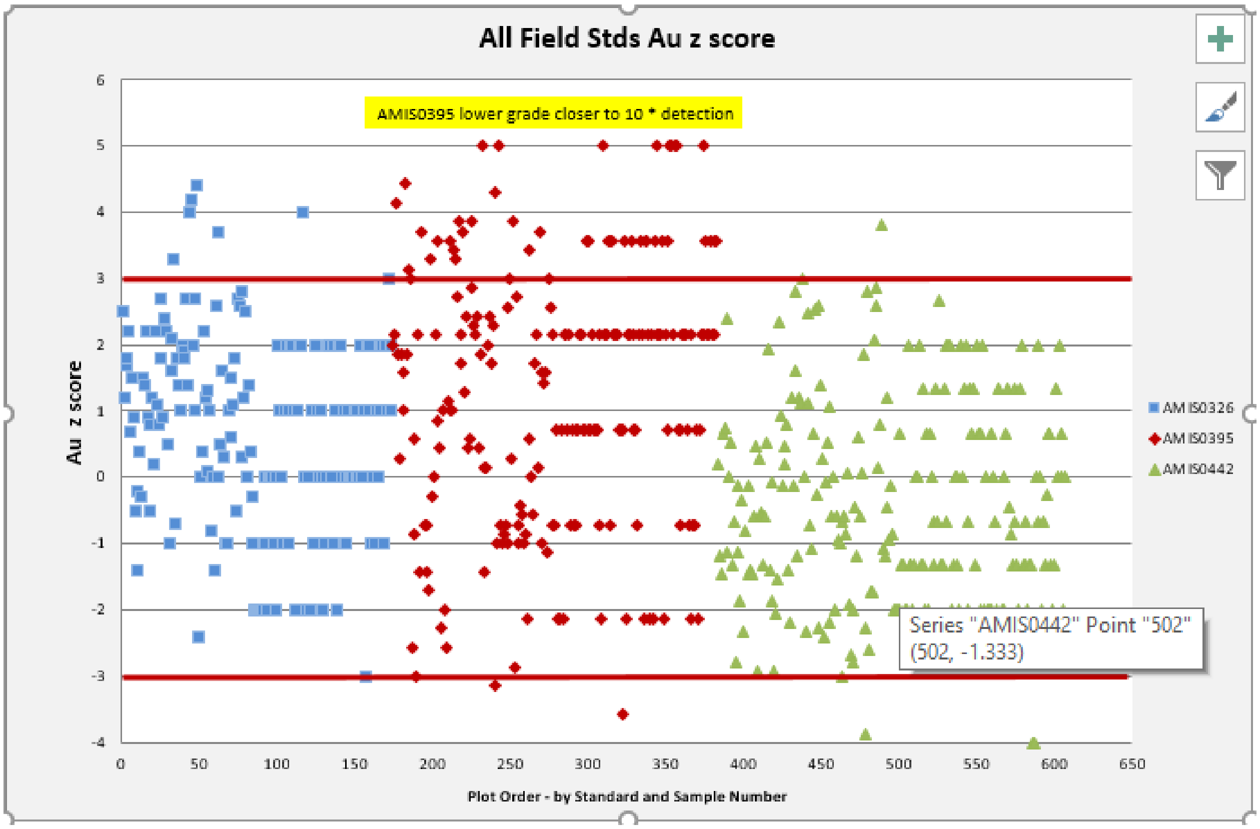
Sample Number	Standard	Elements Outside Acceptable Limits	Comments
O206944	AMIS0326	Pt, Pd, Cu, Ni	Results were confirmed. A possible sample swap
O206992	AMIS0326	Au, Pt, Pd	PGE's repeat fails. Outside reef cut. No need to repeat again
O204862	AMIS0326	Au, Pt, Pd	Not AMIS326, AMIS0442? Field confirmed is it AMIS0326. No need for repeat. Outside reef cut.
O206508	AMIS0326	Au, Pt	PGE's fail. Insufficient sample for repeat
O205901	AMIS0326	Au, Pt, Pd	Repeat not done as field confirmation received after request for repeats. Outside reef cut
O205294	AMIS0395	Pt	Only 1 element fails
O202422	AMIS0395	Au, Pt, Pd, Cu, Ni	Possible sample swap with O202421.Repeat confirm original. Must be a field swap.
O202728	AMIS0326	Pd	Only 1 element fails
O203529	AMIS0395	Pd	Only 1 element fails
O204031	AMIS0395	Au, Pd	Au, less than 10 X detection
O205757	AMIS0442	Au, Pt, Pd	Reported 2nd Repeat PGE's fail. Not identified during analysis. First repeat passes. Results before and after are comparable
O211666	AMIS0442	Pd	Only 1 element fails
O205432	AMIS0326	Au, Pt	Repeat PGE's borderline failure
O204934	AMIS0326	Au, Pd	Outside reef cut. Not necessary to repeat
O209620	AMIS0326	Au	Only 1 element fails

Sample Number	Standard	Elements Outside Acceptable Limits	Comments
O211085	AMIS0326	Au, Pd	Job finalised before repeats could be done
O204922	AMIS0395	Au	Expected value less than 10 X detection
O210138	AMIS0395	Au	Expected value less than 10 X detection
O211438	AMIS0395	Au	Expected value less than 10 X detection
O211582	AMIS0395	Au	Expected value less than 10 X detection
O211618	AMIS0395	Au	Expected value less than 10 X detection
O211654	AMIS0395	Au	Expected value less than 10 X detection
O211966	AMIS0395	Au	Expected value less than 10 X detection
O211127	AMIS0395	Au	Expected value less than 10 X detection
O202679	AMIS0395	Au	Expected value less than 10 X detection
O203644	AMIS0395	Au	Expected value less than 10 X detection
O203787	AMIS0395	Au, Cu	Expected value less than 10 X detection for Au
O205372	AMIS0326	Cu	Only 1 element fails
O203811	AMIS0326	Cu	Only 1 element fails
O203733	AMIS0395	Cu, Ni	Cu/Ni contamination or sample swap
O209870	AMIS0442	Cu	Only 1 element fails
O202142	AMIS0326	Ni	Only 1 element fails

Analysis of Au for Bureau Veritas Inserted Blind Standards

Figure 1 is the Z-score graph for Au. The comments made above explain the samples that plot outside a Z-score of -3 or 3.

Figure 1 – Z-score graph for Au Bureau Veritas inserted blind standards

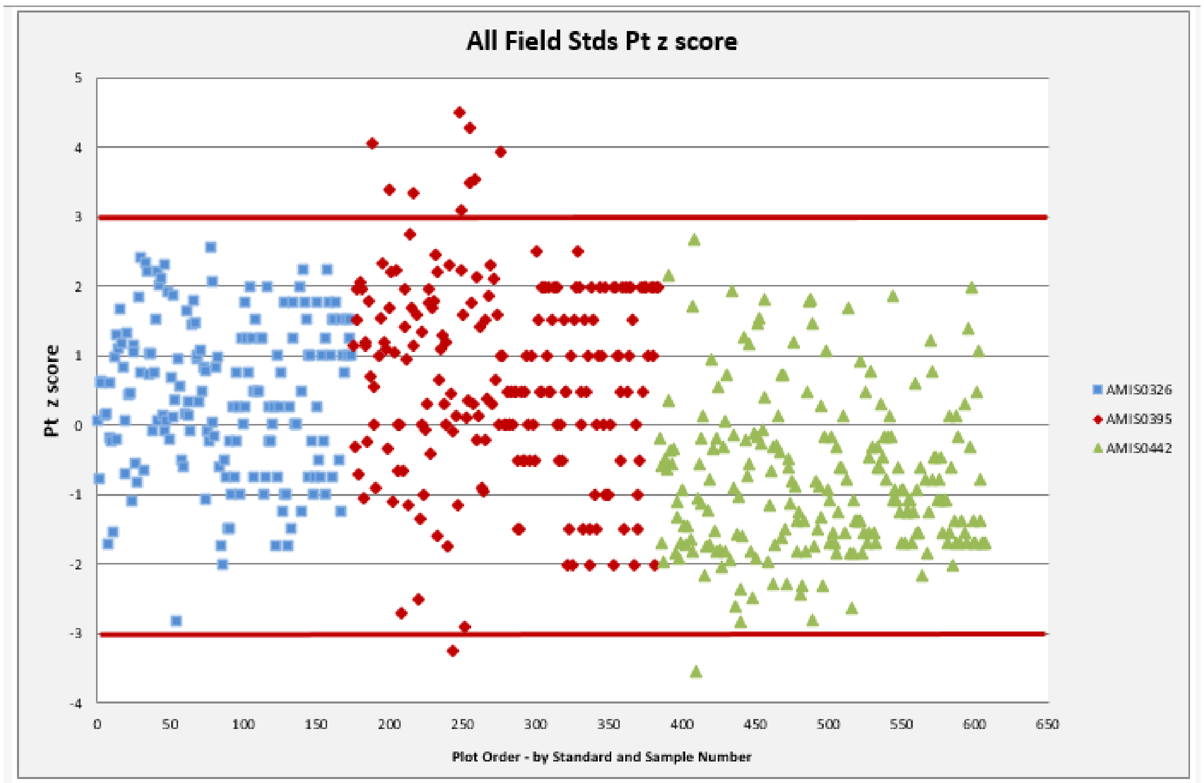


As indicated on the graph, AMIS0395 has results that plot outside acceptable Z-score limits of <-3 or >3. Of the 137 AMIS0395 samples plotted on the graph, 45 plot outside acceptable limits, AMIS0395 is not a suitable standard for Au as the expected value of 0.095 g/t is less than 10 times the detection limit. Most of the results are acceptable.

Analysis of Pt for Bureau Veritas Inserted Blind Standards

Figure 2 is the Z-score graph for Bureau Veritas inserted blind standards for Pt.

Figure 2 – Z-Score graph for inserted blind standards sent to Bureau Veritas for Pt.

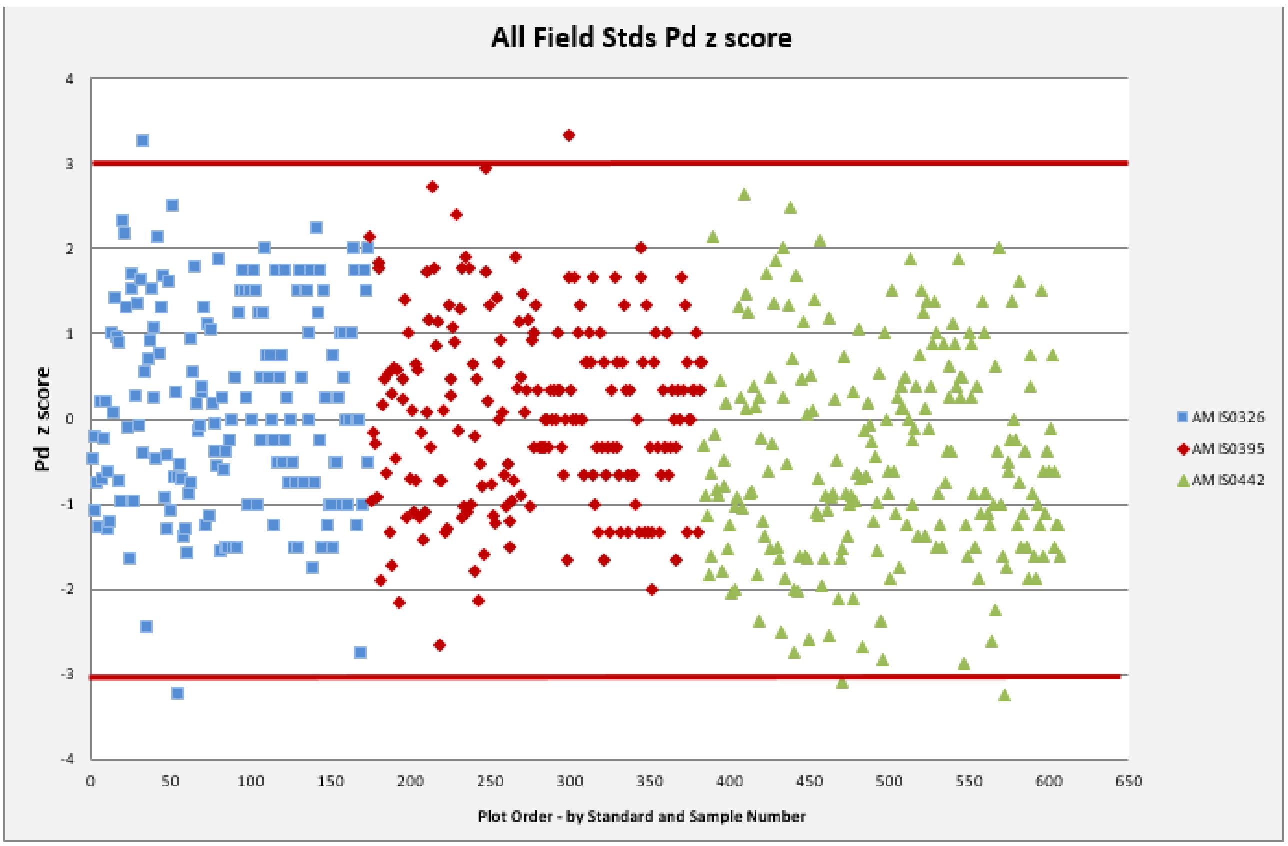


The results for AMIS0326 and AMIS0442 are all acceptable. There are 10 AMIS0395 samples that plot outside acceptable limits of a Z-score <-3 or >3. Results were accepted as only Pt fails.

Analysis of Pd for Bureau Veritas Inserted Blind Standards

Figure 3 is the Z-score graph for Bureau Veritas inserted blind standards for Pd.

Figure 3 – Z-Score graph for inserted blind standards sent to Bureau Veritas for Pd.

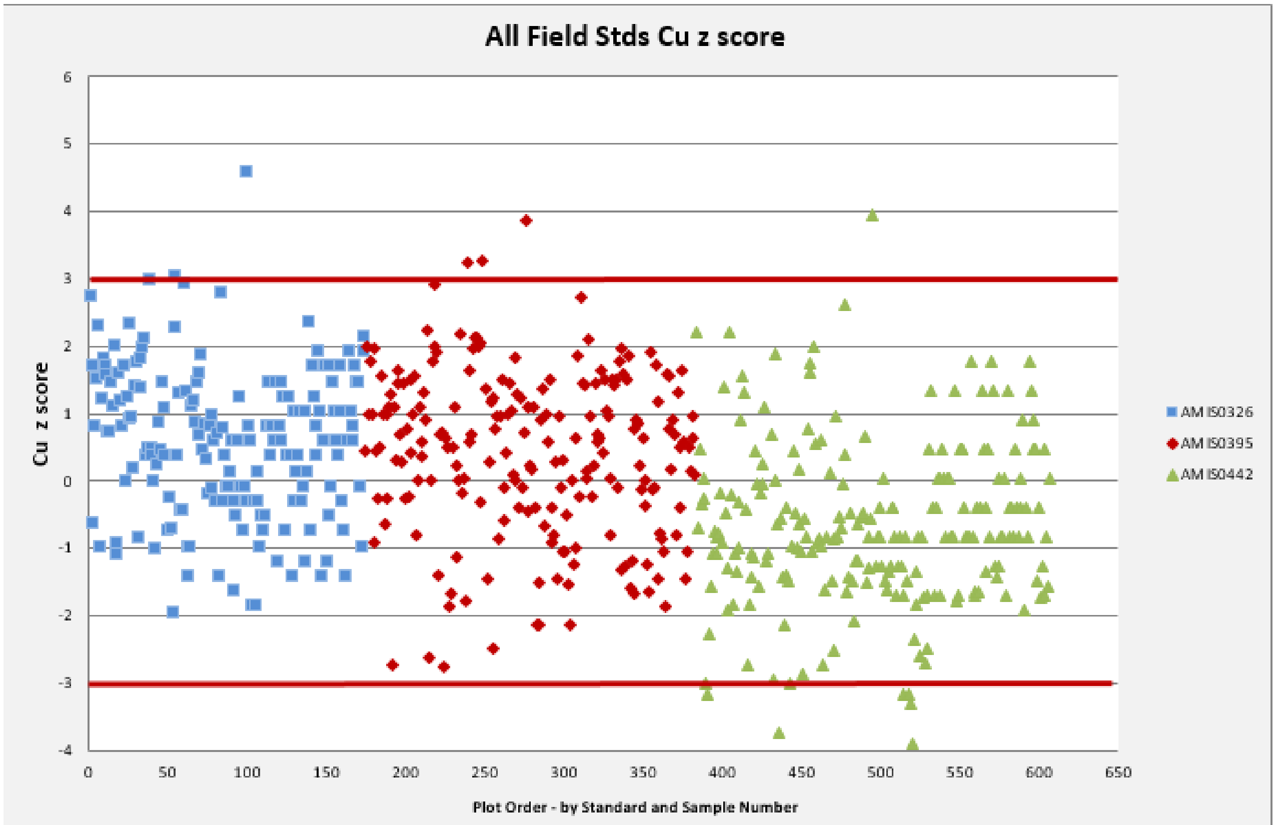


The results for the three standards are all acceptable.

Analysis of Cu for Bureau Veritas Inserted Blind Standards

Figure 4 is the Z-score graph for Bureau Veritas inserted blind standards for Cu.

Figure 4 – Z-Score graph for inserted blind standards sent to Bureau Veritas for Cu.

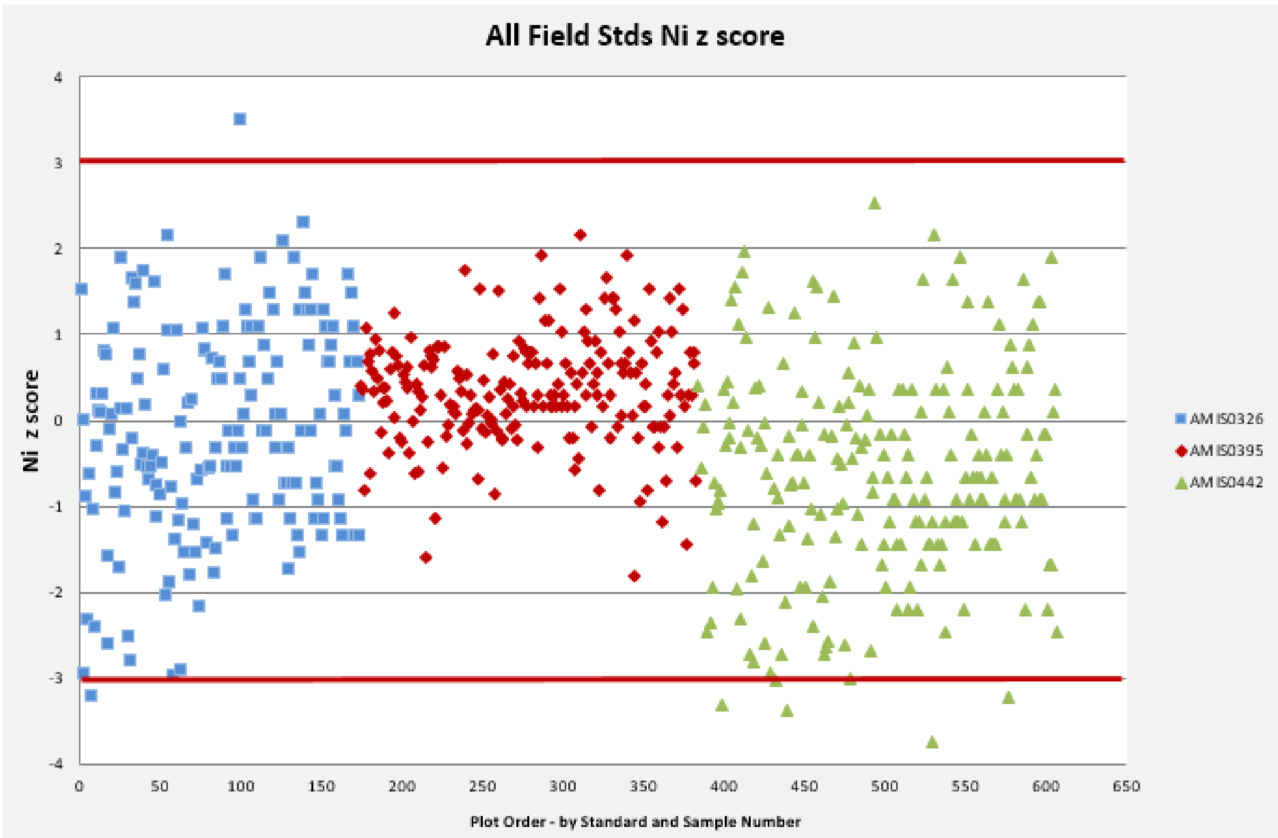


The results for the three standards are all acceptable.

<u>Analysis of Ni for Bureau Veritas Inserted Blind Standards</u>

Figure 5 is the Z-score graph for Bureau Veritas inserted blind standards for Ni.

Figure 5 – Z-Score graph for inserted blind standards sent to Bureau Veritas for Ni.



The results for the three standards are all acceptable.

RESULTS OF INSERTED BLIND BLANKS SENT TO BUREAU VERITAS

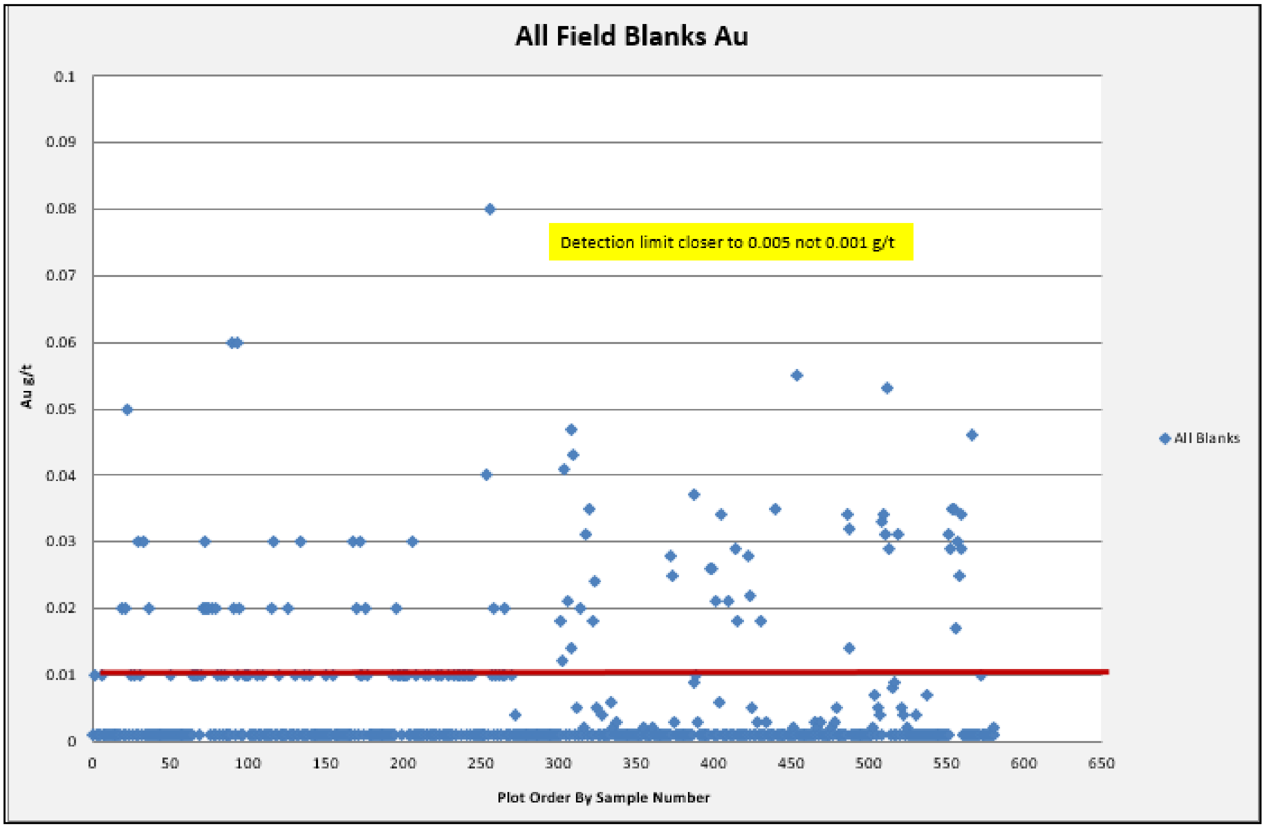
The insertion of blanks provides an important check on the laboratory practices, especially potential contamination or sample sequence miss-ordering. Blanks consist of a selection of Transvaal Quartzite (devoid of platinum, palladium, copper and nickel mineralisation) of a mass like that of a normal core sample the blank being used is always noted to track its behaviour and trace metal content. The plotted graphs have a warning limit, which is equal to ten times the blank background.

In general, the failure rate is deemed not to have a material effect on the data, with more than 90% of the assays falling within acceptable limits.

Analysis of Au for Blind Blanks sent to Bureau Veritas

Figure 6 is the graph for Bureau Veritas inserted blind blanks for Au.

Figure 6 – The graph for inserted blind blanks sent to Bureau Veritas for Au.

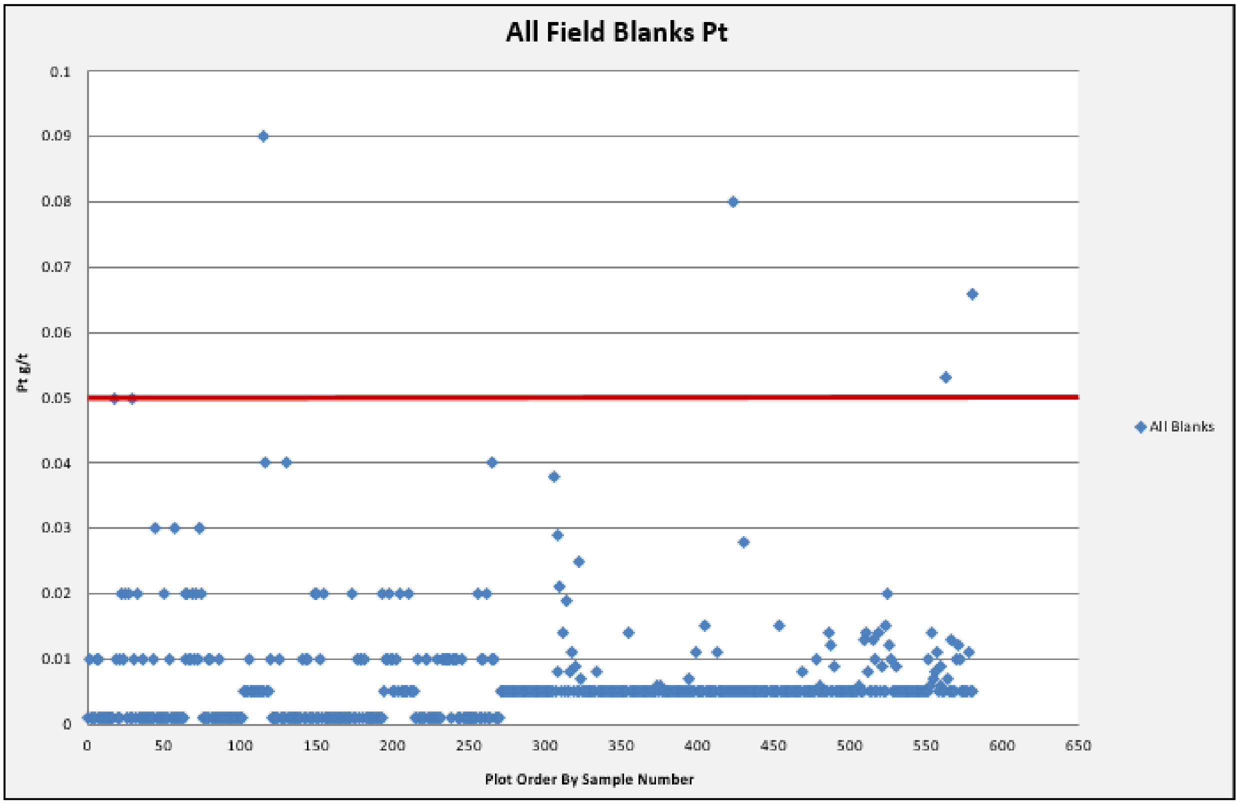


As noted in the graph numerous samples plot above the acceptable limit of 0.01 g/t (10 times detection) and indicates that that Bureau Veritas's detection limit is closer to 0.005 g/t.

Analysis of Pt for Blind Blanks sent to Bureau Veritas

Figure 7 is the graph for Bureau Veritas inserted blind blanks for Pt.

Figure 7 – The graph for inserted blind blanks sent to Bureau Veritas for Pt.

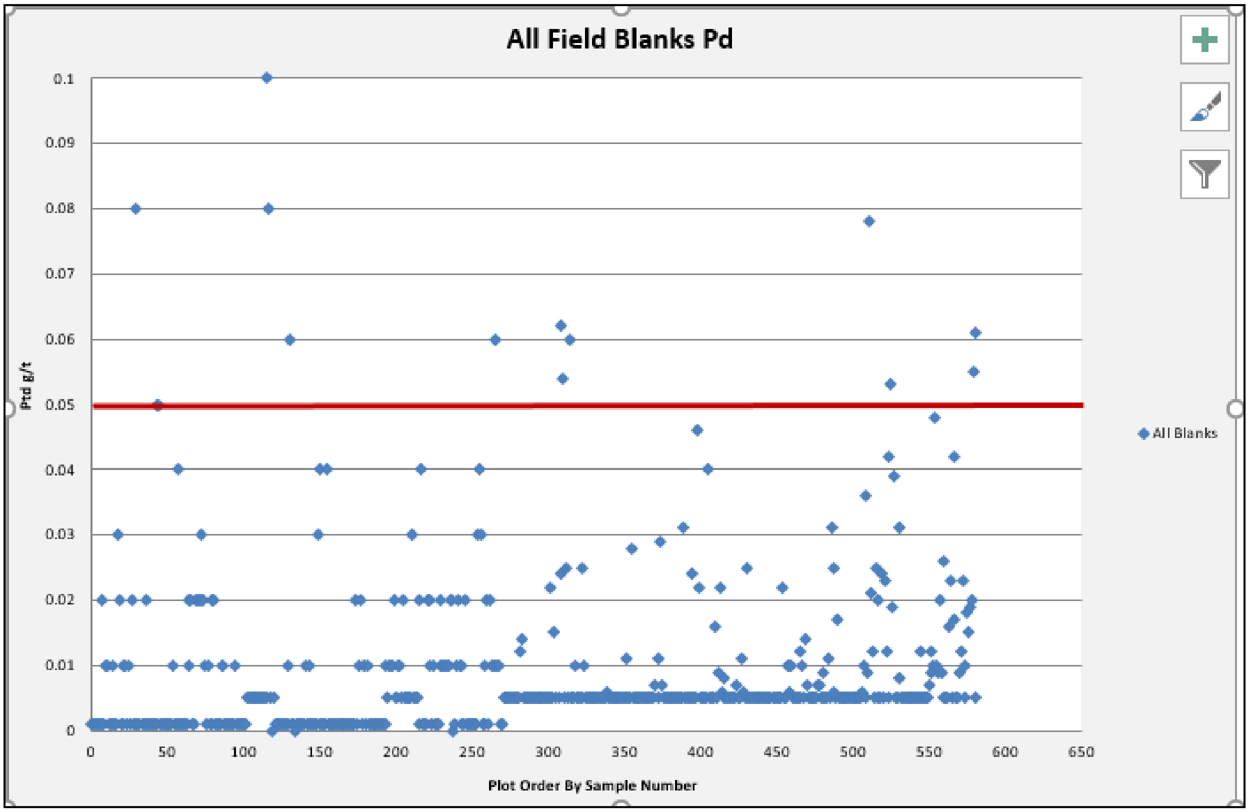


Results for Pt are acceptable for all but a handful of samples.

Analysis of Pd for Blind Blanks sent to Bureau Veritas

Figure 8 is the graph for Bureau Veritas inserted blind blanks for Pd.

Figure 8 – The graph for inserted blind blanks sent to Bureau Veritas for Pd.

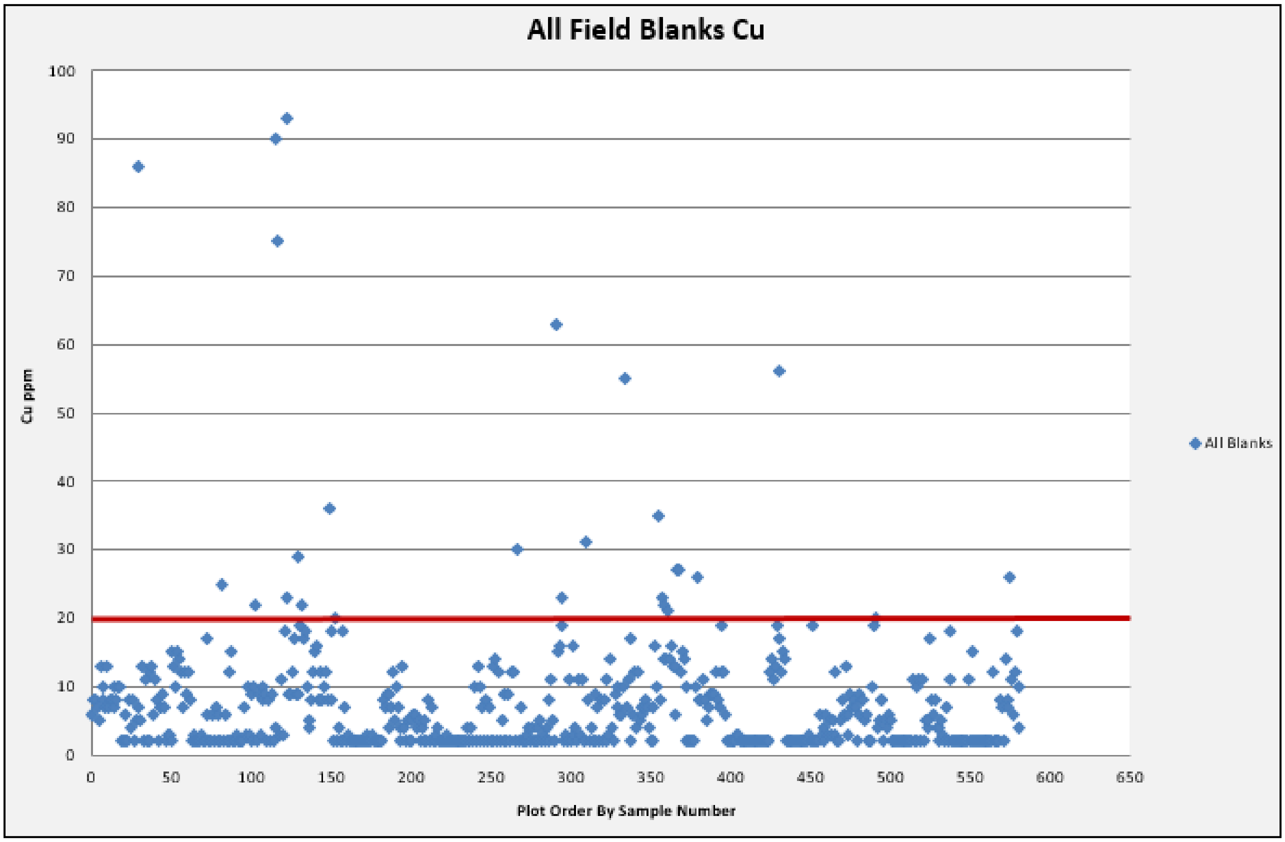


Results for Pd are acceptable for most of the samples.

Analysis of Cu for Blind Blanks sent to Bureau Veritas

Figure 9 is the graph for Bureau Veritas inserted blind blanks for Cu.

Figure 9 – The graph for inserted blind blanks sent to Bureau Veritas for Cu.

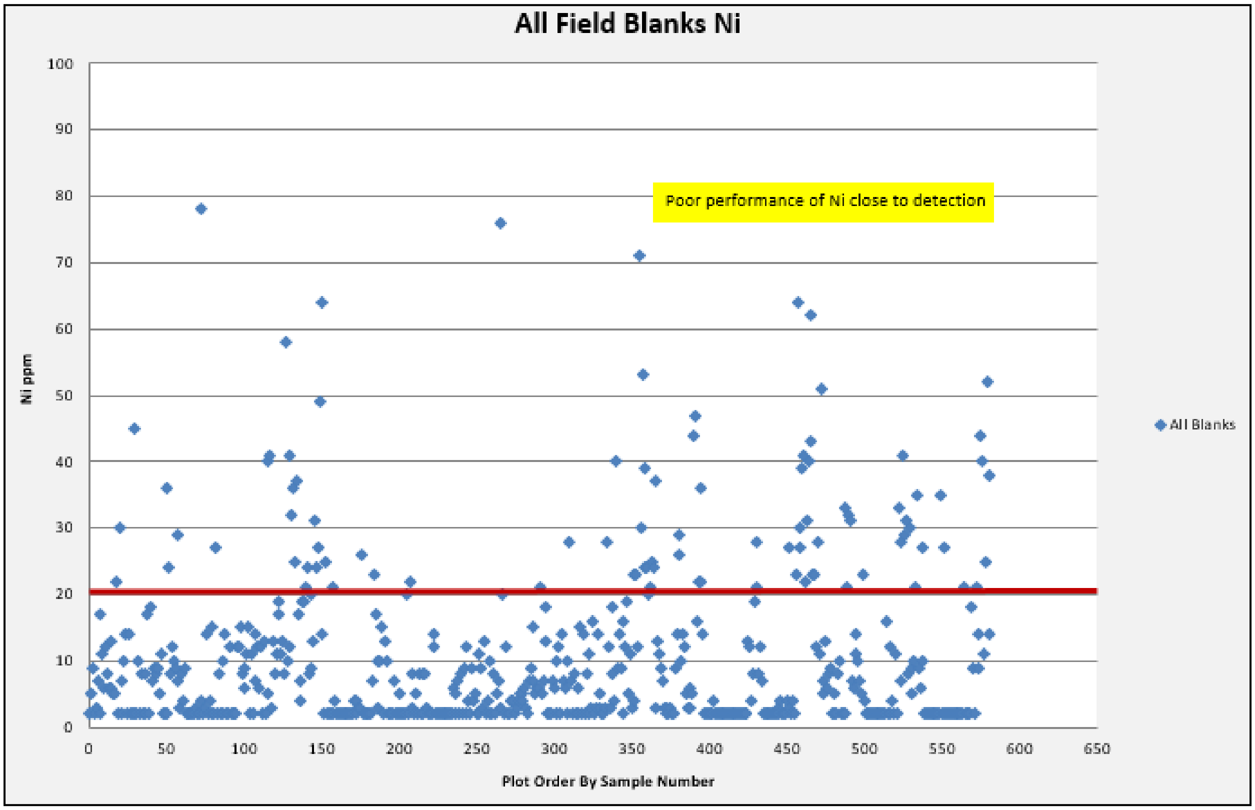


Results for Cu are acceptable for most of the samples.

Analysis of Ni for Blind Blanks sent to Bureau Veritas

Figure 10 is the graph for Bureau Veritas inserted blind blanks for Ni.

Figure 10 – The graph for inserted blind blanks sent to Bureau Veritas for Ni.



As noted on the graph there are numerous failures (> 10 x detection) for Ni. This indicates that the detection limit for Ni is closer to 10ppm rather than 2 ppm.

Operationally, there is very little evidence of contamination, sample swaps or the incorrect sample being prepared.

RESULTS OF INSERTED LABORATORY PREPARATION DUPLICATES

Coarse reject duplicates were created by the laboratory by routinely making a sample from the coarse reject of every 20th sample and assigning it the same sample number as its duplicate pair, with the addition of a prefix CRD.

The original analysis vs. the duplicate analysis showed minimal irregular values. This indicates minimal sample swapping.

In addition to the Coarse Laboratory Reject duplicates (CRD's), field pulp duplicates are selected at random, allocated a new sample number and re-submitted with a new sample number in a new batch to Set point. These show good correlation with the original samples with between 80% and 95% of the data falling within acceptable limits.

Duplicates are inserted into the sample stream in order to measure precision. Precision is defined as the closeness of agreement between independent assays obtained under similar conditions for the same sample. There are numerous statistical methods of measuring precision.

The statistic HARD was calculated for each element. The formula for HARD is:

(ABS (ORIG_PT-DUP_PT / 2) (which is the mean absolute difference)

_________________________ X 100

ORIG_PT+DUP_PT /2 (the mean)

This equates to the relative mean absolute difference (RMD), expressed as a percentage. Preparation duplicates should have at least 90% of the duplicate pairs having HARD less than 20%. The limit of 20% is deemed to be acceptable as split samples (rock chips) are not homogeneous and there may also be a nugget effect.

Table 2 – Percentage of Bureau Veritas coarse reject duplicate pairs that have a HARD less than or equal to 20% for each element

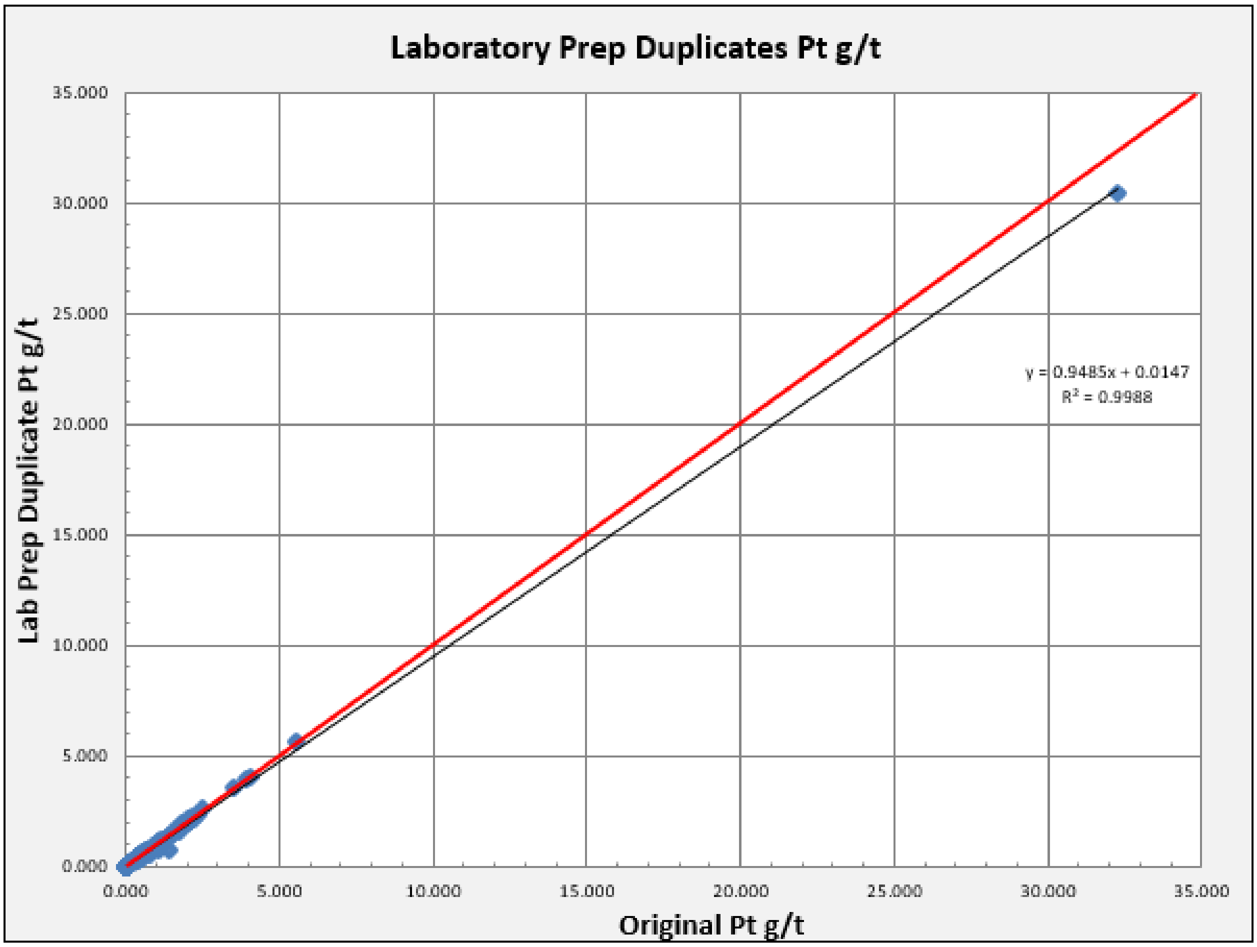
Element	Total samples > 10 X detection limit	Number of samples with HARD <=20%	Percentage with HARD within 20%
Au	69	66	95%
Pt	140	137	98%
Pd	154	151	98%
Cu	191	188	98%
Ni	286	285	99%

Table 2 shows that for all the elements that there is excellent precision for all the elements. The percentage of Au samples with HARD within 20% is 95% which is slightly lower than for the other elements. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection.

Analysis of Pt for Preparation Duplicates

Figure 11 demonstrates the good correlation between the original Pt on the X axis and the duplicate Pt on the Y axis. R^2 is 0.99%.

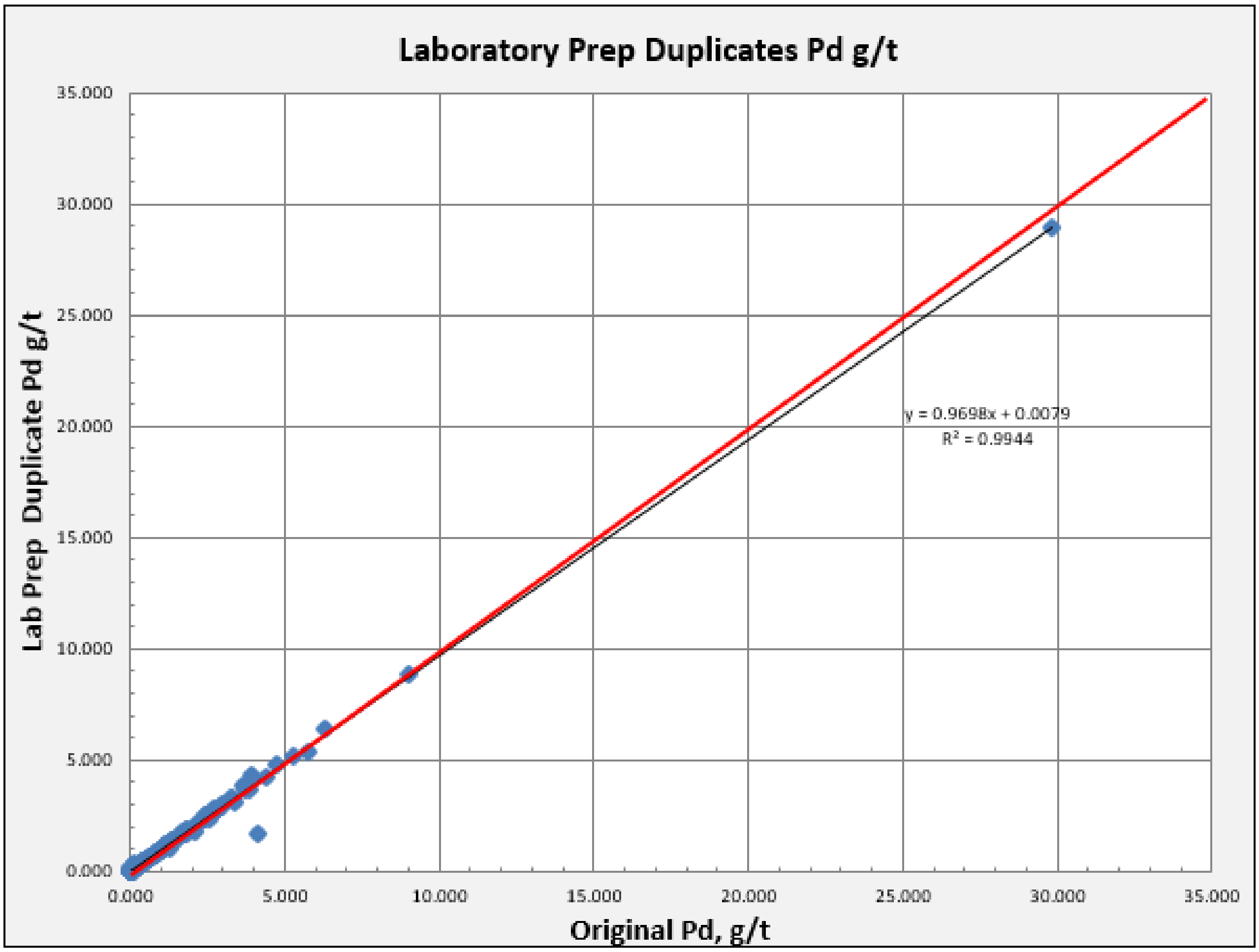
Figure 11 – A scatter plot of Pt showing the correlation between the original and preparation duplicate results for Bureau Veritas Preparation Duplicates.



Analysis of Pd for Preparation Duplicates

Figure 12 demonstrates the good correlation between the original Pd on the X axis and the duplicate Pd on the Y axis. R^2 is 0.99%.

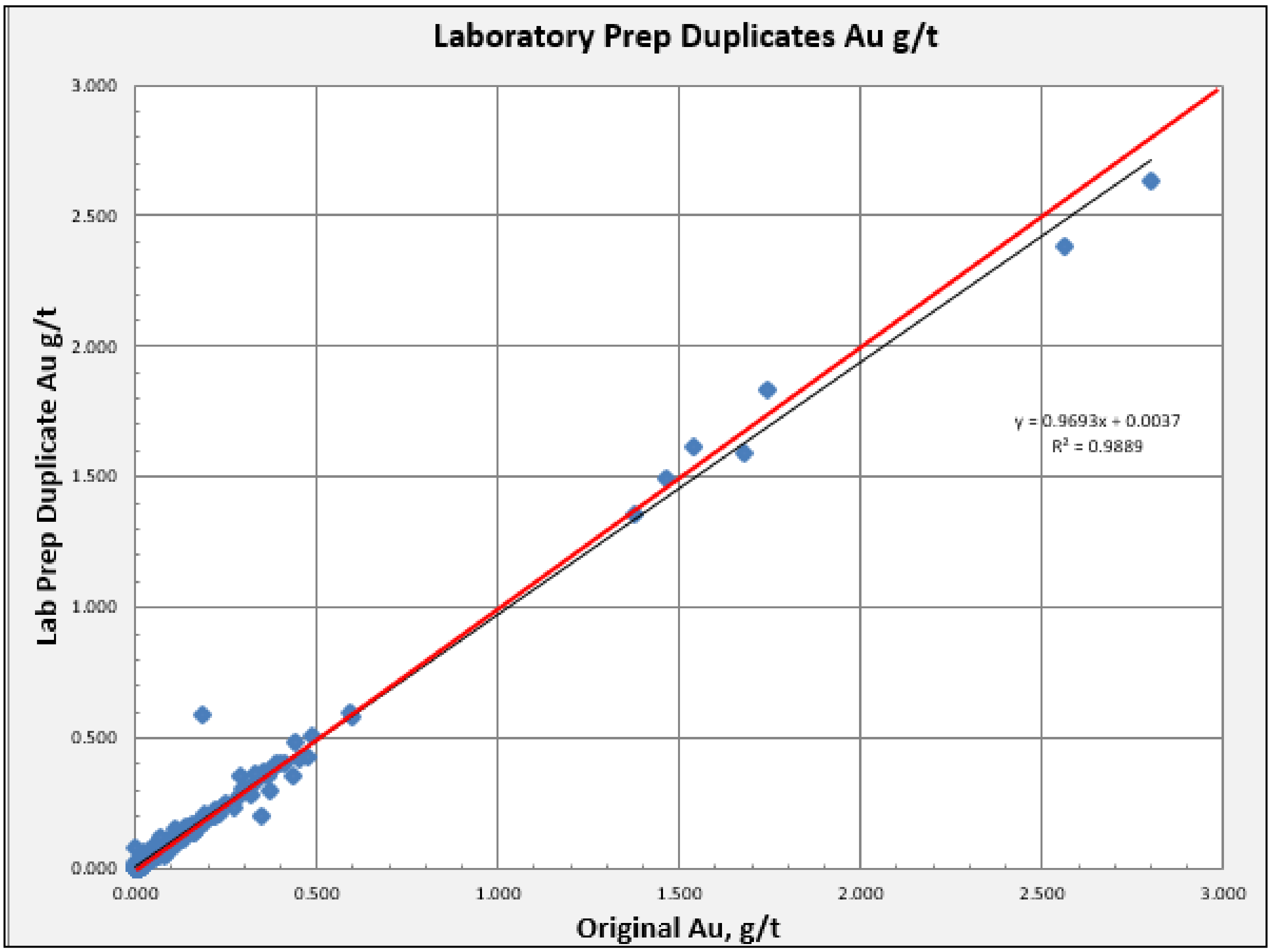
Figure 12 – A scatter plot of Pd showing the correlation between the original and preparation duplicate results for Bureau Veritas Preparation Duplicates.



Analysis of Au for Preparation Duplicates

Figure 13 demonstrates the good correlation between the original Au on the X axis and the duplicate Au on the Y axis. R^2 is 0.99%.

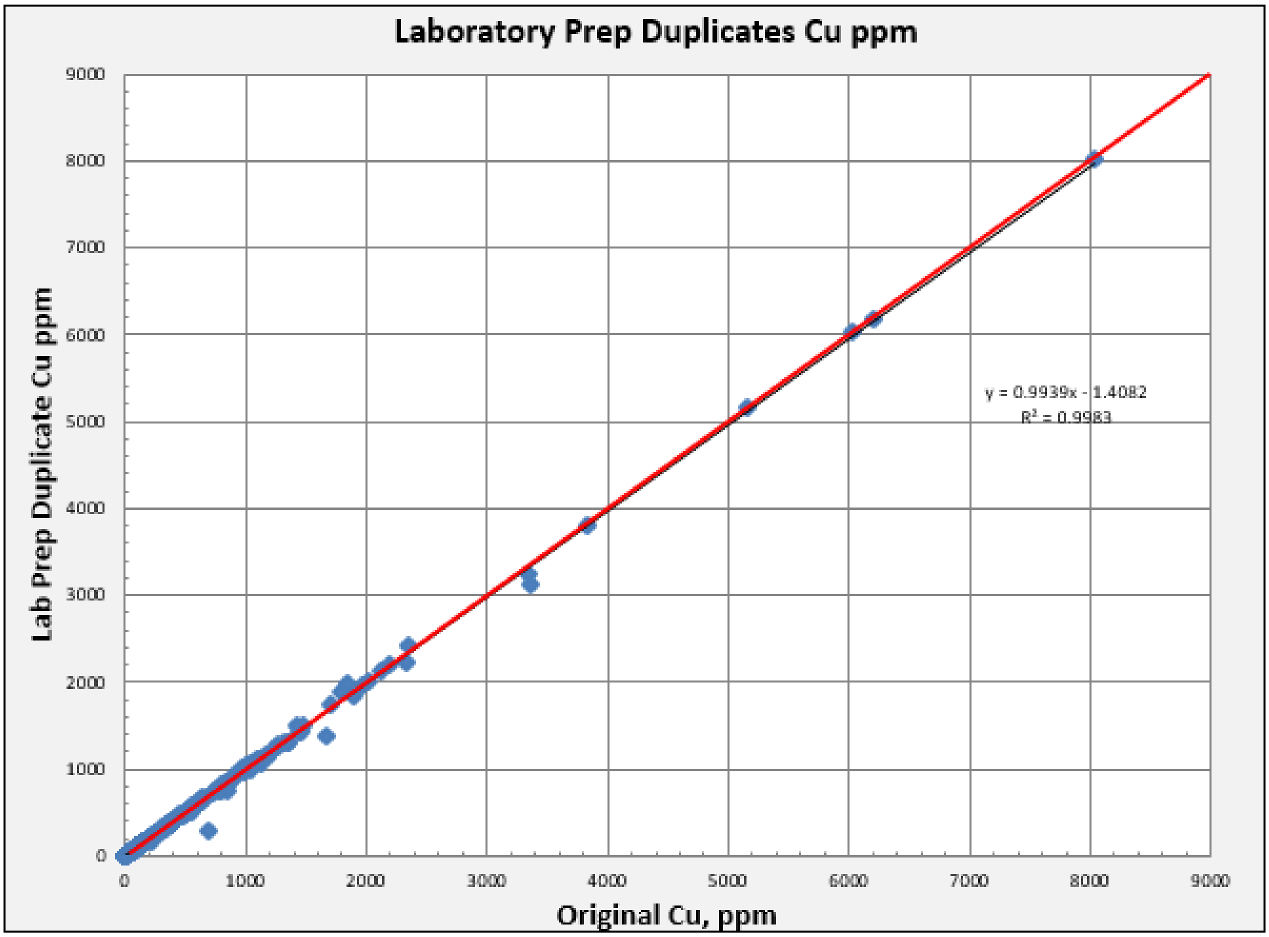
Figure 13 – A scatter plot of Au showing the correlation between the original and preparation duplicate results for Bureau Veritas Preparation Duplicates.



Analysis of Cu for Preparation Duplicates

Figure 14 demonstrates the good correlation between the original Cu on the X axis and the duplicate Cu on the Y axis. R^2 is 0.99%.

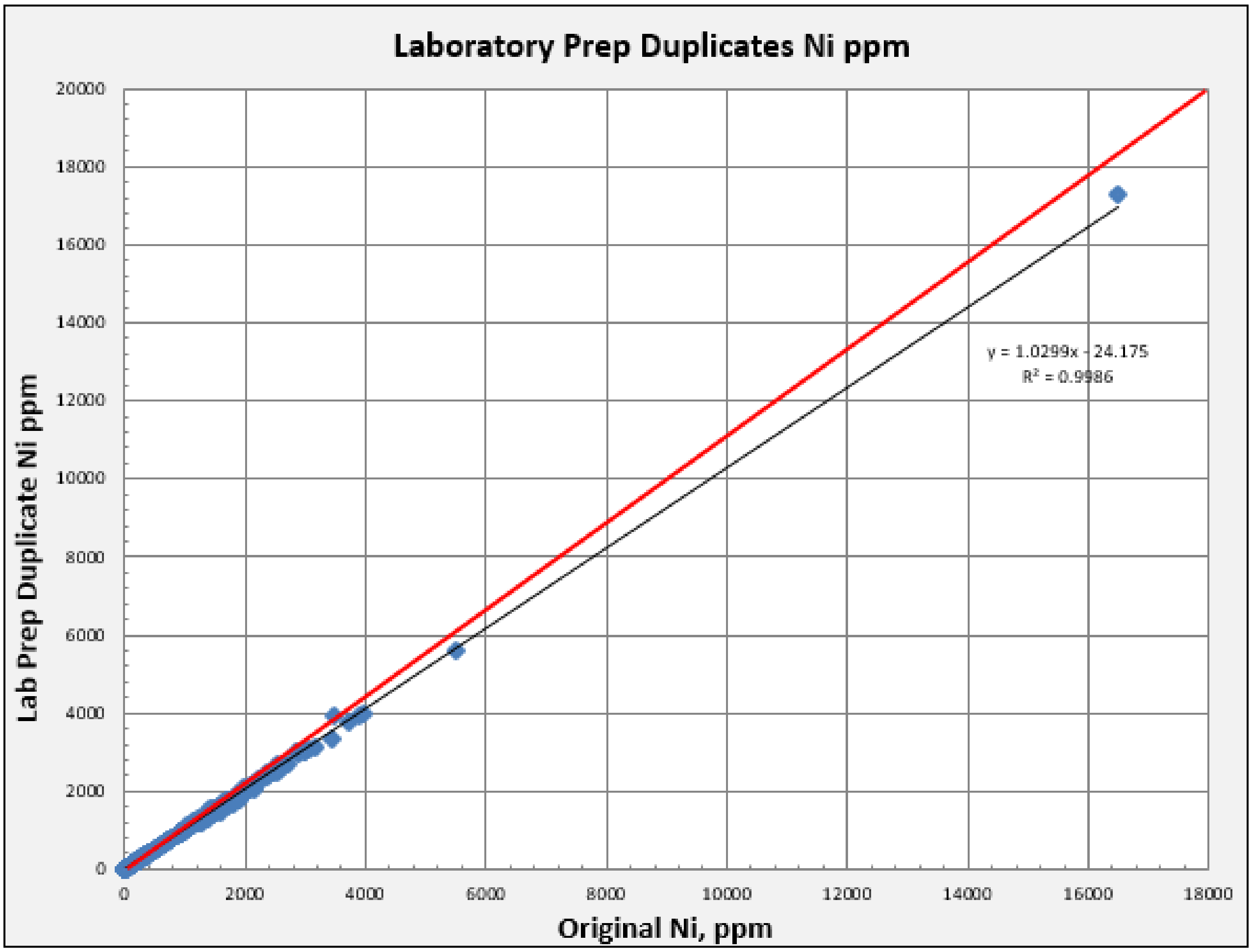
Figure 14 – A scatter plot of Cu showing the correlation between the original and preparation duplicate results for Bureau Veritas Preparation Duplicates.



Analysis of Ni for Preparation Duplicates

Figure 15 demonstrates the good correlation between the original Ni on the X axis and the duplicate Ni on the Y axis. R^2 is 0.99%.

Figure 15 – A scatter plot of Ni showing the correlation between the original and preparation duplicate results for Bureau Veritas Preparation Duplicates.



RESULTS OF INSERTED LABORATORY PULP DUPLICATES FOR BUREAU VERITAS

Quality control in the form of pulp duplicates is also done on a routine basis with random samples (1 in every 20th sample) selected and split once pulps are prepared. The pulp duplicates are inserted into the sample stream and given a suffix of "RPT" for reporting purposes. The statistic HARD was calculated for each element. Pulp duplicates should have at least 90% of the duplicate pairs having HARD less than 10%. The limit of 10% is deemed to be acceptable as pulps were homogenised.

Table 3 lists the percentage of duplicate pairs for each element that have a HARD less than or equal to 10%. Note that samples where results are less than 10 x detection limits were excluded as results close to detection limits show significant variability.

Table 3 – Percentage of pulp duplicate pairs that have a HARD less than or equal to 10% for each element for Bureau Veritas inserted pulp duplicates.

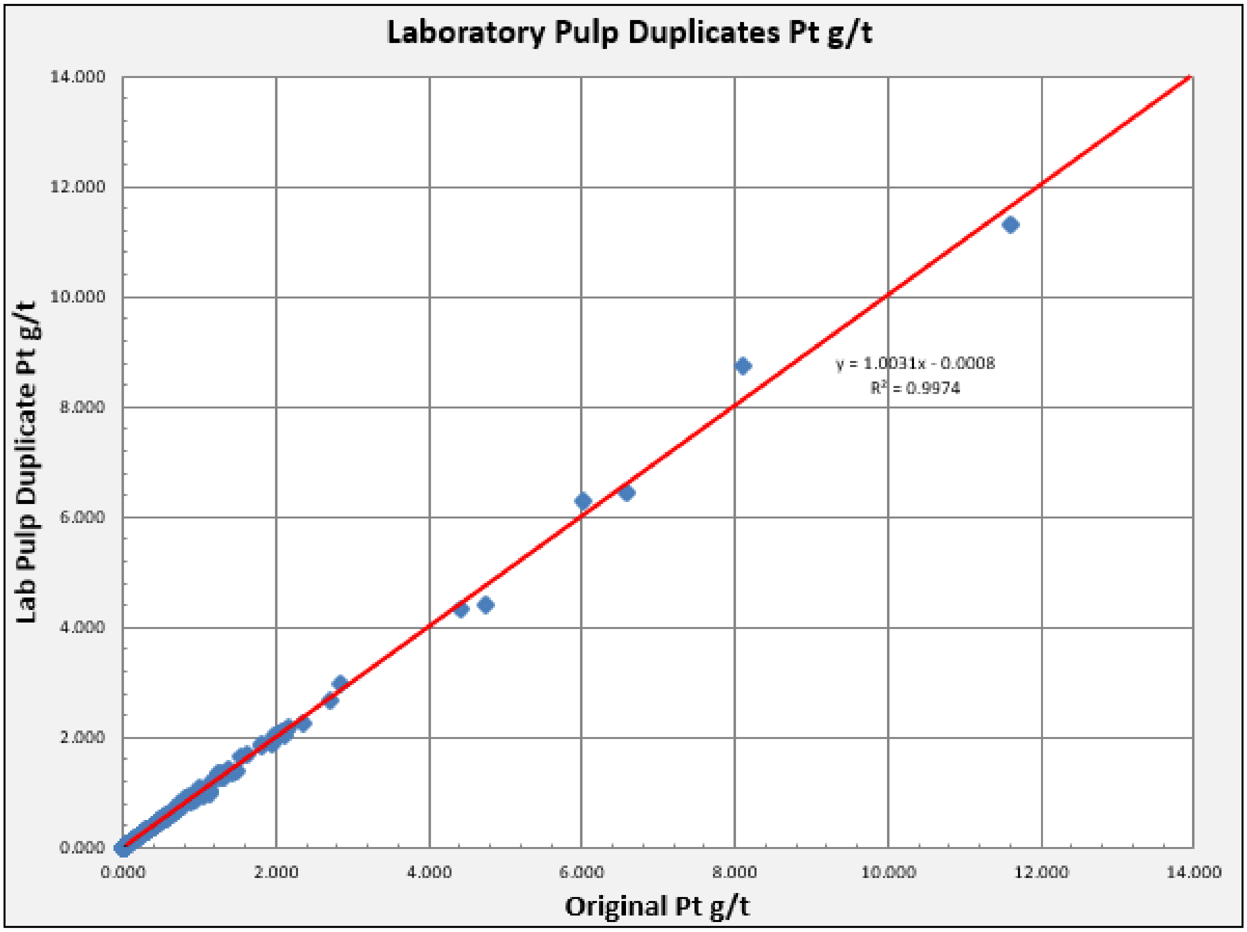
Element	Total samples > 10 X detection limit	Number of samples with HARD <=10%	Percentage with HARD within 10%
Au	128	124	96%
Pt	273	268	98%
Pd	288	284	98%
Cu	288	287	99%
Ni	378	377	99%

Table 3 shows that for all the elements that there is good precision for all the elements. The percentage of Au samples with HARD within 20% Is 95% which is slightly lower than for the other elements. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection.

Analysis of Pt for Pulp Duplicates

Figure 16 demonstrates the good correlation between the original Pt on the X axis and the duplicate Pt on the Y axis. R^2 is 0.99%.

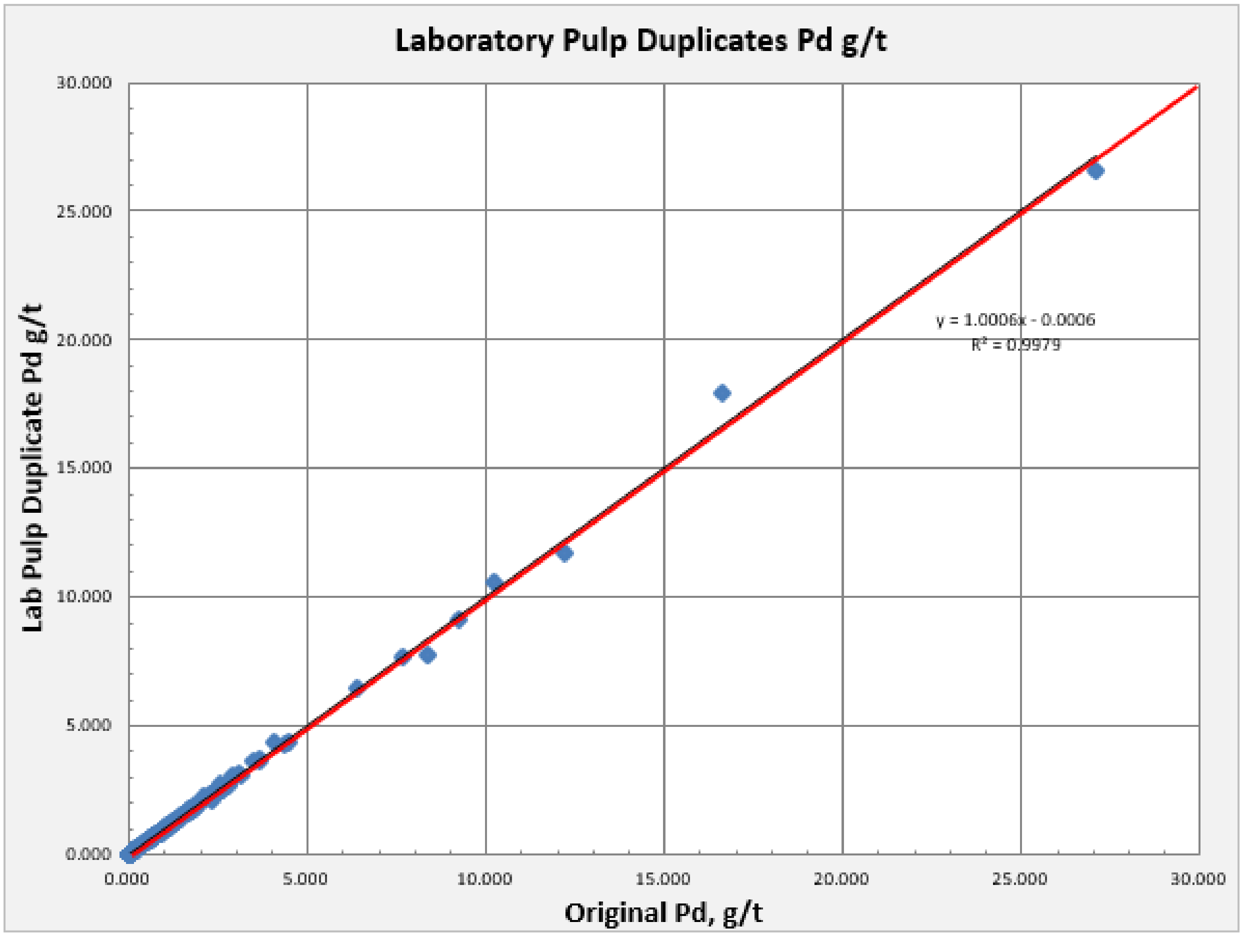
Figure 16 – A scatter plot of Pt showing the correlation between the original and laboratory pulp duplicate results for Bureau Veritas.



Analysis of Pd for Pulp Duplicates

Figure 17 demonstrates the good correlation between the original Pd on the X axis and the duplicate Pd on the Y axis. R^2 is 0.99%.

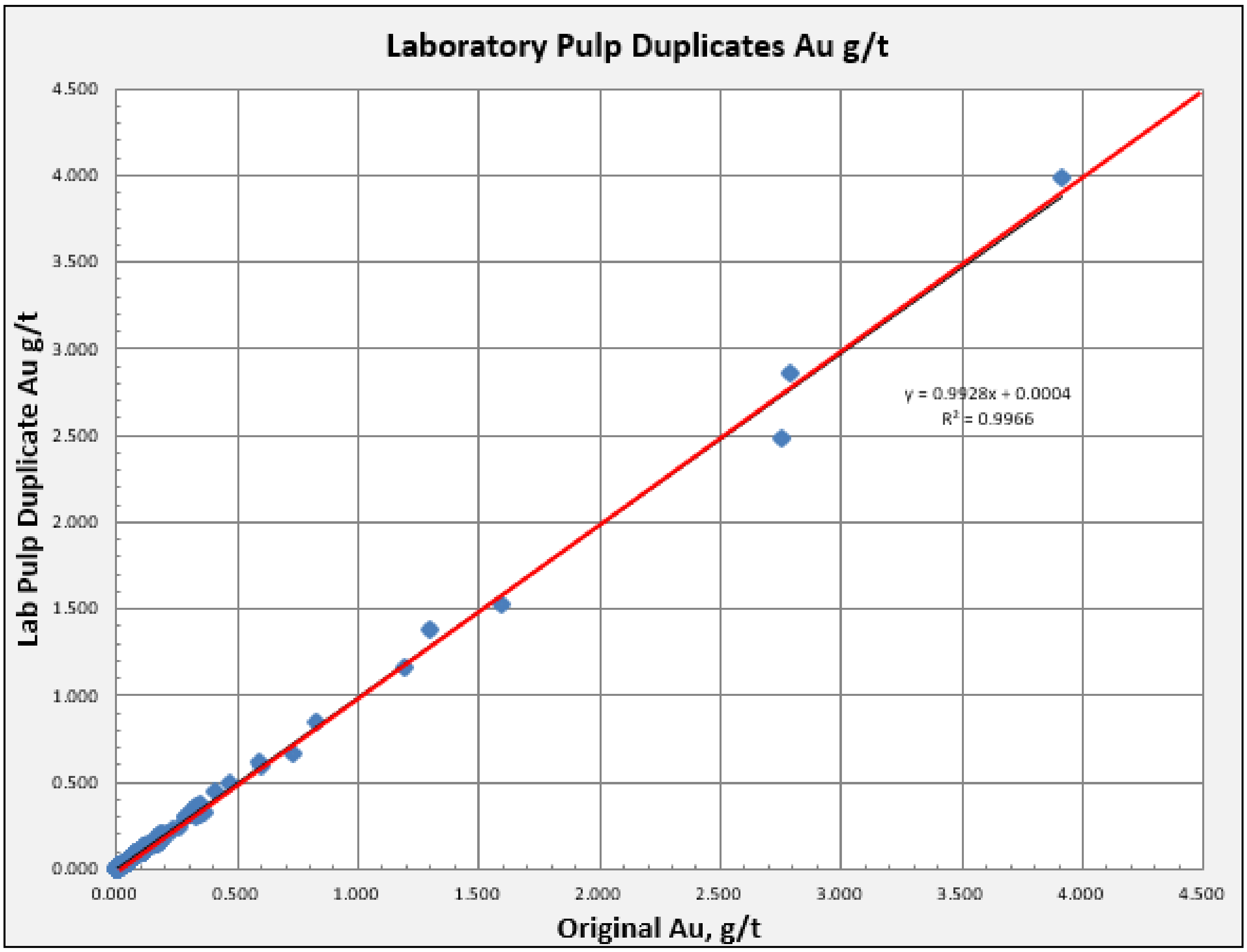
Figure 17 – A scatter plot of Pd showing the correlation between the original and laboratory pulp duplicate results for Bureau Veritas.



Analysis of Au for Pulp Duplicates

Figure 18 demonstrates the good correlation between the original Au on the X axis and the duplicate Au on the Y axis. R^2 is 0.99%.

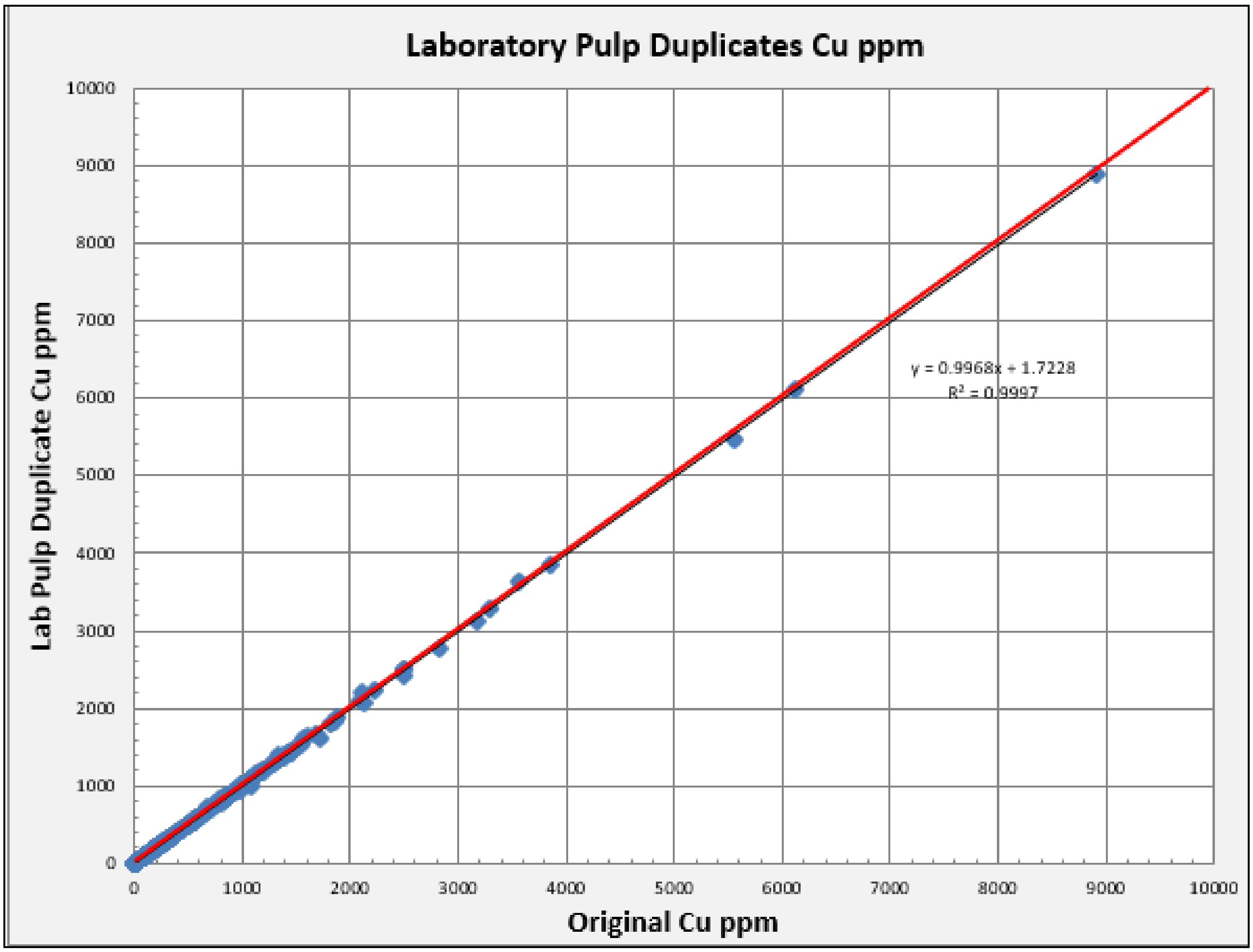
Figure 18 – A scatter plot of Au showing the correlation between the original and laboratory pulp duplicate results for Bureau Veritas.



Analysis of Cu for Pulp Duplicates

Figure 19 demonstrates the good correlation between the original Cu on the X axis and the duplicate Cu on the Y axis. R^2 is 0.99%.

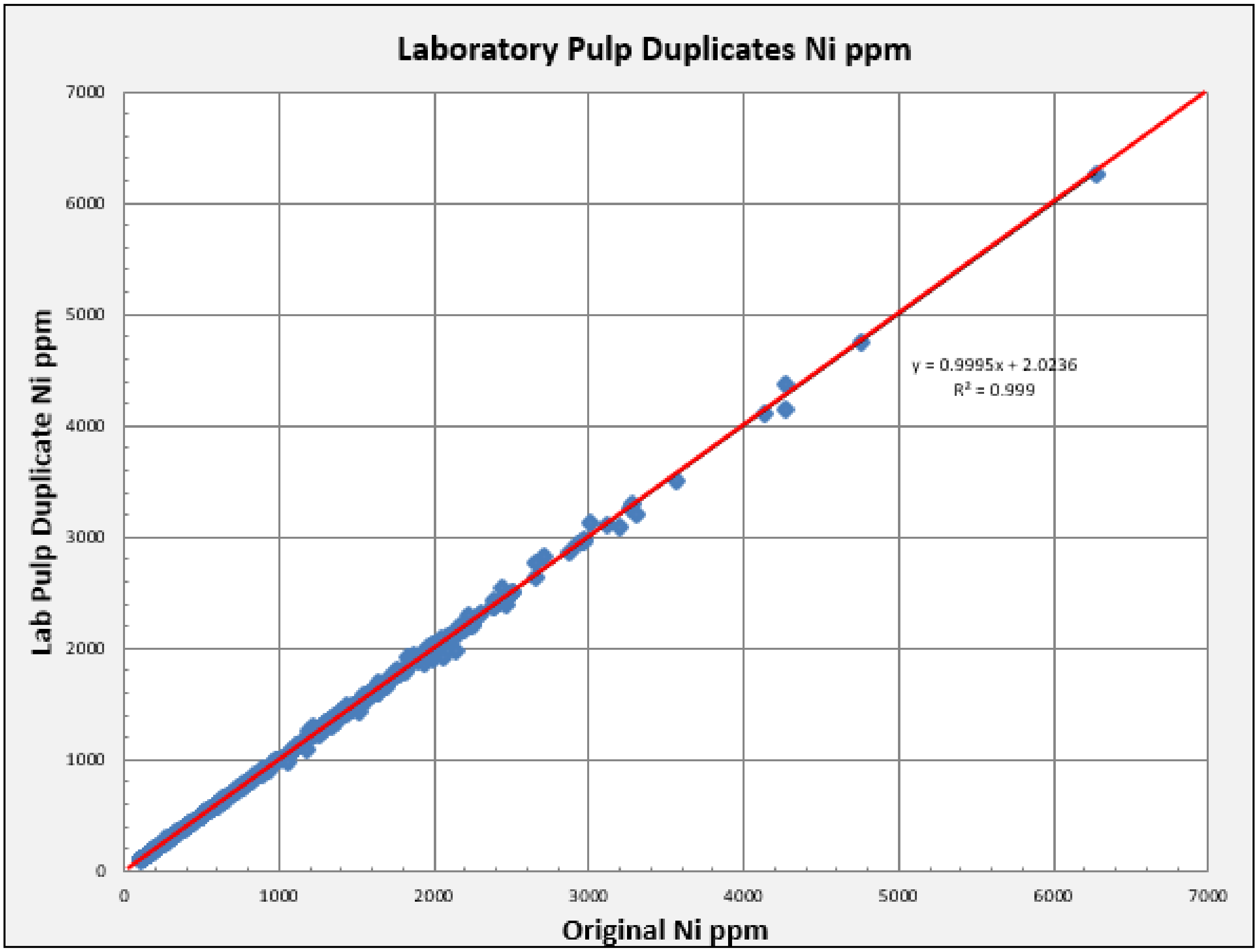
Figure 19 – A scatter plot of Cu showing the correlation between the original and laboratory pulp duplicate results for Bureau Veritas.



Analysis of Ni for Pulp Duplicates

Figure 20 demonstrates the good correlation between the original Ni on the X axis and the duplicate Ni on the Y axis. R^2 is 0.99%.

Figure 20 – A scatter plot of Ni showing the correlation between the original and laboratory pulp duplicate results for Bureau Veritas.



BUREAU VERITAS INSERTED STANDARDS

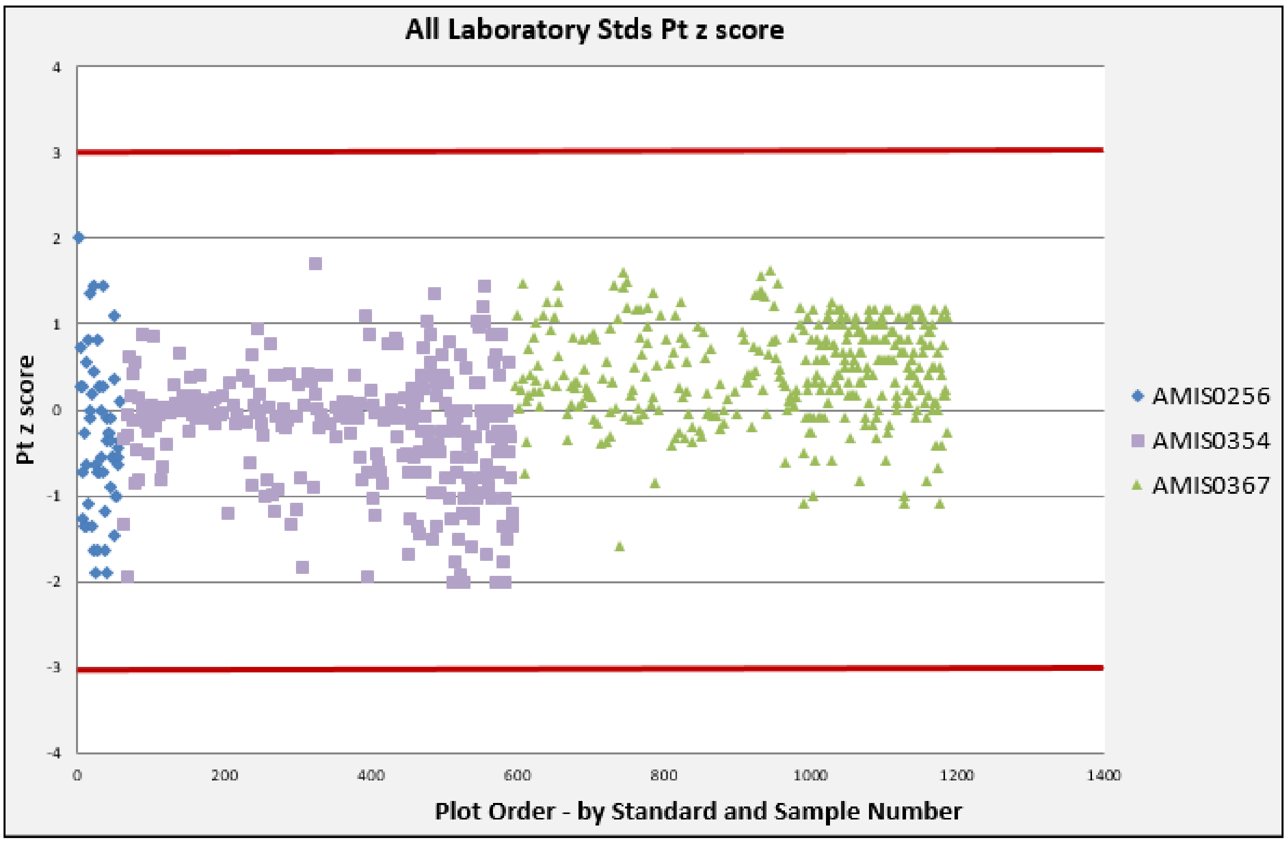
The laboratory inserts their own standards (CRM's) into the sample stream for their own quality control purposes. They are also included in the assay reports.

The value of each reported element is compared to the expected value for that element. The result is assigned a status of "pass" if the reported value is within 3 standard deviations from the expected value or “fail” if the result is outside 3 standard deviations from the expected value. A Z-score was calculated for each element of each sample for plotting purposes.

Analysis of Pt of Bureau Veritas Inserted Standards

Figure 21 is the Z-score graph for Pt. No results are outside acceptable limits of Z-scores <-3 or >3.

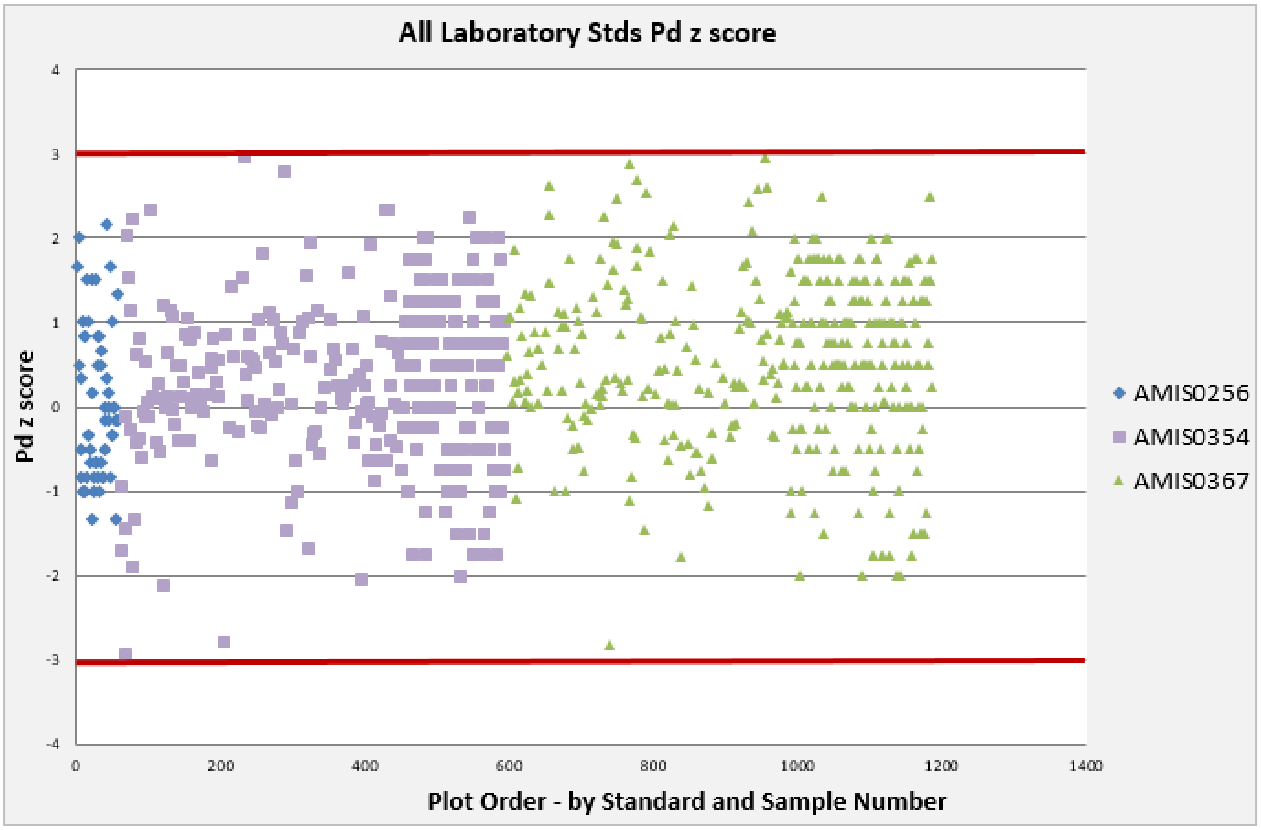
Figure 21 – Z-score graph for Pt Bureau Veritas inserted laboratory standards



Analysis of Pd of Bureau Veritas Inserted Standards

Figure 22 is the Z-score graph for Pd. No results are outside acceptable limits of Z-scores <-3 or >3.

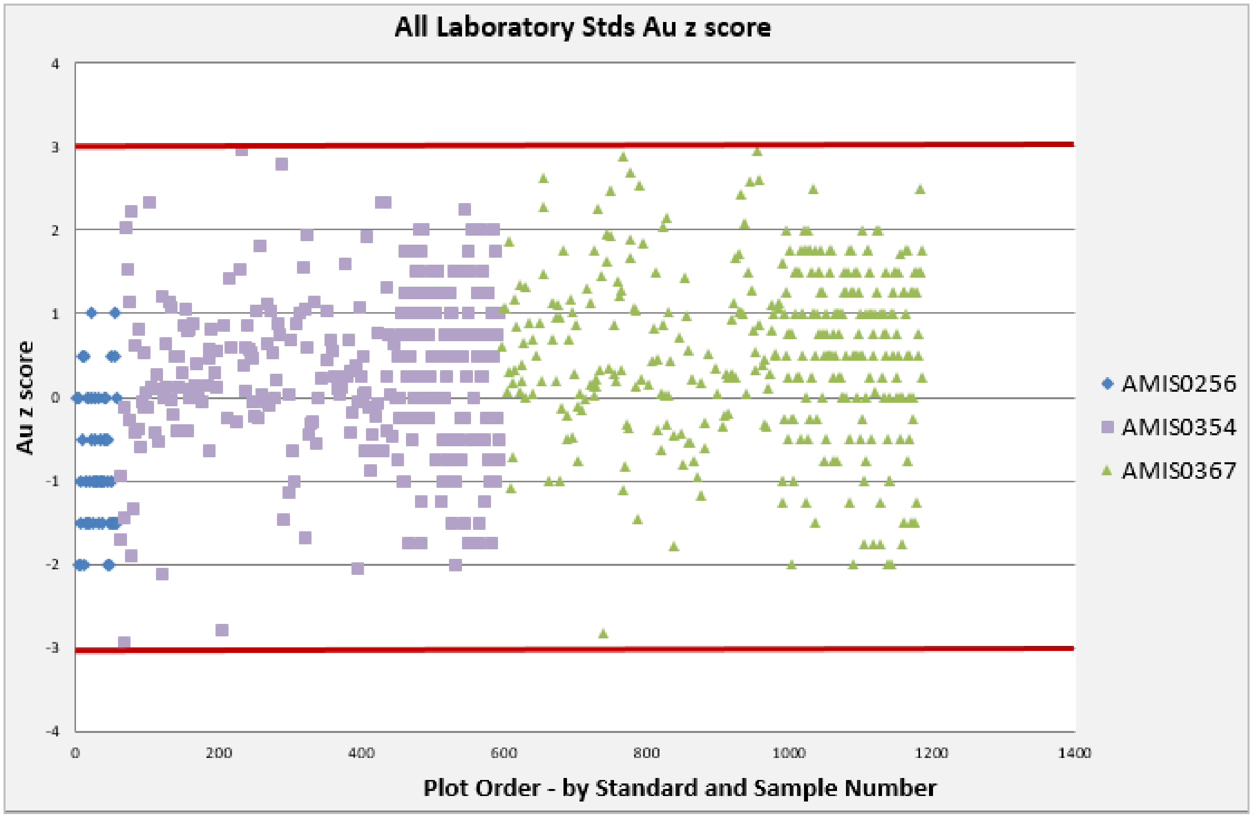
Figure 22 – Z-score graph for Pd Bureau Veritas inserted laboratory standards



Analysis of Au of Bureau Veritas Inserted Standards

Figure 23 is the Z-score graph for Au. No results are outside acceptable limits of Z-scores <-3 or >3.

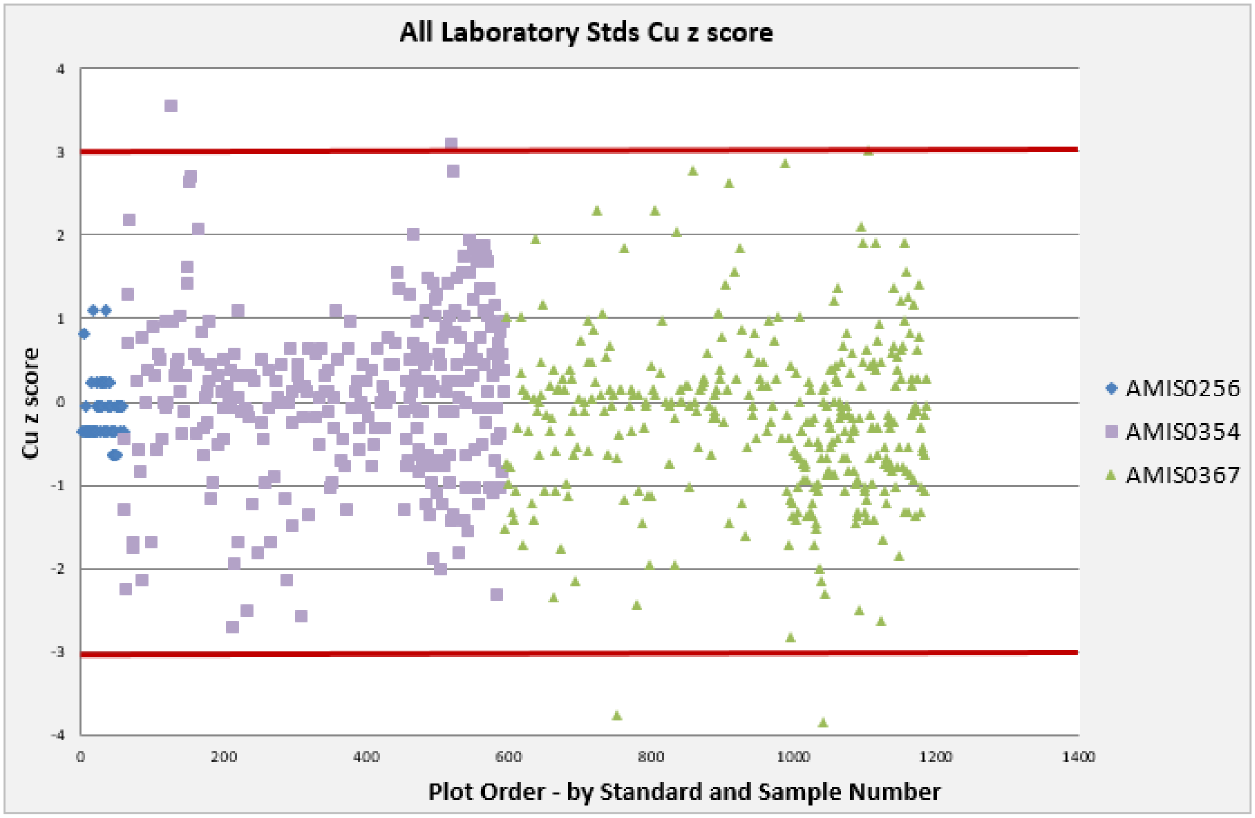
Figure 23 – Z-score graph for Au Bureau Veritas inserted laboratory standards



Analysis of Cu of Bureau Veritas Inserted Standards

Figure 24 is the Z-score graph for Cu. Most results are with acceptable limits of Z-scores <-3 or >3. Only two results for AMIS0354 are outside acceptable limits.

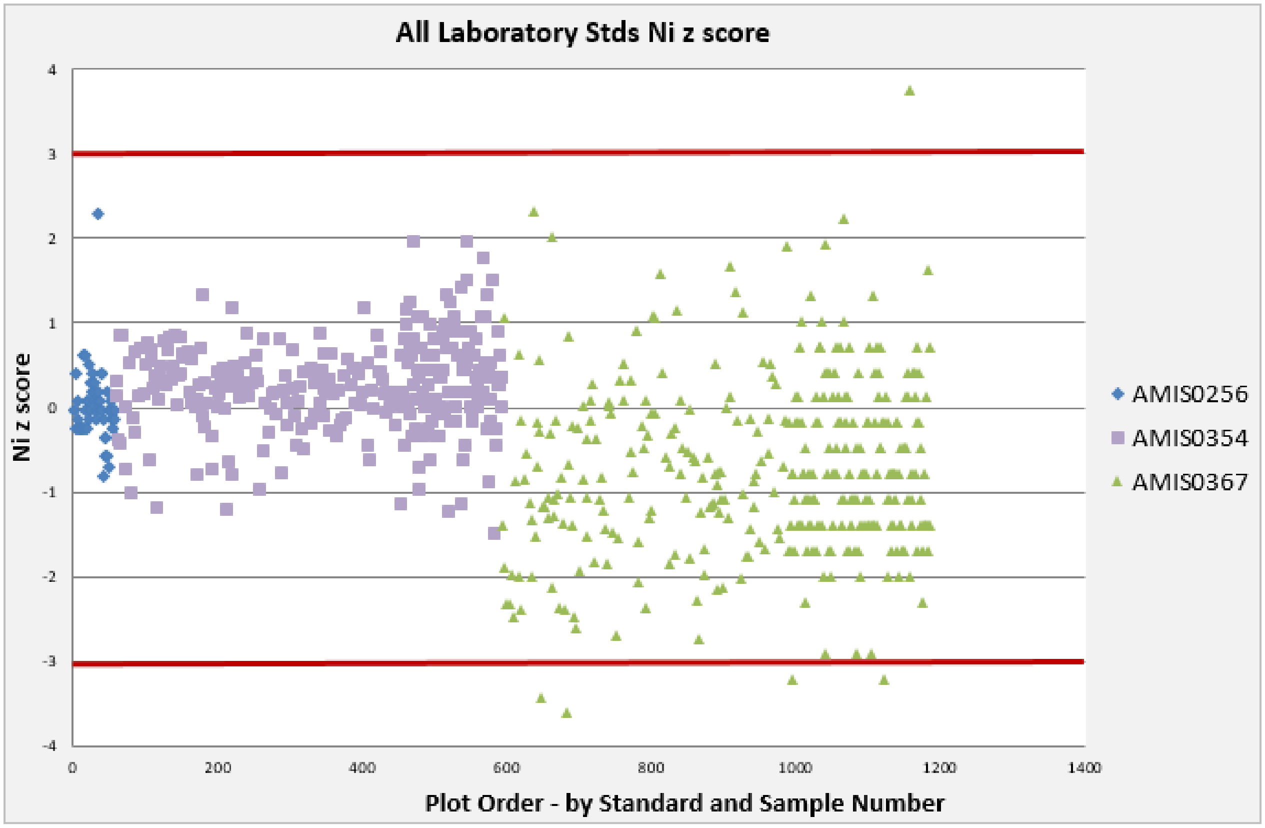
Figure 24 – Z-score graph for Cu Bureau Veritas inserted laboratory standards



Analysis of Ni of Bureau Veritas Inserted Standards

Figure 25 is the Z-score graph for Ni. Most results are either acceptable limits of Z-scores <-3 or >3. Only five results for AMIS0367 are outside acceptable limits.

Figure 25– Z-score graph for Ni Bureau Veritas inserted laboratory standards



BUREAU VERITAS INSERTED BLANKS

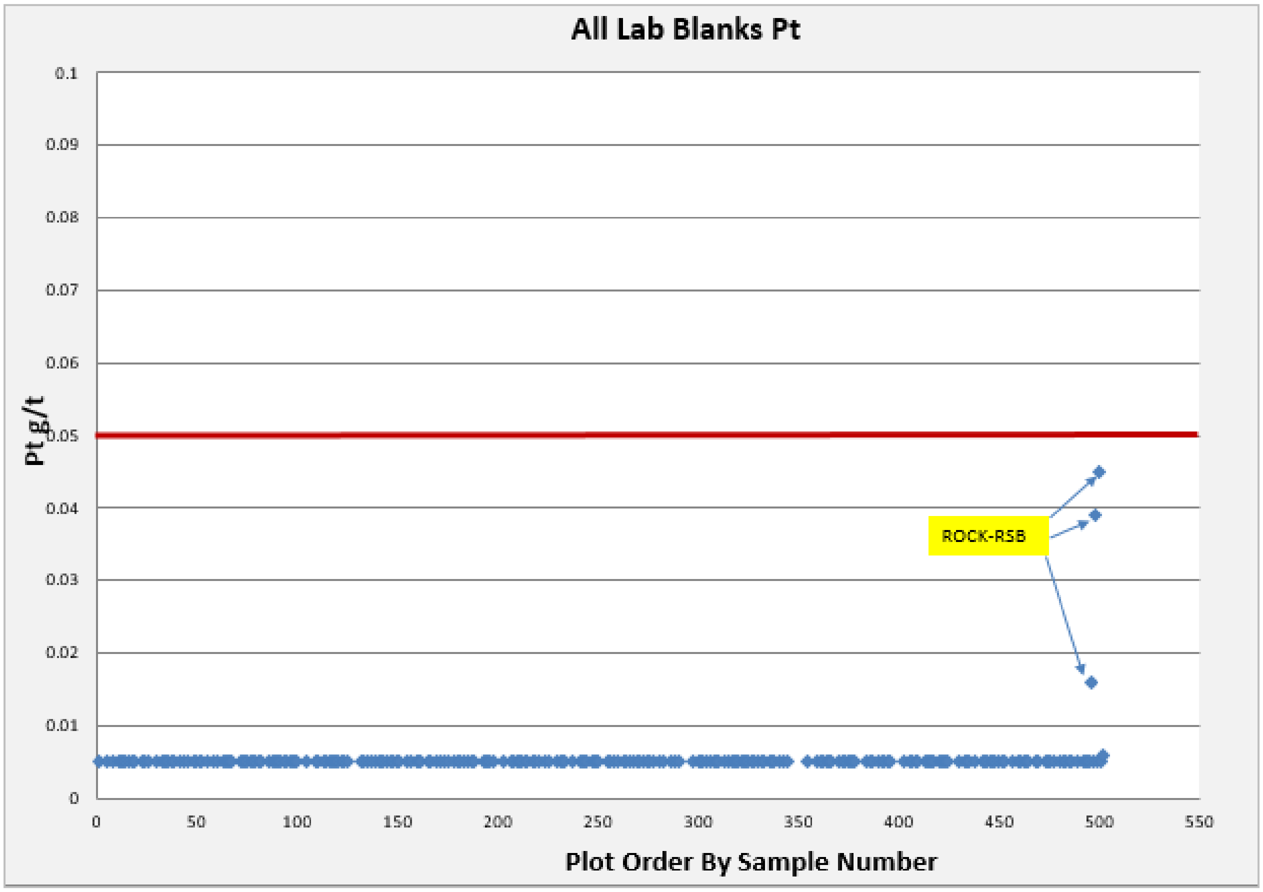
The laboratory inserts their own blanks into the sample stream for their own quality control purposes. They are also included in the assay reports. The plotted graphs have a warning limit, which is equal to ten times the blank background.

In general, the failure rate is deemed not to have a material effect on the data, with more than 90% of the assays falling within acceptable limits.

Analysis of Pt for Bureau Veritas Inserted Blanks

Figure 26 is the graph for Bureau Veritas inserted laboratory blanks for Pt. Rock-RSB is the only blank that shows results that are greater than the background. It is not a certified blank.

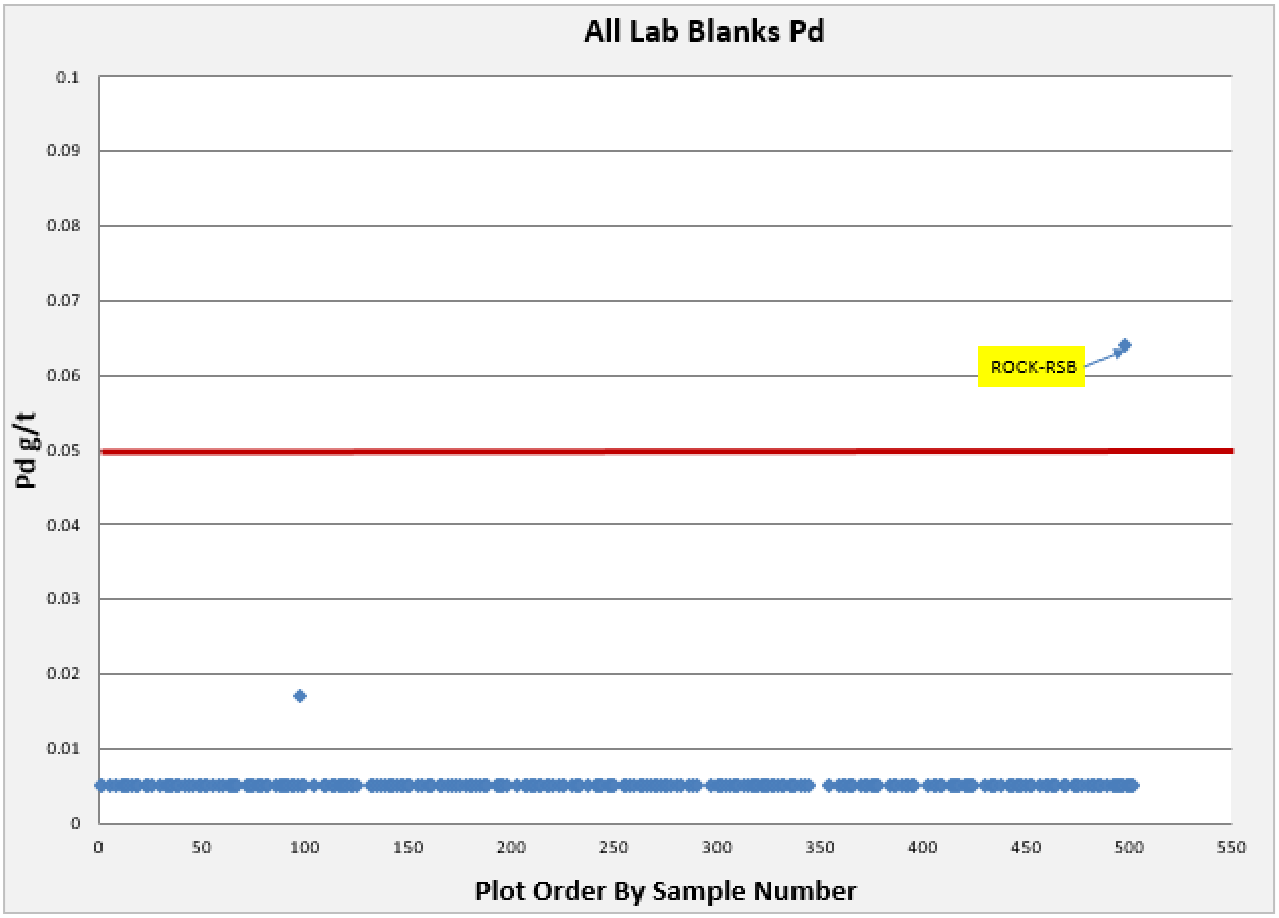
Figure 26 – The graph for inserted Bureau Veritas laboratory blanks for Pt.



Analysis of Pd for Bureau Veritas Inserted Blanks

Figure 27 is the graph for Bureau Veritas inserted laboratory blanks for Pd. Rock-RSB is the only blank that shows results that are greater than the background. It is not a certified blank.

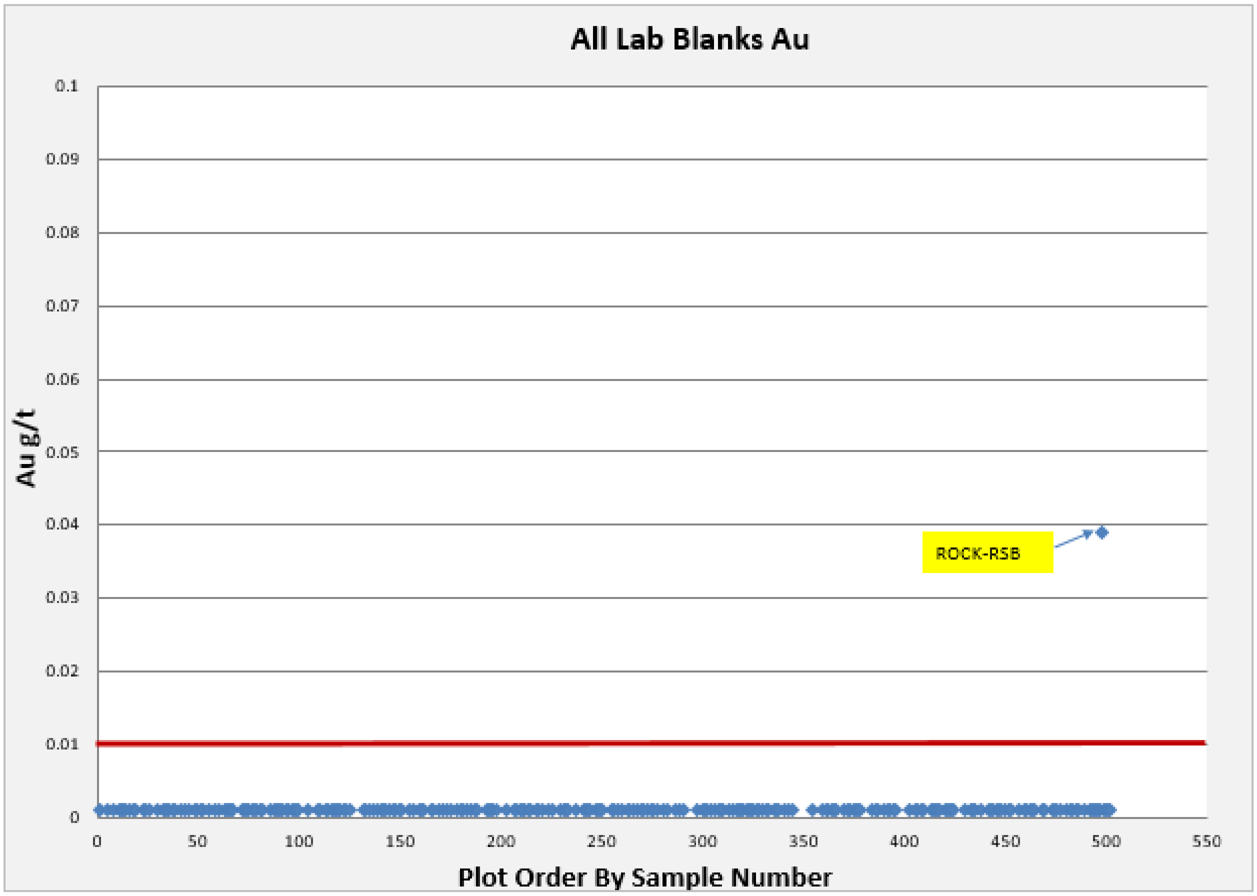
Figure 27 – The graph for inserted Bureau Veritas laboratory blanks for Pd.



Analysis of Au for Bureau Veritas Inserted Blanks

Figure 28 is the graph for Bureau Veritas inserted laboratory blanks for Au. Rock-RSB is the only blank that shows results that are greater than the background. It is not a certified blank.

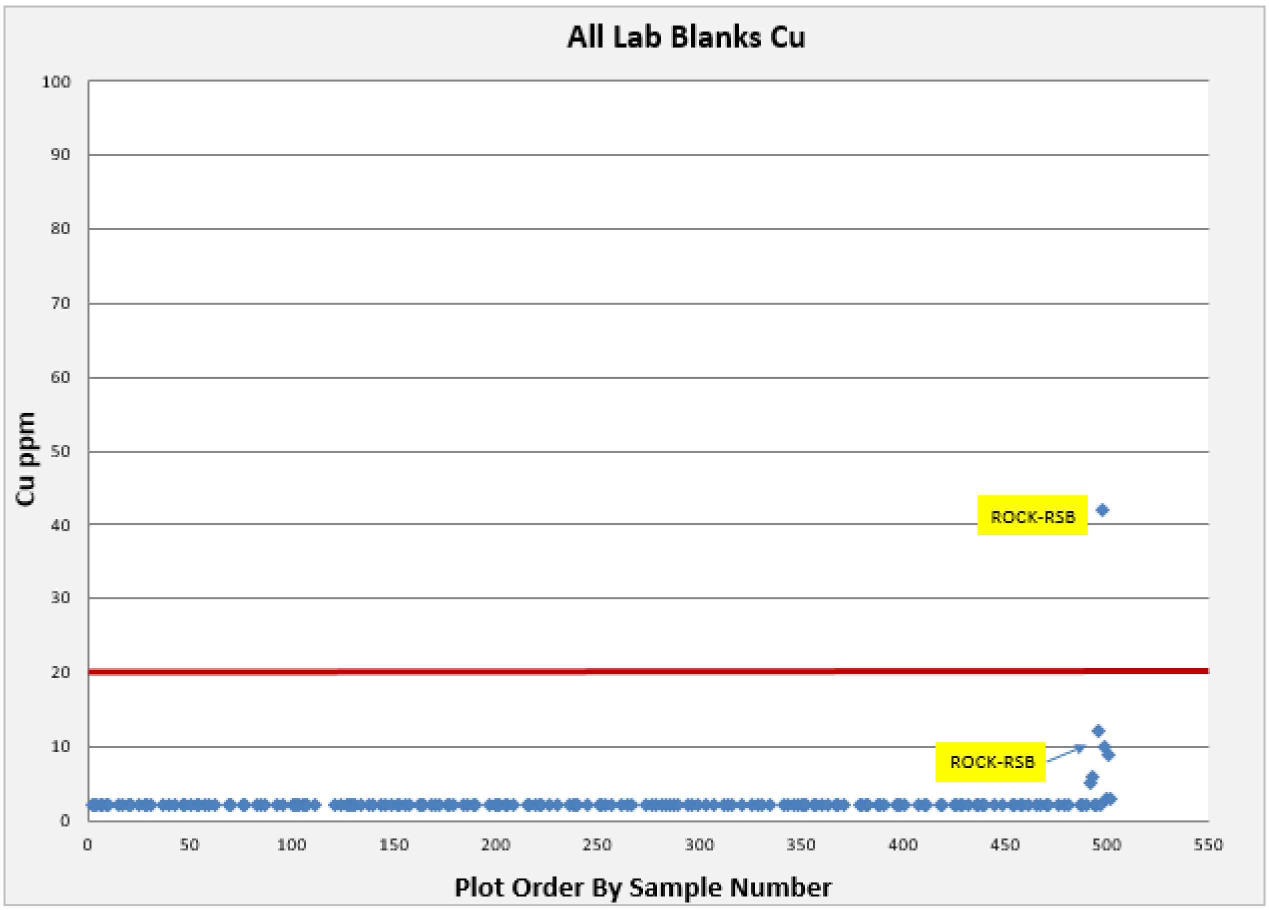
Figure 28 – The graph for inserted Bureau Veritas laboratory blanks for Au.



Analysis of Cu for Bureau Veritas Inserted Blanks

Figure 29 is the graph for Bureau Veritas inserted laboratory blanks for Cu. Rock-RSB is the only blank that shows results that are greater than the background. It is not a certified blank.

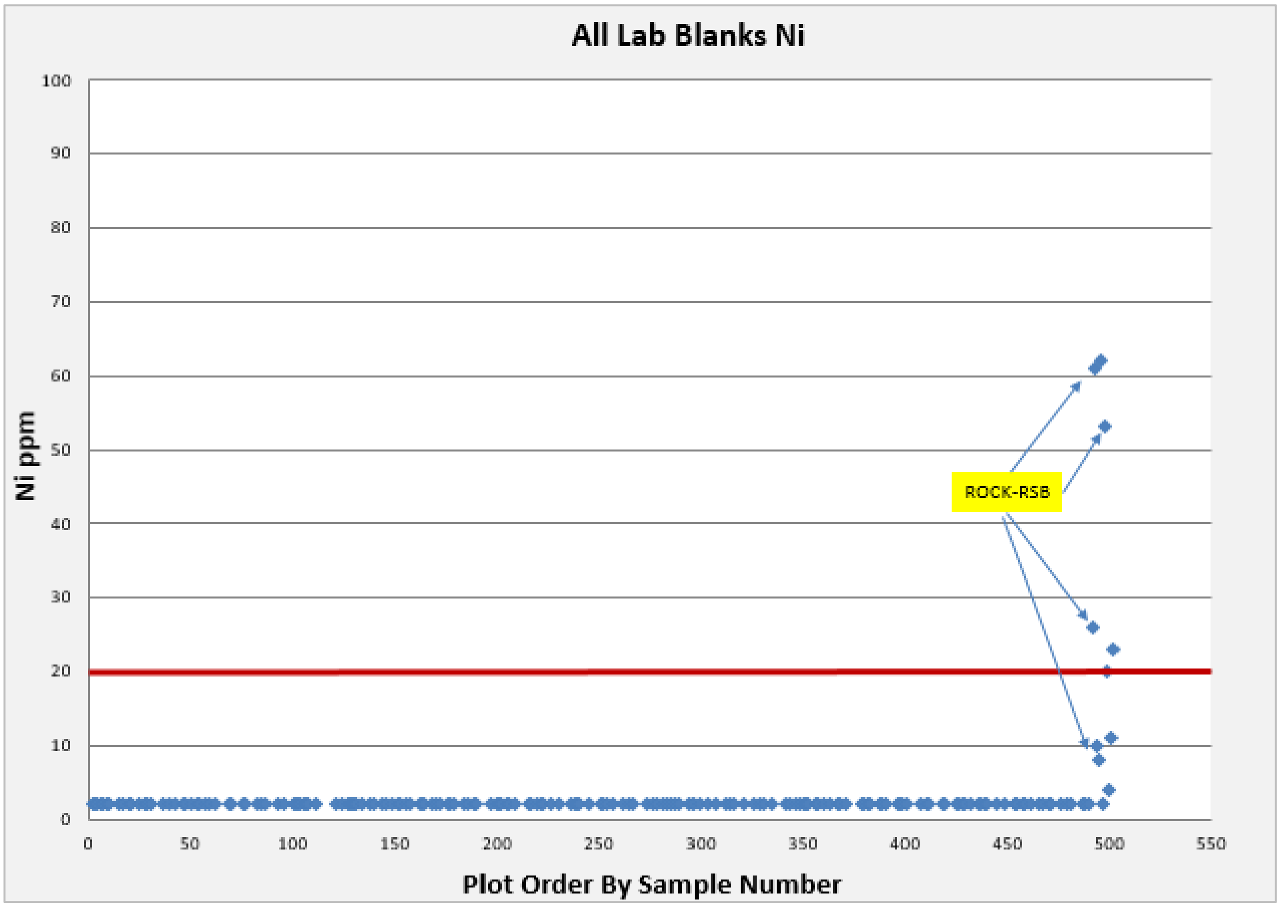
Figure 29 – The graph for inserted Bureau Veritas laboratory blanks for Cu.



Analysis of Ni for Bureau Veritas Inserted Blanks

Figure 30 is the graph for Bureau Veritas inserted laboratory blanks for Ni. Rock-RSB is the only blank that shows results that are greater than the background. It is not a certified blank.

Figure 30 – The graph for inserted Bureau Veritas laboratory blanks for Ni.



APPENDIX 4 : QA/QC OF FIELD DUPLICATES (CORE SPLITS)

The purpose of having field duplicates is to provide a check on possible sample over-selection. The field duplicate contains all levels of error – core or reverse-circulation cutting splitting, sample size reduction in the preparation laboratory, sub-sampling at the pulp and analytical error. Field coarse duplicates are not routinely used on this project due to the assemblage of the core and the different comparative results relative to the primary samples. The only explanation possible is that the core is heterogeneous, and mineralisation is not evenly distributed i.e. there is a nugget effect.

The core is split lengthwise during sampling. Half the core is sent as the primary sample for analysis. The other half of the core is retained to preserve the core record in terms of lithology, stratigraphy and mineralisation. Field duplicates are taken by bagging the other half (or quarter) of the core and assigning a new sample number which is then despatched to the same laboratory for analysis.

670 field duplicates were submitted for analysis.

Graphs showing the relative distribution of the elements (scatter plots with primary results on the X-axis and the corresponding field duplicate result on the Y-axis) as well Thompson-Howarth plots to show the precision obtained by re-analysis of the field duplicates were plotted for each element. The precision graphs show that field duplicates cannot be used to measure precision.

Table 1 lists the percentage of field duplicate pairs for each element that have a HARD less than or equal to 20%. Note that samples where results are less than 10 x detection limits were excluded as results close to detection limits show significant variability. Ideally at least 90% of the duplicate pairs should have a HARD within 20%.

Table 1 – Percentage of field duplicate pairs that have a HARD less than or equal to 20% for each element for samples sent to Set Point.

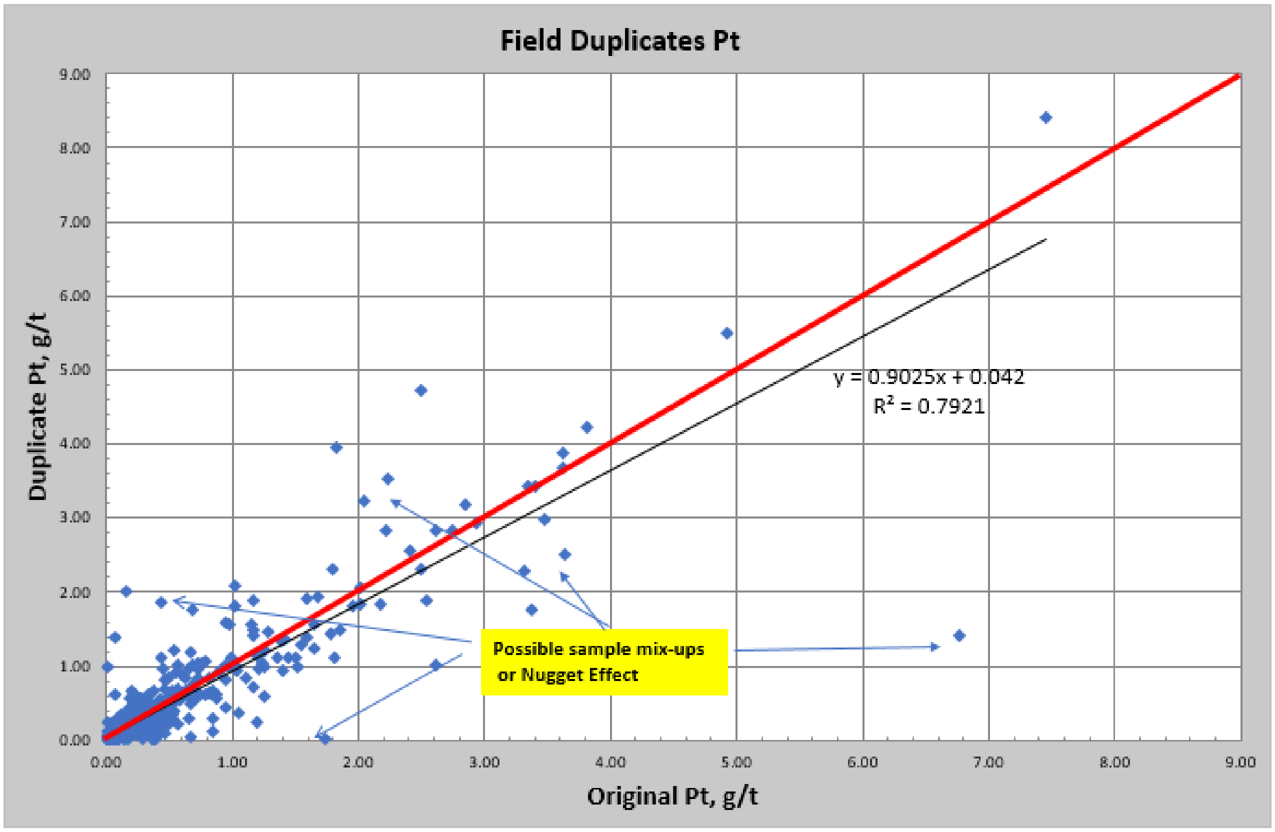
Element	Total samples > 10 X detection limit	Number of samples with HARD <=20%	Percentage with HARD within 20%
Au	186	137	74%
Pt	319	250	78%
Pd	396	326	82%
Cu	313	279	89%
Ni	332	312	93%

Table 1 shows that for Cu and Ni, there is acceptable precision as the percentage with HARD within 20% is close to or greater than 90%. The percentage of Au samples with HARD within 20% is 74% which is lower than for the other elements. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection. Pt and Pd have percentages of 78% and 82% respectively where HARD is within 20%. This indicates that Pt and Pd are also prone to a nugget effect but to a lesser degree than Au.

Analysis of Pt for Field Duplicates

Figure 1 is a scatter plot of the original Pt result on the X-axis and the field duplicate Pt on the Y-Axis.

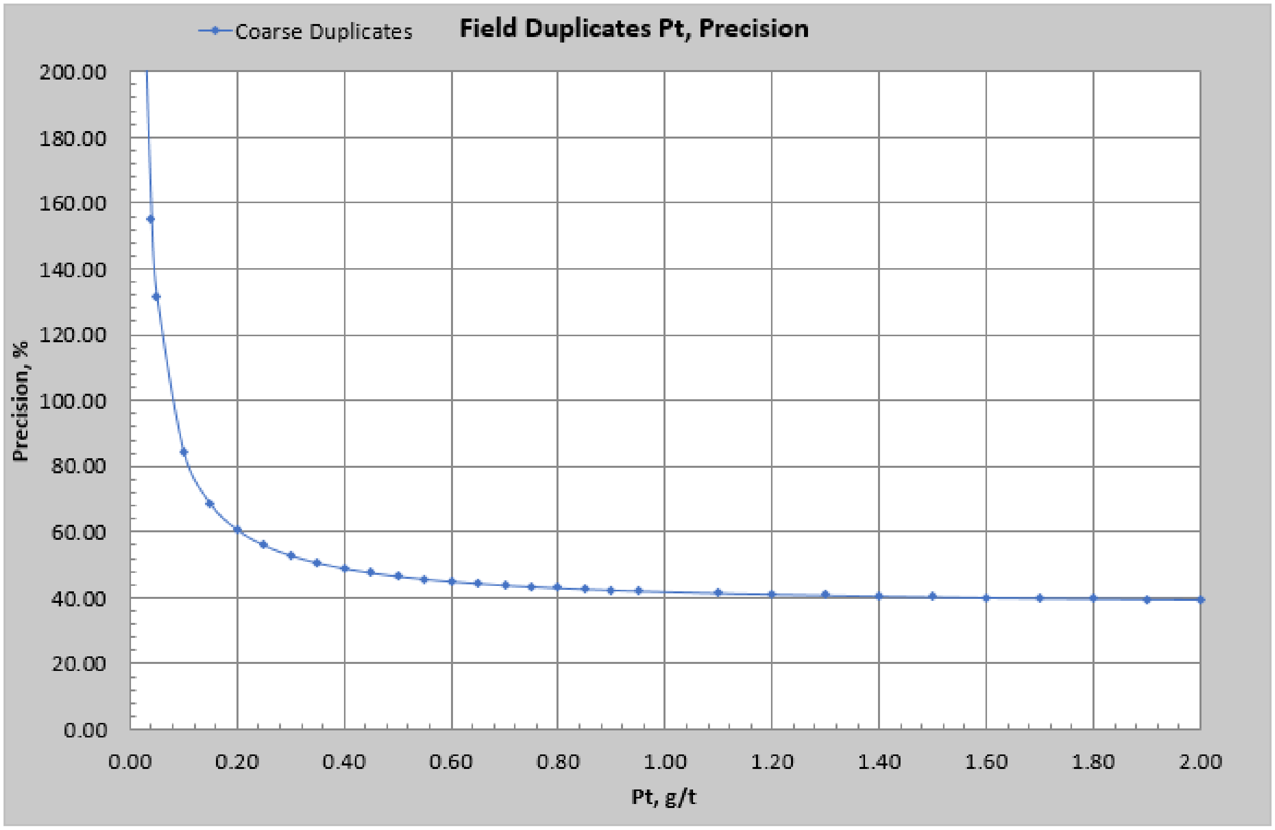
Figure 1 – Scatter plot of original Pt versus the field duplicate results.



There is a lot of scatter relative to the regression line. The high number of results that differ cannot be due to sample mix-ups alone. The only explanation is a nugget effect confirming that mineralisation in drillhole core is not evenly distributed. There is a poor correlation between original Pt results and paired field duplicate results and R^2 is 0.7921.

Figure 2 is a Thompson-Howarth precision plot for Pt.

Figure 2 – Thompson-Howarth precision plot for Pt.

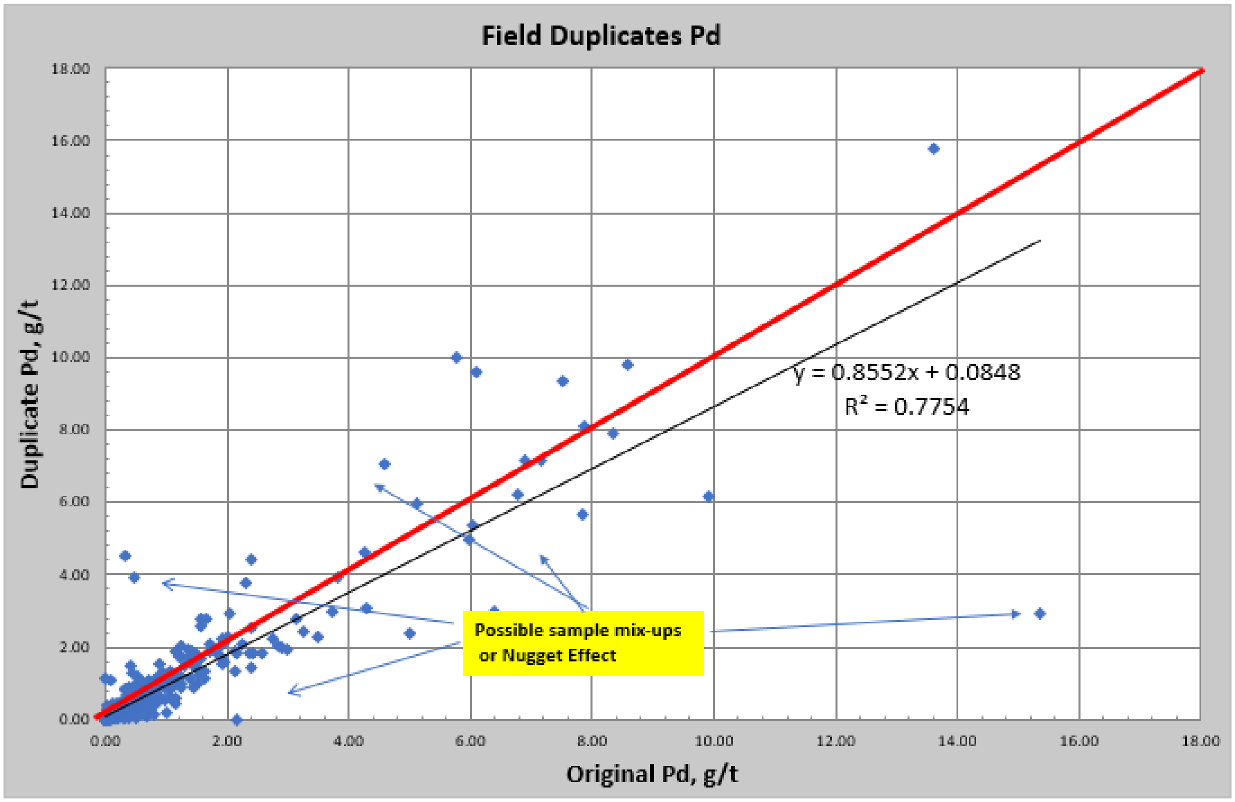


The norm is that precision should be less than or equal to 20% for field duplicates when compared to primary samples. The graph for Pt shows that the best precision possible for field duplicates relative to primary samples is 40% which is outside acceptable limits. The paired results are far from each other.

Analysis of Pd for Field Duplicates

Figure 3 is a scatter plot of the original Pd result on the X-axis and the field duplicate Pd on the Y-Axis.

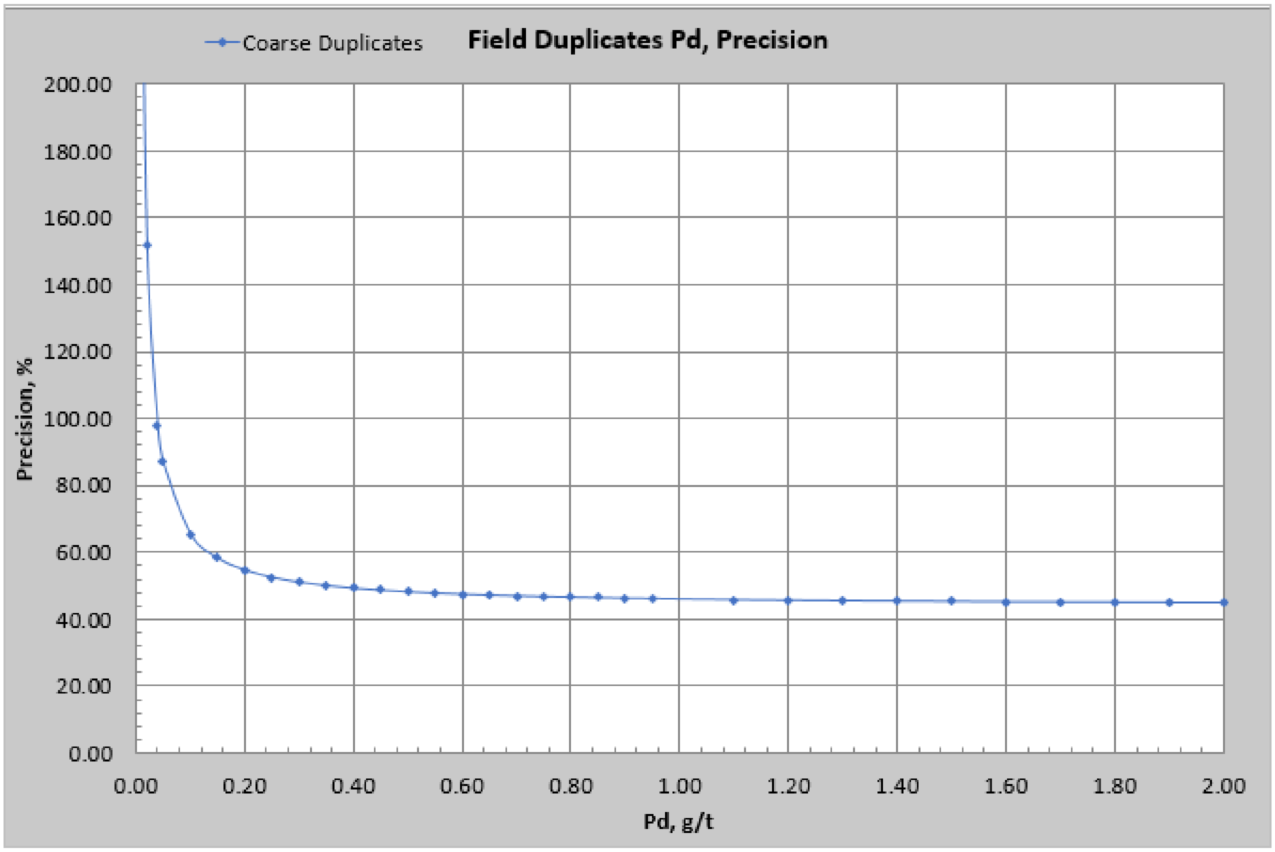
Figure 3 – Scatter plot of original Pd versus the field duplicate results.



There is a lot of scatter relative to the regression line. The high number of results that differ cannot be due to sample mix-ups alone. The only explanation is a nugget effect confirming that mineralisation in drillhole core is not evenly distributed. There is a poor correlation between original Pd results and paired field duplicate results and R^2 is 0.7754.

Figure 4 is a Thompson-Howarth precision plot for Pd.

Figure 4 – Thompson-Howarth precision plot for Pd.

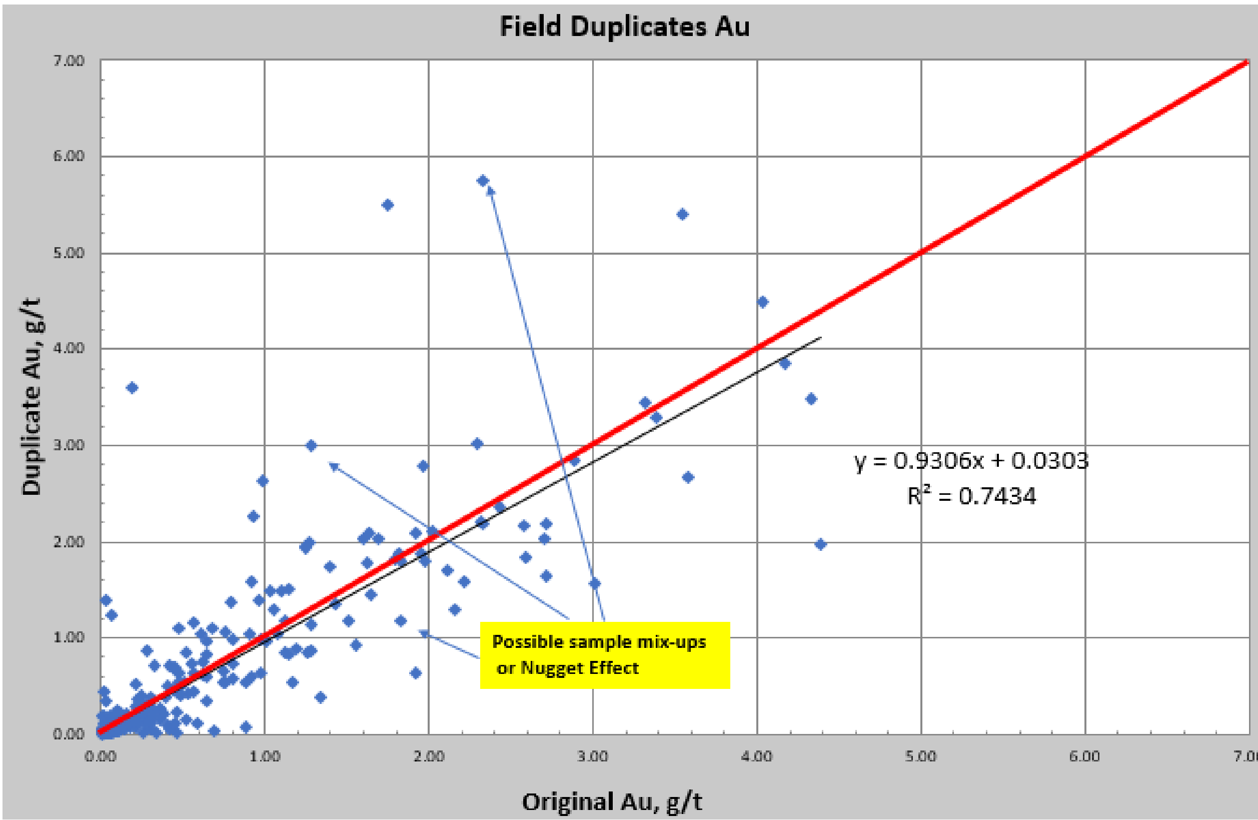


The norm is that precision should be less than or equal to 20% for field duplicates when compared to primary samples. The graph for Pd shows that the best precision possible for field duplicates relative to primary samples is greater than 40% which is outside acceptable limits. The paired results are far from each other.

Analysis of Au for Field Duplicates

Figure 5 is a scatter plot of the original Au result on the X-axis and the field duplicate Au on the Y-Axis.

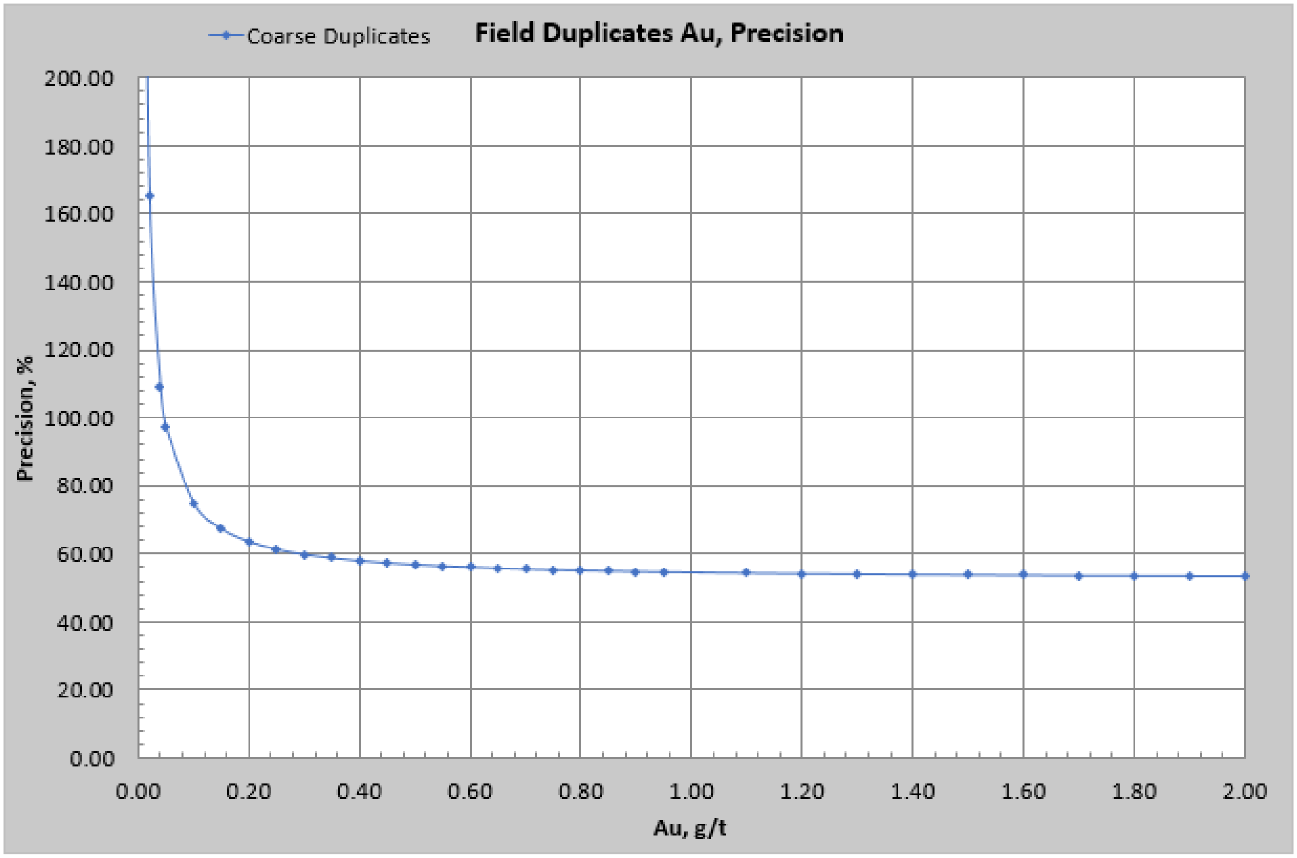
Figure 5 – Scatter plot of original Au versus the field duplicate results.



There is a lot of scatter relative to the regression line. The high number of results that differ cannot be due to sample mix-ups alone. The only explanation is a nugget effect confirming that mineralisation in drillhole core is not evenly distributed. There is a poor correlation between original Au results and paired field duplicate results and R^2 is 0.7434.

Figure 6 is a Thompson-Howarth precision plot for Au.

Figure 6 – Thompson-Howarth precision plot for Au.

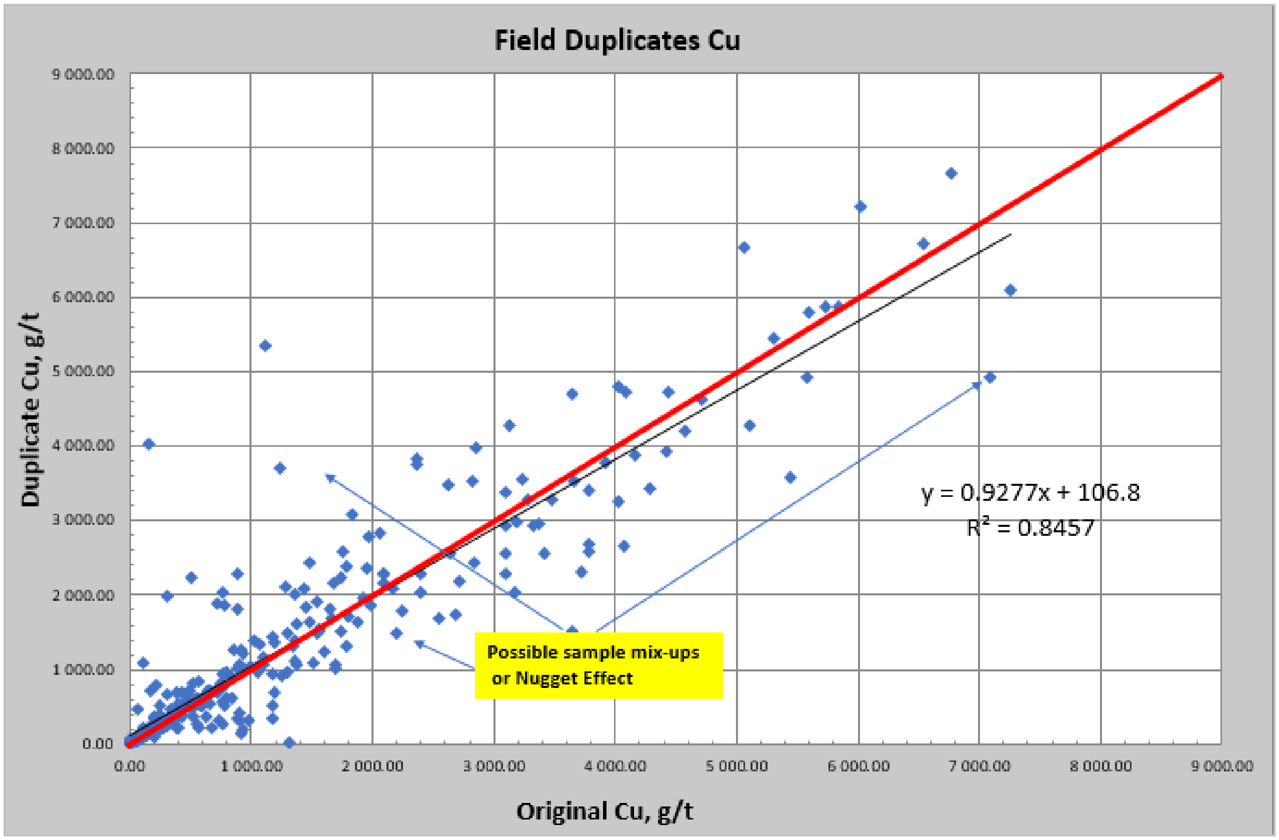


The norm is that precision should be less than or equal to 20% for field duplicates when compared to primary samples. The graph for Au shows that the best precision possible for field duplicates relative to primary samples is closer to 60% which is outside acceptable limits. The paired results are far from each other.

Analysis of Cu for Field Duplicates

Figure 7 is a scatter plot of the original Cu result on the X-axis and the field duplicate Cu on the Y-Axis.

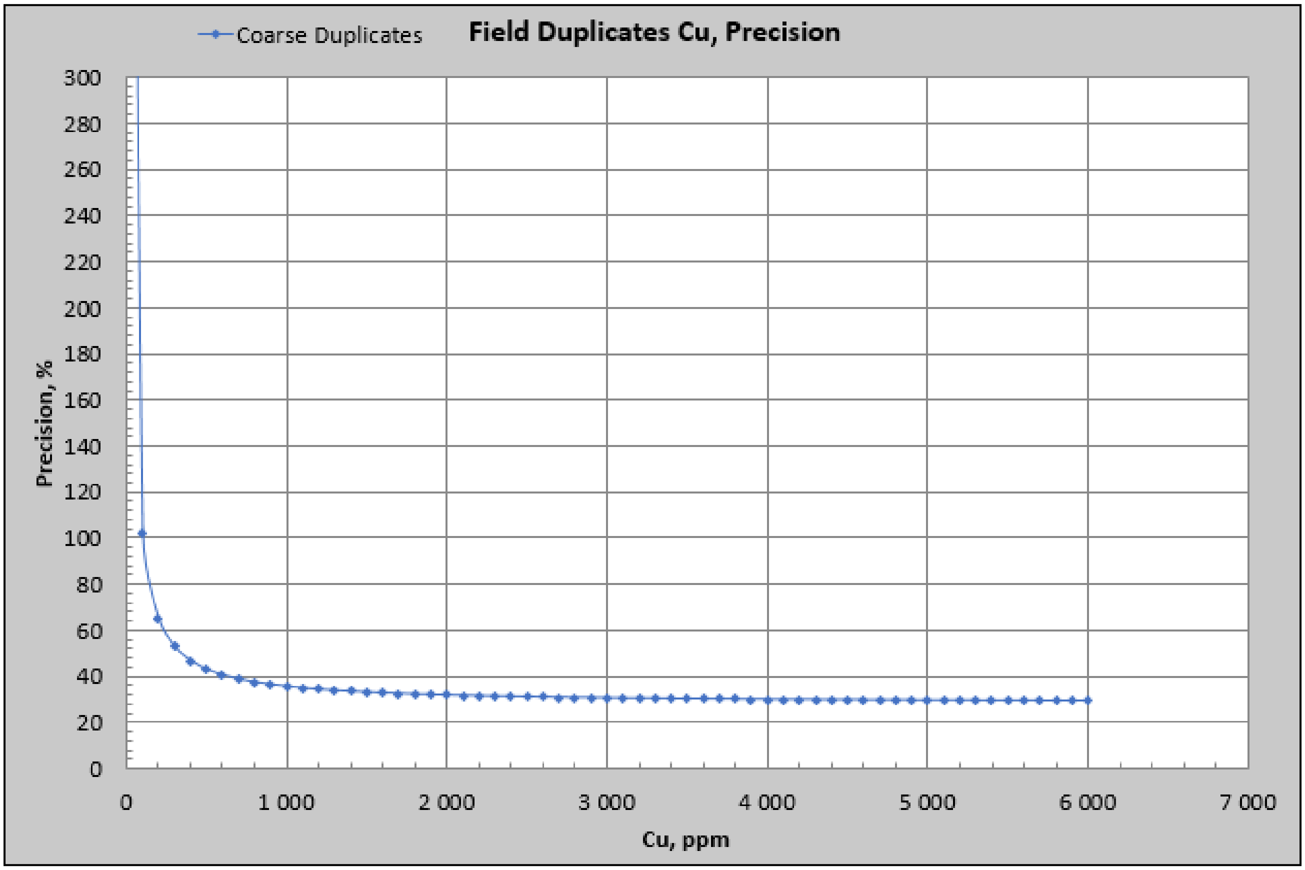
Figure 7 – Scatter plot of original Cu versus the field duplicate Cu results.



There is a lot of scatter relative to the regression line. The high number of results that differ cannot be due to sample mix-ups alone. The only explanation is a nugget effect confirming that mineralisation in drillhole core is not evenly distributed. There is a poor correlation between original Cu results and paired field duplicate results and R^2 is 0.8457.

Figure 8 is a Thompson-Howarth precision plot for Cu.

Figure 8 – Thompson-Howarth precision plot for Cu.

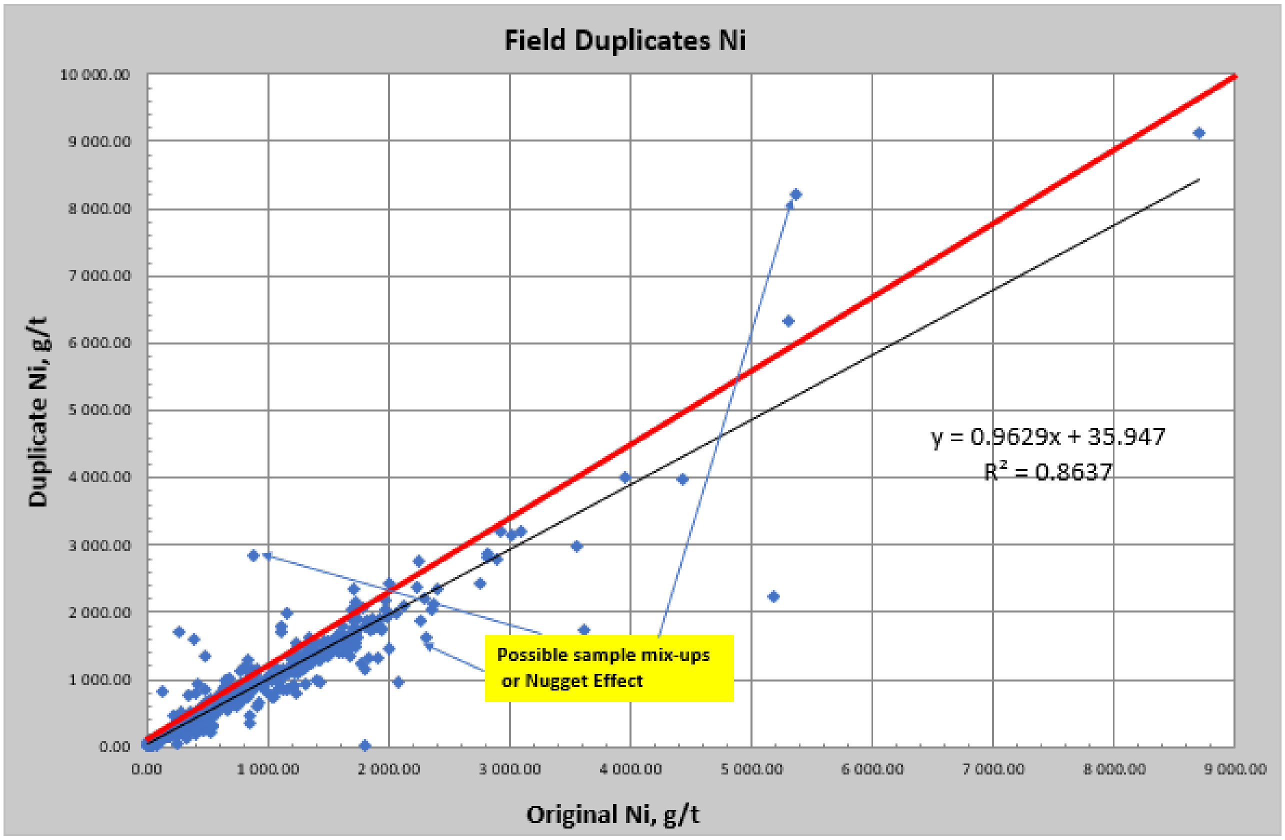


The norm is that precision should be less than or equal to 20% for field duplicates when compared to primary samples. The graph for Cu shows that the best precision possible for field duplicates relative to primary samples is closer to 30% which is outside acceptable limits. The paired results are far from each other.

Analysis of Ni for Field Duplicates

Figure 9 is a scatter plot of the original Ni result on the X-axis and the field duplicate Ni on the Y-Axis.

Figure 9 – Scatter plot of original Ni versus the field duplicate results.



There is a lot of scatter relative to the regression line. The high number of results that differ cannot be due to sample mix-ups alone. The only explanation is a nugget effect confirming that mineralisation in drillhole core is not evenly distributed. There is a poor correlation between original Ni results and paired field duplicate results and R^2 is 0.8637.

APPENDIX 5: QA/QC OF FIELD PULP DUPLICATES

Table 1 lists the percentage of field pulp duplicate pairs for each element that have a HARD less than or equal to 10%. Note that samples where results are less than 10 x detection limits were excluded as results close to detection limits show significant variability. Ideally at least 90% of the duplicate pairs should have a HARD within 10%.

Table 1 – Percentage of field pulp duplicate pairs that have a HARD less than or equal to 10% for each element for samples sent to Set Point.

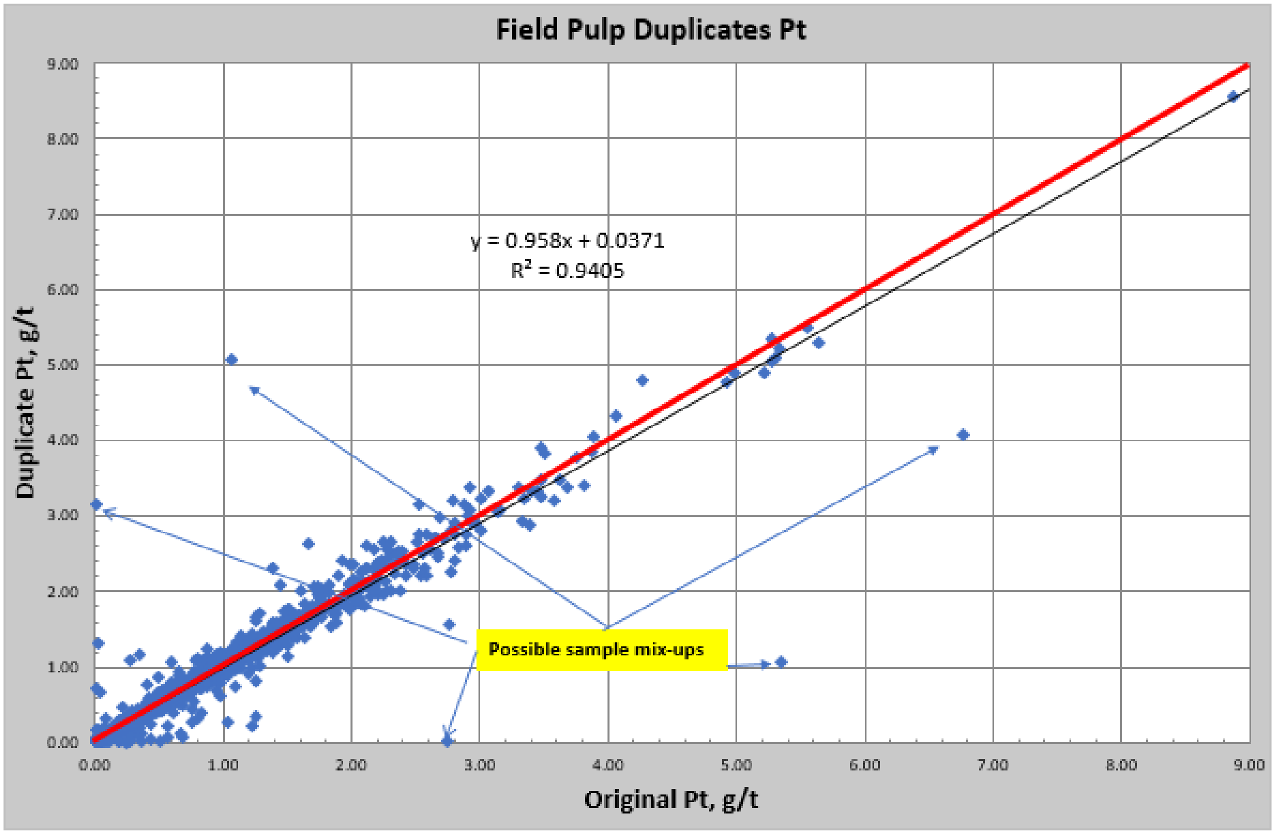
Element	Total samples > 10 X detection limit	Number of samples with HARD <=10%	Percentage with HARD within 10%
Au	319	261	81.81%
Pt	1476	1396	94.57%
Pd	1578	1520	96.32%
Cu	423	391	92.43%
Ni	570	535	93.85%

Table 1 shows that for all the elements except Au, there is acceptable precision as the percentage with HARD within 10% greater than 90%. The percentage of Au samples with HARD within 10% is 81.81% which is lower than for the other elements. Au is subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection.

Analysis of Pt for Field Pulp Duplicates

Figure 1 is a scatter plot of the original Pt result on the X-axis and the field pulp duplicate Pt on the Y-Axis.

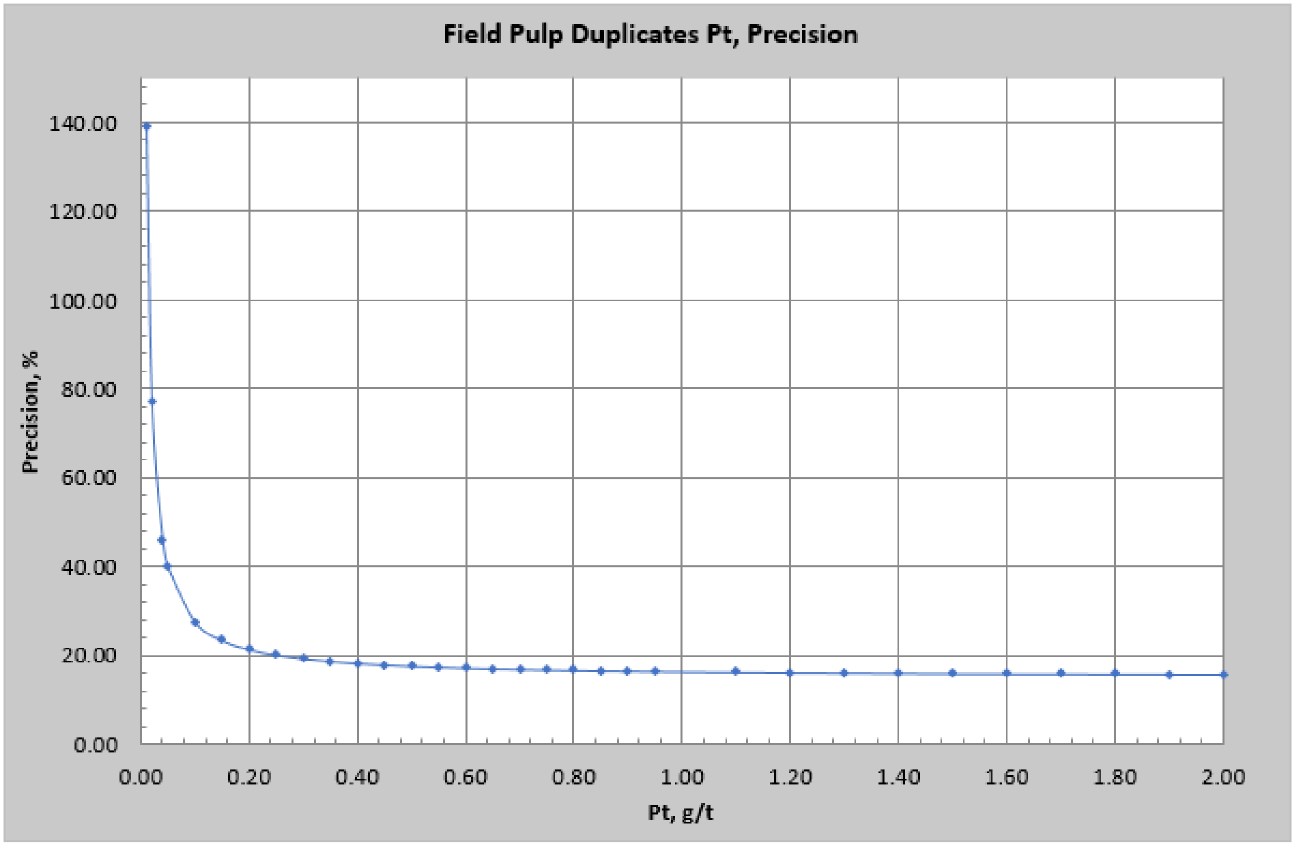
Figure 1 – Scatter plot of original Pt versus the field pulp duplicate Pt results.



There is some scatter relative to the regression line. This may be due to sample mix-ups. There is a good correlation between original Pt results and paired field pulp duplicate results and R^2 is 0.9405.

Figure 2 is a Thompson-Howarth precision plot for Pt.

Figure 2 – Thompson-Howarth precision plot for Pt.

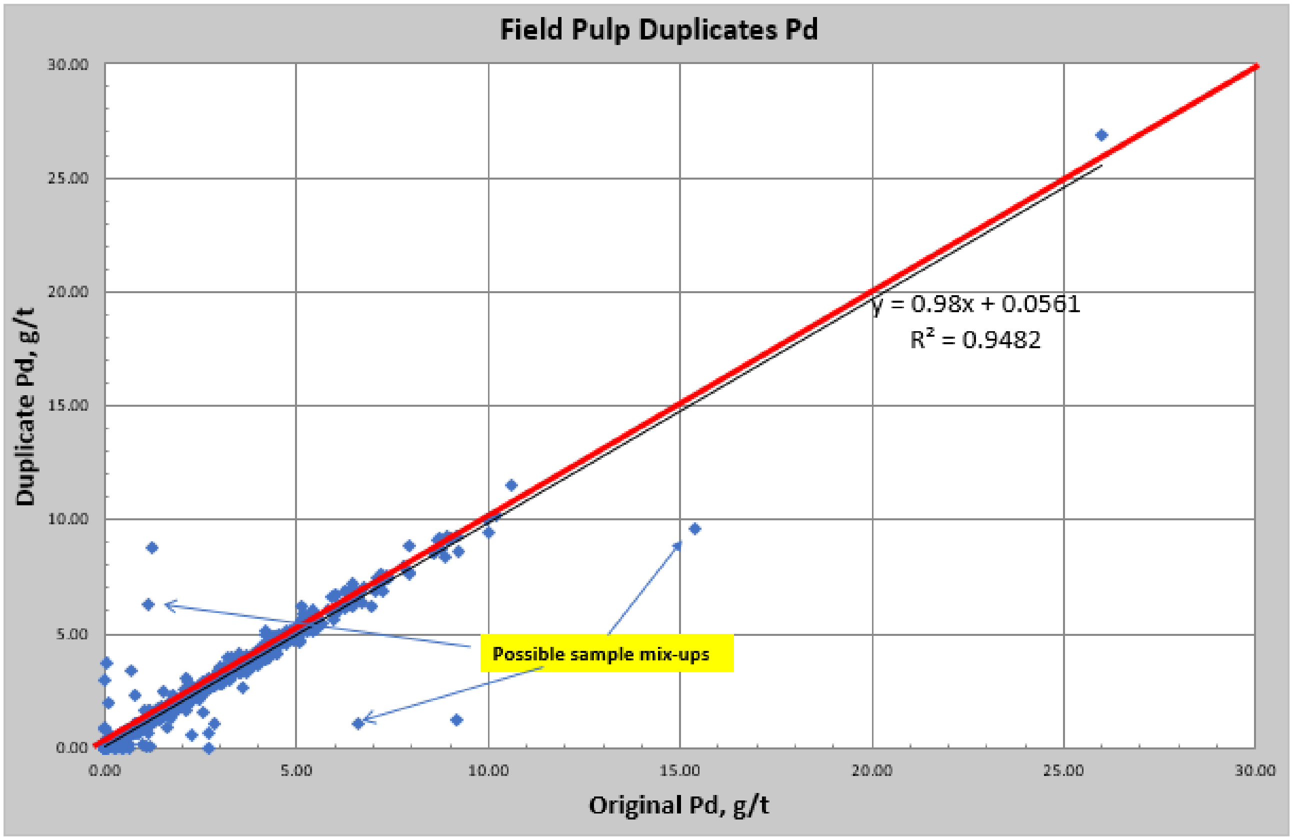


The norm is that precision should be less than or equal to 10% for field pulp duplicates when compared to primary samples. The graph for Pt shows that the best precision possible for field pulp duplicates relative to primary samples is less than 20% but more than 10% which is outside acceptable limits. The paired results are far from each other. This better precision when compared to duplicates split from the core itself shows that field pulp duplicates are homogenised. The sample selection is different. However, there is something that still results in variability between the results for the original sample and the pulp duplicate. Further research would assist in investigating the causes of the variability. There is no issue with the laboratory precision as proven results for laboratory coarse reject duplicates and laboratory pulp duplicates do fall within acceptable limits of precision and variability. There may be a possibility that the results for the ore body are not normally distributed. This would affect the precision estimates on the graph.

Analysis of Pd for Field Pulp Duplicates

Figure 3 is a scatter plot of the original Pd result on the X-axis and the field pulp duplicate Pd on the Y-Axis.

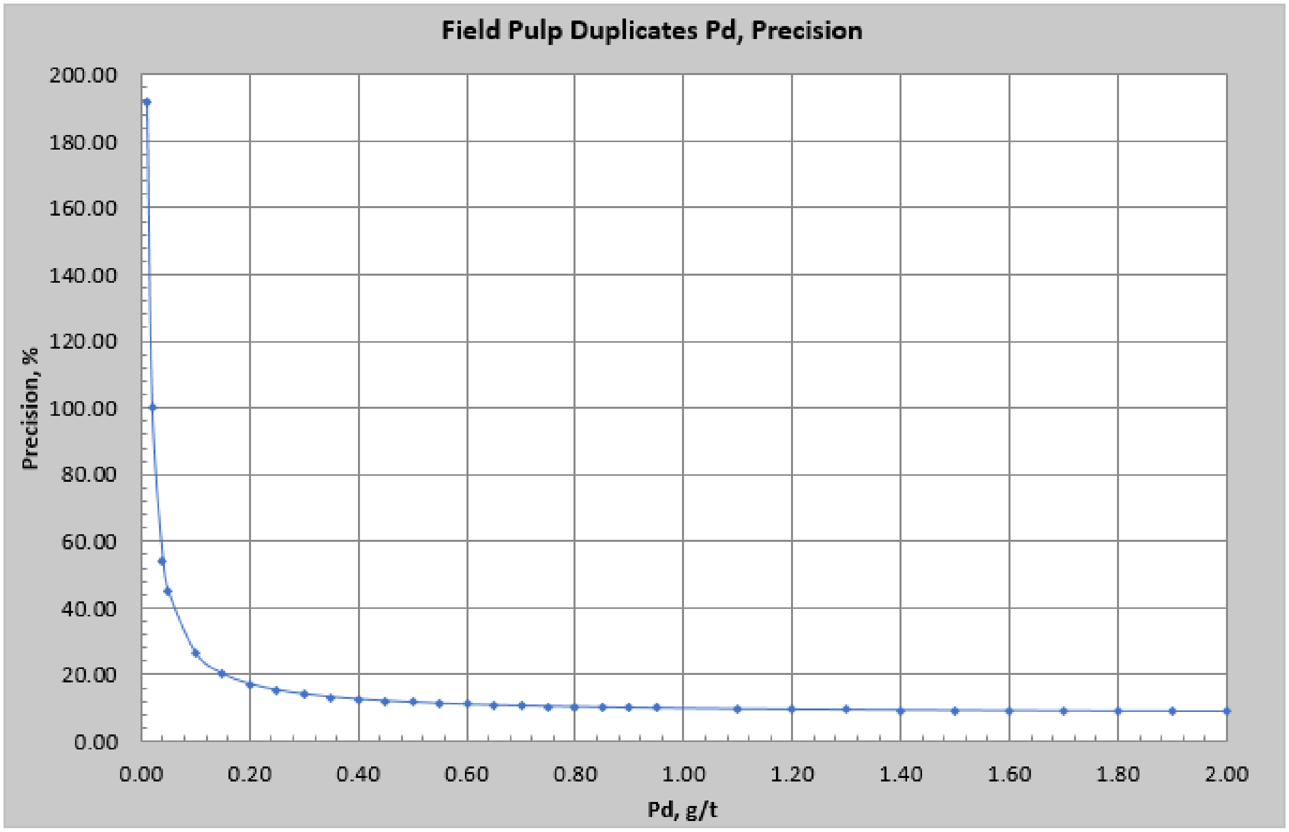
Figure 3 – Scatter plot of original Pd versus the field pulp duplicate Pd results.



There is some scatter relative to the regression line. The number of results that differ may be due to sample mix-ups. There is a good correlation between original Pd results and paired field pulp duplicate results and R^2 is 0.9482.

Figure 4 is a Thompson-Howarth precision plot for Pd.

Figure 4 – Thompson-Howarth precision plot for Pd.

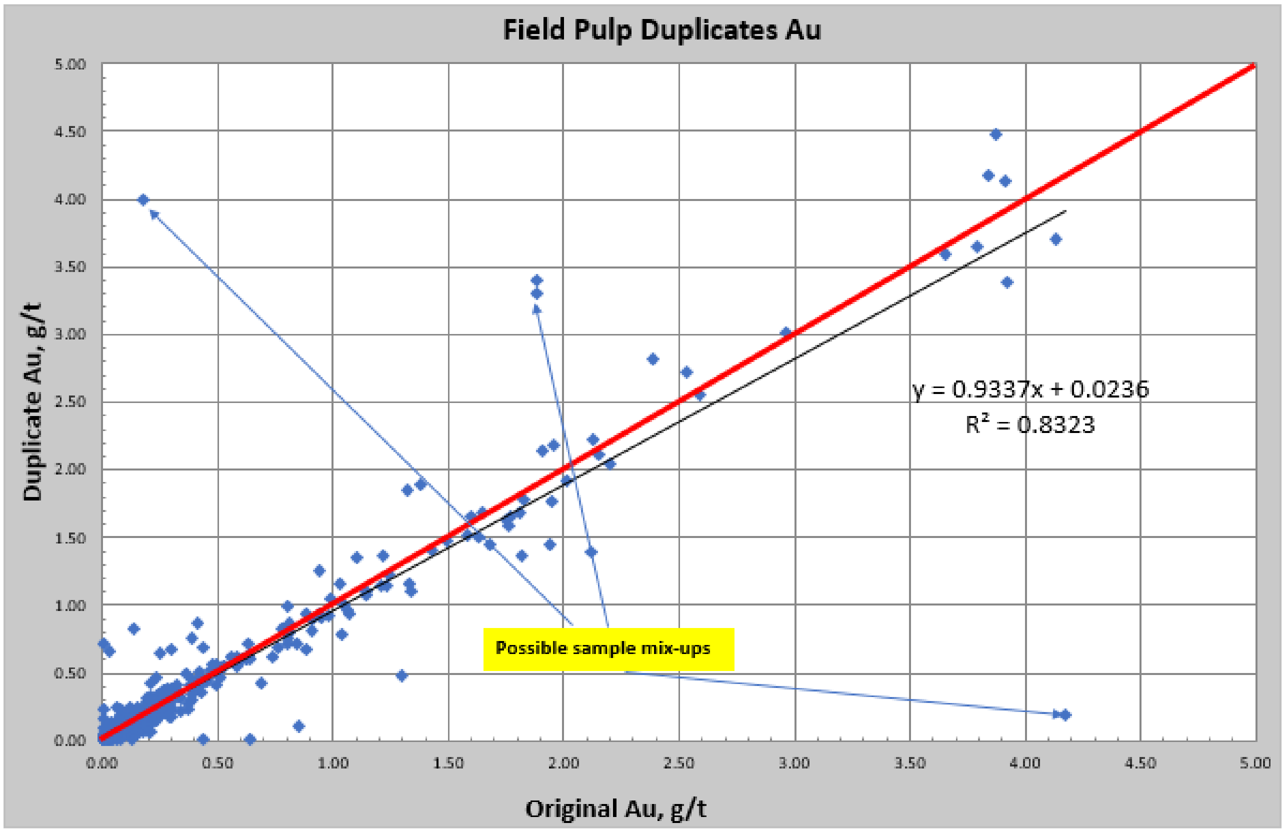


The norm is that precision should be less than or equal to 10% for field pulp duplicates when compared to primary samples. The graph for Pd shows that the best precision possible for field pulp duplicates relative to primary samples is approximately 10% which is within acceptable limits. The paired results are close to each other. This better precision when compared to duplicates split from the core itself shows that field pulp duplicates are homogenised. The sample selection is the same for both the primary sample and the field pulp duplicate and therefore precision can be measured. There is no issue with the laboratory precision.

Analysis of Au for Field Pulp Duplicates

Figure 5 is a scatter plot of the original Au result on the X-axis and the field pulp duplicate Au on the Y-Axis.

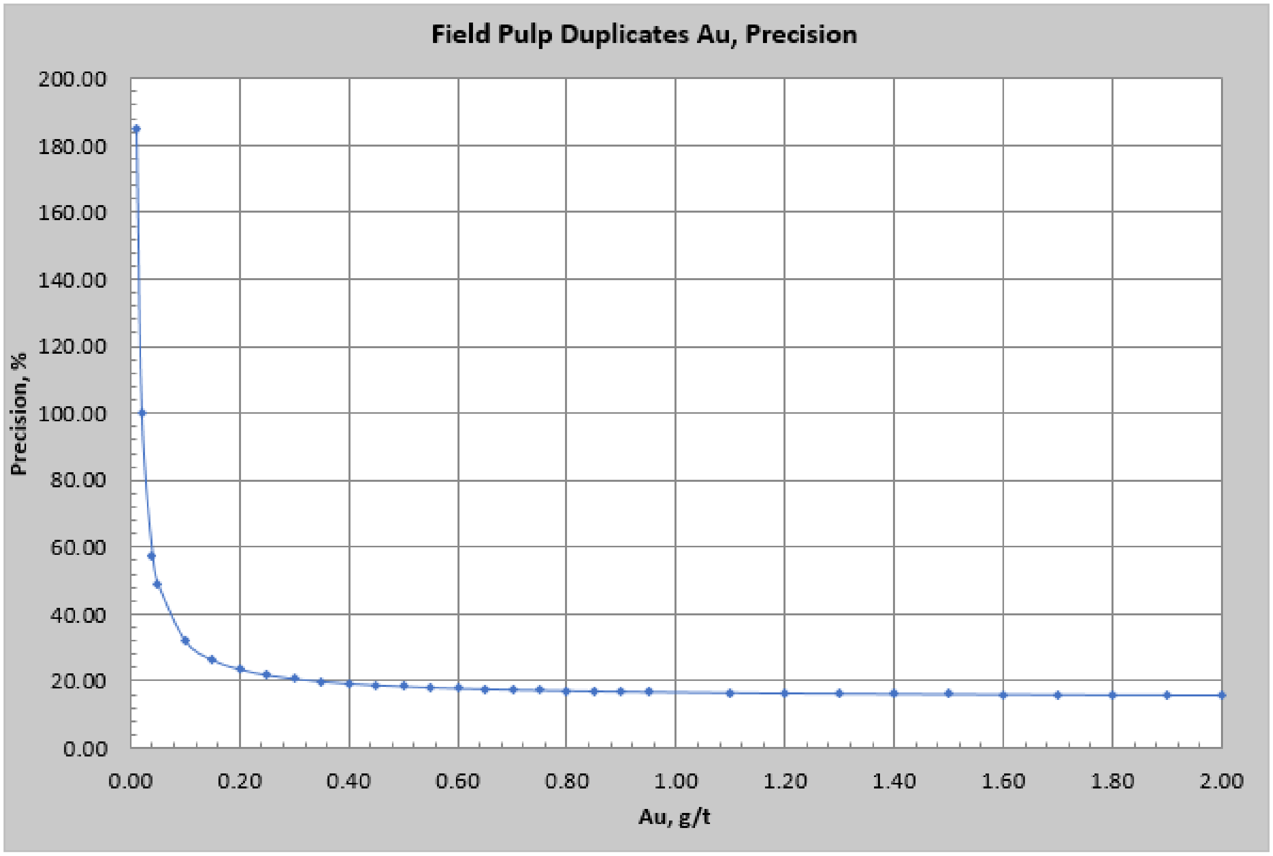
Figure 5 – Scatter plot of original Au versus the field pulp duplicate results.



There is some scatter relative to the regression line. There is a fair correlation between original Au results and paired field pulp duplicate results and R^2 is 0.8323.

Figure 6 is a Thompson-Howarth precision plot for Au.

Figure 6 – Thompson-Howarth precision plot for Au.

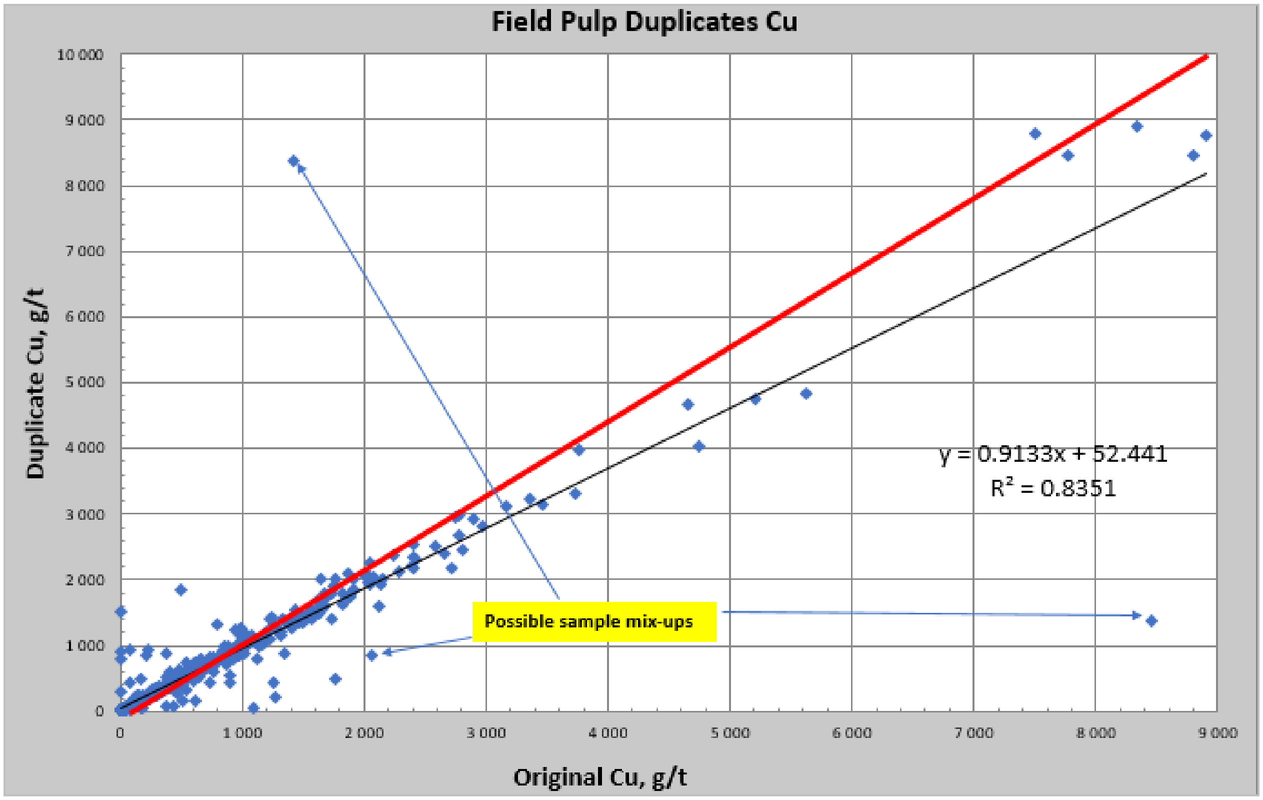


The norm is that precision should be less than or equal to 10% for field pulp duplicates when compared to primary samples. The graph for Au shows that the best precision possible for field duplicates relative to primary samples is closer to 20% which is outside acceptable limits. The paired results are far from each other. The poorer precision is due to the lower grades for Au relative to Pt and Pd. Results show greater variability close to the detection limit.

Analysis of Cu for Field Pulp Duplicates

Figure 7 is a scatter plot of the original Cu result on the X-axis and the field pulp duplicate Cu on the Y-Axis.

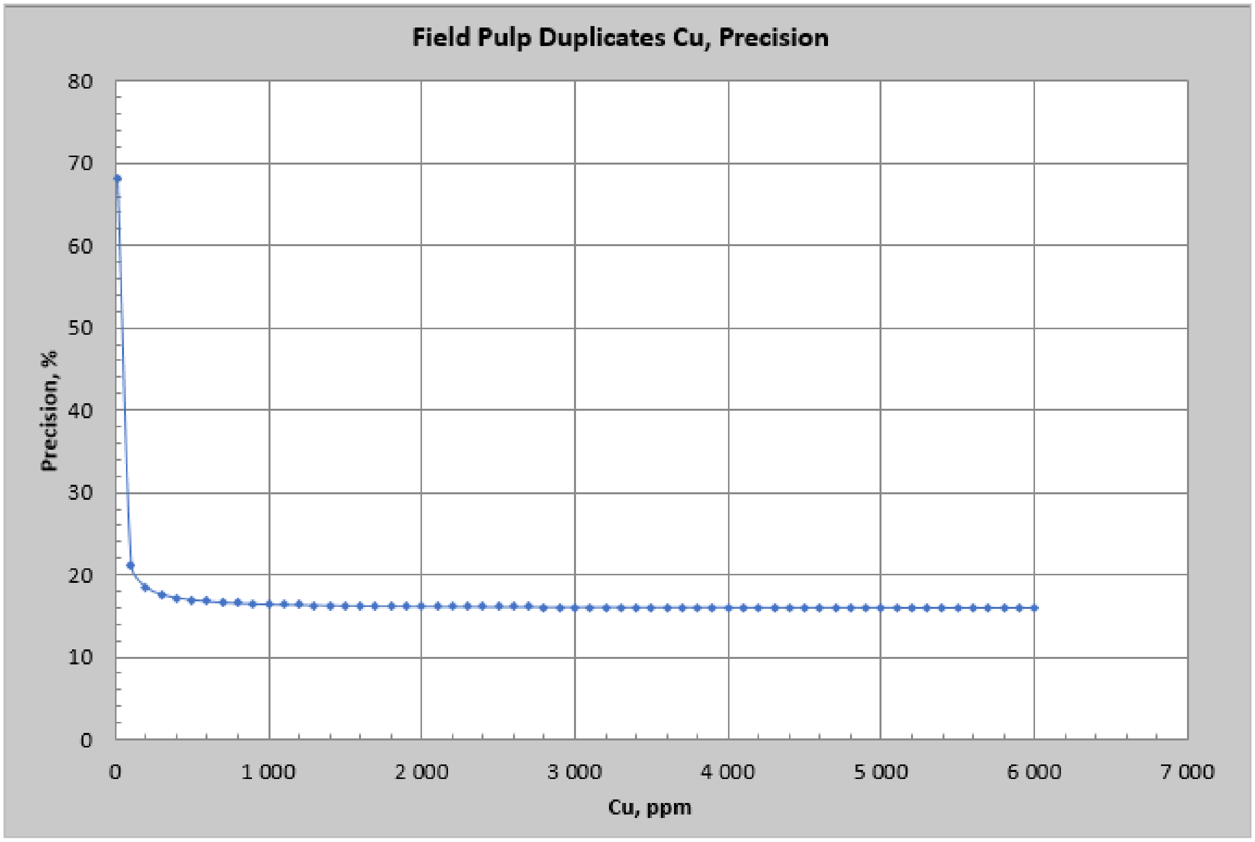
Figure 7 – Scatter plot of original Cu versus the field pulp duplicate results.



There is some scatter relative to the regression line There is a moderate correlation between original Cu results and paired field duplicate results and R^2 is 0.8351.

Figure 8 is a Thompson-Howarth precision plot for Cu.

Figure 8 – Thompson-Howarth precision plot for Cu.

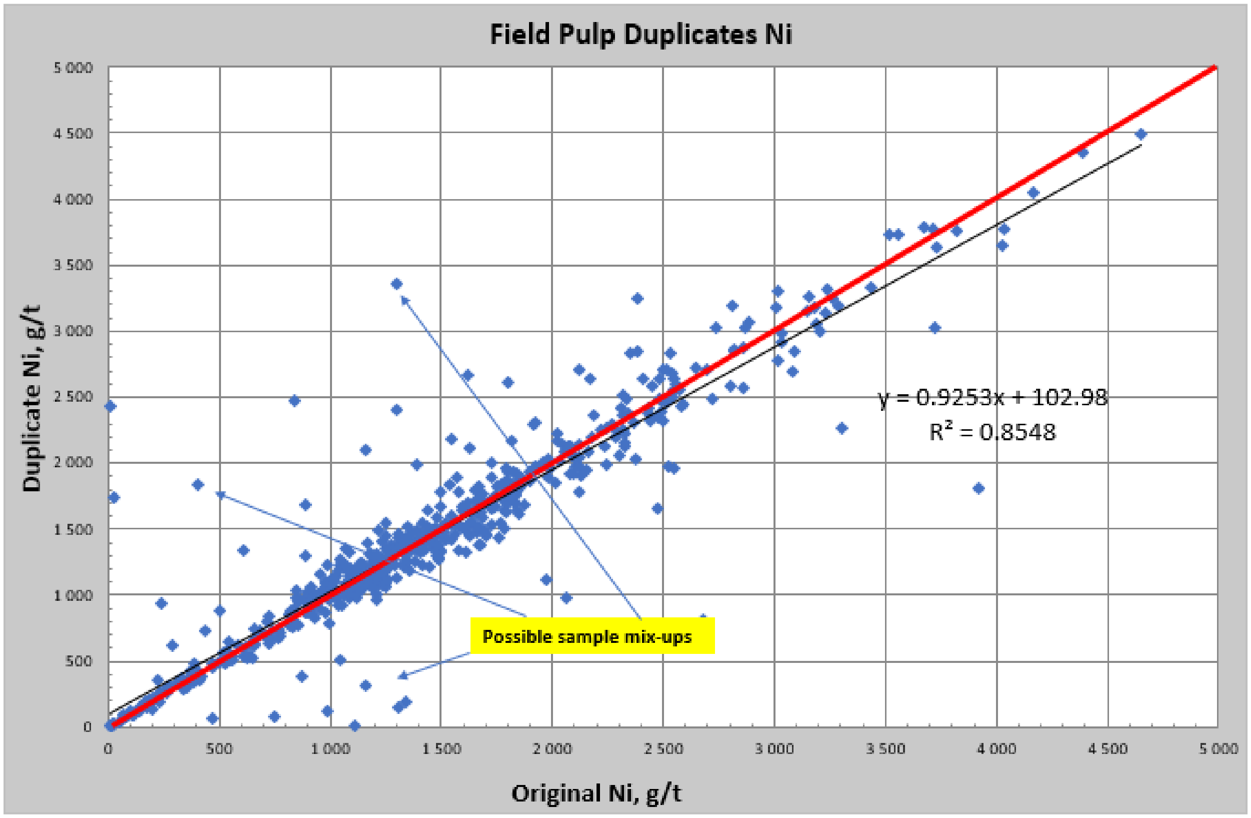


The norm is that precision should be less than or equal to 10% for field pulp duplicates when compared to primary samples. The graph for Cu shows that the best precision possible for field pulp duplicates relative to primary samples is less than 20% but greater than 10% which is outside acceptable limits.

Analysis of Ni for Field Pulp Duplicates

Figure 9 is a scatter plot of the original Ni result on the X-axis and the field pulp duplicate Ni on the Y-Axis.

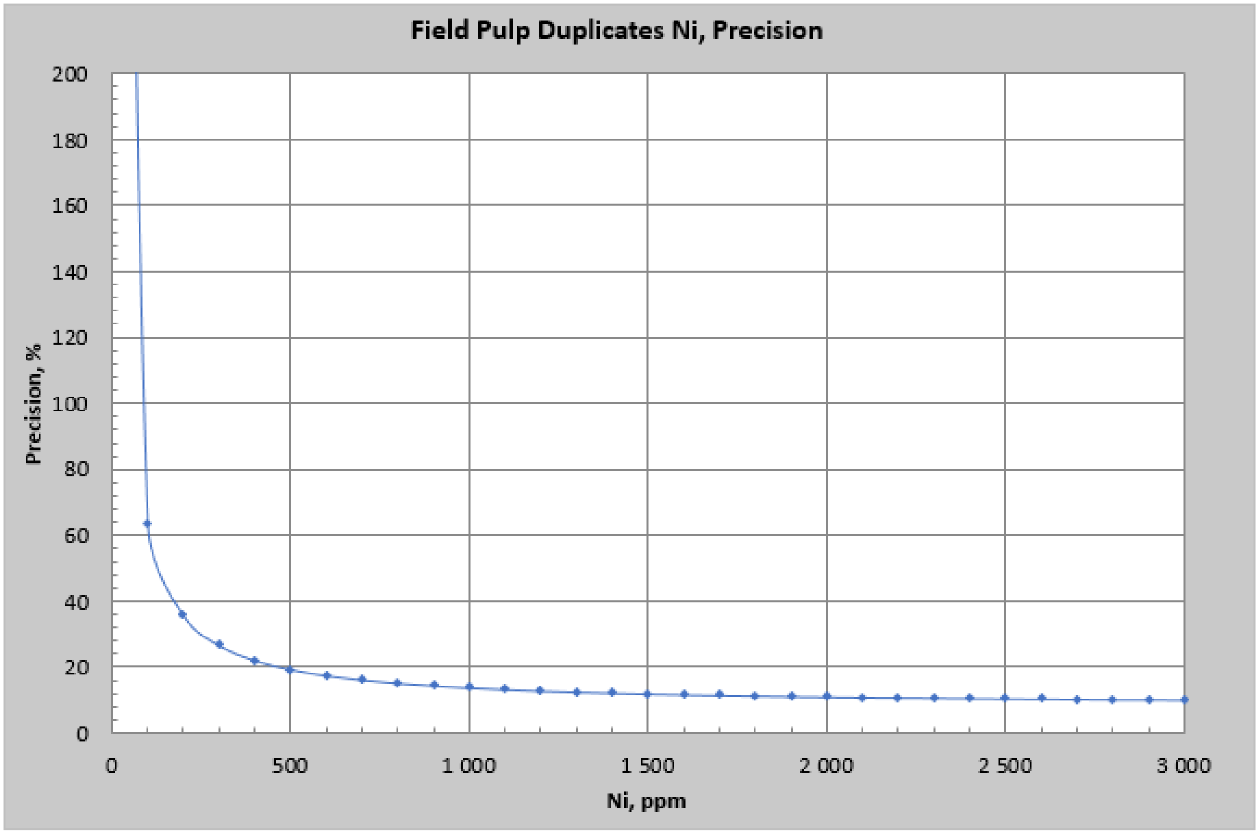
Figure 9 – Scatter plot of original Ni versus the field pulp duplicate results.



There is a lot of scatter relative to the regression line. There is a moderate correlation between original Ni results and paired field pulp duplicate results and R^2 is 0.8548.

Figure 10 is a Thompson-Howarth precision plot for Ni.

Figure 10 – Thompson-Howarth precision plot for Ni.



The norm is that precision should be less than or equal to 10% for field pulp duplicates when compared to primary samples. The graph for Ni shows that the best precision possible for field duplicates relative to primary samples is closer to 15% or approximates 10% for results >1500ppm, which is the best performance of all the elements. The paired results are far from each other for results <1500ppm.

APPENDIX 6: QA/QC OF GENALYSIS UMPIRE SAMPLES PRIOR TO 2018

Statistics and graphs were compiled for 665 samples sent to both Set Point and Genalysis prior to 2018.

A HARD statistic was calculated for each element and for each sample analysed at both laboratories. This is not to measure precision as the laboratories are different. This to identify whether there is agreement between the results between the laboratories. Samples with significantly different results may have been mixed up during the repackaging process before despatch to the umpire laboratory or during processing at the umpire laboratory. At least 90% of the samples should have a HARD within 10%. Table 1 lists the percentage of samples with HARD within 10%.

Table 1 – Percentage of samples analysed at both laboratories that have a HARD less than or equal to 10% for each element

Element	Total samples > 10 X detection limit	Number of samples with HARD <=10%	Percentage with HARD within 10%
Au	314	230	73%
Pt	613	500	81%
Pd	636	516	81%
Cu	552	500	91%
Ni	663	663	100%

Table 1 shows that for Cu and Ni that there is good comparability between both laboratories. The percentage of Au samples with HARD within 10% is 73% which is slightly lower than for the other elements. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection. The percentage of samples with HARD within 10% for Au, Pt and Pd is lower than the acceptable limit of 90%. The cause of this is not clear. Sample mix-ups are one possible cause but not to such an extent. All results with a HARD greater than 10% are less than 5 g/t for Pt. Further analysis may confirm this phenomenon or may indicate that this poor performance is specific to this dataset.

Two graphs were plotted for each element. One is a scatter plot to demonstrate the correlation between the laboratories and the second is a Q-Q plot.

A Q–Q (quantile-quantile) plot is a probability plot, which is a graphical method for comparing two probability distributions by plotting their quantiles against each other. First, the set of intervals for the quantiles is chosen. A point (*x*, *y*) on the plot corresponds to one of the quantiles of the second distribution (*y*-coordinate) plotted against the same quantile of the first distribution (*x*-coordinate). Thus, the line is a parametric curve with the parameter which is the number of the interval for the quantile.

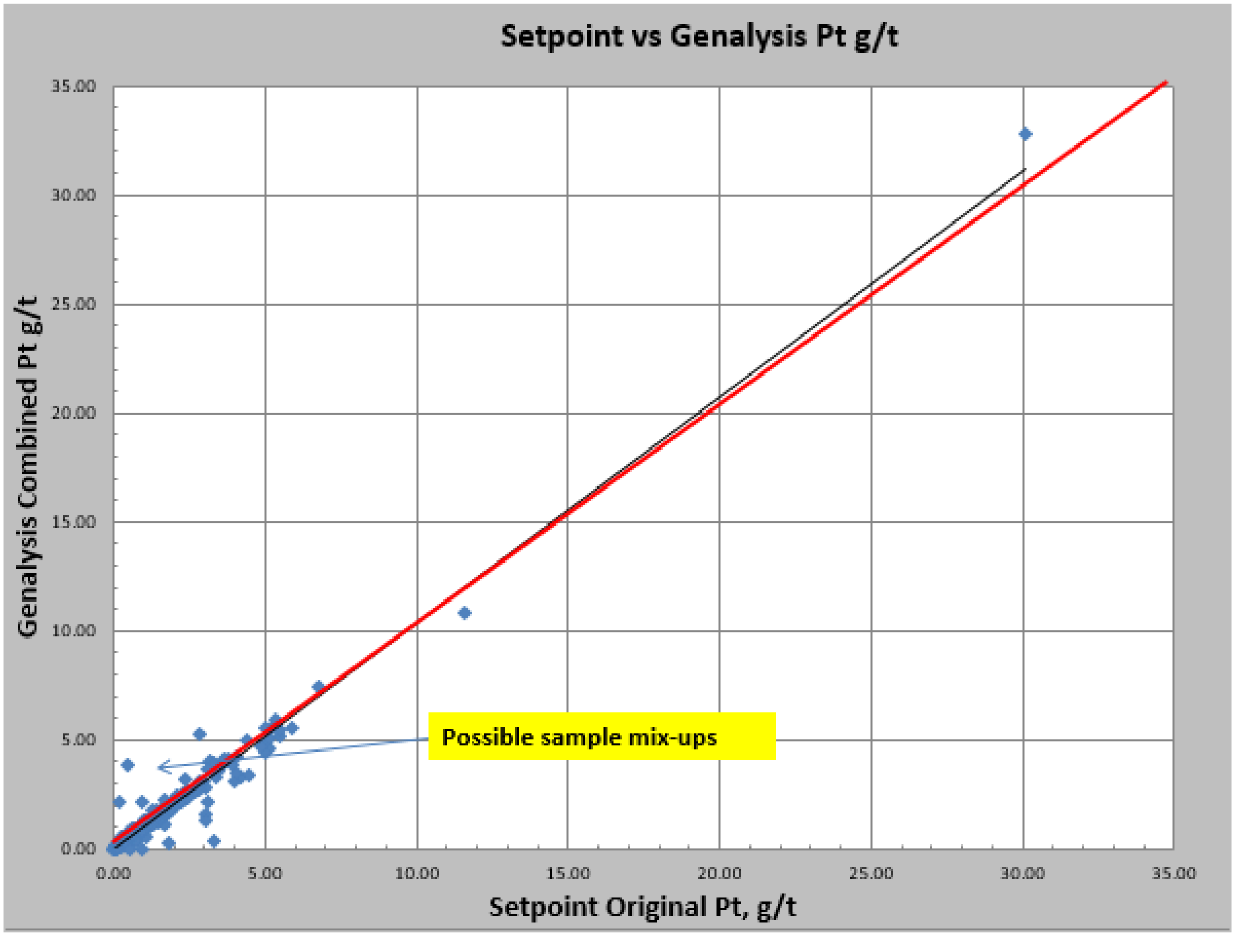
If the two distributions being compared are similar, the points in the Q–Q plot will approximately lie on the line $y = x$. If the distributions are linearly related, the points in the Q–Q plot will approximately lie on a line, but not necessarily on the line $y = x$.

A Q–Q plot is used to compare the shapes of distributions, providing a graphical view of how properties such as location, scale, and skewness are similar or different in the two distributions. The use of Q–Q plots to compare two samples of data can be viewed as a non-parametric approach to comparing their underlying distributions. A Q–Q plot is generally a more powerful approach to do this than the common technique of comparing histograms of the two samples, but requires more skill to interpret. Since Q–Q plots compare distributions, there is no need for the values to be observed as pairs, as in a scatter plot, or even for the numbers of values in the two groups being compared to be equal.

Analysis for Pt for samples sent to Set Point and to Genalysis

Figure 1 is a scatter plot of Pt where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

Figure 1 – Scatter plot for Pt of Set Point versus Genalysis Results



The scatter as indicated on the graph for results less than 5 g/t is equally distributed. There is no bias indicated for either of the laboratories.

Figure 2 is a Q-Q plot for Pt.

Figure 2 – Q-Q plot for Pt.

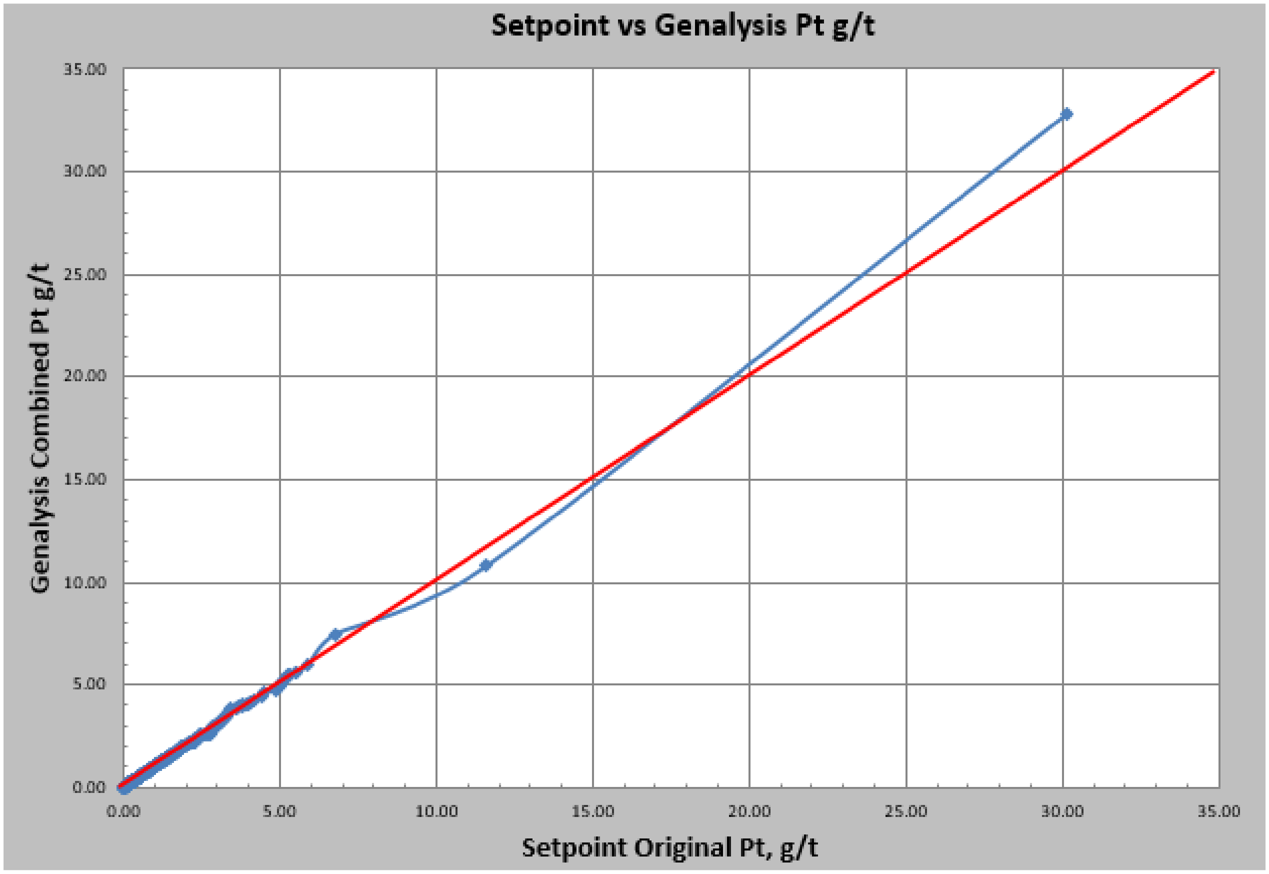
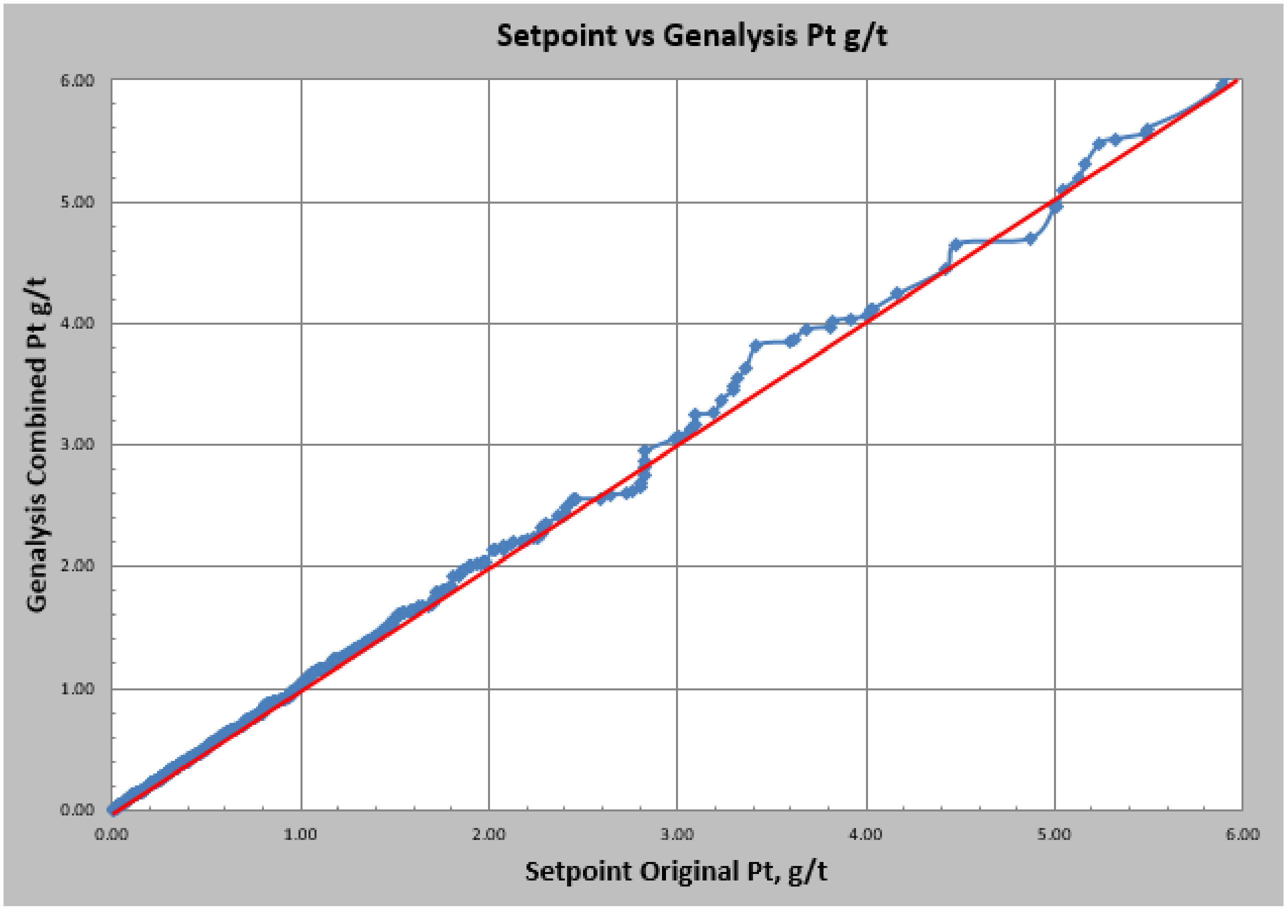


Figure 3 is a trimmed Q-Q plot for Pt for grades less than 6 g/t.

Figure 3 – Trimmed Q-Q plot for Pt.

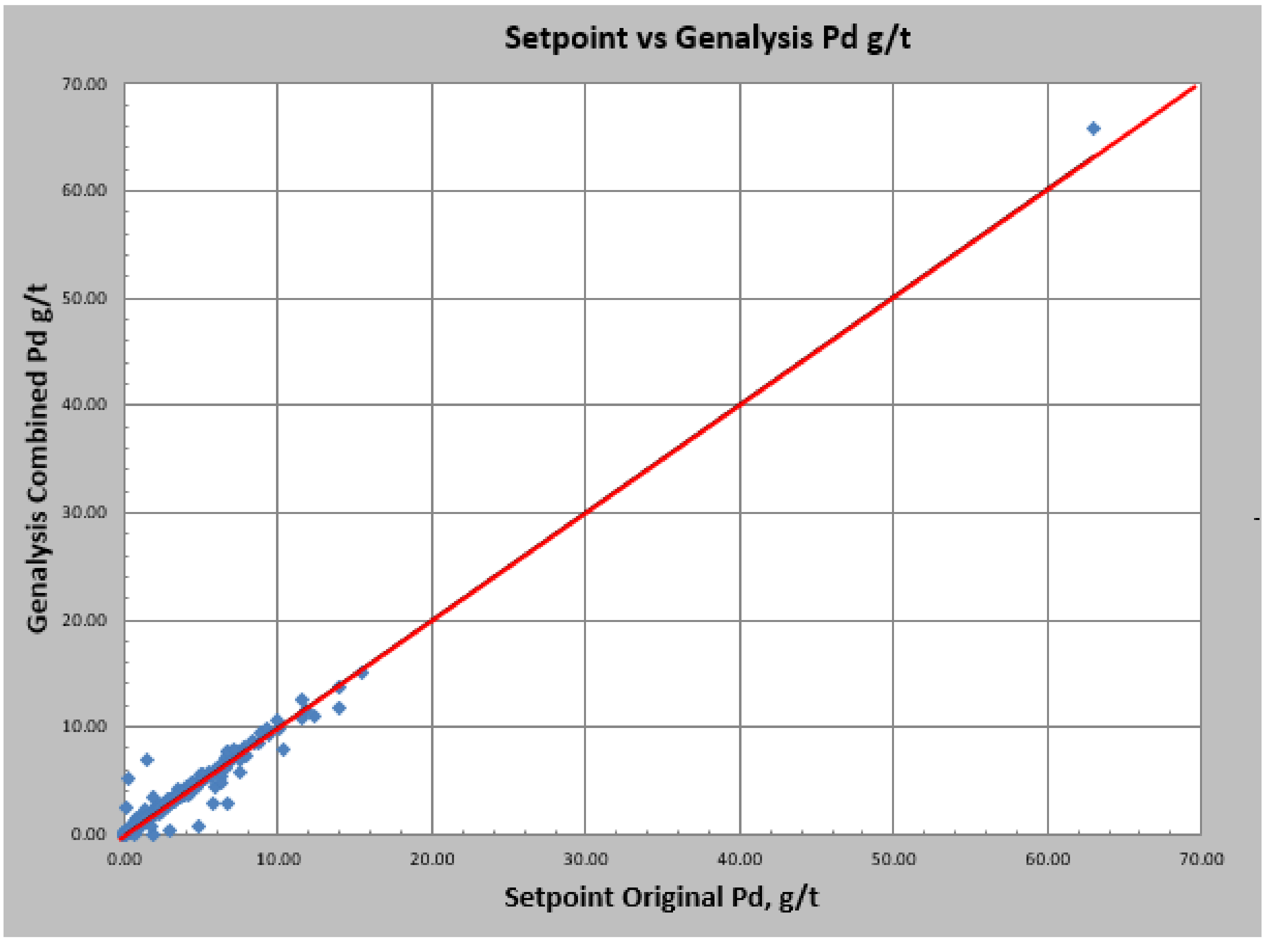


The distributions for both Set Point and Genalysis have a linear relationship indicating that they are similar.

Analysis for Pd for samples sent to Set Point and to Genalysis

Figure 4 is a scatter plot of Pd where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

Figure 4 – Scatter plot for Pd of Set Point versus Genalysis Results



The scatter as indicated on the graph for results less than 10 g/t is equally distributed. There is no bias indicated for either of the laboratories.

Figure 5 is a Q-Q plot for Pd.

Figure 5 – Q-Q plot for Pd.

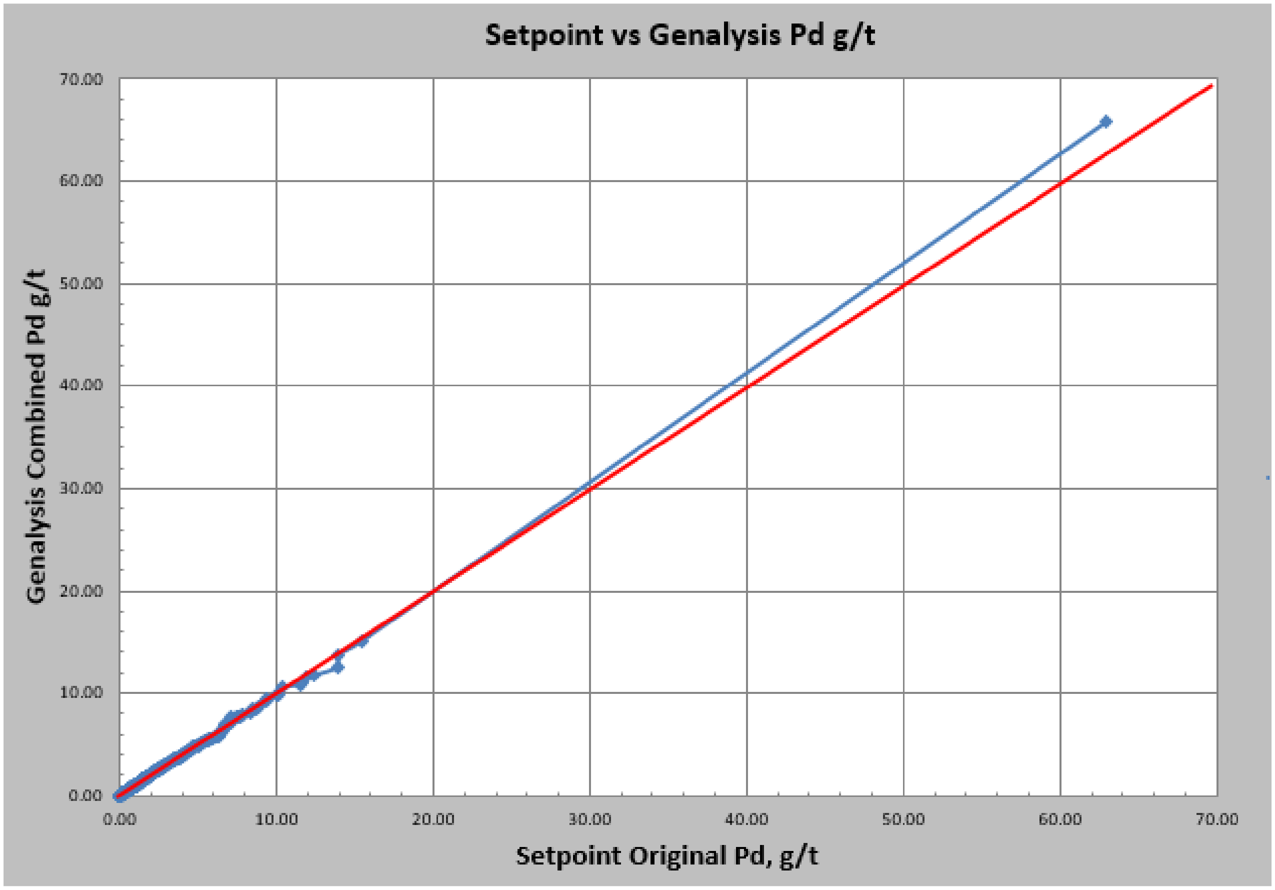
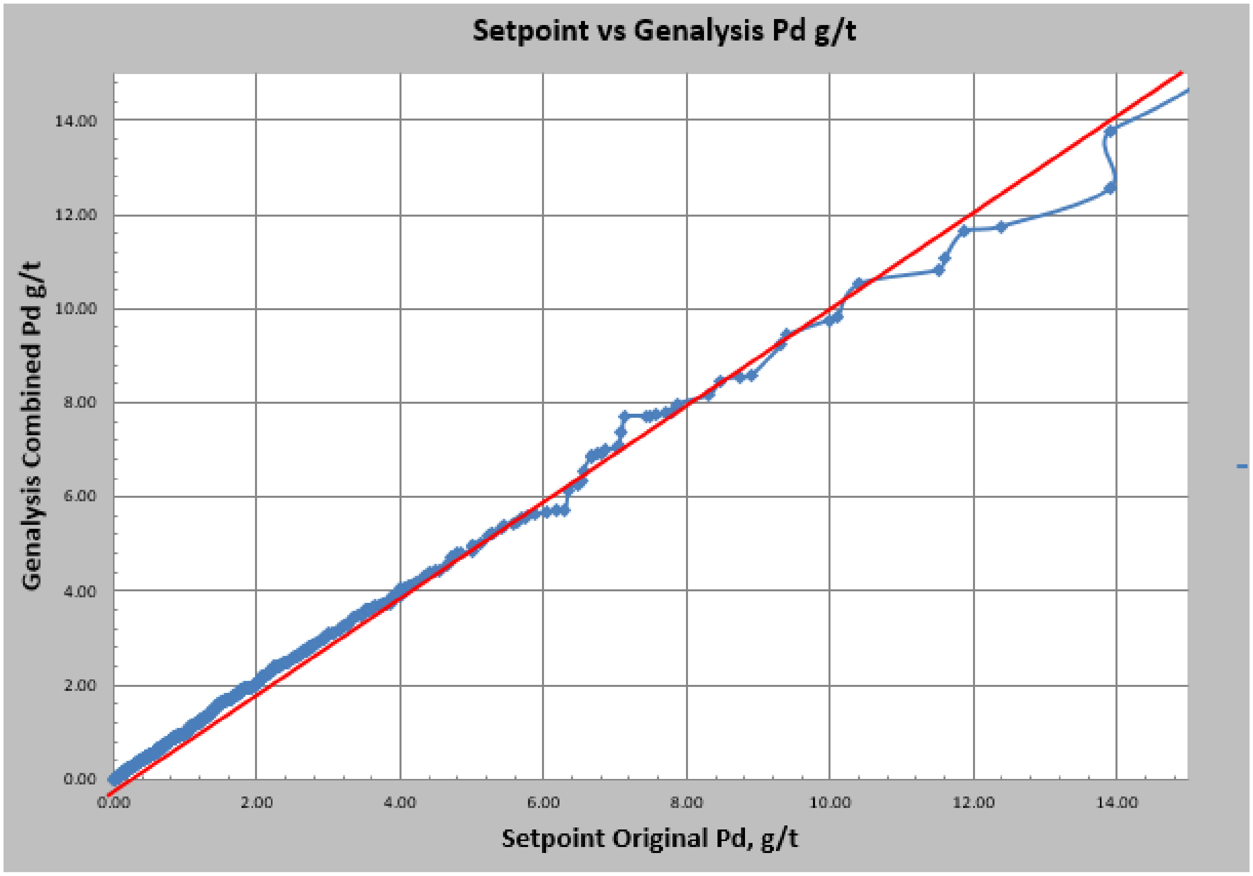


Figure 6 is a trimmed Q-Q plot for Pd for grades less than 14 g/t.

Figure 6 – Trimmed Q-Q plot for Pd.

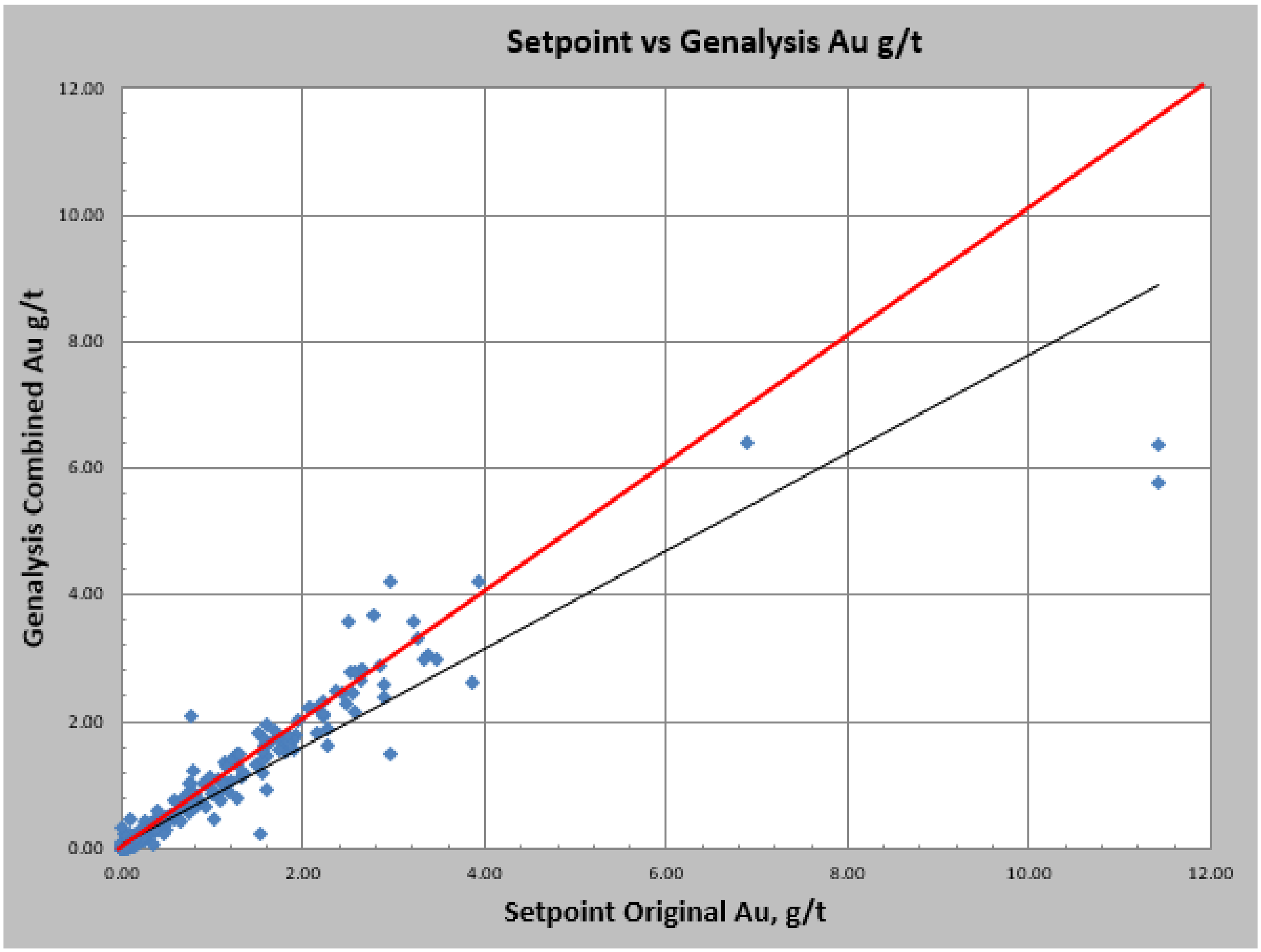


The distributions for both Set Point and Genalysis have a linear relationship indicating that they are similar.

Analysis for Au for samples sent to Set Point and to Genalysis

Figure 7 is a scatter plot of Au where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

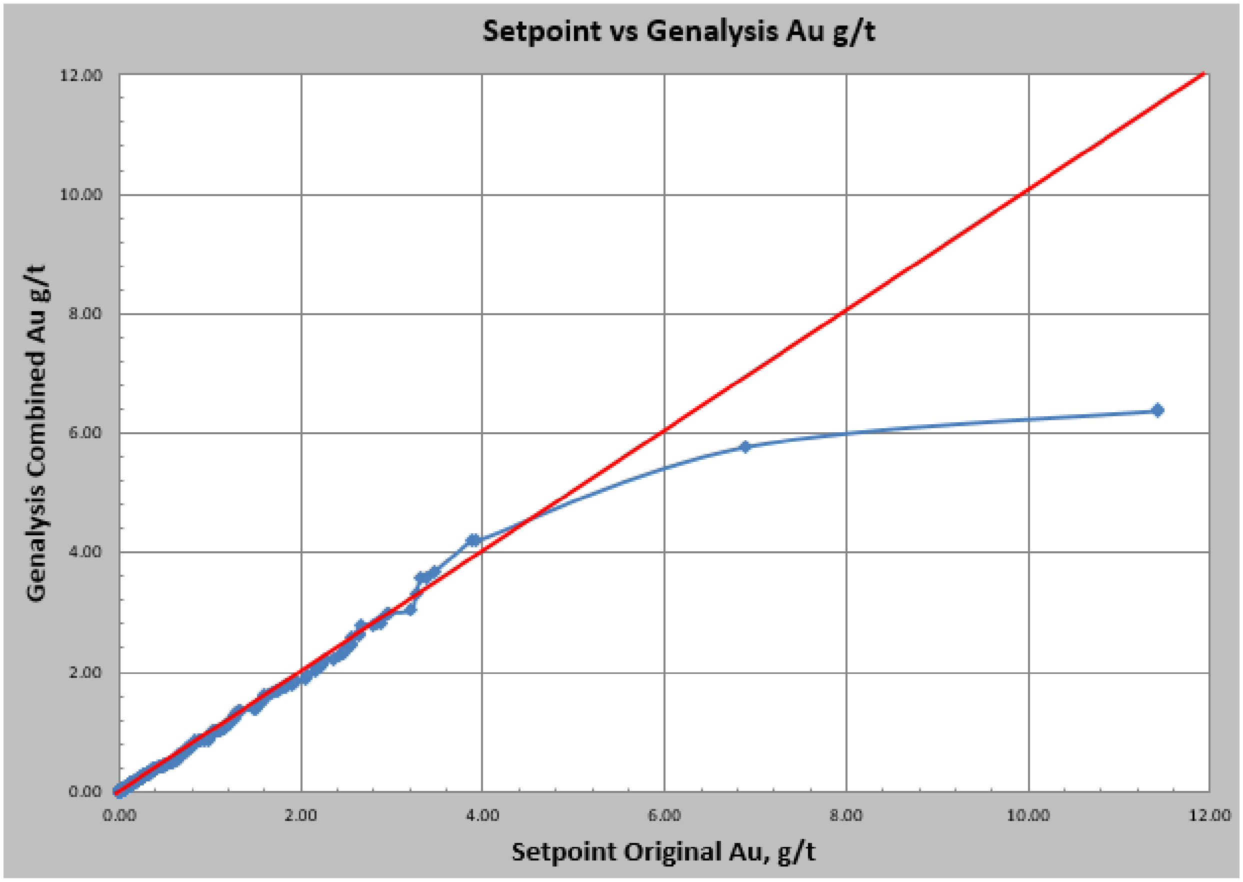
Figure 7 – Scatter plot for Au of Set Point versus Genalysis Results



Compared to Pt and Pd, Au shows less correlation and more scatter between the Set Point and Genalysis results.

Figure 8 is a Q-Q plot for Au.

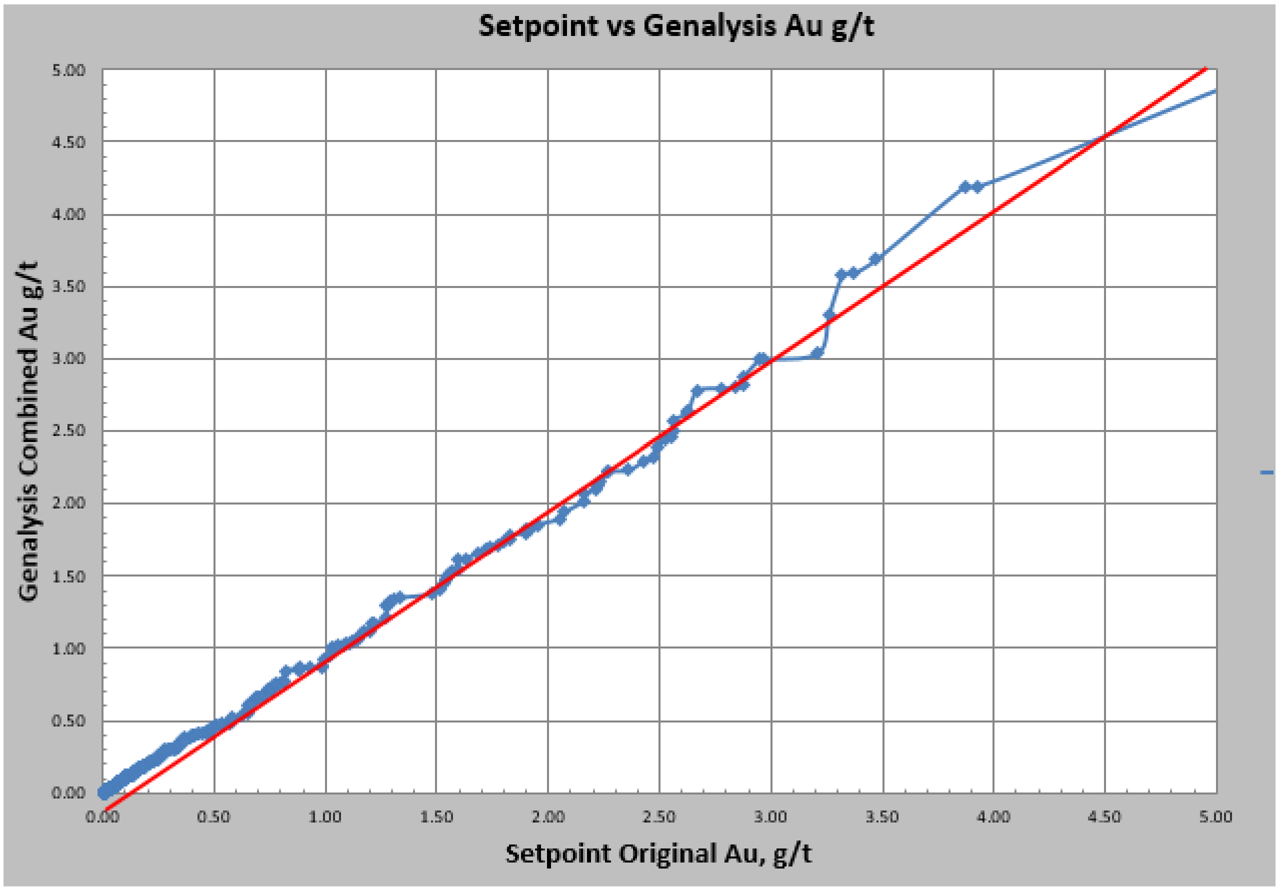
Figure 8 – Q-Q plot for Au.



There is good agreement between the Set Point and Genalysis results until a grade of 4 g/t. Set Point results show a positive bias for grades greater than 4 g/t.

Figure 9 is a trimmed Q-Q plot for Au for grades less than 5 g/t.

Figure 9 – Trimmed Q-Q plot for Au.

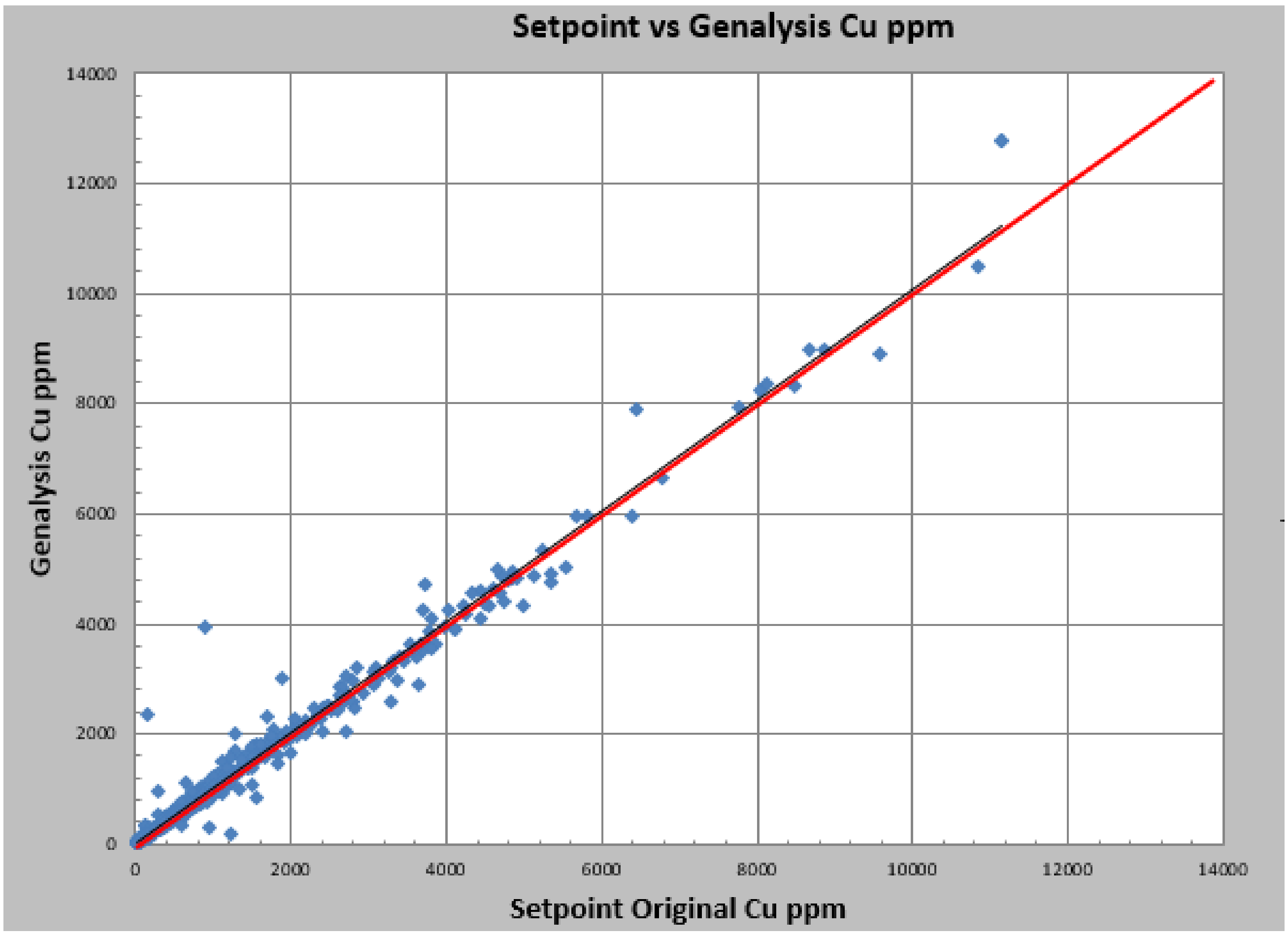


The distributions for both Set Point and Genalysis have a linear relationship indicating that they are similar.

Analysis for Cu for samples sent to Set Point and to Genalysis

Figure 10 is a scatter plot of Cu where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

Figure 10 – Scatter plot for Cu of Set Point versus Genalysis Results



There is an acceptable correlation between Set Point and Genalysis results.

Figure 11 is a Q-Q plot for Cu.

Figure 11 – Q-Q plot for Cu.

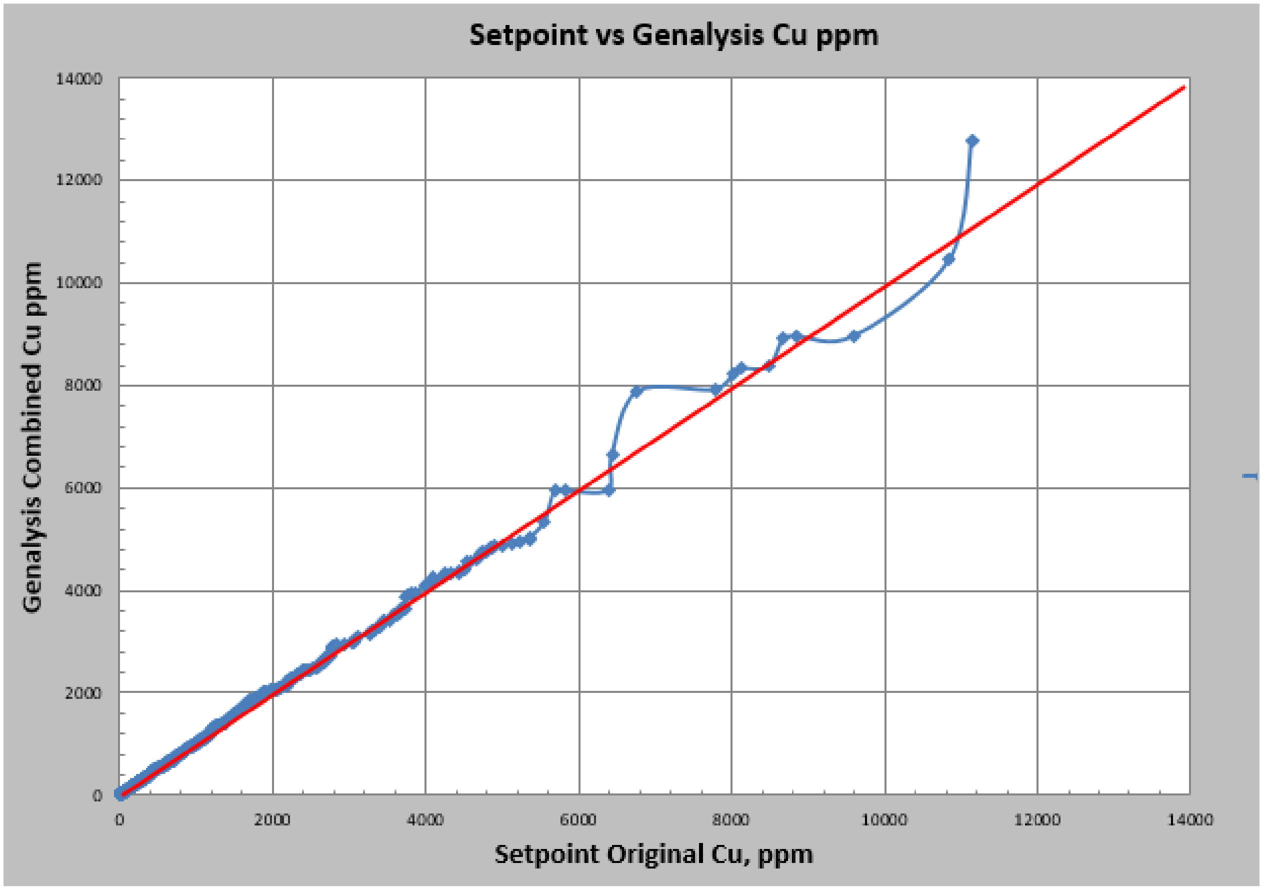
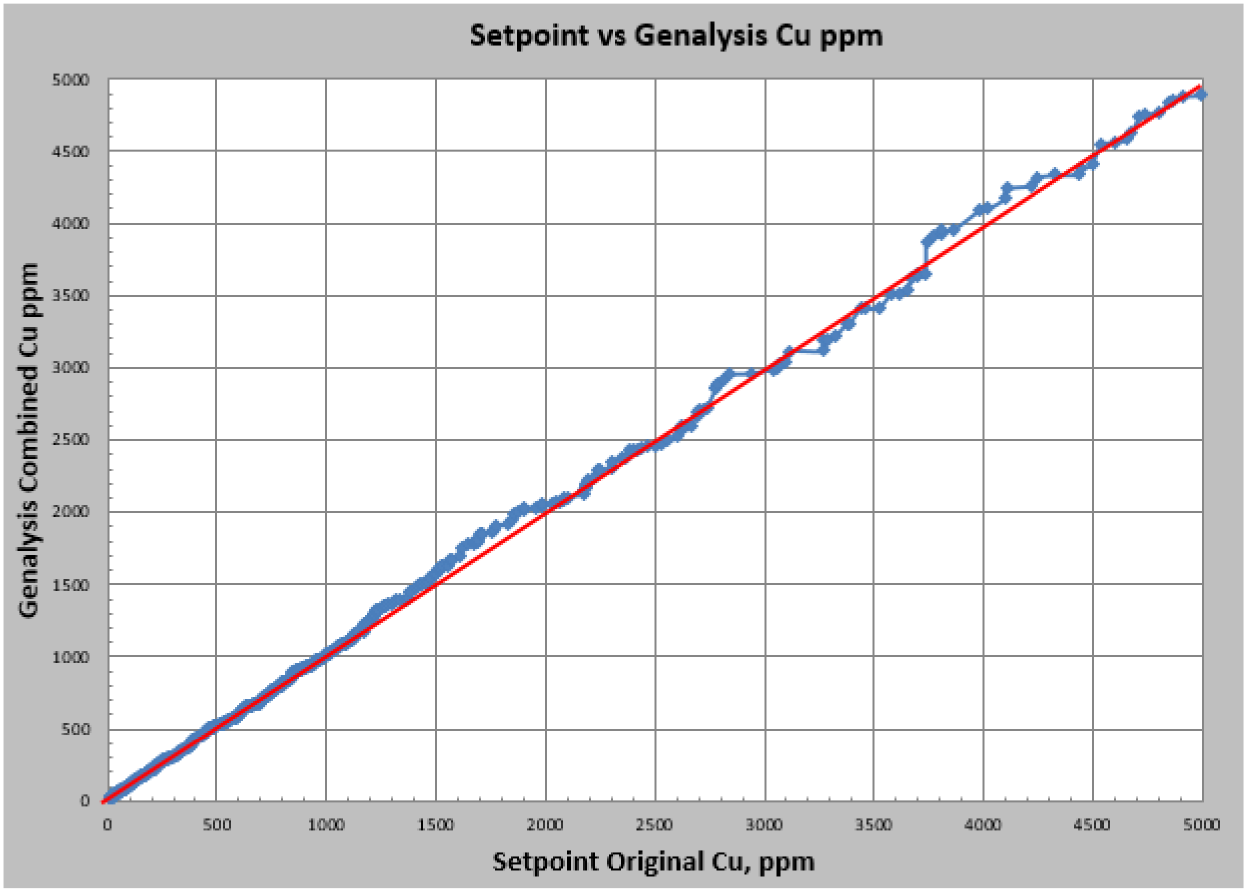


Figure 12 is a trimmed Q-Q plot for Cu for results less than 5000ppm.

Figure 12 – Trimmed Q-Q plot for Cu.

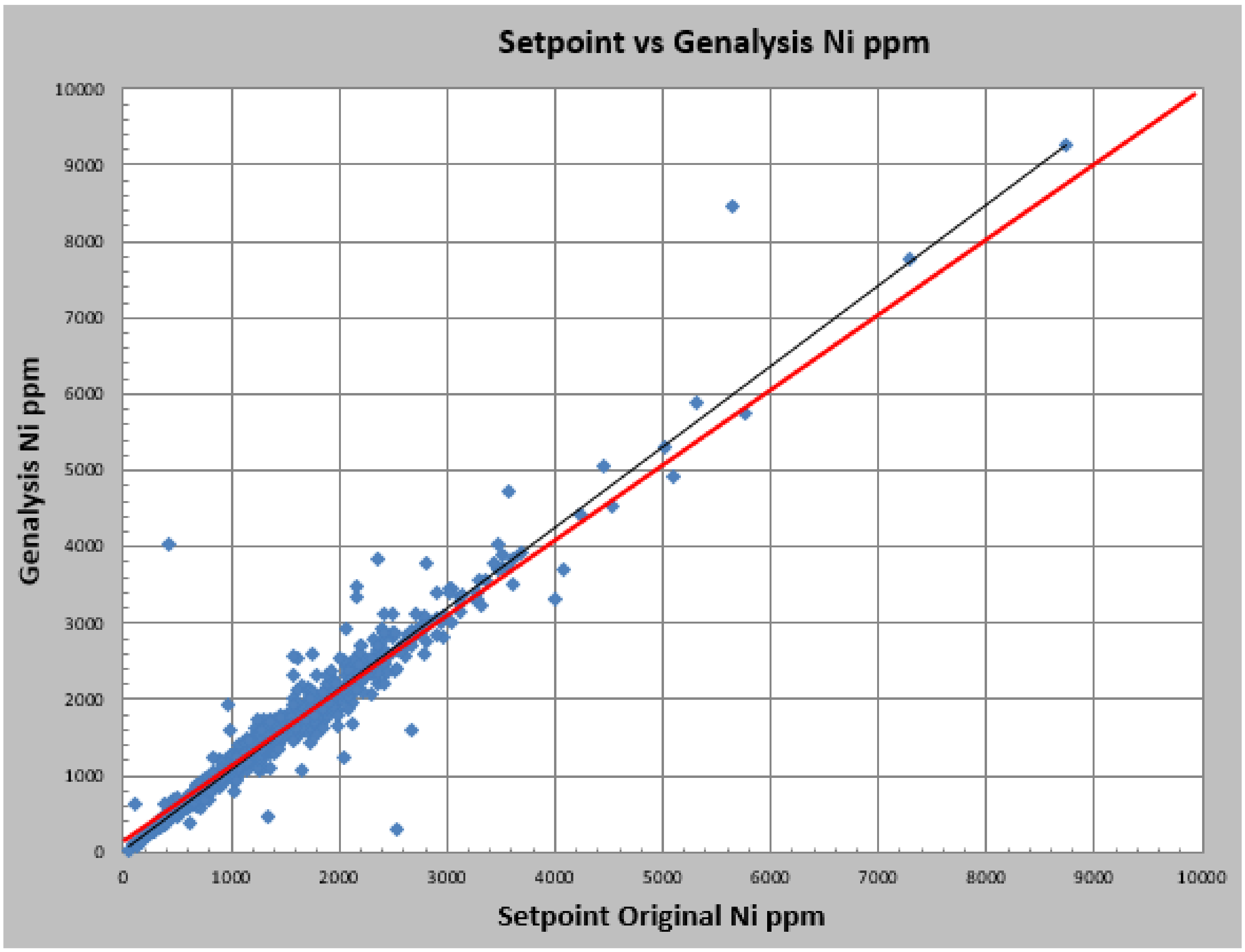


The distributions for both Set Point and Genalysis have a linear relationship indicating that they are similar.

Analysis for Ni for samples sent to Set Point and to Genalysis

Figure 13 is a scatter plot of Ni where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

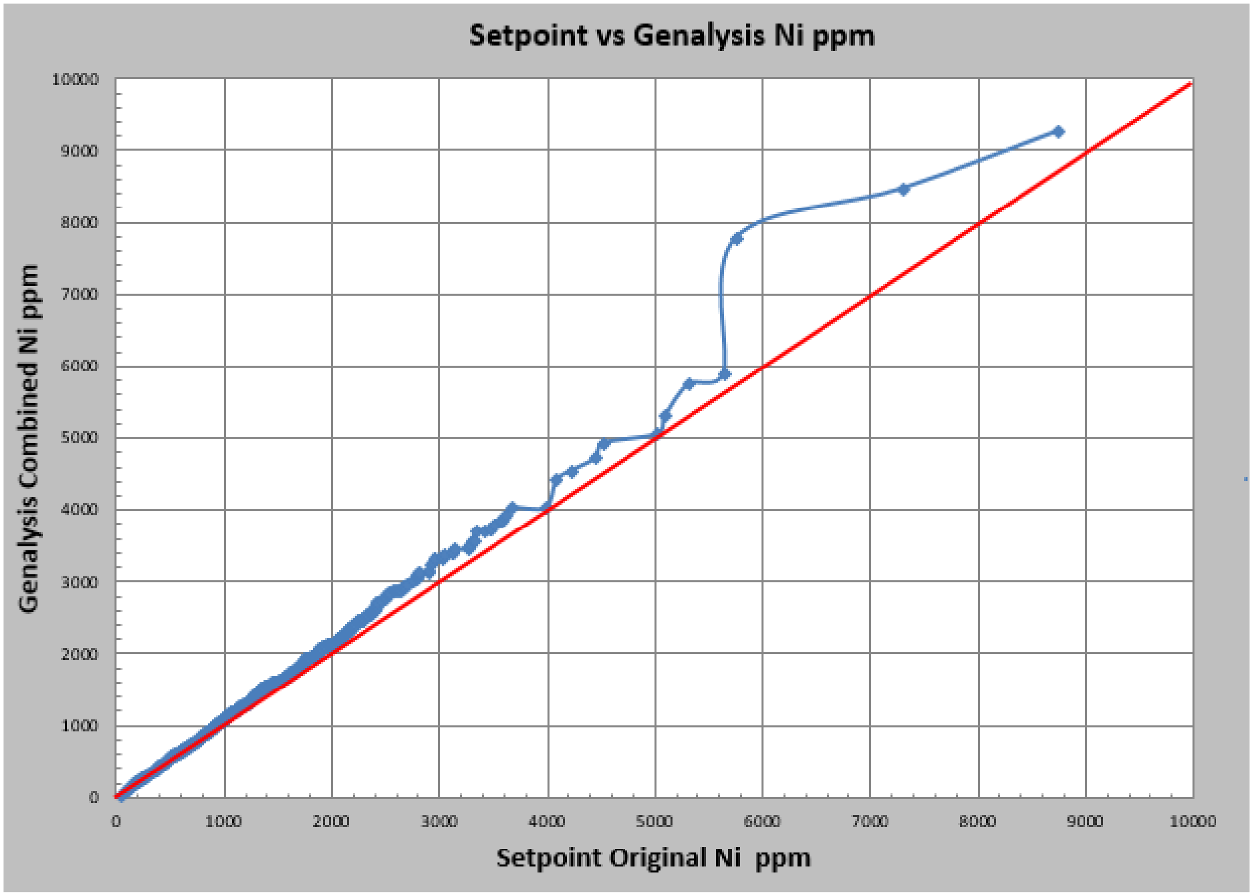
Figure 13 – Scatter plot for Ni of Set Point versus Genalysis Results



The correlation between the results of Genalysis and Set Point are acceptable.

Figure 14 is a Q-Q plot for Ni.

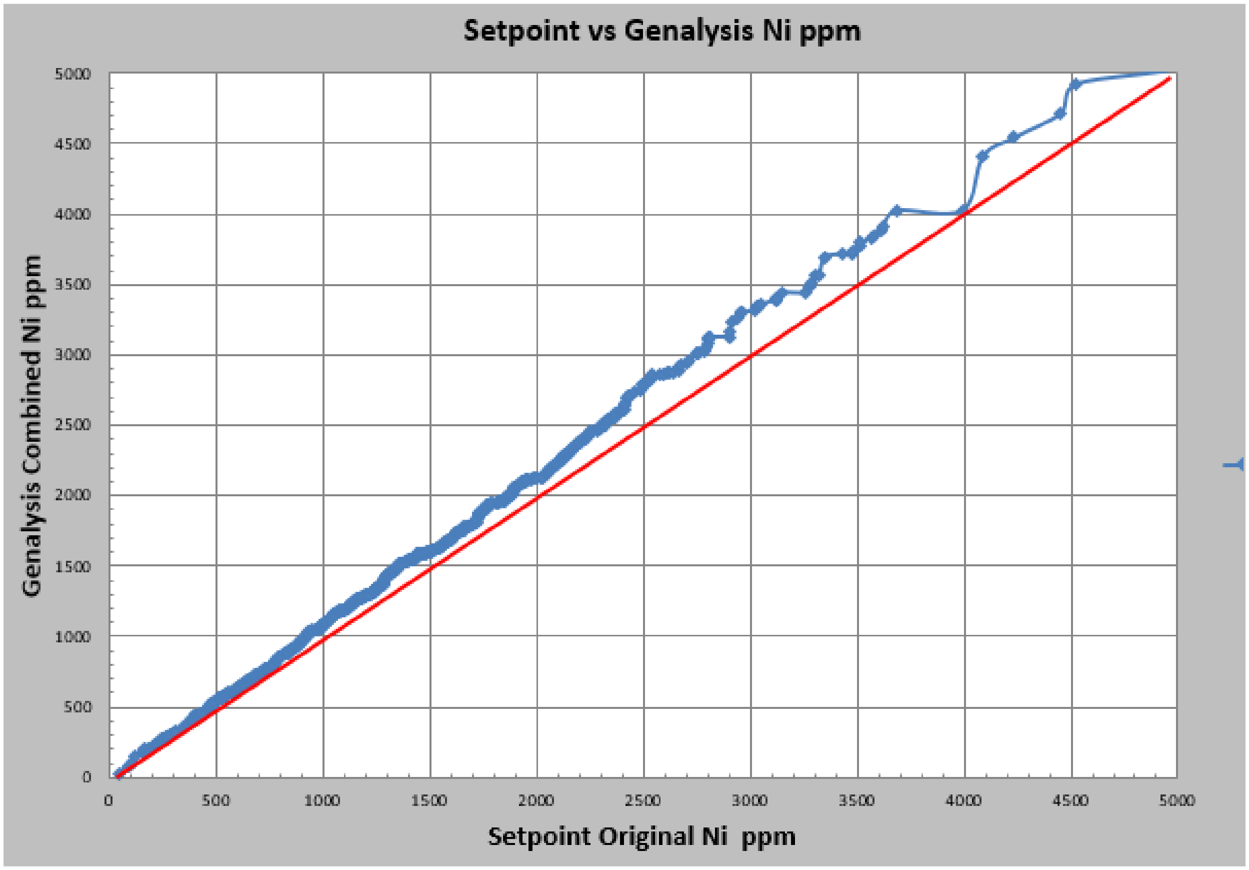
Figure 14 – Q-Q plot for Ni.



There is a slight positive bias for Genalysis results when compared to Set Point results.

Figure 15 is a trimmed Q-Q plot for Ni for results less than 5000ppm.

Figure 15 – Trimmed Q-Q plot for Ni.



The distributions for both Set Point and Genalysis have a linear relationship indicating that they are similar.

APPENDIX 7 : QA/QC OF GENALYSIS UMPIRE SAMPLES SENT IN 2018

A HARD statistic was calculated for each element and for each sample analysed at both laboratories. This is not to measure precision as the laboratories are different. This to identify whether there is agreement between the results between the laboratories. Samples with significantly different results may have been mixed up during the repackaging process before despatch to the umpire laboratory or during processing at the umpire laboratory. At least 90% of the samples should have a HARD within 10%. Table 1 lists the percentage of samples with HARD within 10%.

Table 1 – Percentage of samples analysed at both laboratories in 2018 that have a HARD less than or equal to 10% for each element

Element	Total samples > 10 X detection limit 2018	Number of samples with HARD <=10% 2018	Percentage of samples with HARD within 10% 2018	Percentage of samples with HARD within 10% For Previous 665 samples
Au	409	275	67.2%	73%
Pt	534	478	89.5%	81%
Pd	550	513	93.3%	81%
Cu	537	514	95.7%	91%
Ni	596	575	96.5%	100%

Table 1 shows that for Pt, Pd, Cu and Ni the percentage of samples having a HARD within 10% are within acceptable limits of approximately 90 – 97%. There is an improvement relative to the previous 665 samples analysed. The percentage of samples with HARD within 10% for Au, Pt and Pd is lower than the acceptable limit of 90% for the previous 665 samples. What caused the low percentages for the previous samples is not known. Sample mix-ups may have caused these discrepancies. The results for the 2018 indicate that there may also have been sample swaps or samples having a nugget effect, but such samples are within acceptable limits.

The percentage of Au samples with HARD within 10% Is 67.2% which is lower than for the other elements and lower than the 73% for the previous 665 samples. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection.

Three graphs were plotted for each element. The first graph plots the distribution of results for both laboratories to demonstrate that the results are repeatable when sent to different laboratories.

The second graph is a scatter plot to demonstrate the correlation between the laboratories and the third is a Q-Q plot.

A Q–Q (quantile-quantile) plot is a probability plot, which is a graphical method for comparing two probability distributions by plotting their quantiles against each other. First, the set of intervals for the quantiles is chosen. A point (*x*, *y*) on the plot corresponds to one of the quantiles of the second distribution (*y*-coordinate) plotted against the same quantile of the first distribution (*x*-coordinate). Thus, the line is a parametric curve with the parameter which is the number of the interval for the quantile.

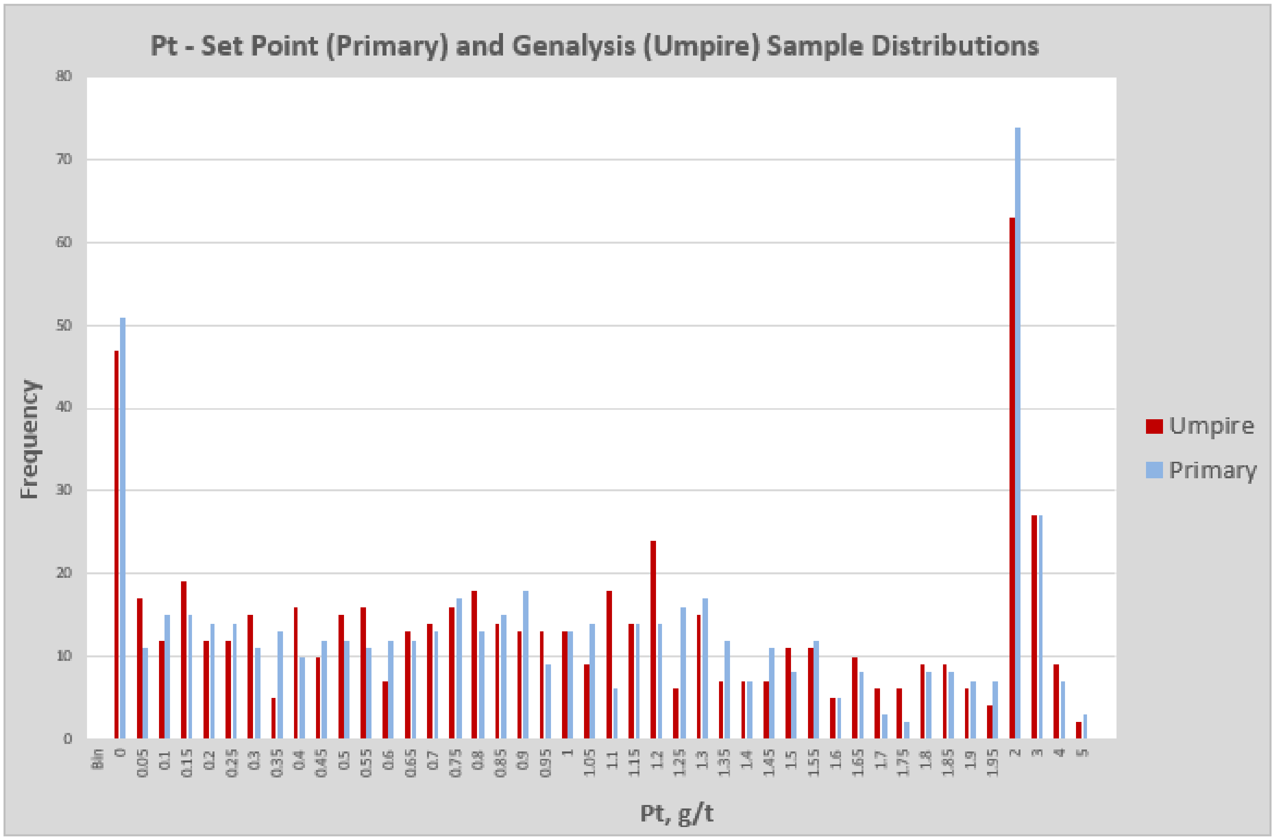
If the two distributions being compared are similar, the points in the Q–Q plot will approximately lie on the line $y = x$. If the distributions are linearly related, the points in the Q–Q plot will approximately lie on a line, but not necessarily on the line $y = x$.

A Q–Q plot is used to compare the shapes of distributions, providing a graphical view of how properties such as location, scale, and skewness are similar or different in the two distributions. The use of Q–Q plots to compare two samples of data can be viewed as a non-parametric approach to comparing their underlying distributions. A Q–Q plot is generally a more powerful approach to do this than the common technique of comparing histograms of the two samples, but requires more skill to interpret. Since Q–Q plots compare distributions, there is no need for the values to be observed as pairs, as in a scatter plot, or even for the numbers of values in the two groups being compared to be equal.

<u>Analysis for Pt for samples sent to Set Point and to Genalysis During 2018</u>

Figure 1 is a plot of the distribution of results for both laboratories.

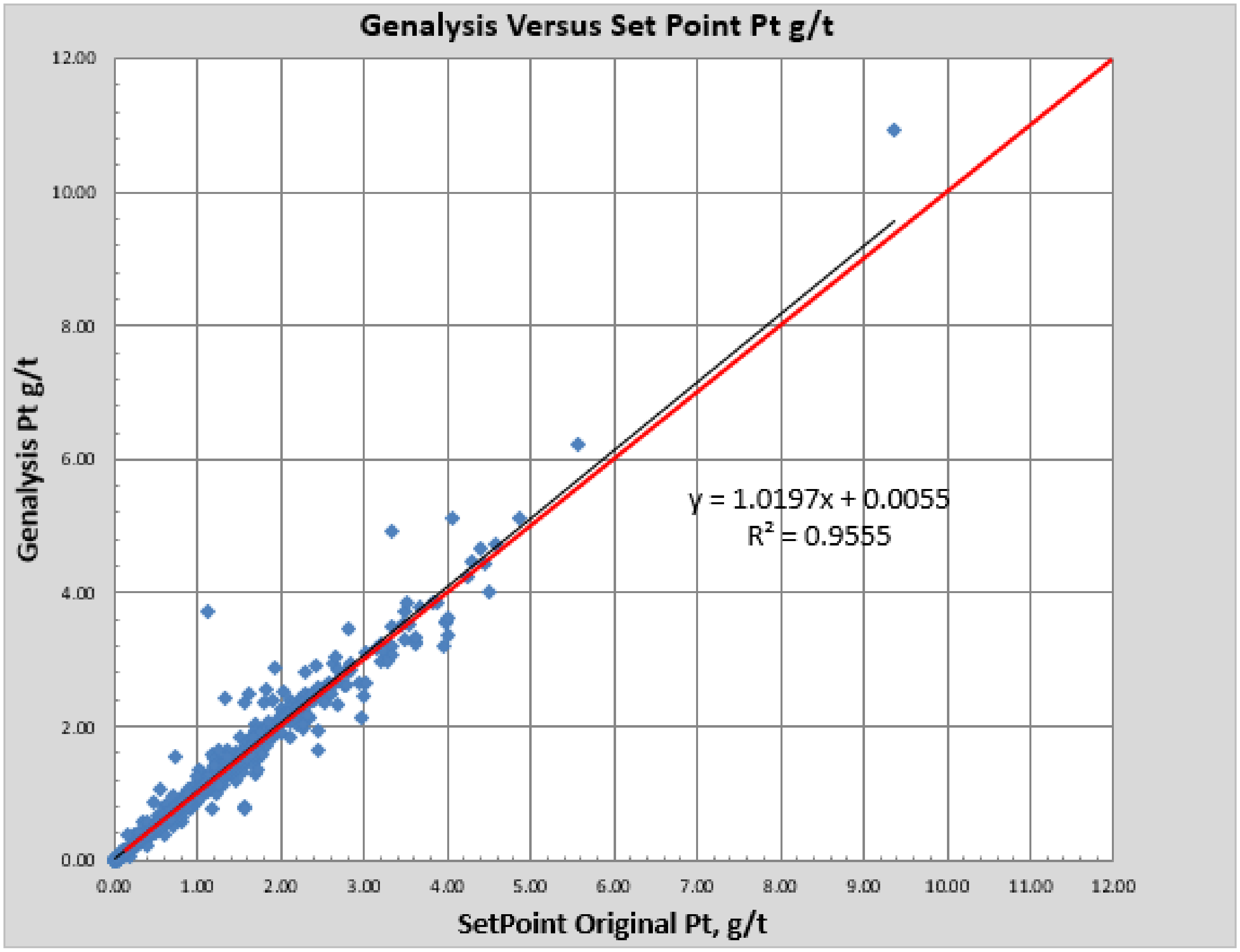
Figure 1 – A plot of result distribution for Set Point and Genalysis for Pt



The distributions for both laboratories are similar.

Figure 2 is a scatter plot of Pt where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

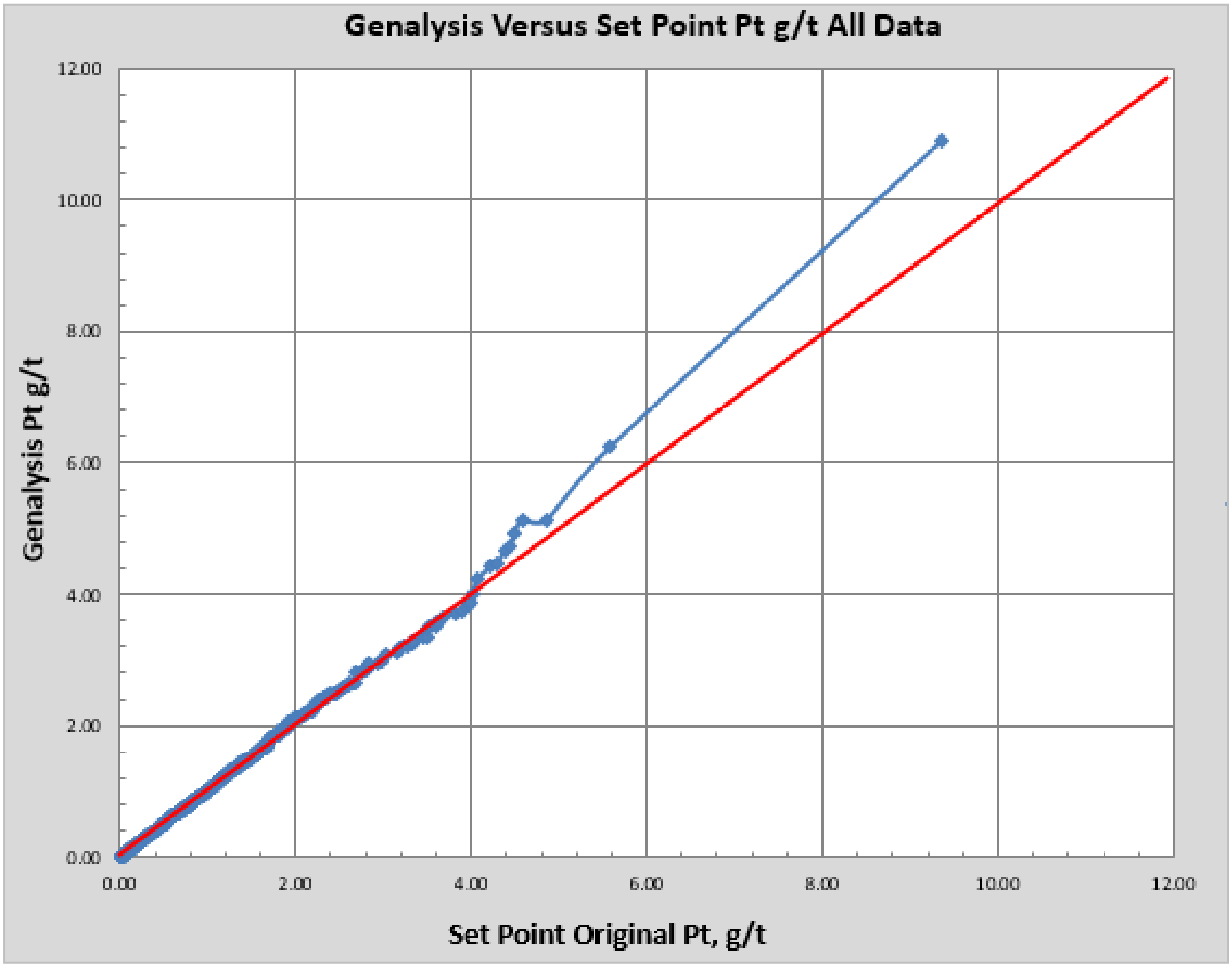
Figure 2 – Scatter plot for Pt of Set Point versus Genalysis Results reported in 2018



The scatter around the regression line as indicated on the graph for results less than 5 g/t is equally distributed. There is no bias indicated for either of the laboratories. Results are within acceptable limits with R^2 of 0.9555.

Figure 3 is a Q-Q plot for Pt.

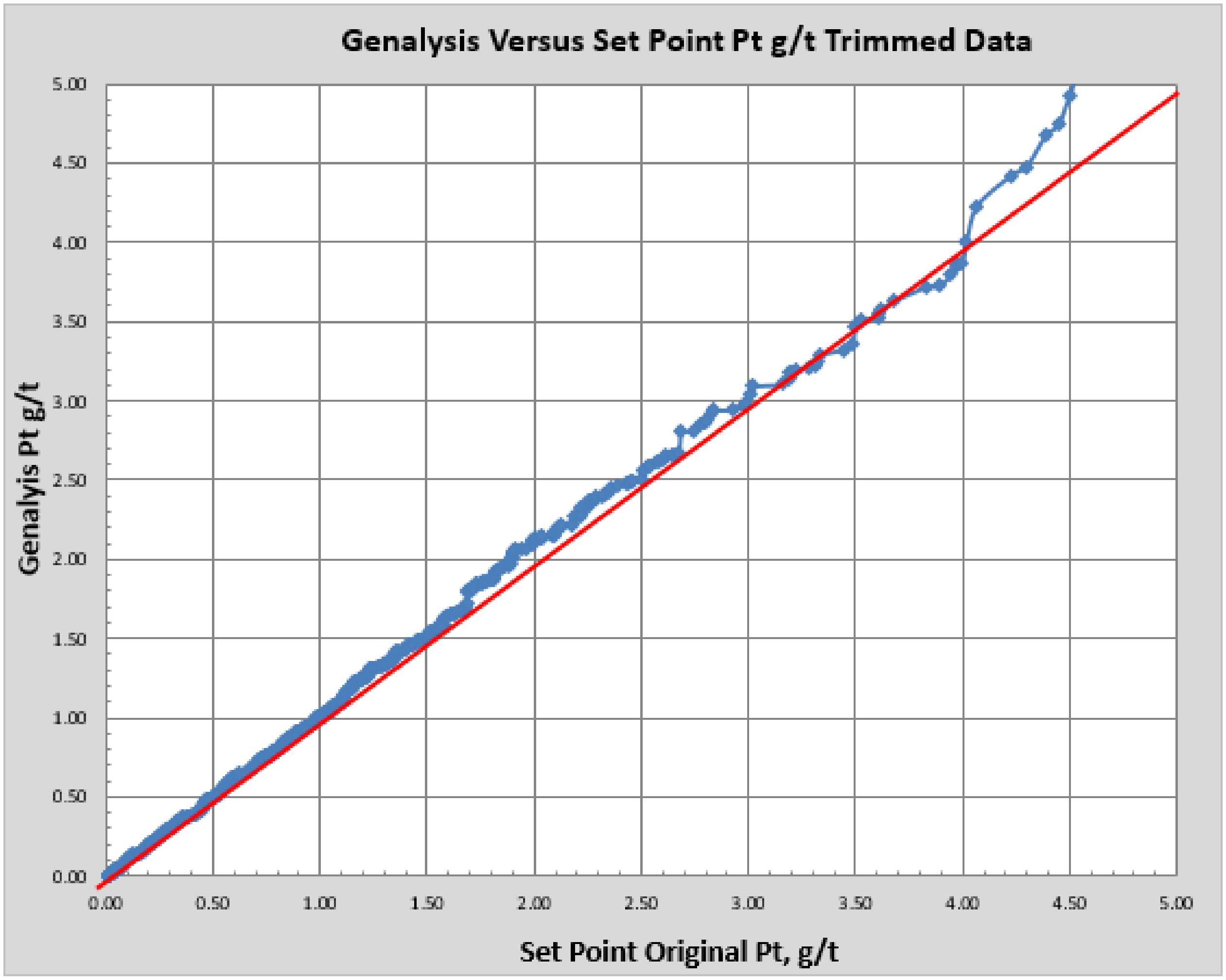
Figure 3 – Q-Q plot for Pt.



Results for both laboratories are similar for grades less than 5 g/t. Genalysis shows a positive bias for grades higher than 5 g/t due to better Pt recovery during analysis.

Figure 4 is a trimmed Q-Q plot for Pt for grades less than 5 g/t.

Figure 4 – Trimmed Q-Q plot for Pt.

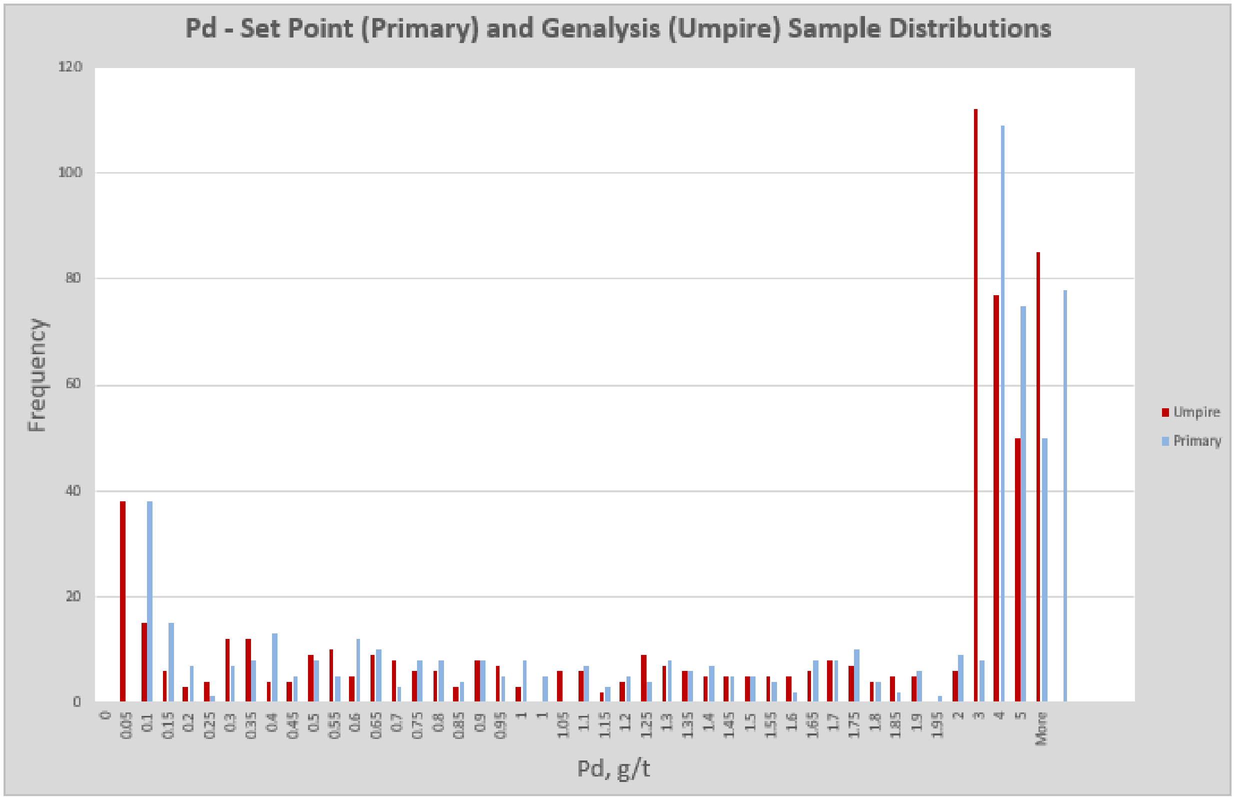


The distributions for both Set Point and Genalysis have a linear relationship. The umpire results confirm that the primary laboratory's results are reliable.

Analysis for Pd for samples sent to Set Point and to Genalysis During 2018

Figure 5 is a plot of the distribution of results for both laboratories.

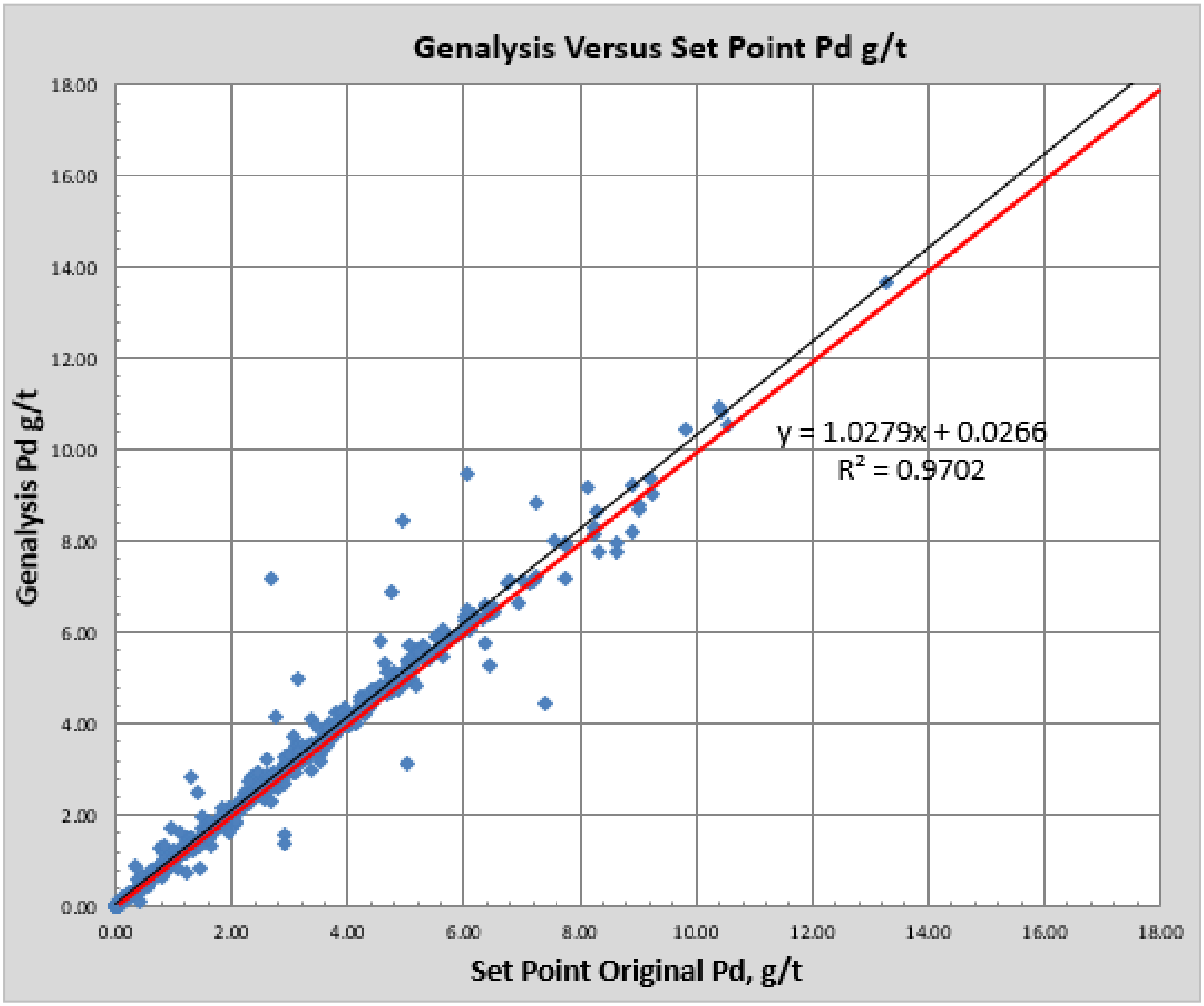
Figure 5 – A plot of result distribution for Set Point and Genalysis for Pd



The distributions for both laboratories are similar.

Figure 6 is a scatter plot of Pd where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

Figure 6 – Scatter plot for Pd of Set Point versus Genalysis Results reported in 2018



The scatter around the regression line as indicated on the graph for results less than 10 g/t is equally distributed. There is no bias indicated for either of the laboratories. Results are within acceptable limits with R^2 of 0.9702.

Figure 7 is a Q-Q plot for Pd.

Figure 7 – Q-Q plot for Pd.

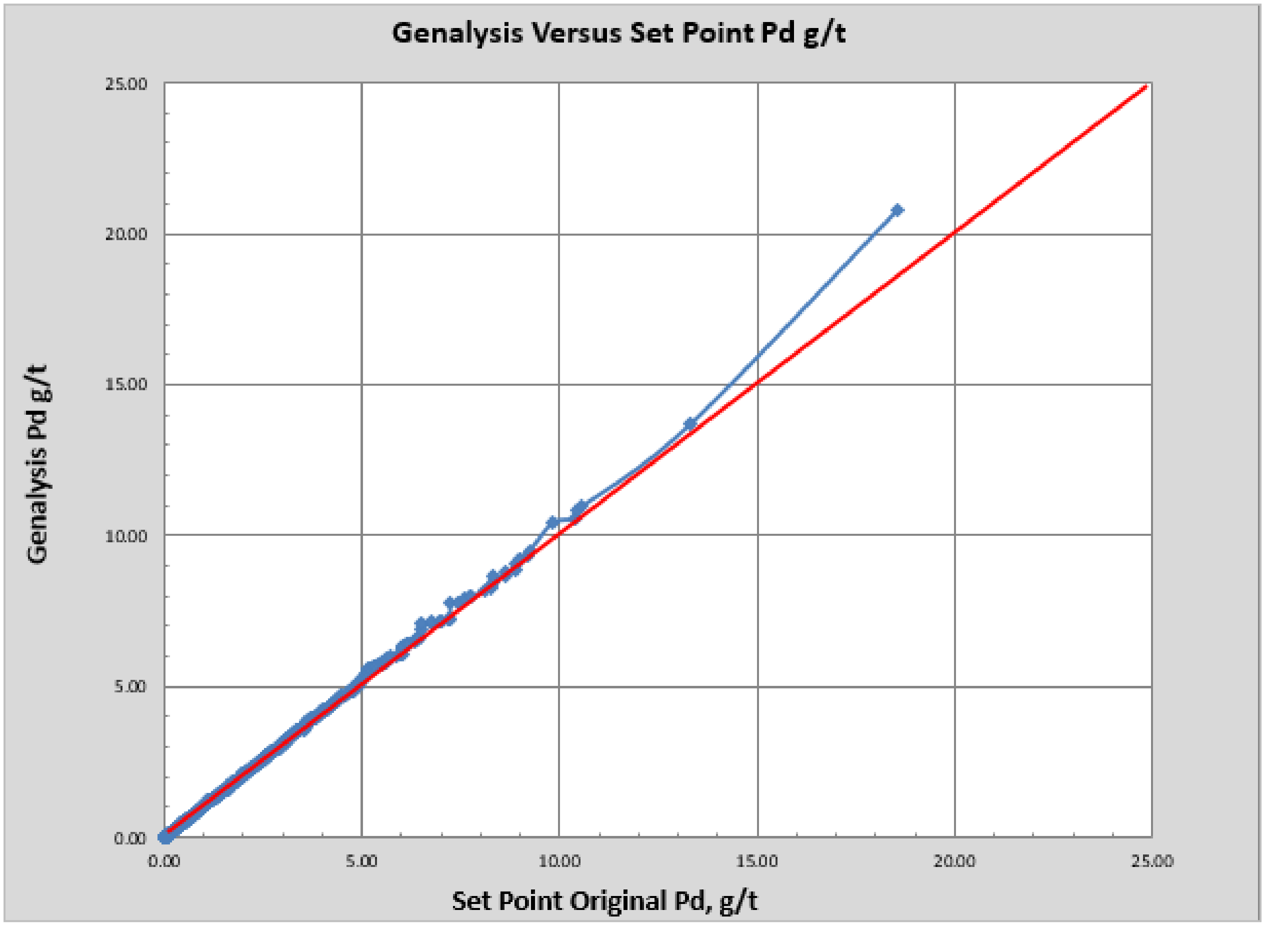
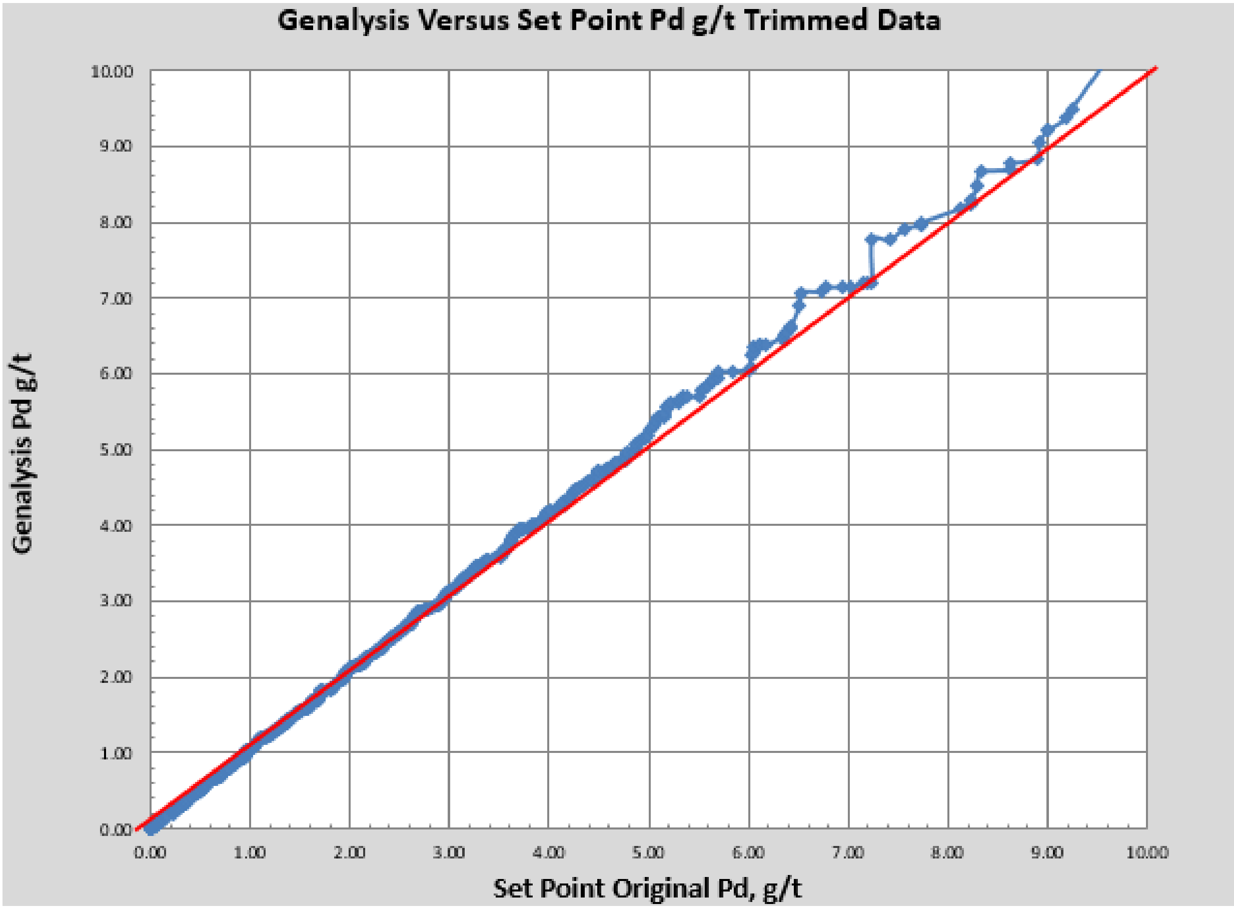


Figure 8 is a trimmed Q-Q plot for Pd for grades less than 10 g/t.

Figure 8 – Trimmed Q-Q plot for Pd.

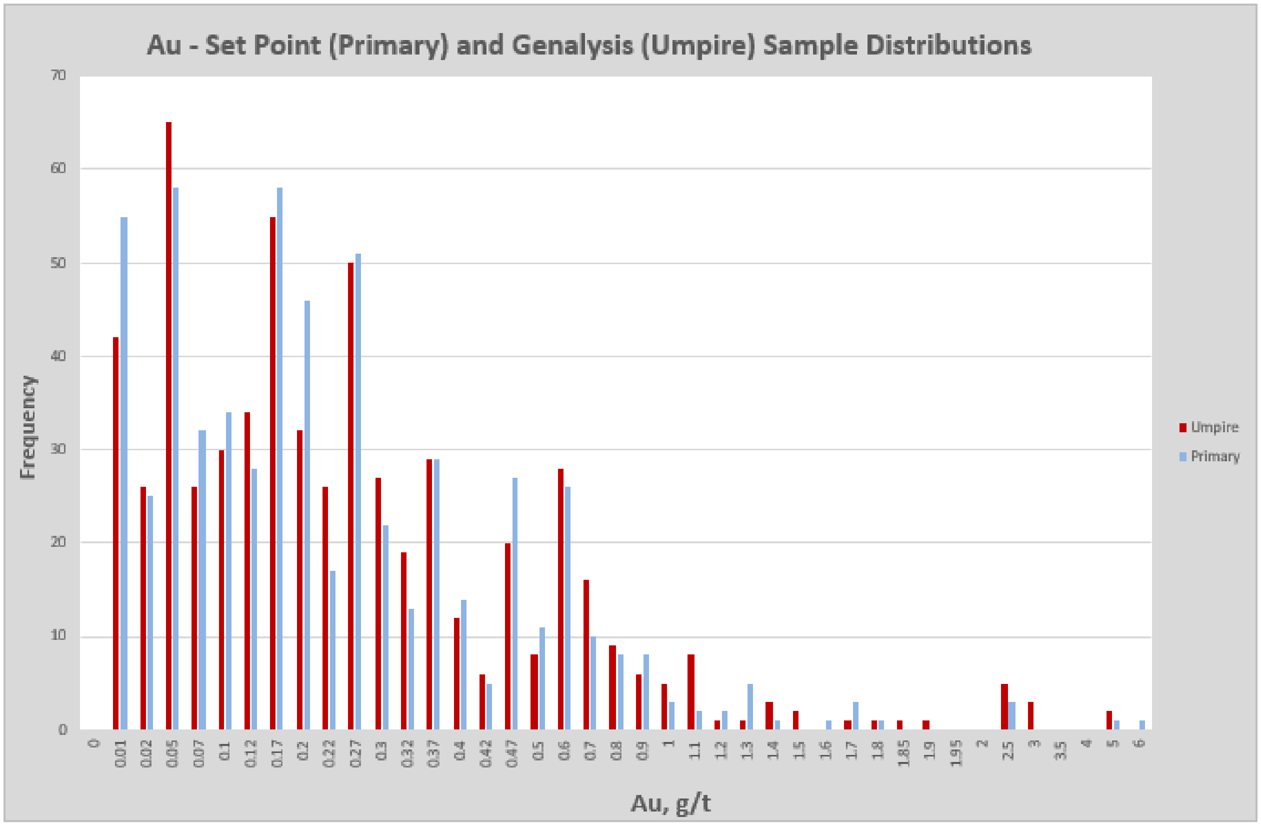


The distributions for both Set Point and Genalysis have a linear relationship. The umpire results confirm that the primary laboratory's results are reliable.

<u>Analysis for Au for samples sent to Set Point and to Genalysis During 2018</u>

Figure 9 is a plot of the distribution of results for both laboratories.

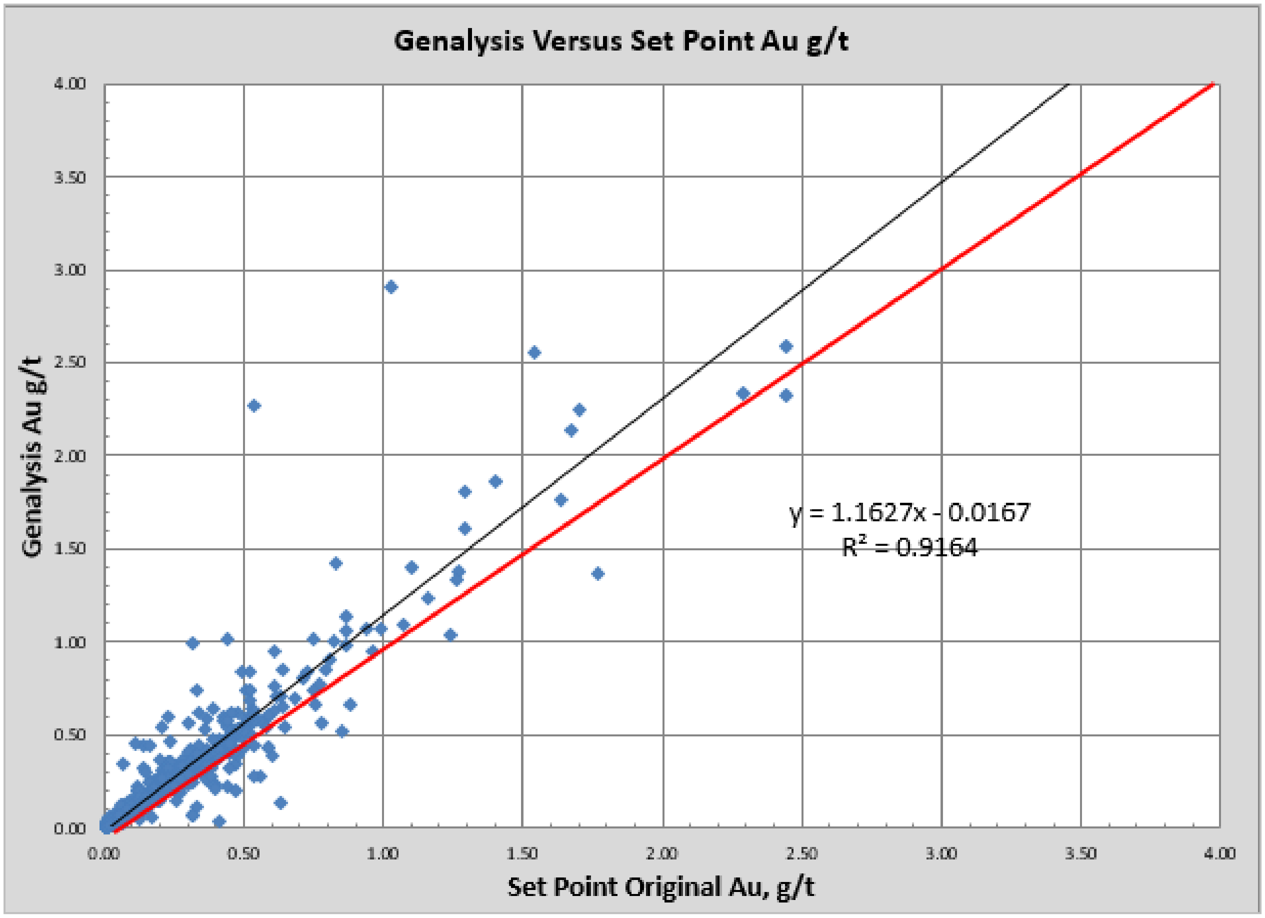
Figure 9 – A plot of result distribution for Set Point and Genalysis for Au



The distributions for both laboratories are similar.

Figure 10 is a scatter plot of Au where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

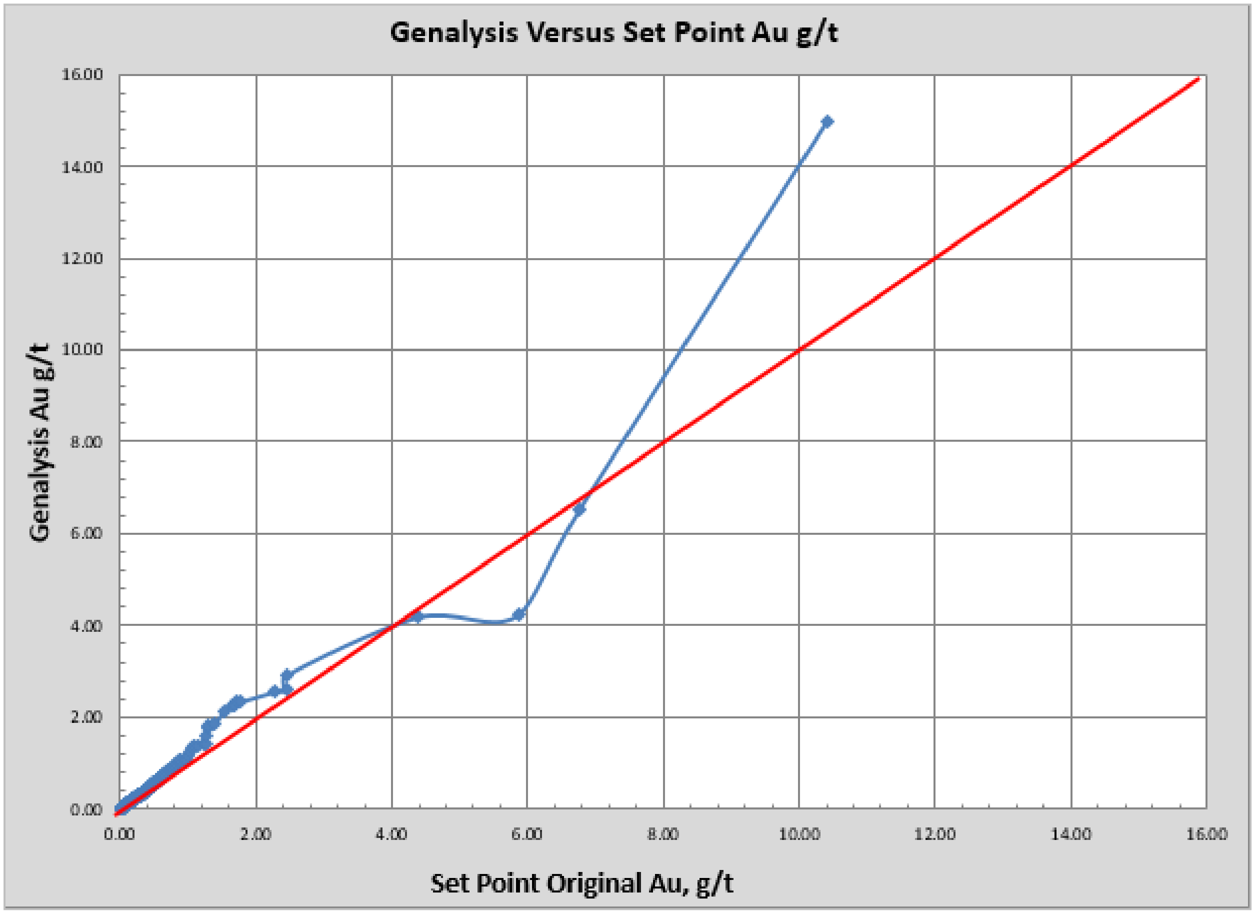
Figure 10 – Scatter plot for Au of Set Point versus Genalysis Results



Compared to Pt and Pd, Au shows less correlation and more scatter around the regression line for Set Point versus Genalysis results. Genalysis results have a positive bias as indicated by the regression line. This may be due to better recovery of Au during the analytical process at Genalysis. The R^2 of 0.9164 is acceptable.

Figure 11 is a Q-Q plot for Au.

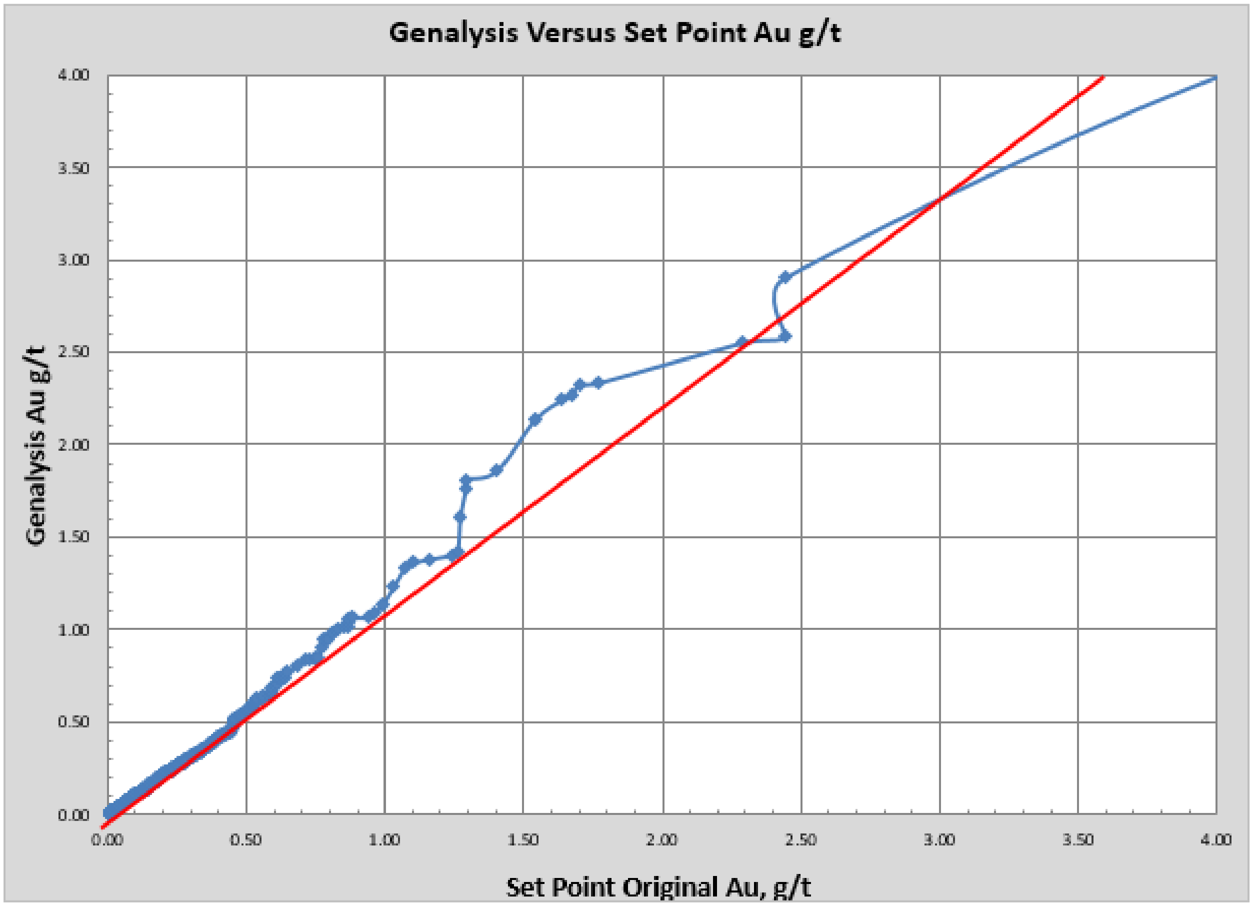
Figure 11 – Q-Q plot for Au.



There is good agreement between the Set Point and Genalysis results. Genalysis results show a positive bias for grades greater than 1 g/t as Genalysis has better Au recovery due to their analytical technique used.

Figure 12 is a trimmed Q-Q plot for Au for grades less than 5 g/t.

Figure 12 – Trimmed Q-Q plot for Au.



The trimmed Q-Q graph again shows the positive bias for Genalysis results and better Au recovery during analysis. This means that Set Point Au results are conservative. It is better to have an underestimate of grade by a primary laboratory than an overestimate.

<u>Analysis for Cu for samples sent to Set Point and to Genalysis During 2018</u>

Figure 13 is a plot of the distribution of results for both laboratories.

Figure 13 – A plot of result distribution for Set Point and Genalysis for Cu

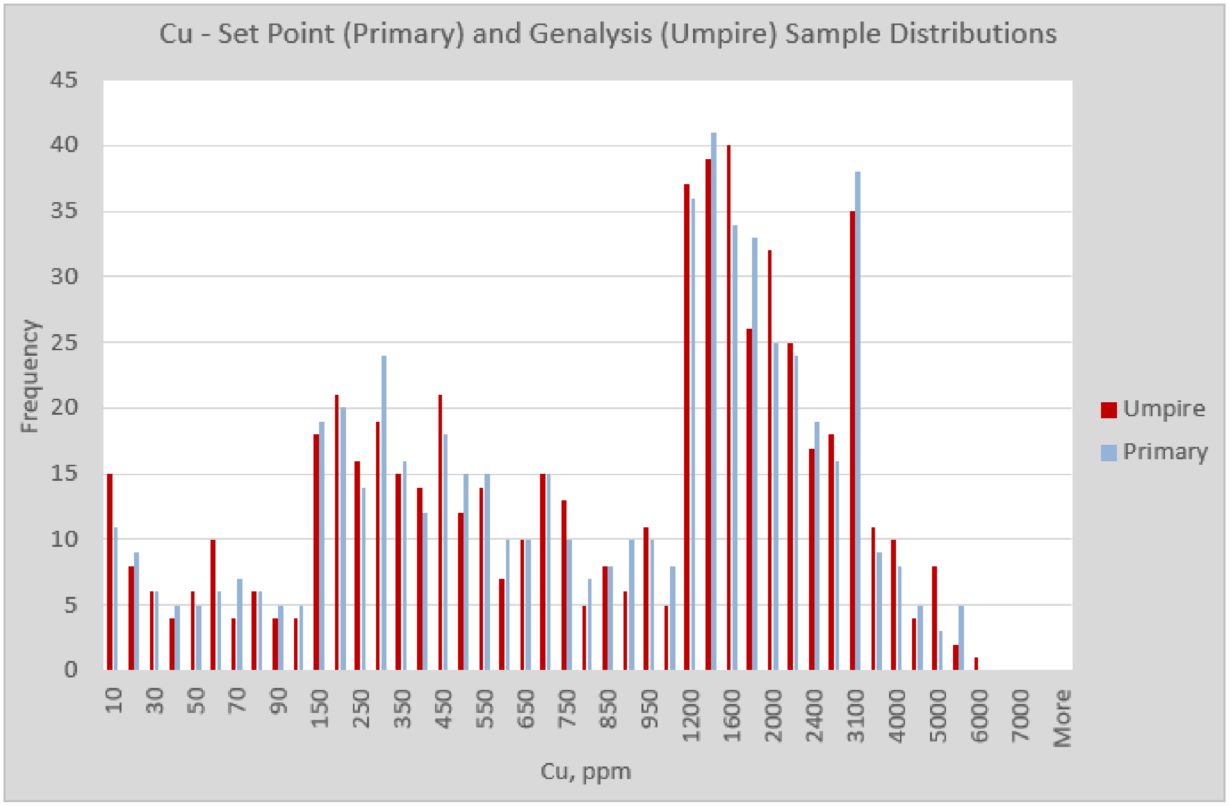
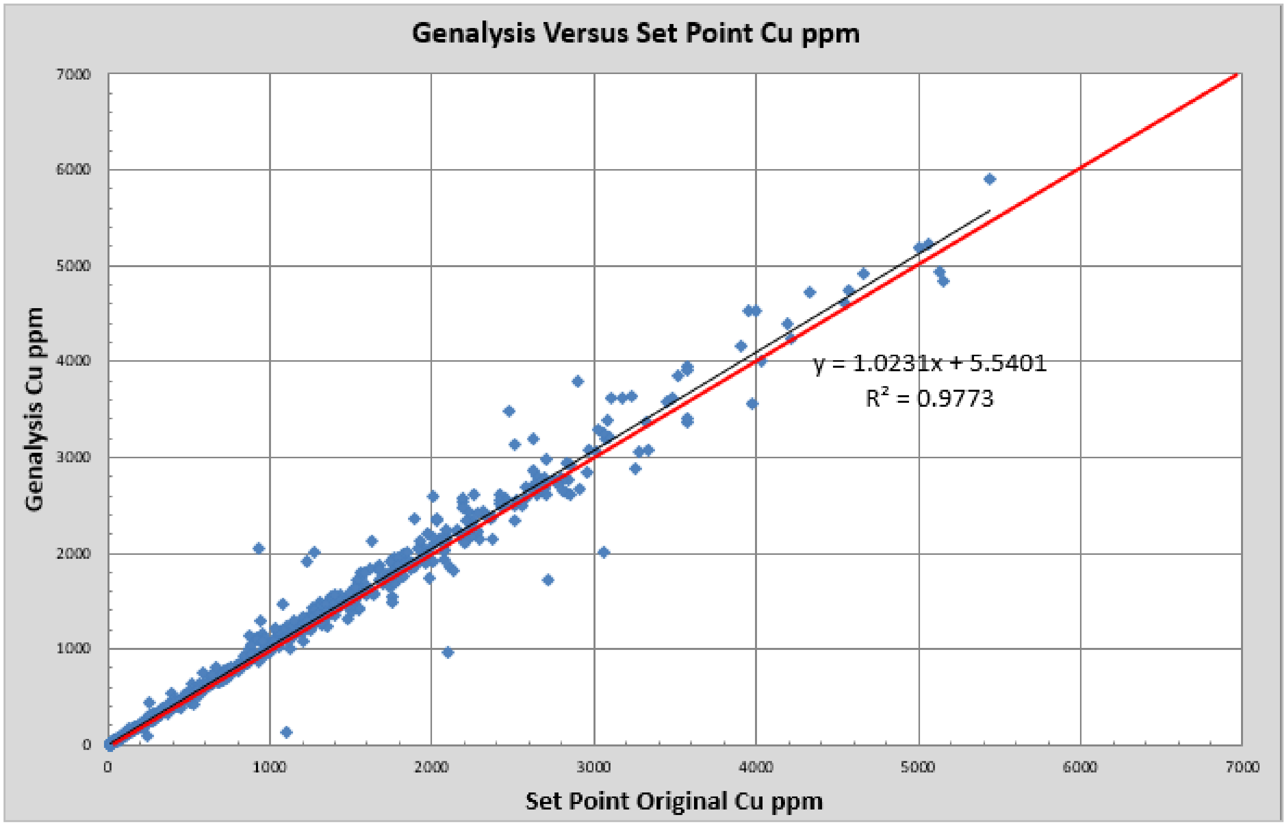


Figure 14 is a scatter plot of Cu where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

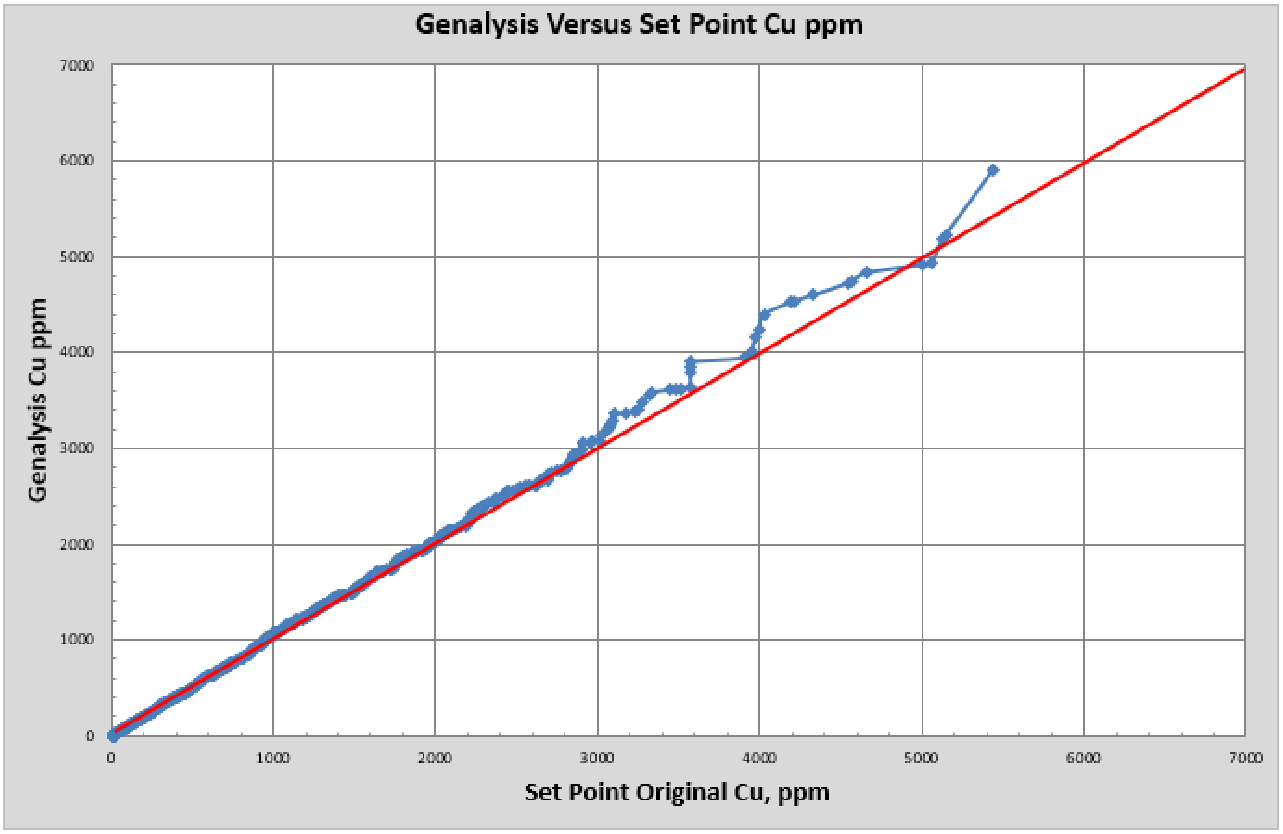
Figure 14 – Scatter plot for Cu of Set Point versus Genalysis Results



The scatter around the regression line as indicated on the graph equally distributed. There is no bias indicated for either of the laboratories. Results are within acceptable limits with R^2 of 0.9773.

Figure 15 is a Q-Q plot for Cu.

Figure 15 – Q-Q plot for Cu.

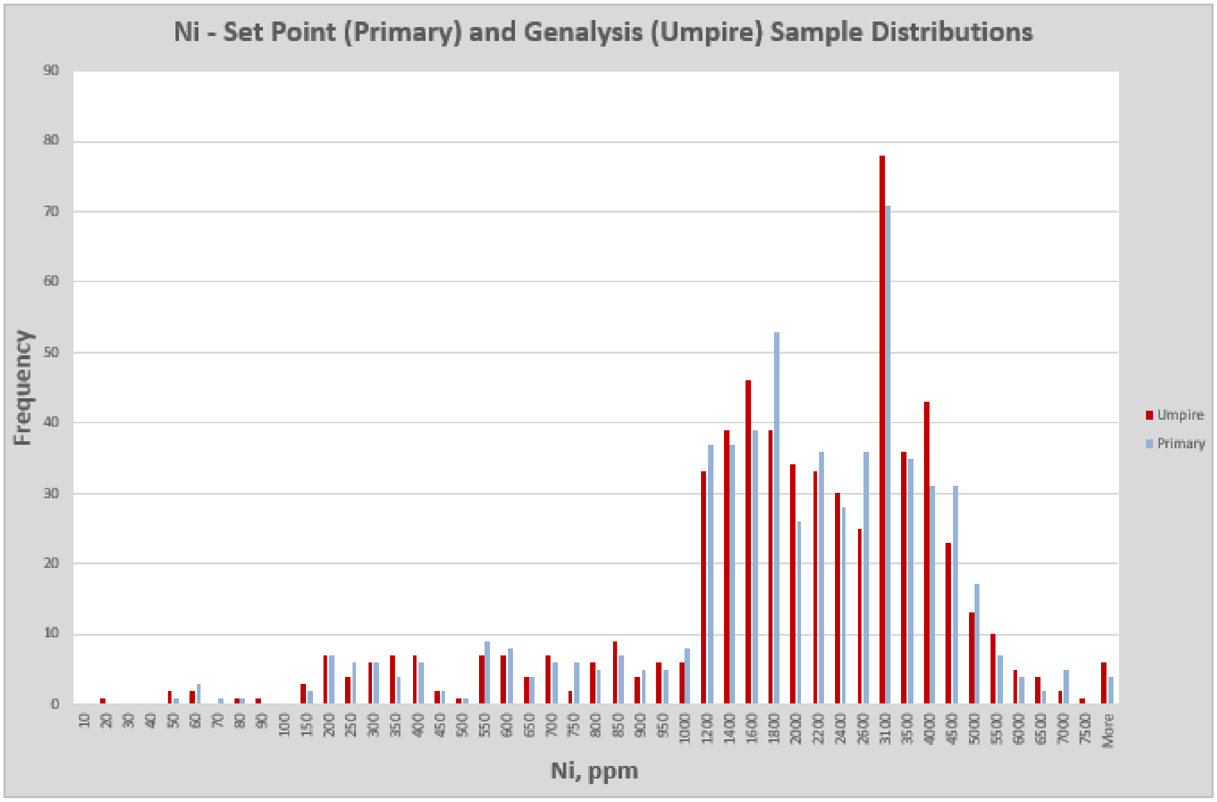


The distributions for both Set Point and Genalysis have a linear relationship. The umpire results confirm that the primary laboratory's results are reliable.

<u>Analysis for Ni for samples sent to Set Point and to Genalysis During 2018</u>

Figure 16 is a plot of the distribution of results for both laboratories.

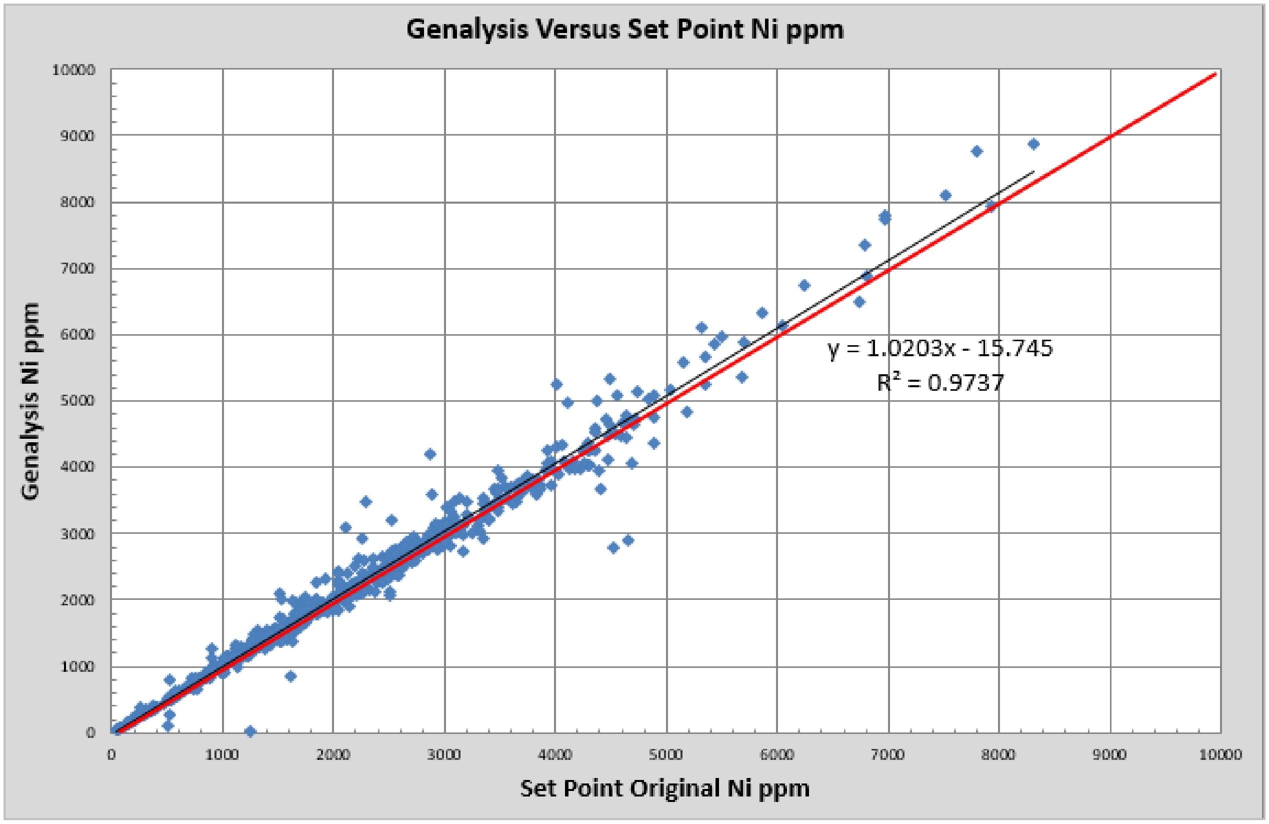
Figure 16 – A plot of result distribution for Set Point and Genalysis for Ni



The distributions for both laboratories are similar.

Figure 17 is a scatter plot of Ni where Set Point results are plotted on the X-axis and the corresponding Genalysis results are plotted on the Y-axis.

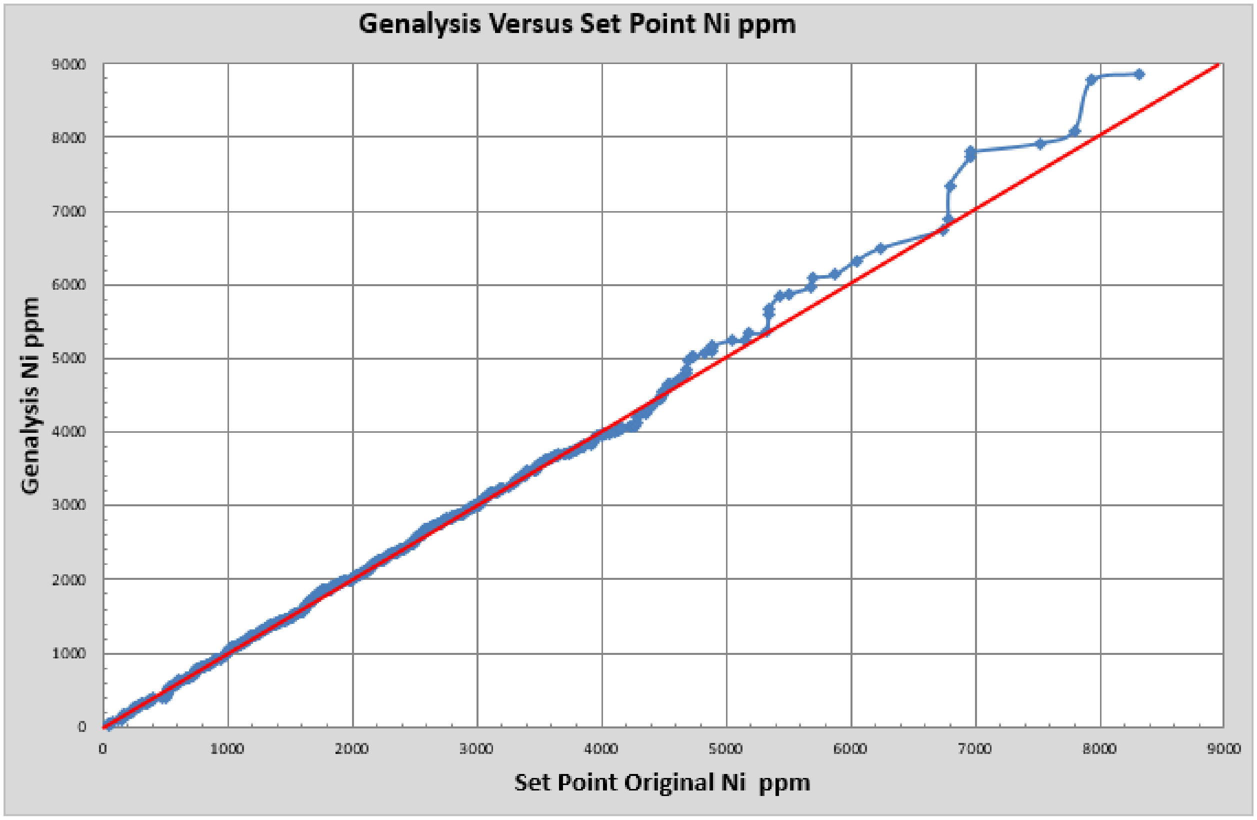
Figure 17 – Scatter plot for Ni of Set Point versus Genalysis Results



The scatter around the regression line as indicated on the graph is equally distributed. There is no bias indicated for either of the laboratories. Results are within acceptable limits with R^2 of 0.9737.

Figure 18 is a Q-Q plot for Ni.

Figure 18 – Q-Q plot for Ni.



The trimmed Q-Q graph shows a good linear relationship for results < 5000 ppm. There is a positive bias for Genalysis results as there is better Ni recovery during analysis relative to Set Point for results >5000 ppm. This means that Set Point Ni results are conservative. It is better to have an underestimate of grade by a primary laboratory than an overestimate.

APPENDIX 8: QA/QC OF BUREAU VERITAS UMPIRE SAMPLES

Statistics and graphs were compiled for the 772 samples sent to both Set Point and Bureau Veritas.

A HARD statistic was calculated for each element and for each sample analysed at both laboratories. This is not to measure precision as the laboratories are different. This to identify whether there is agreement between the results between the laboratories. Samples with significantly different results may have been mixed up during the repackaging process before despatch to the umpire laboratory or during processing at the umpire laboratory. At least 90% of the samples should have a HARD within 10%. Table 1 lists the percentage of samples with HARD within 10%.

Table 1 – Percentage of samples analysed at both laboratories that have a HARD less than or equal to 10% for each element

Element	Total samples > 10 X detection limit	Number of samples with HARD <=10%	Percentage with HARD within 10%
Au	400	180	45%
Pt	701	613	87%
Pd	701	648	92%
Cu	621	604	97%
Ni	699	681	97%

Table 1 shows that for Cu and Ni that there is good comparability between both laboratories. The percentage of Au samples with HARD within 10% is 45% which is very low. Au is prone to a possible nugget effect. Au is also subject to higher variability due to the analytical technique used (fire assay with Pb collection) at low grades (<0.1 g/t). Au also has more samples with results closer to the limit of detection. The percentage of samples with HARD within 10% for Au and Pt is lower than the acceptable limit of 90%. The cause of this is not clear. Sample mix-ups are one possible cause but not to such an extent. Results with a HARD greater than 10% for Pt may indicate a positive bias in results from Bureau Veritas.

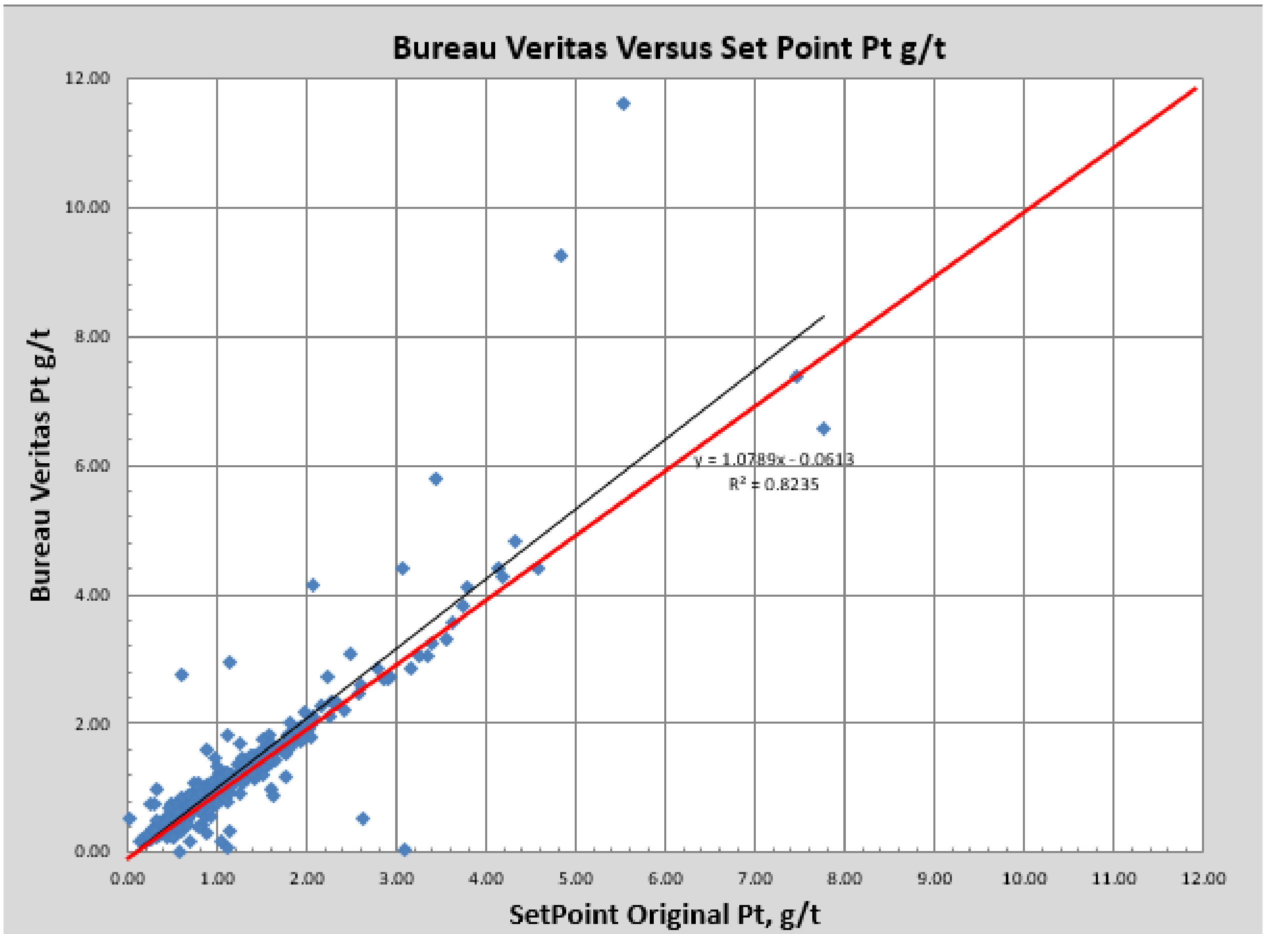
Three graphs were plotted for each element. The first graph plots the distribution of results for both laboratories to demonstrate that the results are repeatable when sent to different laboratories.

The second graph is a scatter plot to demonstrate the correlation between the laboratories and the third is a Q-Q plot.

Analysis for Pt for samples sent to Set Point and to Bureau Veritas

Figure 1 is a scatter plot of Pt where Set Point results are plotted on the X-axis and the corresponding Bureau Veritas results are plotted on the Y-axis.

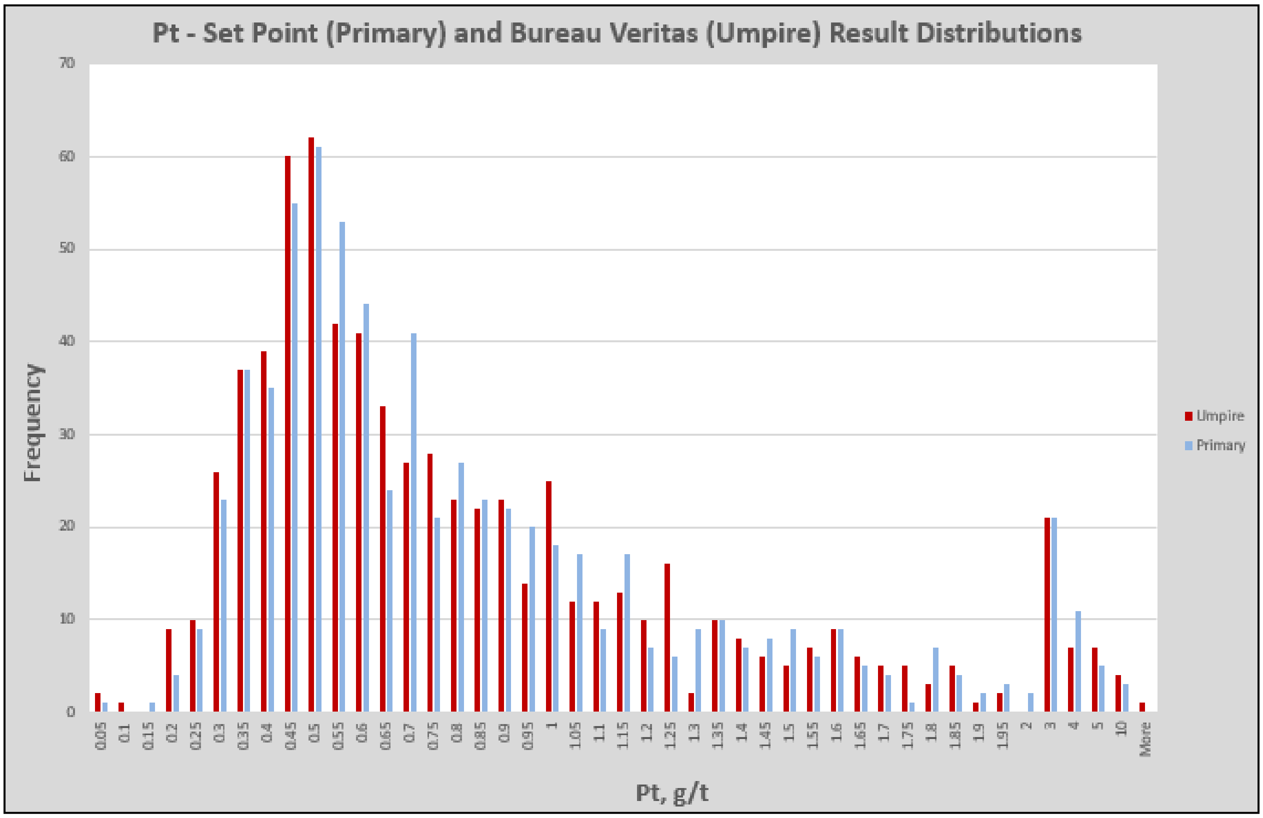
Figure 1 – Scatter plot for Pt of Set Point versus Bureau Veritas Results



The correlation between Set Point and Bureau Veritas results is acceptable although there is an observed positive bias for a few Bureau Veritas results when compared to Set Point for grades greater than 2 g/t.

Figure 2 is a plot of the distribution of results for both laboratories.

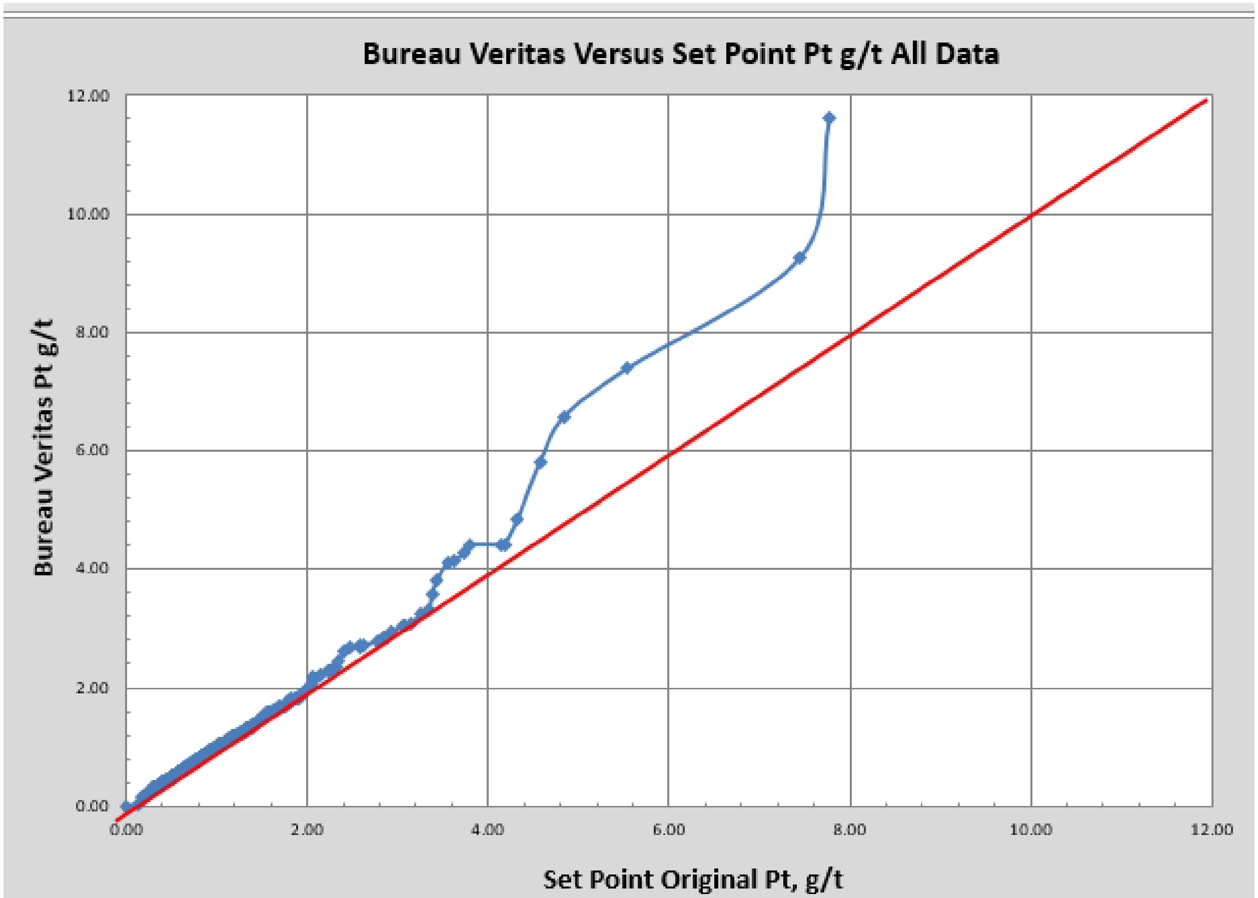
Figure 2 – A plot of result distribution for Set Point and Bureau Veritas for Pt



The distributions are comparable.

Figure 3 is a Q-Q plot for Pt.

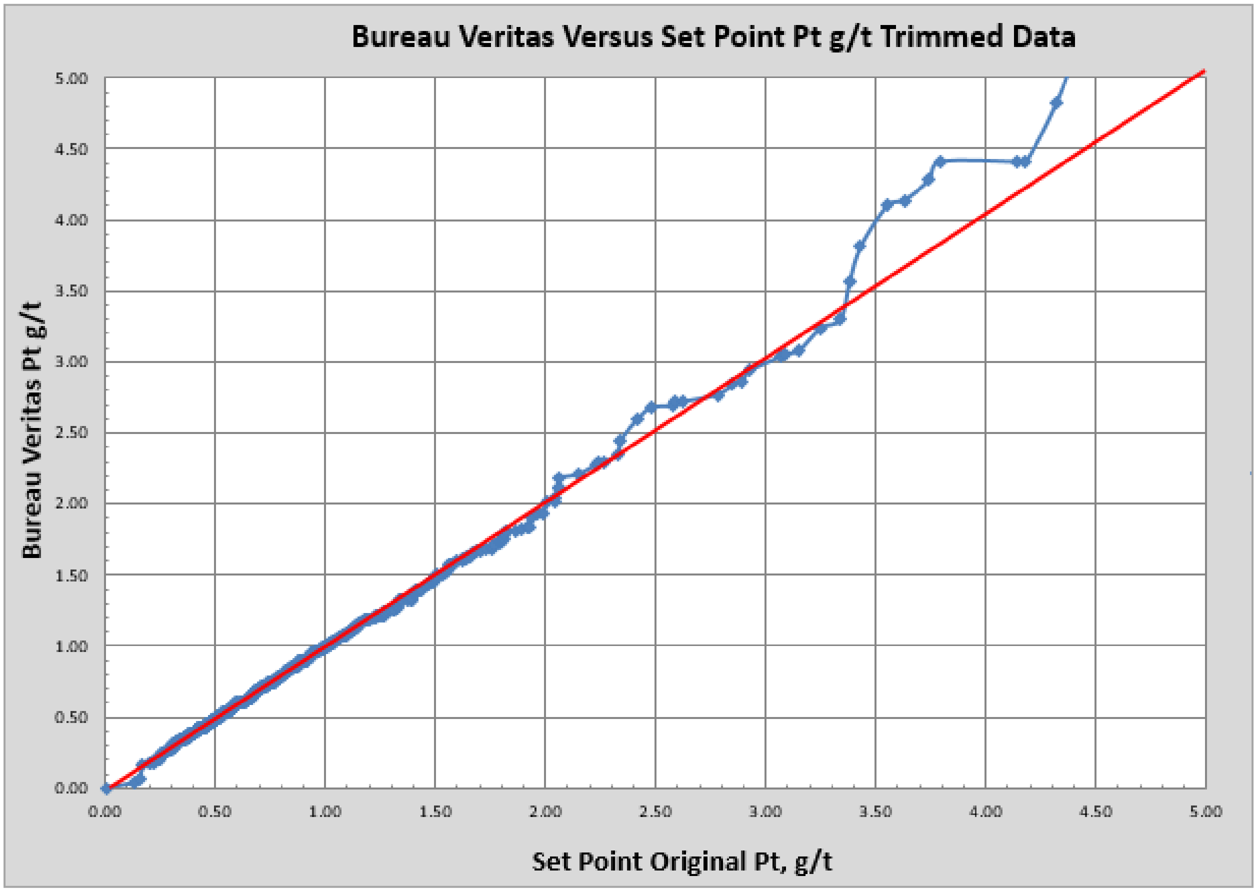
Figure 3 – Q-Q plot for Pt.



The distributions are comparable up to a grade of 4 g/t. The positive bias of Bureau Veritas results relative to Set Point for grades greater than 4 g/t is shown on the graph.

. Figure 4 is a trimmed Q-Q plot for Pt for results less than 5 g/t.

Figure 4 – Trimmed Q-Q plot for Pt.

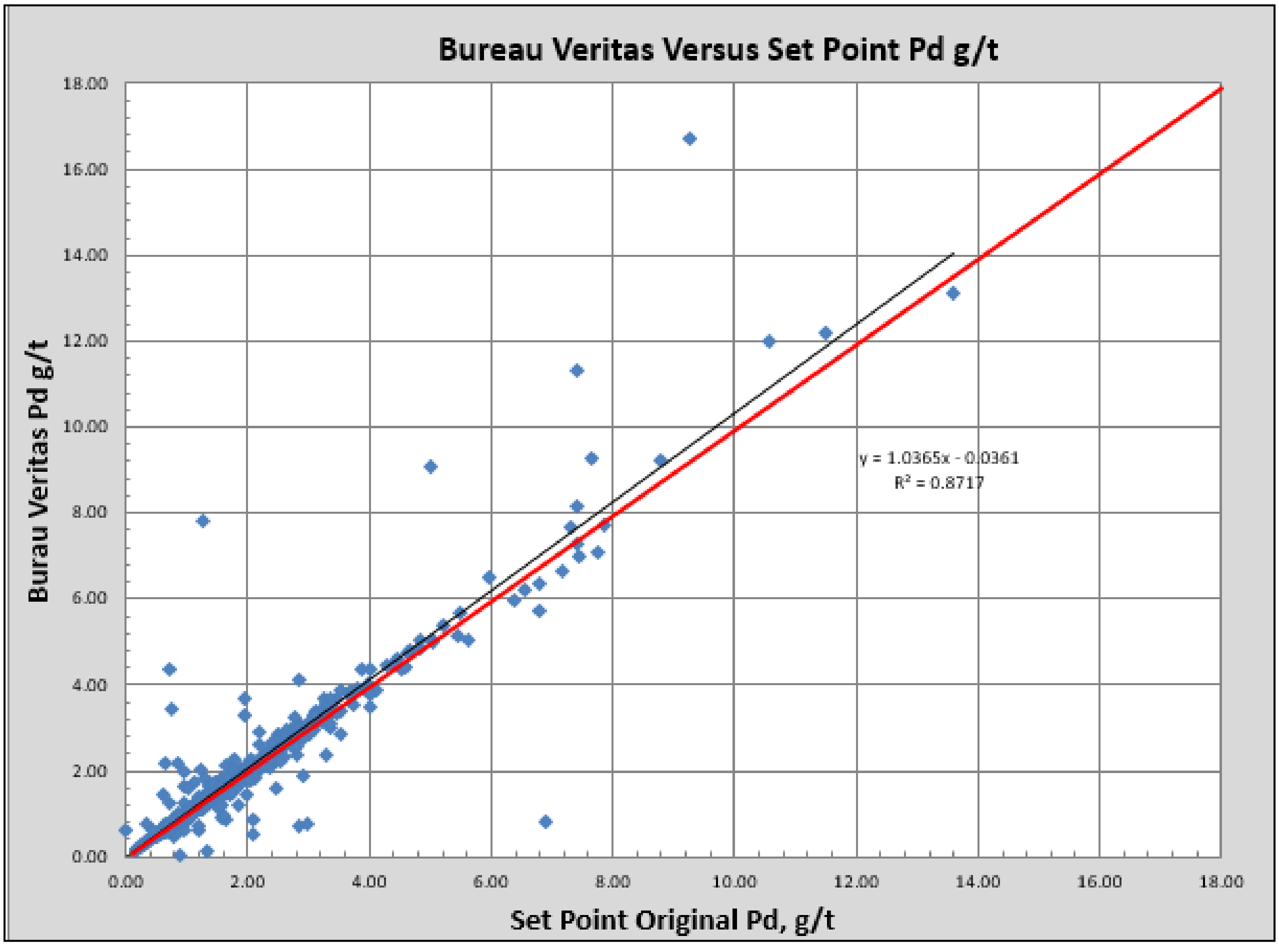


The distributions of both laboratories are comparable within the range corresponding to grades for most mineralised samples.

Analysis for Pd for samples sent to Set Point and to Bureau Veritas

Figure 5 is a scatter plot of Pd where Set Point results are plotted on the X-axis and the corresponding Bureau Veritas results are plotted on the Y-axis.

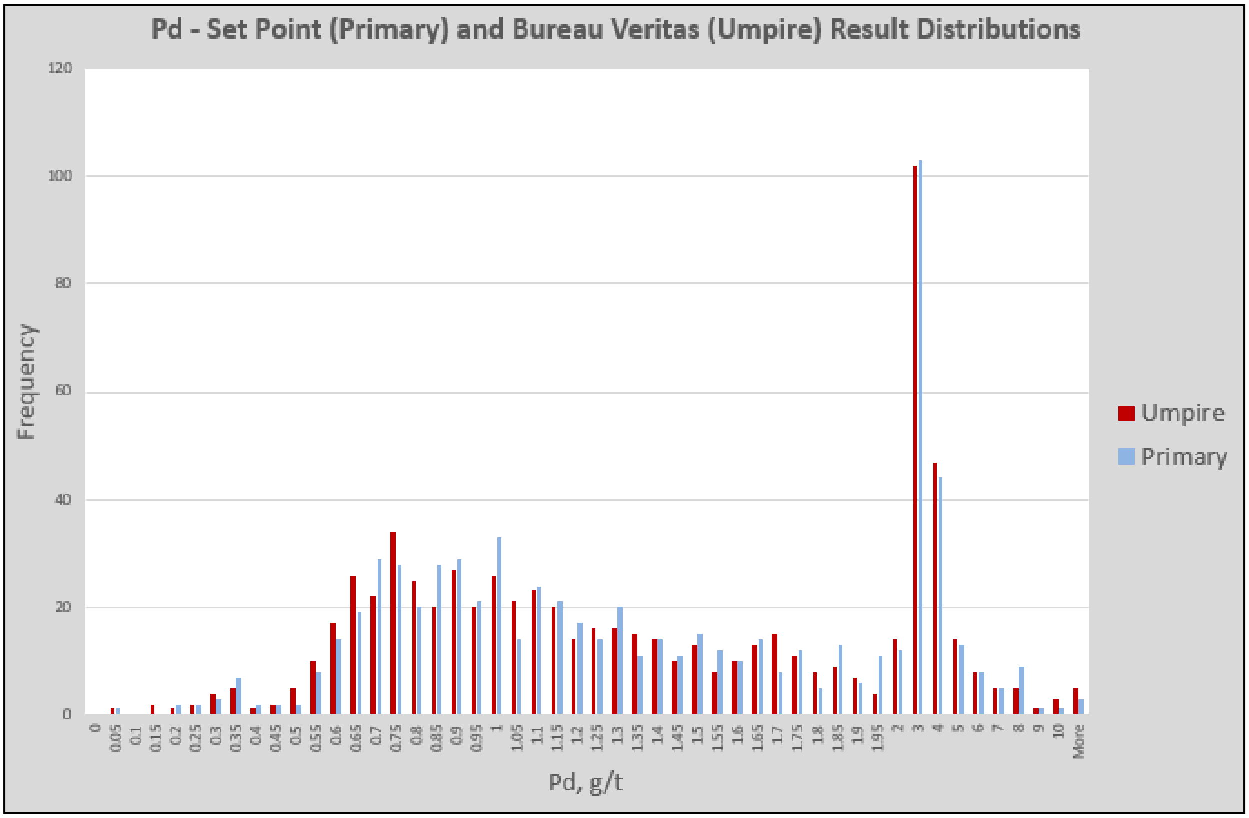
Figure 5 – Scatter plot for Pd of Set Point versus Bureau Veritas Results



There is some scatter at grades less than 4 g/t and Bureau Veritas results show a positive bias for some samples when compared to Set Point results for grades greater than 2 g/t.

Figure 6 is a plot of the distribution of results for both laboratories.

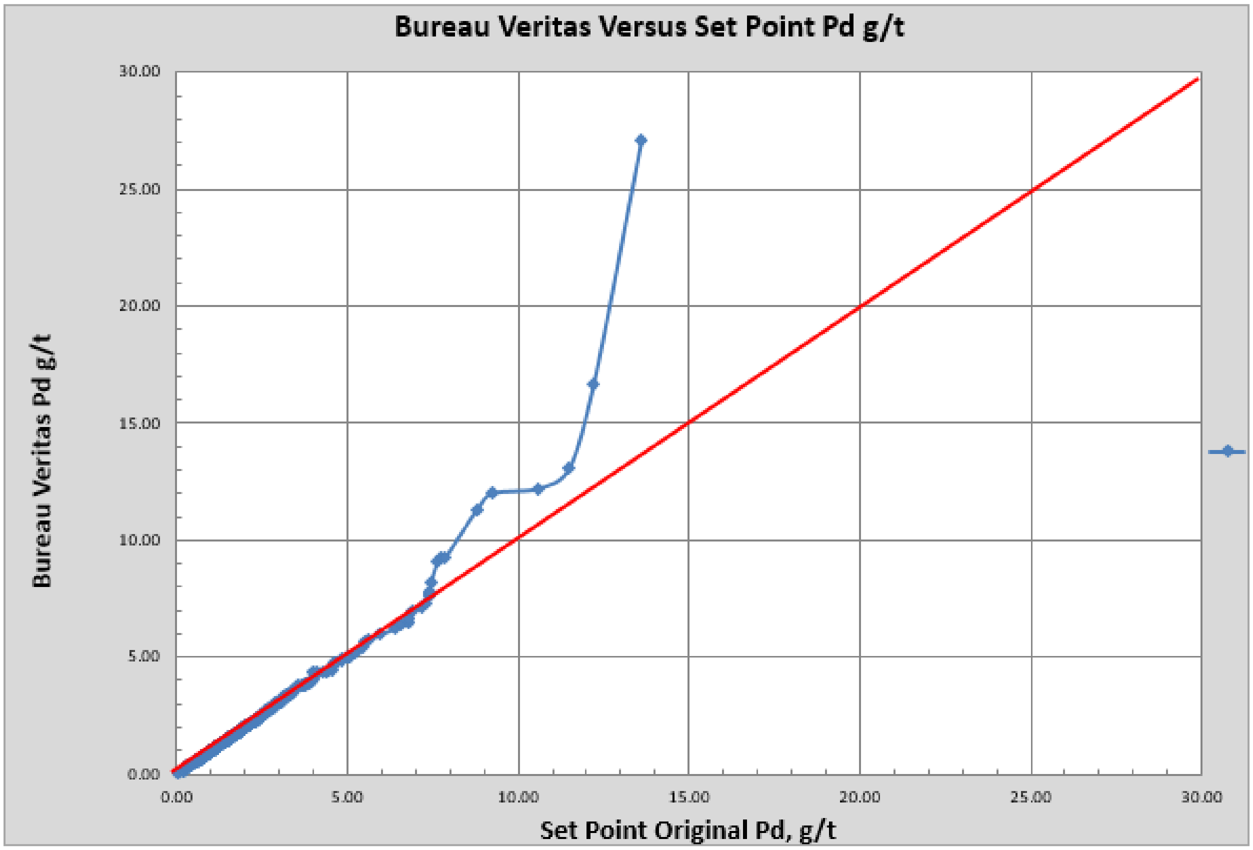
Figure 6 – A plot of result distribution for Set Point and Bureau Veritas for Pd



The distributions are comparable.

Figure 7 is a Q-Q plot for Pd.

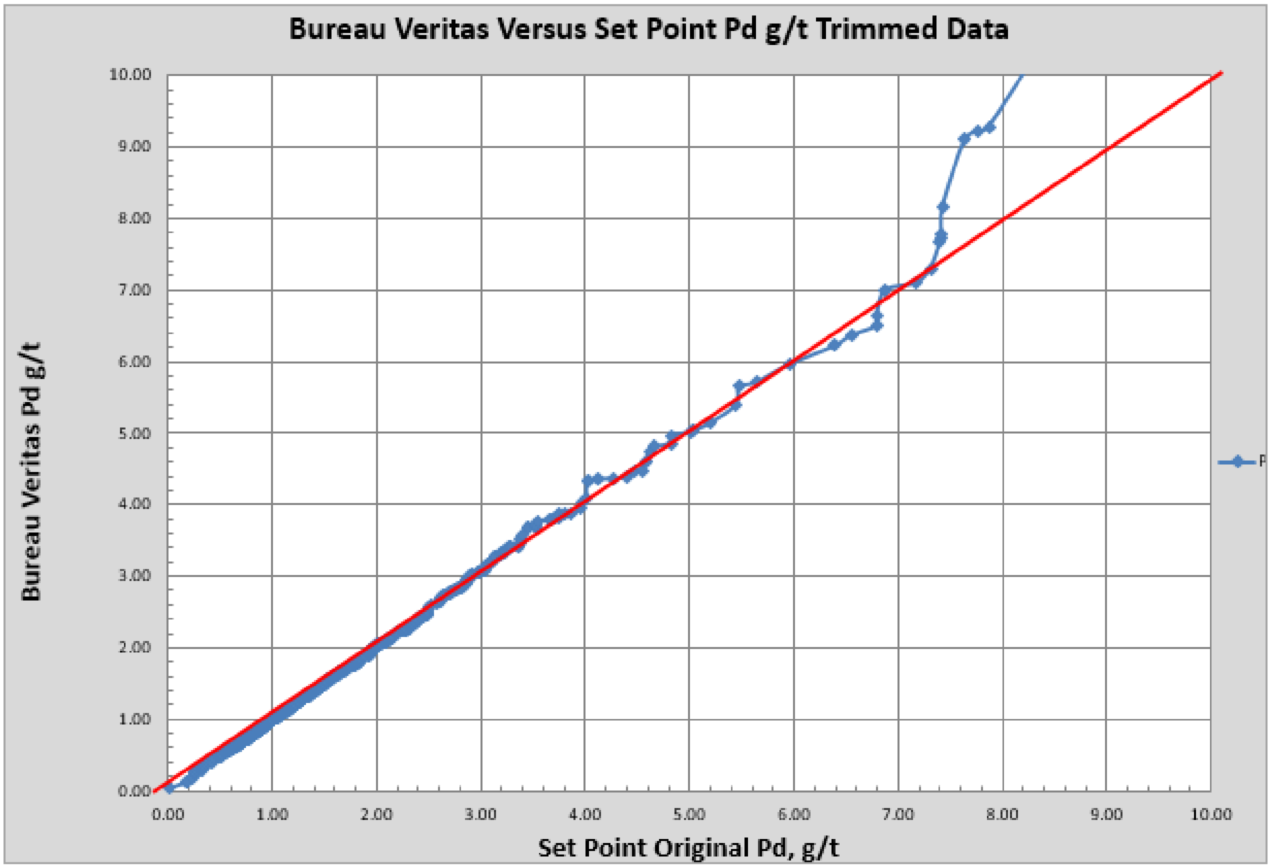
Figure 7 – Q-Q plot for Pd.



Result distributions are comparable up to a grade of 8 g/t and Bureau Veritas shows a positive bias for results greater than 8 g/t relative to Set Point.

Figure 8 is a trimmed Q-Q plot for Pd for results less than 10 g/t.

Figure 8 – Trimmed Q-Q plot for Pd.

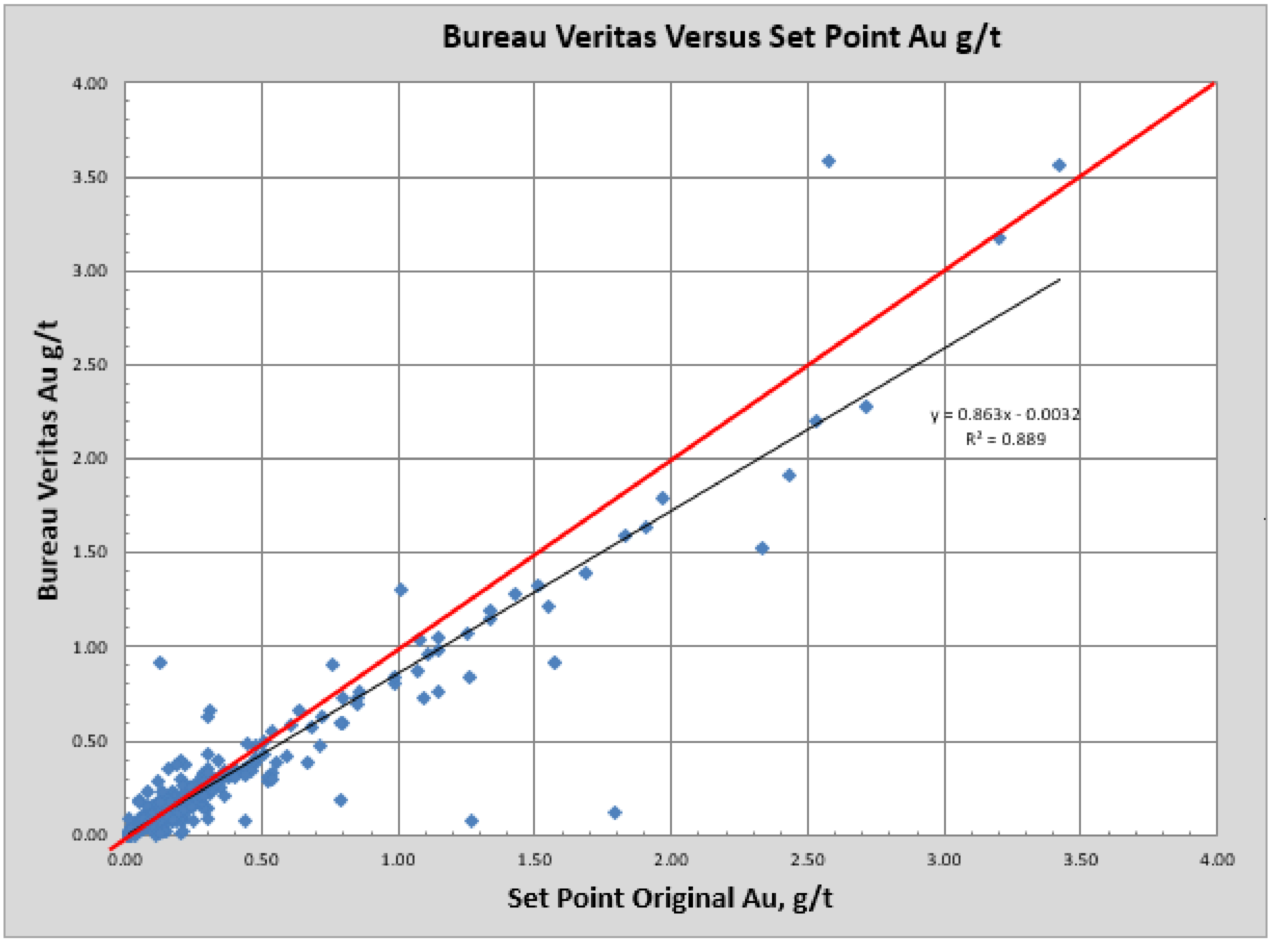


The distributions of both laboratories are comparable within the range corresponding to grades for most mineralised samples.

Analysis for Au for samples sent to Set Point and to Bureau Veritas

Figure 9 is a scatter plot of Au where Set Point results are plotted on the X-axis and the corresponding Bureau Veritas results are plotted on the Y-axis.

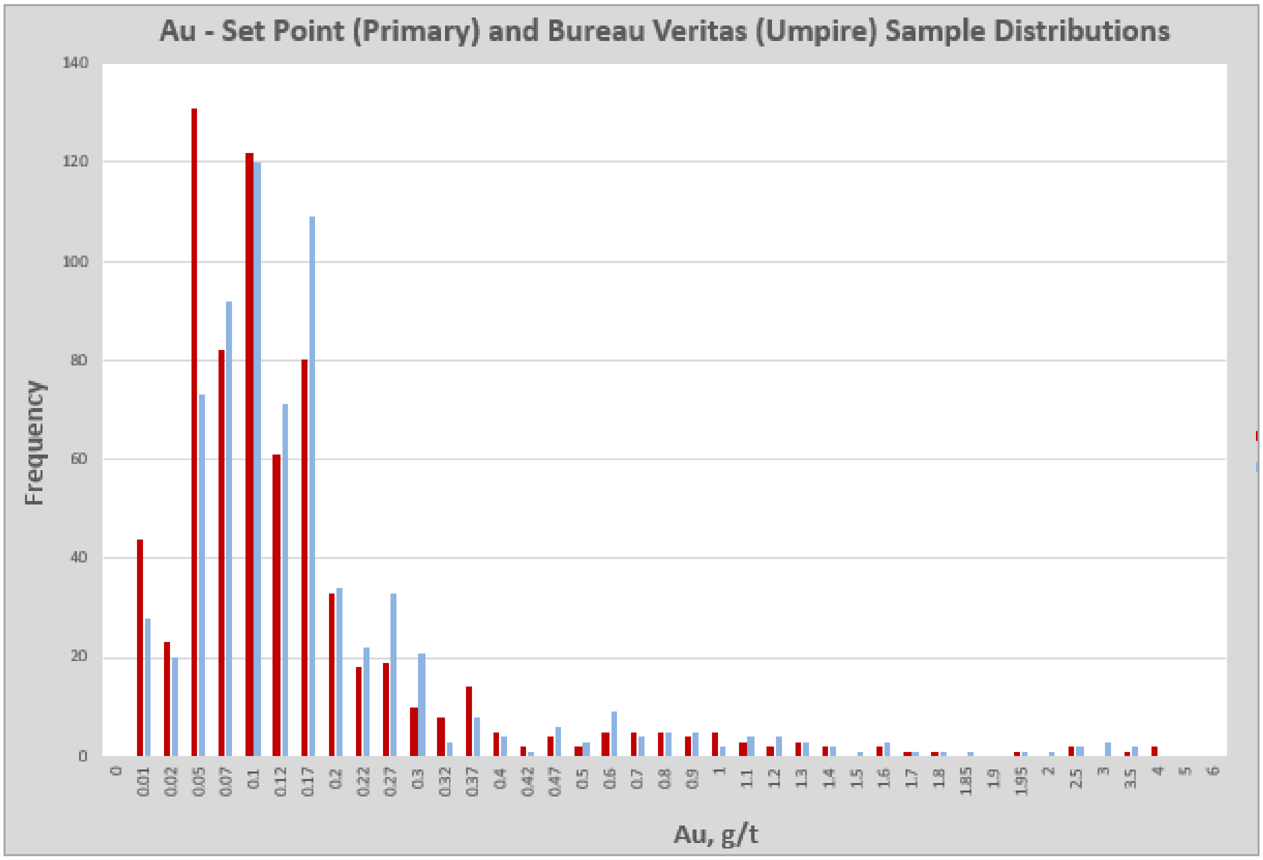
Figure 9 – Scatter plot for Au of Set Point versus Bureau Veritas Results



The correlation between Bureau Veritas and Set Point is poor with an R^2 of 0.889. Bureau Veritas has a negative bias when compared to Set Point results.

Figure 10 is a plot of the distribution of results for both laboratories.

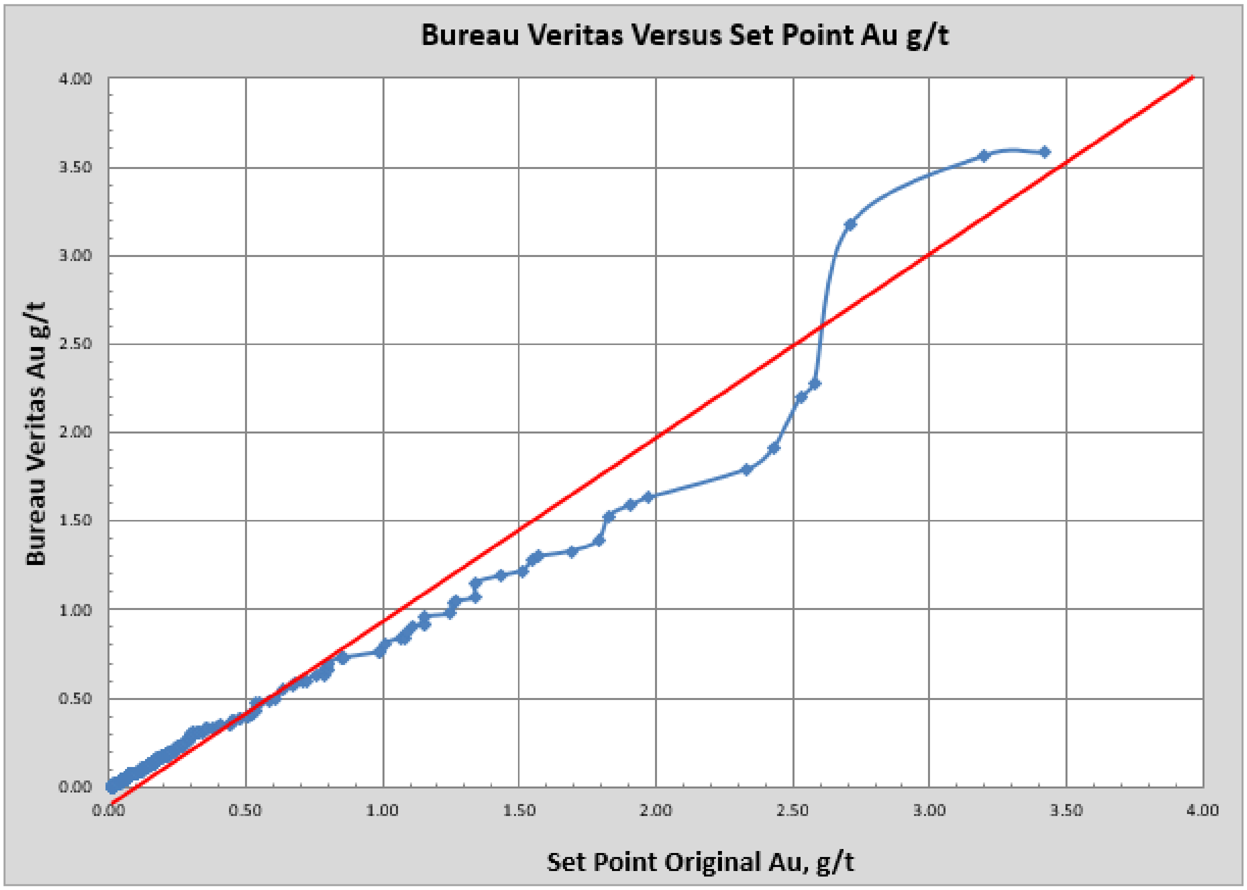
Figure 10 – A plot of result distribution for Set Point and Bureau Veritas for Au



The distributions are comparable.

Figure 11 is a Q-Q plot for Au.

Figure 11 – Q-Q plot for Au.

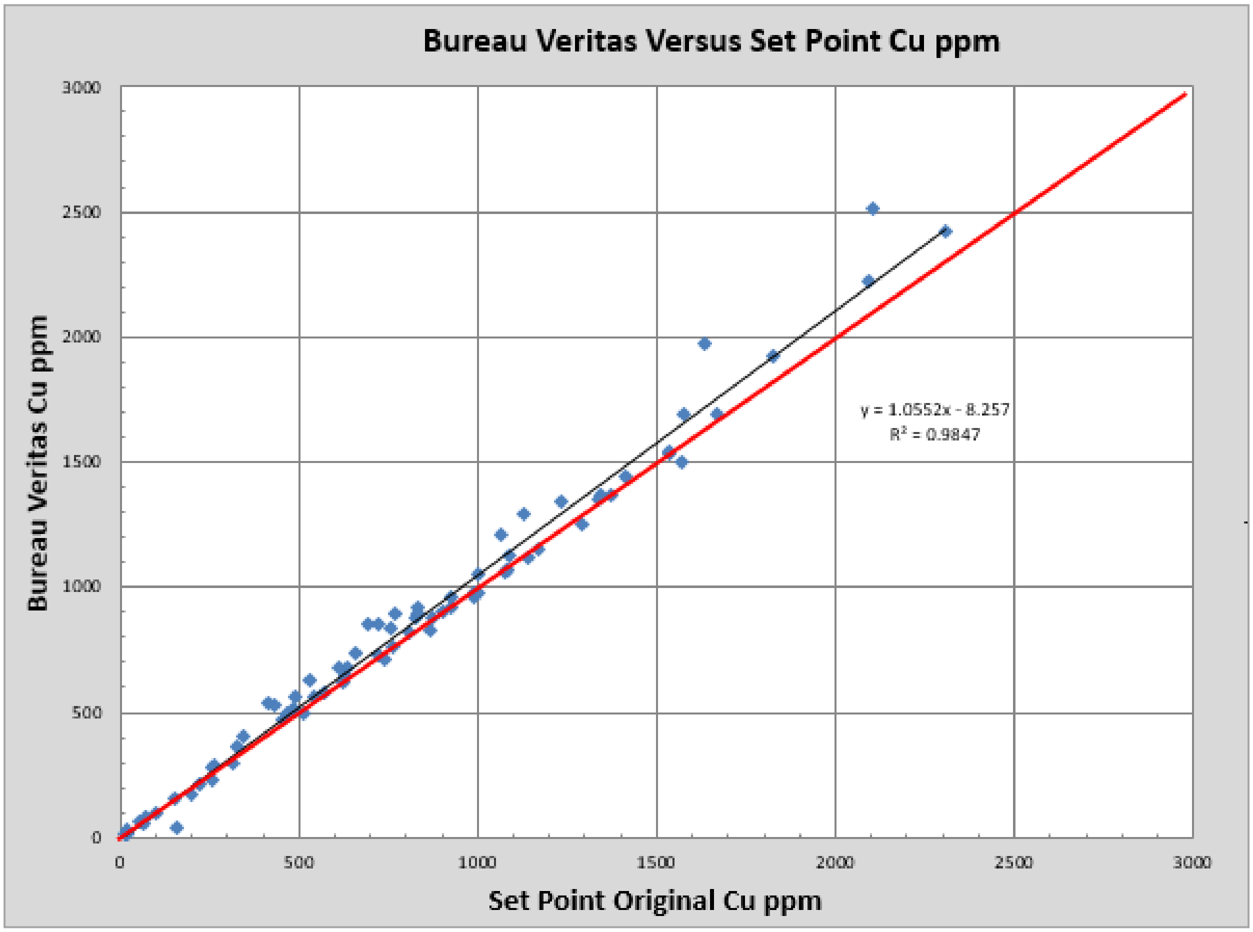


The result distributions are comparable up to grades of 1 g/t which is within the range of most mineralised samples. Again, the negative bias of Bureau Veritas results when compared to Set Point results for grades greater than 1 g/t is shown on the graph.

Analysis for Cu for samples sent to Set Point and to Bureau Veritas

Figure 12 is a scatter plot of Cu where Set Point results are plotted on the X-axis and the corresponding Bureau Veritas results are plotted on the Y-axis.

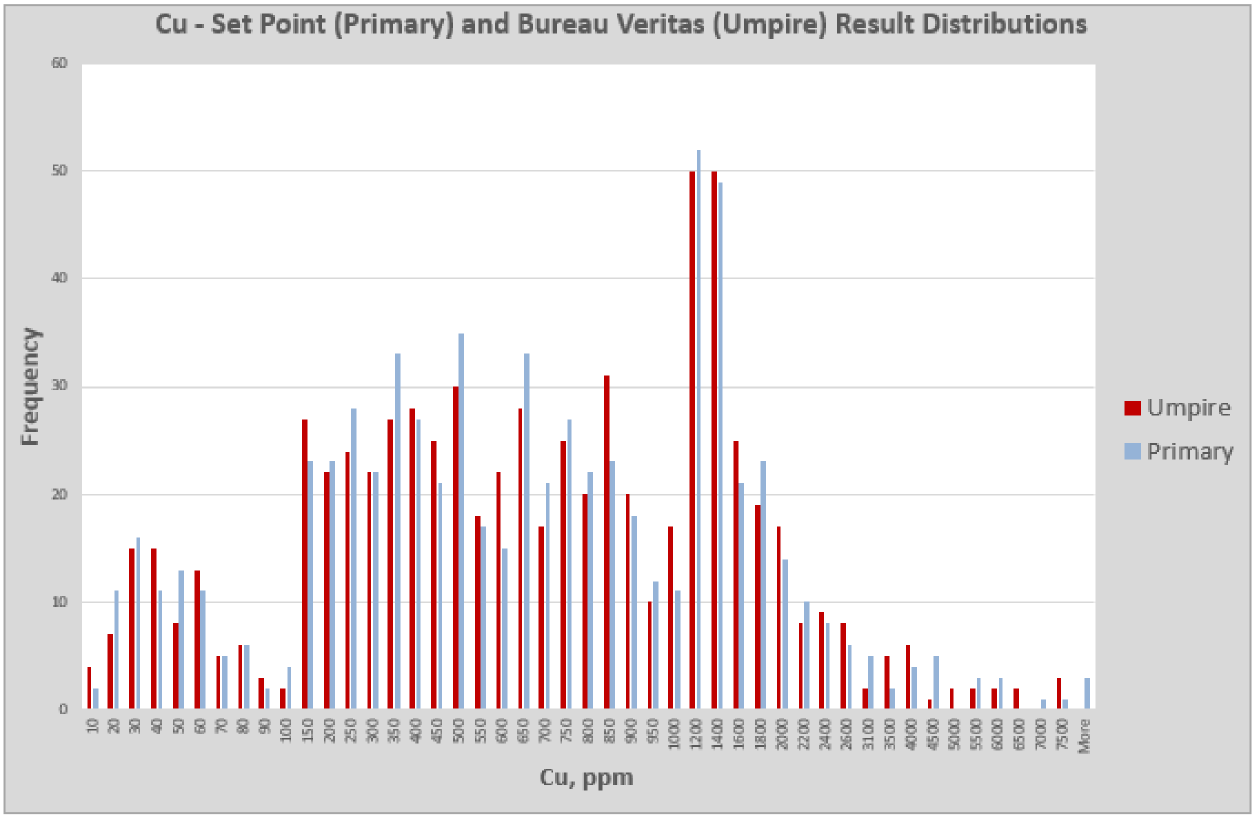
Figure 12 – Scatter plot for Cu of Set Point versus Bureau Veritas Results



There is a good correlation between the results from Bureau Veritas and Set Point.

Figure 13 is a plot of the distribution of results for both laboratories.

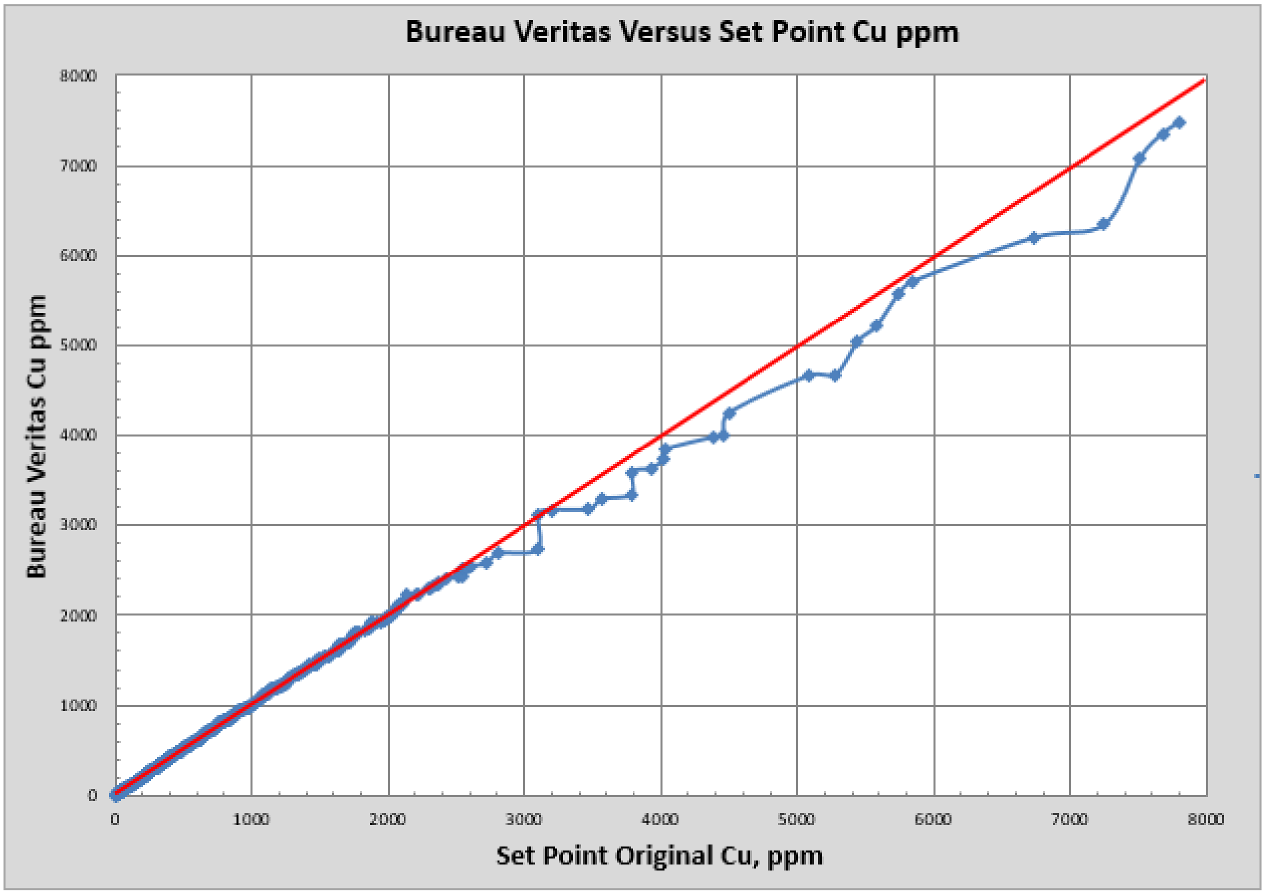
Figure 13 – A plot of result distribution for Set Point and Bureau Veritas for Cu



The distributions for both laboratories are comparable.

Figure 14 is a Q-Q plot for Cu.

Figure 14 – Q-Q plot for Cu.

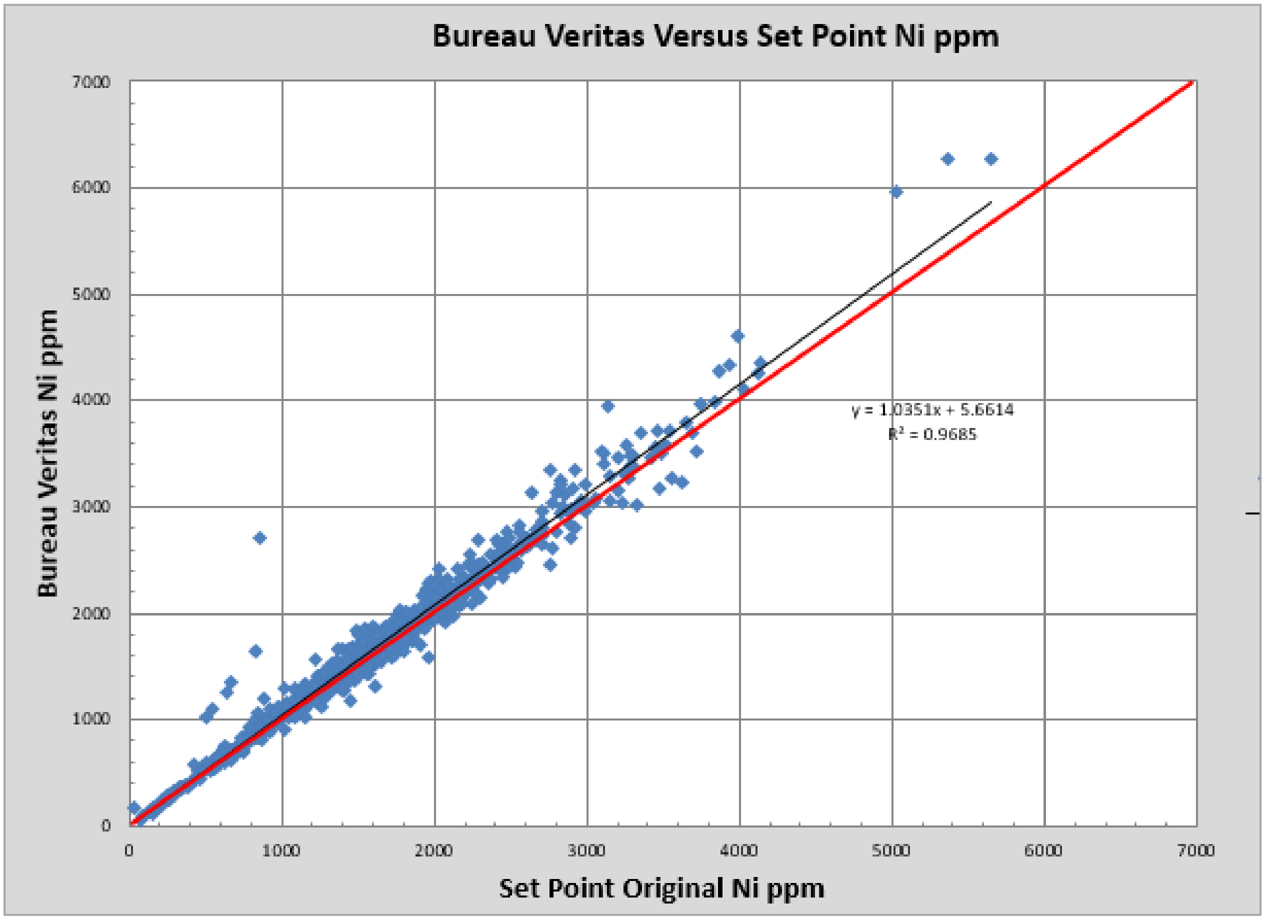


The result distributions are comparable up to 3000ppm which is within the range of most mineralised samples. There is a negative bias of Bureau Veritas results when compared to Set Point results above 3000ppm.

Analysis for Ni for samples sent to Set Point and to Bureau Veritas

Figure 15 is a scatter plot of Ni where Set Point results are plotted on the X-axis and the corresponding Bureau Veritas results are plotted on the Y-axis.

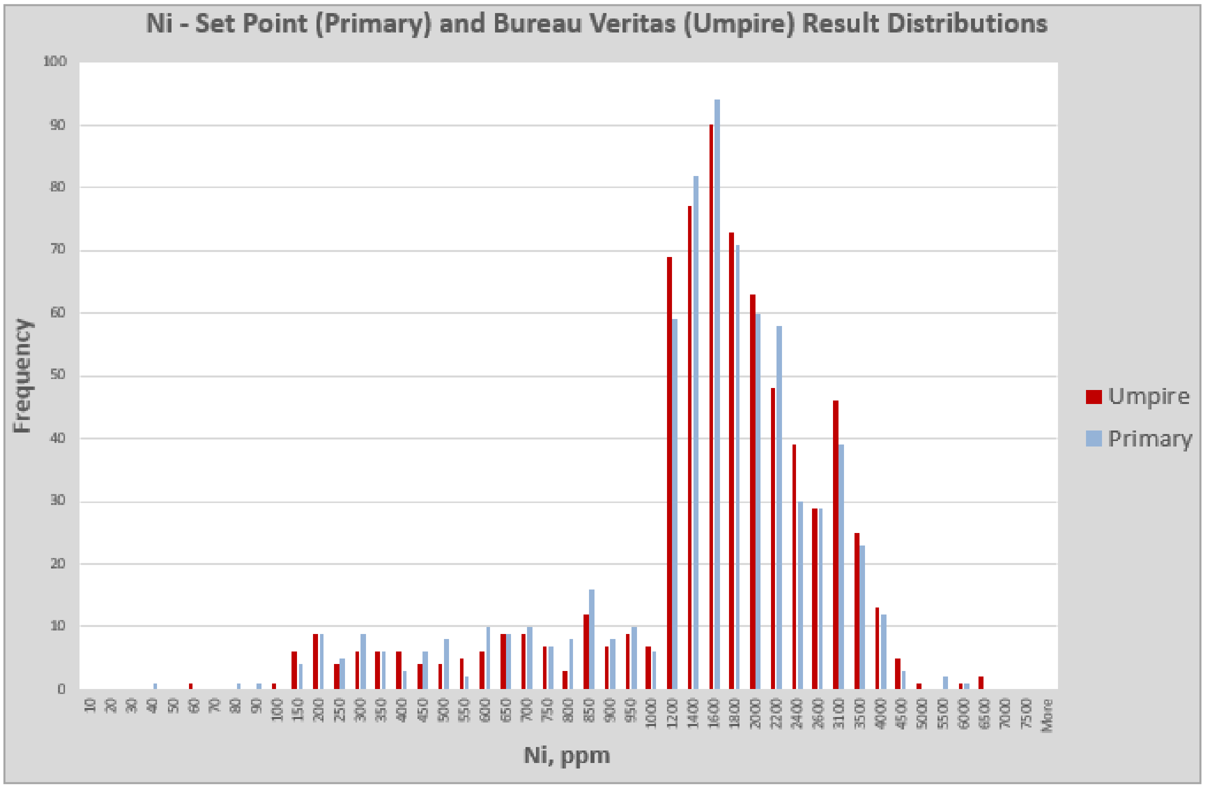
Figure 15 – Scatter plot for Ni of Set Point versus Bureau Veritas Results



There is a good correlation between Set Point and Bureau Veritas results with R^2 of 0.96.

Figure 16 is a plot of the distribution of results for both laboratories.

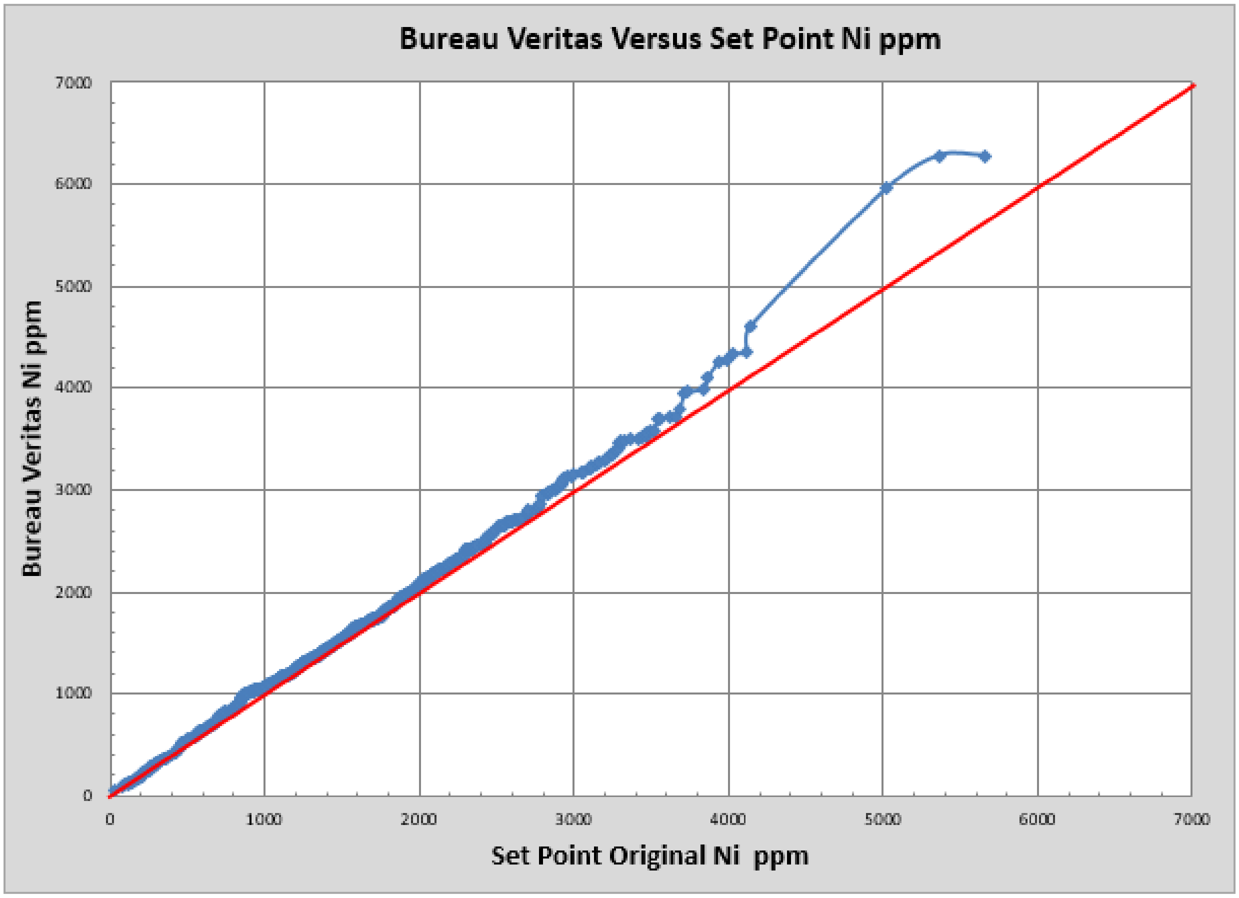
Figure 16 – A plot of result distribution for Set Point and Bureau Veritas for Ni



The distributions are comparable.

Figure 17 is a Q-Q plot for Ni.

Figure 17 – Q-Q plot for Ni.



The result distributions are comparable up to values of 4000 ppm which is in the range of most mineralised samples.