UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16 of
the Securities Exchange Act of 1934

Date: March 16, 2012

Commission File Number 001-31528

IAMGOLD Corporation
(Translation of registrant's name into English)

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Tel: (416) 360-4710
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F ¨ Form 40-F x

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ¨

Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ¨

Note: Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR.

Description of Exhibit

Exhibit	Description of Exhibit
99.1	NI 43-101 Technical Report to present the Mineral Resources of the Rare Earth Elements Zone, Niobec Mine, IAMGOLD Corporation – March 2012

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

IAMGOLD CORPORATION

Date: March 16, 2012

By: /s/ Tim Bradburn

Associate General Counsel and Corporate Secretary

Exhibit 99.1

Photo: Niobec Mine looking East; the REE Zone is in the bottom left (North)

Respectfully presented to
IAMGOLD Corporation

401 Bay Street, Suite 3200
Toronto ON M5H 2Y4
Canada
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Date: March 2012

By:

M. Pierre-Jean Lafleur, P. Eng.
M. Ali Ben Ayad, P. Geo.

P.J. Lafleur Geo-Conseil Inc.

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1 SUMMARY

In November 2011, IAMGOLD Corporation retained the services of P.J. Lafleur Géo-Conseil Inc (“PJLGC”) to publish a Technical Report of the mineral resources of the Rare Earth Elements Zone near the Niobec Mine in Saguenay, Quebec, to comply with the national instrument 43-101. The authors of the report are Pierre-Jean Lafleur, Eng., and M. Ali Ben Ayad, P.Geo. The preparation for the publication of the report included a visit of the site, a review of the core logging, sampling procedures, assaying method, the geology and reporting the mineral resources. All data sources are from surface drilling (*with one exception: DH S-3607*), mostly done in 2011, some historical surface drilling starting in 1968, time of the discovery.

The Niobec property, which contains a Rare Earth Elements Zone (the “REE Zone”) in a carbonatite complex (St-Honoré carbonatite complex), is located thirteen kilometres north of Ville de Saguenay (Chicoutimi), in the limits of the municipality of St—Honoré, in Simard Township, Quebec. This property held 100% by Niobec Inc., a wholly-owned subsidiary of IAMGOLD Corporation, consists of 2 mining leases and 66 claims for 2422.63 ha. An agreement dated August 31 st , 2011 between Niobec Inc. and IAMGOLD granted to IAMGOLD 100% of the beneficial rights to all the non-niobium mineral rights located on the property (including the rights to the REE’s).

The St-Honoré carbonatite complex (SHCC), which contains the Niobec mine and the REE Zone, was discovered by SOQUEM (“Société Québécoise d’Exploration Minière”) in 1967, and is located in Precambrian rocks (anorthosite complex) belonging to the Grenville orogenic province of the Canadian Shield (Figure. 3).

This annular intrusive mass, which is almost completely covered by Trenton limestone of Paleozoic age, is elliptical in plan view, with a north-east major axial length of approximately 3 kilometres and a surface area of about 8 km². Dated by Potassium-Argon (K-Ar) to be 650 my old, the SHCC is part of the igneous alkaline activity related to a tectonic extension event known as Lapetan rift system at the end of Precambrian.

This Alkaline complex is composed of a central carbonatite core, surrounded mainly by an alkaline syenite, a feldspathoid bearing syenite and syenitic foidites (Ijolites and Urtites). The Grenville basement, constituted in this area by pyroxene syenites, diorites (with hypersthene or magnetite), syeno-diorite with aegyrine and pyroxene gneiss, is highly fenitized in contact with the SHCC.

The carbonatite core, of this alkaline complex, comprises concentric lenses of calcitites (Sovites) and dolomitites (rauhaugites), interpreted as cone sheets and ring dykes. These units consist of a series of crescentric lenses of carbonatite with compositions younging progressively inwards from calcitite through dolomitite to ferro-carbonatite. The brecciated core of ferrocarbonatite, which form the central conical core, contains REE mineralization, mainly as REE fluorocarbonates and monazite. The mineralization forms part of the breccia cement and is associated with hematite, chlorite, ferroan dolomite, minor thorite, ilmenorutile and pyrite.

The property has been explored since its discovery in 1967 by SOQUEM and SOQUEM & Associates until 1986 where approximately 3500 metres of diamond drill holes have been completed on the REE Zone. The REE mineralization and its economic aspects have been identified.

In 2011, IAMGOLD undertook a first 13,798 m drill reconnaissance campaign (29 drill holes) to a depth of 400 m from which, added to the SOQUEM drill holes, the resources reported herein were estimated.

As part of the independent verification program, the authors of the report validated the exploration methodology which includes core logging, sampling, analytical procedures, and quality analysis following the quality control protocol implemented by IAMGOLD.

The 2011 drill program conducted by the Company on the REE zone aimed to establish the three dimensional “footprint” of mineralization, provide a preliminary REE grade estimate and provide samples for preliminary metallurgical test work. The campaign was completed on a grid spacing of 100 by 200 metres to programmed drill depths of about 400 metres. Four holes exceeded 700 metres in total length, and to a maximum length of 750 metres. The deeper holes demonstrate that the brecciated and mineralized facies of the REE zone persists uninterrupted at depth, although the resource model is reported only to a depth of 400 metres The Company initiated a 2,750 metres follow-up drill campaign in January to further define the lateral extent (south and southwest) of the resource and establish the overall limits of the REE mineralization with greater certainty. A second phase of drilling is also planned for resource definition and to explore at depth.

Based on these new drilling results, a resource estimate was prepared by Pierre Jean Lafleur, Eng., an independent Qualified Person and principal consultant of P.J. Lafleur Géo-Conseil Inc ("PJLGC") of Ste-Thérèse, Québec. The REE resource corresponds to an enriched zone of Light REEs ("LREE") which is characteristic of this annular carbonatite type. LREEs comprise 98.1% of the weight of the Total REEs ("TREE"), with the remaining 1.9% Heavy REEs ("HREE") that could potentially add significant economic value. As indicated in the tables below, the REE zone contains total Inferred Resources of **466.8 Million Tonnes at a grade of 1.65% Total Rare Earth Oxides ("TREO"), including 0.031% Heavy Rare Earth Oxides ("HREO"), to a depth of approximately 400 metres** (the surface lies at a reference elevation of 10,000 metres).

REE Mineral Resources by Grade Groups

Grade Groups % TREO	Tonnage Million Tonnes	% TREO	ppm HREO	Light REO: Ce_2O_3 ppm	La_2O_3 ppm	Nd_2O_3 ppm	Pr_2O_3 ppm	Sm_2O_3 ppm	Main Heavy REO: Gd_2O_3 ppm	Eu_2O_3 ppm	Dy_2O_3 ppm	Tb_2O_3 ppm
> 2.50	13.2	2.93	552	14020	7173	5384	1538	603	284	124.0	81.3	22.2
2.00 to 2.50	80.0	2.16	408	10359	5300	3978	1137	445	210	91.6	60.1	16.4
1.75 to 2.00	123.8	1.87	353	8961	4585	3441	983	385	182	79.3	52.0	14.2
1.50 to 1.75	98.0	1.64	309	7845	4014	3013	861	337	159	69.4	45.5	12.4
1.00 to 1.50	99.2	1.26	237	6020	3080	2312	661	259	122	53.3	34.9	9.5
0.5 to 1.00	52.6	0.81	153	3890	1990	1494	427	167	79	34.4	22.6	6.2
Total/Average Grade	**466.8**	**1.65**	**311**	**7913**	**4048**	**3039**	**868**	**340**	**161**	**70.0**	**45.9**	**12.5**
	Niobec TREO Signature		1.88%	47.9%	24.5%	18.4%	5.26%	2.06%	*0.97 %*	*0.42 %*	*0.28 %*	*0.076 %*

REO Mineral Resources by Depth

DEPTH SLICES m	Tonnage Million Tonnes	% TREO	ppm HREO	Light REO: Ce_2O_3 ppm	La_2O_3 ppm	Nd_2O_3 ppm	Pr_2O_3 ppm	Sm_2O_3 ppm	Main Heavy REO: *Gd_2O_3 ppm*	*Eu_2O_3 ppm*	*Dy_2O_3 ppm*	*Tb_2O_3 ppm*
Surface at 9975	5.4	1.90	358	9102	4657	3495	999	391	*185*	*80.5*	*52.8*	*14.4*
9950 (+/-25m)	60.5	1.77	333	8467	4332	3251	929	364	*172*	*74.9*	*49.1*	*13.4*
9900 (+/-25m)	72.7	1.65	311	7895	4040	3032	866	339	*160*	*69.8*	*45.8*	*12.5*
9850 (+/-25m)	72.0	1.61	303	7704	3941	2958	845	331	*156*	*68.1*	*44.7*	*12.2*
9800 (+/-25m)	70.2	1.61	303	7709	3944	2960	846	331	*156*	*68.2*	*44.7*	*12.2*
9750 (+/-25m)	66.7	1.63	308	7816	3999	3001	858	336	*159*	*69.1*	*45.3*	*12.4*
9700 (+/-25m)	61.8	1.64	309	7854	4018	3016	862	338	*159*	*69.5*	*45.5*	*12.5*
9650 (+/-25m)	57.4	1.66	312	7928	4056	3044	870	341	*161*	*70.1*	*46.0*	*12.6*
Total/Average Grade	**466.8**	**1.65**	**311**	**7913**	**4048**	**3039**	**868**	**340**	***161***	***70.0***	***45.9***	***12.5***

* TREO is for Total Rare Earth Oxides which include La_2O_3, Ce_2O_3, Pr_2O_3, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, and Lu_2O_3.

** HREO is for Heavy Rare Earth Oxides which include Eu_2O_3, Gd_2O_3, Tb_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, and Lu_2O_3. But only the 4 most important HREE elements are individually reported in the table, namely Eu_2O_3, Gd_2O_3, Tb_2O_3 and Dy_2O_3.

NOTES:

1. Results are presented in situ, unconfined and undiluted
2. The average bulk density used is 2.85 g/cm³ and was calculated from specific gravity measurements taken from core samples.
3. Resource modeling used 6,731 samples from the 2011 drill program with 54 elements assayed (with re-assays for high grade samples). 564 samples from 1985 historical surface drilling program were also incorporated although 21 elements were assayed in the earlier programs instead of 54. A further 422 samples were incorporated from historic surface drill holes that were assayed only for La_2O_3; TREO values were recalculated from the elemental ratios established by the 2011 program.
4. 5m composites were utilized throughout.

5. Variography indicates total cumulative grade variance is about 22% at very short range (1m to 2 m), 55% within 20m, and 100% up to -200m.
6. The estimated mineral resources have been modeled using a 10-metre cubic block model and grades were estimated using Ordinary Kriging. All the blocks were estimated using a minimum of 4 and a maximum of 25 (5m) composites. The Inverse Distance Square interpolation method was used only for comparison with Kriging.

The estimated resource is enclosed within the core breccias of the carbonatite complex. The near surface "footprint" of mineralization has been confirmed in three directions in 2011. Drilling planned in early 2012 should confirm the known outline to the south. Given the narrow range (approximately 1% to 2%) of grade values in the block model and the wide drill hole spacing, it is difficult to outline low and high grade zones inside the REE resource at this time. Whereas sporadic higher grade REE values are encountered near surface down to a depth of 50 metres, mineralization in the resource model shows low variability below that depth. Four drill holes extending well below the resource model and to a maximum depth of 750 metres show comparable grades to other intercepts in the resource model. Based on all of the preceding information, the Mineral Resources have been classified as Inferred.

All assay results are reported in Total Rare Earth Element Oxides ("TREO"). Main rare earths found are LREEs: Cerium (Ce), Lanthanum (La), Neodymium (Nd), Praseodymium (Pr) and Samarium (Sm), and HREEs: Gadolinium (Gd), Europium (Eu), Dysprosium (Dy) and Terbium (Tb). Preliminary metallurgical test work results of a REO bulk concentrate shows recoveries between 58% and 70%. Optimization test work continues and preliminary leach tests as well as extraction leach tests are ongoing. A final recovery of 53.5% of the REE is for the moment assumed.

Background information on the REE industry can be found by clicking on the following link:
http://www.iamgold.com/Theme/IAmGold/files/REE101.pdf

2 INTRODUCTION and TERMS OF REFERENCE

2.1 Scope of Work

In November 2011, IAMGOLD Corporation retained the services of P.J. Lafleur Géo-Conseil Inc ("PJLGC") to publish a Technical Report of the mineral resources of the Rare Earth Elements Zone (the "REE Zone") near the Niobec Mine in Saguenay, Quebec, to comply with the national instrument 43-101. Item 1 to 3 of this report are self-explanatory: summary, introduction and reliance. The main authors of the report are M. Ali Ben Ayad, P.Geo for Items 4 to 11 (property and geology) and 25 and 26, and Pierre-Jean Lafleur, Eng. for Items 10 to 26 (data and mineral resources), except item 13. Both are independent consultants. Jean-François Tremblay, Eng. and Geology leader at Niobec has provided most of the drilling program information. Pierre Pelletier, Eng. and Vice president metallurgy at IAMGOLD, contributed Item 13 (processing). Marie-France Bugnon, P.Geo., General manager Exploration for IAMGOLD, and Steve Thivierge, Eng. and Superintendant geology and special projects at Niobec contributed to the overall edition of the report. Pierre-Jean Lafleur is responsible for the final edition and content of the report. All six persons above are qualified persons (QP) in accord to the NI 43-101.

The preparation for the publication of the report included two visits of the site in December 2012, a full review of the core logging, sampling procedures with QA/QC, assaying method, a full compilation of the geology from mapping to logging, validating the database, creating and reporting the mineral resources. The report includes some recommendations regarding ongoing and future work on the REE Zone project and some of its impact on IAMGOLD's local asset value.

IAMGOLD owns Niobec Inc. which operates an underground niobium mine about 1 km south of the REE Zone. The property on which the REE project is located is registered in the name of Niobec Inc. (a 100% owned subsidiary of IAMGOLD). There is an agreement dated August 31 st , 2011 between Niobec Inc. and IAMGOLD under which Niobec Inc. granted to IAMGOLD, 100% of the beneficial rights to all the non-niobium mineral rights located on the property (including the rights to the REE's). The agreement also granted IAMGOLD the right to enter on to Niobec's property and undertake all activities which might be necessary to undertake exploration, development, and production of the REE minerals. There is no underground development in the REE Zone at this moment.

The current program of work aimed at outlining the REE Zone using a regular surface drilling grid of about 200m by 100m to a depth of about 400 metres to create a mineral resource base to start a preliminary economic assessment (PEA) study, i.e., a Scoping study, later in 2012.

2.2 Sources of Information

Geological data in this report comes from different sources:

- The internal documents (internal report of Soquem, all the GM filed with the MRNFQ and recovered by IAMGOLD, historical maps and drilling data, etc.) provided by Niobec Mine geology department.
- University works, provided partially by the owner and completed by M. A. Ben Ayad’s own research.
- The database sources in Gems software from Gemcom Software International Inc and many Excel files for assay results reported for the 28 surface drillholes and one underground drillhole (S-3607) drilled in 2011 from the Niobec mine, plus some historical surface drilling descriptions accumulated at the time of the discovery, through to 1985.
- Personal observations from site visits.

The following report is the result of a compilation and synthesis of all these data which are referenced in the text, with a complete reference in the Item 27.

The authors would like to thank the Niobec Mine geology team for their collaboration and permanent support.

2.3 Field Validation Work

The authors visited the mine site twice for the purpose of this mandate (43-101 of the REE Zone), the first time between the 5 th and the 9 th of December 2011 and a second time between the 20 th and 21th December of 2011. PJ Lafleur has been at the Niobec mine site repeatedly over the last 10 years for other tasks.

Throughout these mine visits, the recuperation of additional documentation, discussions and confirmation of different works and conclusions, multiple core shack visits and core observations of multiple drill holes have been conducted. In addition, a check sampling program of 29 samples directed by PJLGCI was carried on.

There was limited surface outcrop of the rocks hosting the REE Zone deposit in 1968 which is currently covered with backfill material or mine infrastructures. Therefore the REE Zone could not be seen at the surface for the writing of this report. Most of the mineralized carbonatite is covered by the Trenton limestone which is up to 30m thick or more, plus a few metres of surface overburden. All the new geological data was acquired by drilling in 2011.

3 RELIANCE ON OTHER EXPERTS

3.1 Other Data Sources

The technical material considered in the present report is based on the existing data produced by IAMGOLD. This material includes a technical report complying with the NI 43-101 published in 2009 and 2011 relating to the Niobec mine and various other technical reports regarding the host rocks of the REE Zone. Item 27 provides a full list of reference documents used in preparing this report. In the production of this NI 43-101 technical report, PJLGCI has relied on the data collected essentially by new drilling on the property in 2011 and by producing an updated compilation of geological data to support the mineral resources estimation stated in Item 14. Item 13 is based on limited testing for processing methods led by Pierre Pelletier, Eng., working for IAMGOLD.

3.2 Limited responsibility of PJLGCI

PJLGCI responsibility is limited to using the data provided to them by IAMGOLD, assuming it is the best data available to perform the resource estimation of the REE Zone project. PJLGCI does not take any responsibility for the quality of the data that was produced by IAMGOLD, other than the customary verification done by PJLGCI to comply with the NI 43-101 rules.

PJLGCI responsibility is limited to making a statement about the mineral resources estimation based on the original data by applying the best method to create its models. There is no mine plan to estimate mineral reserves at this stage.

PJLGCI has found the quality of the data to be in good standing. PJLGCI sees no reason to doubt or further investigate its validity based on the evidence available at the time of writing this report. The present report intends to comply fully with the NI 43-101 rules regarding the production of a Technical Report.

PJLGCI is acting as technical experts in the area of geology and mining only. PJLGCI has limited legal or financial expertise applied to exploration and mining.

3.3 Reasonable data verification

PJLGCI did verify the data made available to them for inconsistencies and database entry errors and applied standard statistical methods commonly used in the exploration and mining industry to characterize the data. PJLGCI used topographic plans and mine plans, including maps showing the property limits, to determine the volume of resources available, but it did not verify completely the source of information or the legal status of the property, including the rights to own, explore and extract ore material from the site. PJLGCI is not aware of the existence of any claims on the property due to financial grievances (bankruptcy, mortgage, debts, etc.), liabilities or responsibilities due to environment rules, policies or claims to impeach the development of the project.

According to PJLGCI representative, personal knowledge of the region and satellite images, PJLGCI is satisfied that the geographic, topographic and geologic information used in this report is correct. The results and opinions expressed in this report are dependent on the accuracy of the geological and legal information's mentioned above, which are up to date and complete at the date of publication of the report. It is understood that no information susceptible to influence the conclusion of the present report were withheld from the study. PJLGCI asserts the right, but not the obligation, to modify this report and its conclusions if new information is presented after the date of publication. PJLGCI assumes no responsibility for the actions of IAMGOLD in the distribution of the report.

4 PROPERTY DESCRIPTION AND LOCATION

This item 4 is partially summarized from the NI43-101 of February 2009 and March 2011, after validation for the mining titles status by the author from the Ministère des Ressources naturelles et de la Faune" (MRNF. Web site: www.mrn.gouv.qc.ca).

4.1 Property location

The Niobec property, which contains the REE Zone and the Niobec mine, is located thirteen kilometres north of Ville de Saguenay (Chicoutimi), in the limits of the municipality of St—Honoré, in Simard Township, Quebec (Figure 1).

Figure 1 : Niobec Property location

4.2 Property description

The Niobec property is held 100% by Niobec Inc., a wholly-owned subsidiary of IAMGOLD Corporation.

The Niobec mine is located on a property of 2,422.6 hectares comprising two mining leases, No 663 and 706 (with surface area of 79.9 and 49.5 hectares respectively), and

66 claims totaling 2,293.2 hectares. The property was enlarged in 2010 with the acquisition of all rights into 23 claims owned by individuals and located to the south-east of the mining leases. The mining leases have been renewed until 2015 (Figure 2).

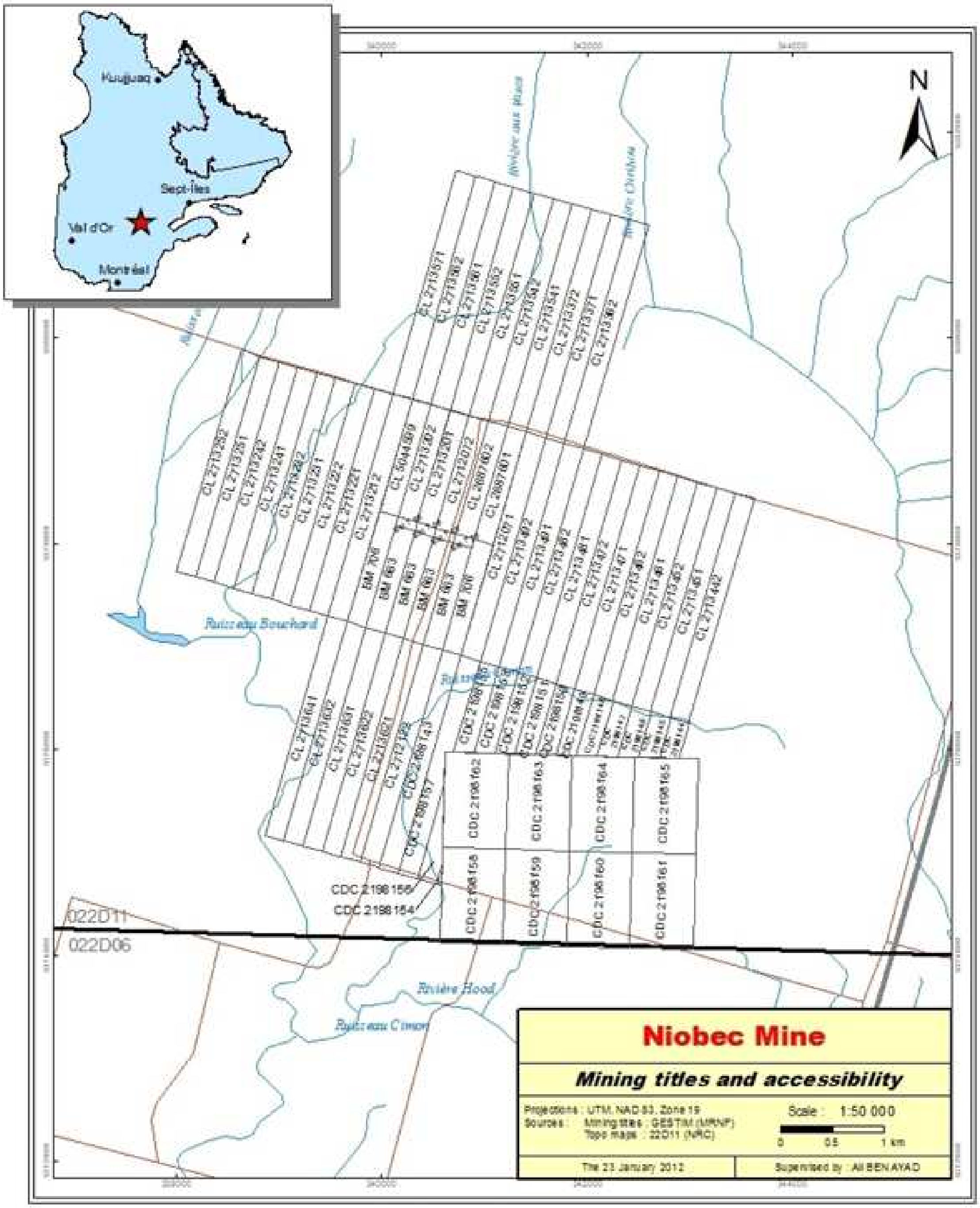


Figure 2 Mining titles and accessibility

4.3 Mining titles status

Table 1 describes the Claims and Leases of the Niobec Property, with their location shown on Figure 2. This information was controlled at the Quebec Ministry of Natural Resources website http://www.mrnf.gouv.qc.ca/mines/titres/titres-gestim.jsp ., with the registration certificates received by the company and validated by IAMGOLD claim administrator as of December 2011 and confirmed by the General Manager Exploration of IAMGOLD for the purpose of this report.

Table 1 Mining titles status

(Property Claims (CM) and Leases (BM))

NTS Sheet	Type of title	Title no.	Status	Registration date	Expiry date	Surface (Ha)	Registered owner (name, number and percentage)
22D11	BM	BM 663	Active	1/16/1975	1/15/2015	79,93	Niobec inc. (88562) 100%
22D11	BM	BM 706	Active	6/5/1980	6/4/2015	49,52	Niobec inc. (88562) 100%
22D11	CL	CL 2687601	Active	10/26/1967	9/13/2013	20	Niobec inc. (88562) 100%
22D11	CL	CL 2687602	Active	10/26/1967	9/13/2013	21,4	Niobec inc. (88562) 100%
22D11	CL	CL 2712071	Active	10/26/1967	9/13/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2712072	Active	10/26/1967	9/13/2013	21,4	Niobec inc. (88562) 100%
22D11	CL	CL 2712122	Active	10/26/1967	9/14/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713201	Active	10/26/1967	9/24/2013	21,4	Niobec inc. (88562) 100%
22D11	CL	CL 2713202	Active	10/26/1967	9/24/2013	21,4	Niobec inc. (88562) 100%
22D11	CL	CL 2713212	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713221	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713222	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713231	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713232	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713241	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713242	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713251	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713252	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713362	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713371	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713372	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713442	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%

NTS Sheet	Type of title	Title no.	Status	Registration date	Expiry date	Surface (Ha)	Registered owner (name, number and percentage)
22D11	CL	CL 2713451	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713452	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713461	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713462	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713471	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713472	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713481	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713482	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713491	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713492	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713541	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713542	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713551	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713552	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713561	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713562	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713571	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713621	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713622	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713631	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713632	Active	10/26/1967	9/24/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 2713641	Active	10/26/1967	9/25/2013	40	Niobec inc. (88562) 100%
22D11	CL	CL 5044599	Active	11/23/1989	11/22/2013	20	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198143	Active	1/5/2010	1/4/2014	42,4	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198144	Active	1/5/2010	1/4/2014	7,41	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198145	Active	1/5/2010	1/4/2014	8,42	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198146	Active	1/5/2010	1/4/2014	9,4	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198147	Active	1/5/2010	1/4/2014	10,4	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198148	Active	1/5/2010	1/4/2014	11,63	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198149	Active	1/5/2010	1/4/2014	12,34	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198150	Active	1/5/2010	1/4/2014	13,34	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198151	Active	1/5/2010	1/4/2014	14,31	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198152	Active	1/5/2010	1/4/2014	15,29	Niobec inc. (88562) 100%

NTS Sheet	Type of title	Title no.	Status	Registration date	Expiry date	Surface (Ha)	Registered owner (name, number and percentage)
22D11	CDC	CDC 2198153	Active	1/5/2010	1/4/2014	16,27	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198154	Active	1/5/2010	1/4/2014	0,54	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198155	Active	1/5/2010	1/4/2014	17,26	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198156	Active	1/5/2010	1/4/2014	11,14	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198157	Active	1/5/2010	1/4/2014	41,07	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198158	Active	1/5/2010	1/4/2014	57,05	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198159	Active	1/5/2010	1/4/2014	57,05	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198160	Active	1/5/2010	1/4/2014	57,05	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198161	Active	1/5/2010	1/4/2014	57,05	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198162	Active	1/5/2010	1/4/2014	57,04	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198163	Active	1/5/2010	1/4/2014	57,04	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198164	Active	1/5/2010	1/4/2014	57,04	Niobec inc. (88562) 100%
22D11	CDC	CDC 2198165	Active	1/5/2010	1/4/2014	57,04	Niobec inc. (88562) 100%
TOTAL:		68 titles				2 422,63	ha

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

This item 5 is from NI43-101 Technical Report Niobec Mine 2009 (Belzile E.,2009).

5.1 Accessibility

The Niobec mine is readily accessible by existing paved roads and benefits from available water supply and electric power supply sources. The Niobec mine facilities include a head frame, a pyrochlore-to-niobium pentoxide (Nb_2O_5) concentrator, a concentrate-to ferroniobium converter and ancillary surface installations.

5.2 Local resources and infrastructures

Niobec mine is close to Ville de Saguenay with a population of about 150,000. The city is serviced several times a day by regional airlines from Montreal. It is about a two hours' drive to Quebec City and five hours to Montreal. Schools (up to University), Hospitals, Governmental services, suppliers and manpower are all available in Ville de Saguenay and at some villages in the vicinity.

5.3 Climate and Physiography

Topography is relatively flat in the vicinity of the mine with an average altitude of 144 metres above sea level. The mine is surrounded by a mix of forest and farms.

The climate of Ville de Saguenay area is temperate with warm summers and cold winters. The mean annual temperature is 2.3°C, with average daily temperatures ranging from -16.1°C in January to +18.1°C in July. The average total annual precipitation is 951 mm, peaking in July (123 mm) and at a minimum in February (51 mm). Snow falls from October to April, with most occurring between November and March. Peak snowfall occurs in December, averaging 82 cm (equivalent to 67 mm of water).

The information is based on data collected at the Bagotville meteorological station between 1971 and 2000, as reported by the CRIACC (www.CRIACC.qc.ca).

6 HISTORY

Following a regional airborne radiometric survey in search for uranium in 1967, SOQUEM (Société Québécoise d'Exploration Minière) detected a high-intensity radiometric anomaly near St-Honoré, Quebec (Vallée & Dubuc, 1970).

Ground verification confirmed the radiometric anomaly (high value of thorium and presence of REE) and revealed a carbonate rock locally poor in REE and radioactive elements. The association of these features with a large roughly circular magnetic anomaly suggested the existence of a large carbonatite and alkaline rock intrusive complex. This anomaly was centered on the core of the complex, now referred to as the REE Zone, and a second radiometric anomaly on the syenite intrusive outcropping through the Iimestones, southeast of the carbonatite (Vallée and Dubuc, 1970).

Magnetic and radiometric anomalies were outlined by geophysical prospecting and, subsequently drilled to delineate two zones of economic concentrations of niobium and one REE enrichment zone.

In 1970, Copperfield Mining joined Soquem to explore and develop this project. Twenty one kilometres of diamond drill holes were realized until 1973 to recognize and delineate the two niobium zones. In parallel, five short drill holes ("Série 700" of REE Zone) totaling 706 metres have been realized between 1968 and 1970 on the Central radiometric and magnetic anomaly allowing the discovery of REE mineralization, grading 1.87% REO. [1]

In 1975, 8 drill holes ("Série 800") totaling about 958 metres realized on the Central Core allowed to recognize the REE Zone, particularly in its north-east part. The recognized REE mineralization gives an average of 5973 ppm in Lanthanides, equivalent to 2.8% TREO. [2]

In 1978, 2 drill holes touched the southern edge of the REE Zone (total of 672 metres) while Soquem was drill testing some exploration targets at the scale of the carbonatite.

1 In 1970, Vallée & Dubuc reported only 3 drillholes and 328 metres of drilling for that period.
2 In 1986, Dénommé & al reported only 6 drillholes over 585 metres averaging 0.69% La_2O_3 for 1975.

In 1985, three deep drill holes ("Série 85") totaling 1566 metres were completed with the aim to extend the recognition to the whole Central Core, to locate mineralization with coarser grains of lanthanide and to draw-up a detailed inventory of the various elements of lanthanides. This campaign allowed to define a depth limit of 60m for the hematitic weathered facies, to outline lanthanide rich zones (>2%) in the central part of the Central Core, to recognize the same lanthanides mineralogy and grain size down below the weathered hematitic facies (Bastnaesite and monazite), that is in fine needles or in reddish brown-purple accumulations (Dénommé & al, 1986).

In 2011, after a long quiet period, REEs are in short supply and prices have recently reached historic highs. A new economic interest for the REE Zone by IAMGOLD-Niobec Inc. boosted the exploration interest by the realization of a first drilling campaign of 29 drill holes totaling 13,798 metres to evaluate the REE resources known as the "REE Zone".

Table 2 Detailed list of all Drillholes by Year

Year	Total Length (m)	Easting (MTM NAD83)	Northing (MTM NAD83)	Elevation
1968				
782-701	226	256,587.1	5,378,411.0	143.44
782-704	124	256,405.3	5,378,567.5	143.44
782-705	153	256,782.8	5,378,300.0	143.44
782-709	154	255,961.2	5,378,450.0	143.44
782-712	50	256,517.7	5,378,453.0	143.44
1975				
782-801	121	256,448.0	5,378,724.0	143.44
782-802	124	256,274.4	5,378,598.5	145.38
782-803	122	256,376.7	5,378,475.5	150.90
782-804	124	256,376.7	5,378,475.5	150.90
782-805	69	256,461.0	5,378,419.0	152.43
782-806	148	256,492.0	5,378,435.5	152.64
782-807	124	256,544.7	5,378,592.5	143.44
782-808	125	256,324.1	5,378,332.5	145.20
1978				
782-901	443	256,348.8	5,377,899.5	143.44
782-908	229	255,897.5	5,378,257.5	143.44

Year	Total Length (m)	Easting (MTM NAD83)	Northing (MTM NAD83)	Elevation
1985				
85-1	550	256,392.8	5,378,363.5	149.49
85-2	458	256,097.1	5,378,831.0	144.05
85-3	559	256,378.3	5,378,301.0	143.44
2011				
2011-REE-001	251	256,444.8	5,378,412.0	151.24
2011-REE-002	250	256,518.6	5,378,675.7	151.84
2011-REE-003	253	256,422.6	5,378,336.6	148.44
2011-REE-004	251	256,549.5	5,378,544.5	151.84
2011-REE-005	445	256,508.7	5,378,279.6	147.44
2011-REE-006	452	256,611.6	5,378,453.3	153.34
2011-REE-007	450	256,400.2	5,378,227.3	144.84
2011-REE-008	335	256,616.5	5,378,623.6	153.14
2011-REE-009	449	256,335.8	5,378,387.7	145.34
2011-REE-010	449	256,253.0	5,378,441.9	143.64
2011-REE-011	450	256,169.4	5,378,492.6	143.44
2011-REE-012	449	256,146.4	5,378,268.8	142.14
2011-REE-013	449	256,231.1	5,378,219.7	142.64
2011-REE-014	446	256,321.4	5,378,167.6	143.34
2011-REE-015	449	256,064.5	5,378,316.8	142.24
2011-REE-016	449	256,083.8	5,378,544.1	143.24
2011-REE-017	446	255,995.4	5,378,597.3	143.44
2011-REE-018	452	255,893.2	5,378,430.8	142.64
2011-REE-019B	450	255,975.5	5,378,379.0	142.44
2011-REE-020	503	256,439.7	5,378,557.1	152.04
2011-REE-021	500	256,352.0	5,378,608.8	149.94
2011-REE-022	450	255,956.8	5,378,150.4	141.34
2011-REE-023	450	256,271.1	5,378,663.2	144.44
2011-REE-024	410	256,150.2	5,378,645.5	143.84
2011-REE-025	704	256,300.9	5,378,234.4	142.84
2011-REE-026	750	256,580.0	5,378,535.0	152.14
2011-REE-027	752	256,511.0	5,378,607.0	151.84
2011-REE-028	755	256,081.0	5,378,429.0	142.64
S-3607	898	255,858.4	5,377,677.2	-268.65

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional geology

The Saguenay region is mainly composed of Precambrian rocks (Figure. 3) belonging to the Grenville orogenic province of the Canadian Shield (Roy, 1986, 1977; Laurin and Sharma, 1975; Benoit and Valiquette, 1971; Rondot, 1967; Jooste, 1964; Dressler and Denis, 1946). The metamorphism reached the upper amphibolite facies-granulite and at least three generations of folds are superimposed. More recently, Dimroth (1981) divided these rocks in three distinct lithostructural units (In Belzile, 2008; modified):

- The first Unit constitutes a gneiss complex that is divided in three Groups (Groups I, II and III) based on increasing structural complexity from the youngest to the oldest Group. All the rocks from the Group I have been migmatized and deformed during the Hudsonian Orogeny (1,735 million years ago).
- The second Unit is represented by anorthosite and charnockite-mangerite batholiths showing well preserved igneous structures and textures. Anorthosite which range from pre- to post Greenvillian age, are regarded as evidence of crustal extension, the Neohelikian extensional tectonics, which continued during the Grenville Orogeny, 935 million years ago. The mangerites are believed to have been generated by partial melting of the lower crust by the anorthosite bodies, and forms the host rocks of the St-Honoré carbonatite complex.
- The third Unit is characterized by calc-alkaline intrusions that cross-cut the host rocks. The mineralogy of these intrusions is of superior amphibolite facies (Dimroth et al., 1981). At the beginning of the Palaeozoic (or end of the Precambrian), a younger episode of rifting, south of the Neohelikian rift, referred to as the Lapetan Rift System, resulted in the development of the St-Lawrence River rift system (Figure 4). This tectonic extension event incorporated normal faulting, updoming and igneous alkaline activity (Kumarapeli and Saull, 1966), including emplacement of the St-Honoré carbonatite.

  The St-Honore carbonatite is dated by Potassium-Argon (K-Ar) to be 650 million years old (Vallée and Dubuc, 1970).

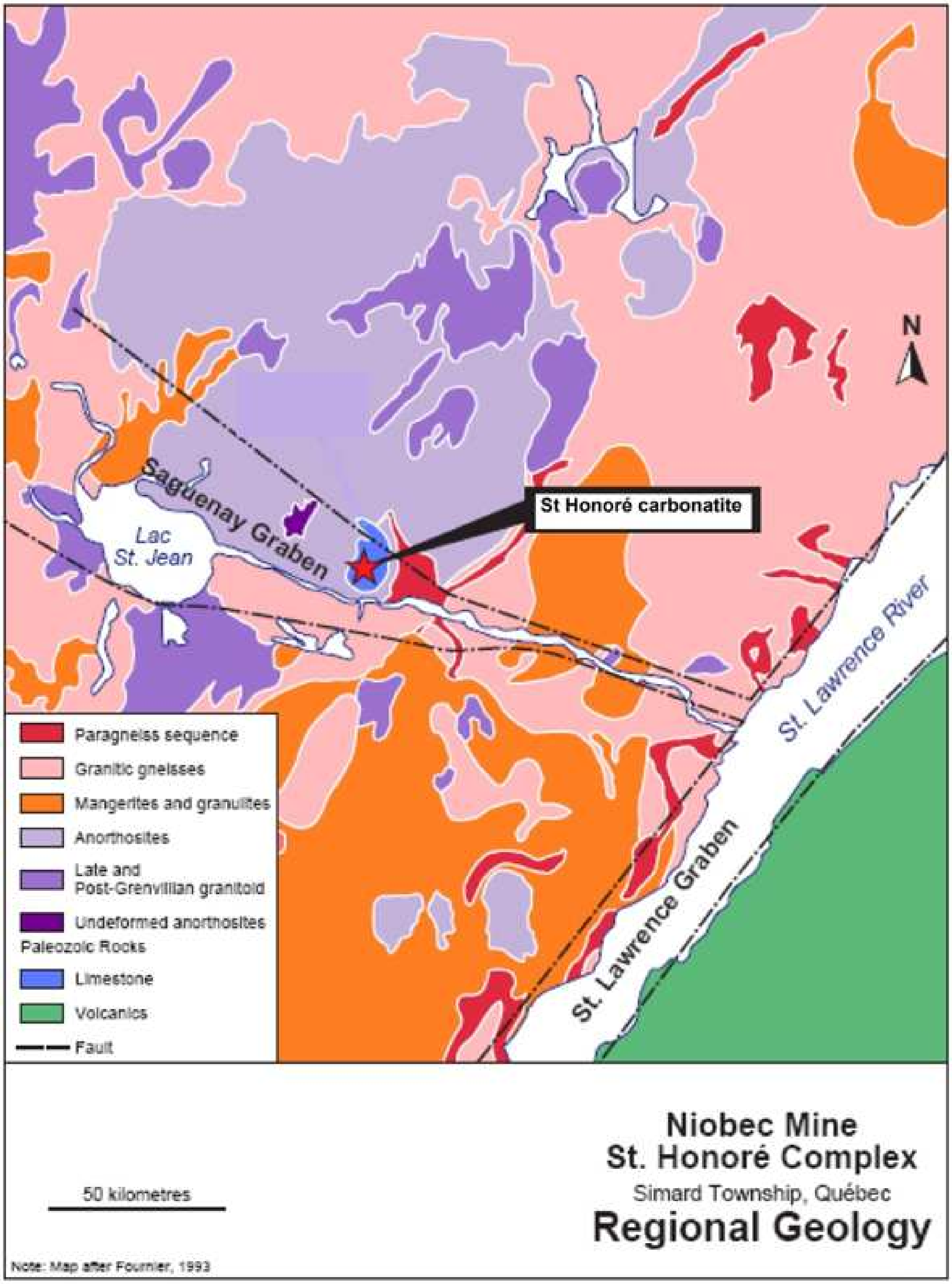


Figure 3 St-Honoré carbonatite complex regional geology (In Belzile, 2008, modified)

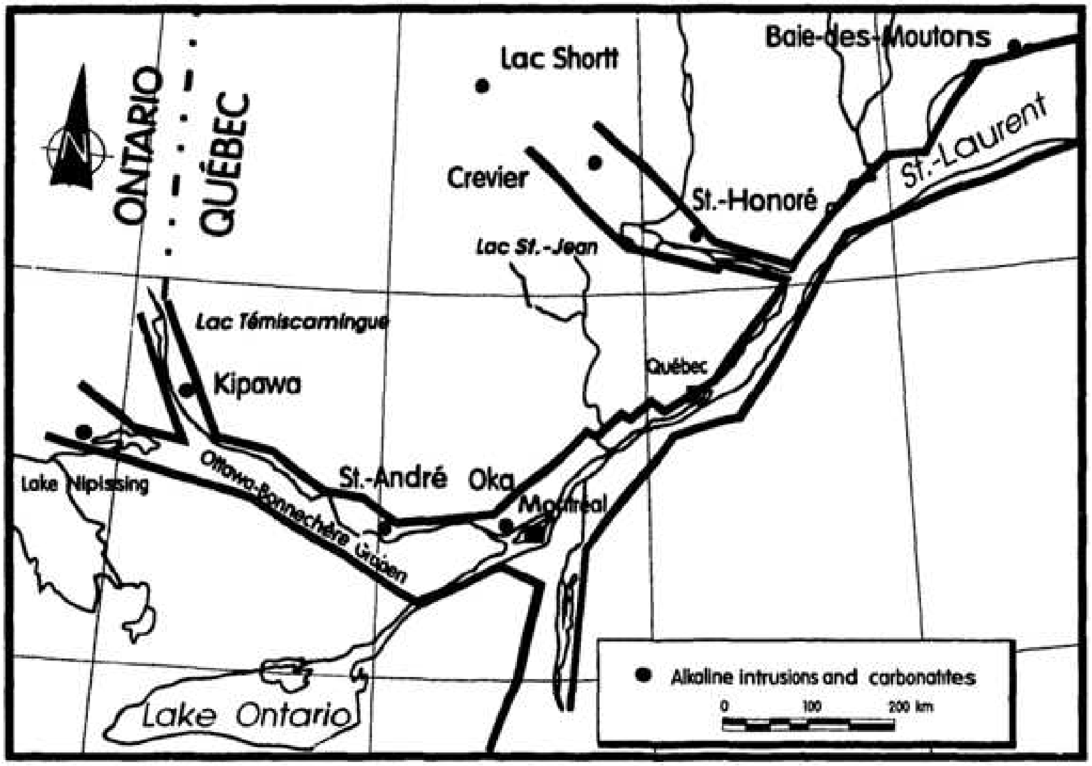


Figure 4 The Lapetan rift system (In Fournier, 1993)

7.2 Property geology

The St.-Honoré alkaline complex is located 13 km NW of Chicoutimi and 5 km west of the town of St.-Honoré from which it obtained its name. The intrusive mass is almost completely covered by Trenton limestone of Paleozoic age. The intrusion is elliptical in planview, with a north-east major axial length of approximately four kilometres and a surface of about 25 km^2.

This alkaline complex intrudes the Grenville basement constituted in this area by pyroxene syenites, diorites (with hypersthene or magnetite), syeno-diorite with aegyrine and pyroxene gneiss (Fortin, 1977).

Carbonatization of the country rocks is interpreted to be a metasomatic alteration product related to carbonatite complex intrusion (Fortin 1977). This Fenitization is evident from the occurrences of sodic-amphiboles and aegyrine in the host rock, and associated green and red carbonates veinlets (Fortin, 1977).

This carbonatite is known as the host of two individual deposits:

- Niobium deposit in the south part of the carbonatite, which constitute the principal Niobec mine;
- REE Zone mineralized in REE elements, located in the central part of the carbonatite which is the subject of this report.

7.2.1 The Alkaline complex of St-Honoré

7.2.1.1 Geological highlights

The first complete geological map, using the different geophysical surveys and drill holes data realized between 1967 and 1975, has been produced by Soquem geologists (Gauthier.A & Lamontagne.C) in 1978. This map, based on a petrographic and geochemical study which allow the definition of the different carbonatite terms (Fortin, 1977), has been actualized and reinterpreted in 1986 by Niobec Mine geology staff using the additional drill holes data realized by Soquem in 1985.

The geological compilation map of Figure 5 is the result of a synthesis of these entire maps and the drill holes data since 1967.

The Alkaline complex is composed (Fortin, 1977; Figure 5) by a central carbonatite core, surrounded by mainly an alkaline syenite, a feldspathoid bearing syenite and syenitic foidites (Ijolites and urtites). The contact of this complex with the country rocks is marked by a reniform phlogopite calcitite in the northern part, and in the southern part by the presence of a triangular form of a cancrinite (Na-Ca-Al-silicate and carbonate mineral) - bearing syenite (Dénommé, 1980).

A chronology has been established (Fortin, 1977) for this Alkaline complex as follow from older to younger:

Ijolite – Urtite – Foidites syenite – Feldspathoid syenite – Alkaline syenite – Lamprophyre – Carbonatite

Following a petrographic and geochemical study (Fortin, 1977) of different drill holes cores realized in the carbonatite by Soquem (1973), different carbonatites units with different geochemical characteristics have been established. Four Sovites (Calcitites) types and three Rauhaugites (dolomitites) types have been recognized and constitute the different units of the carbonatite core. These units consist of a series of crescent shape lenses of carbonatite with younger compositions progressively inwards from calcitite through dolomitite to ferro-carbonatite (Fortin, 1997).This evolution is attested by the numerous xenolithes of the alkali syenites rocks in the carbonate at the scale of all the complex and at a smaller scale between the different carbonates facies themselves.

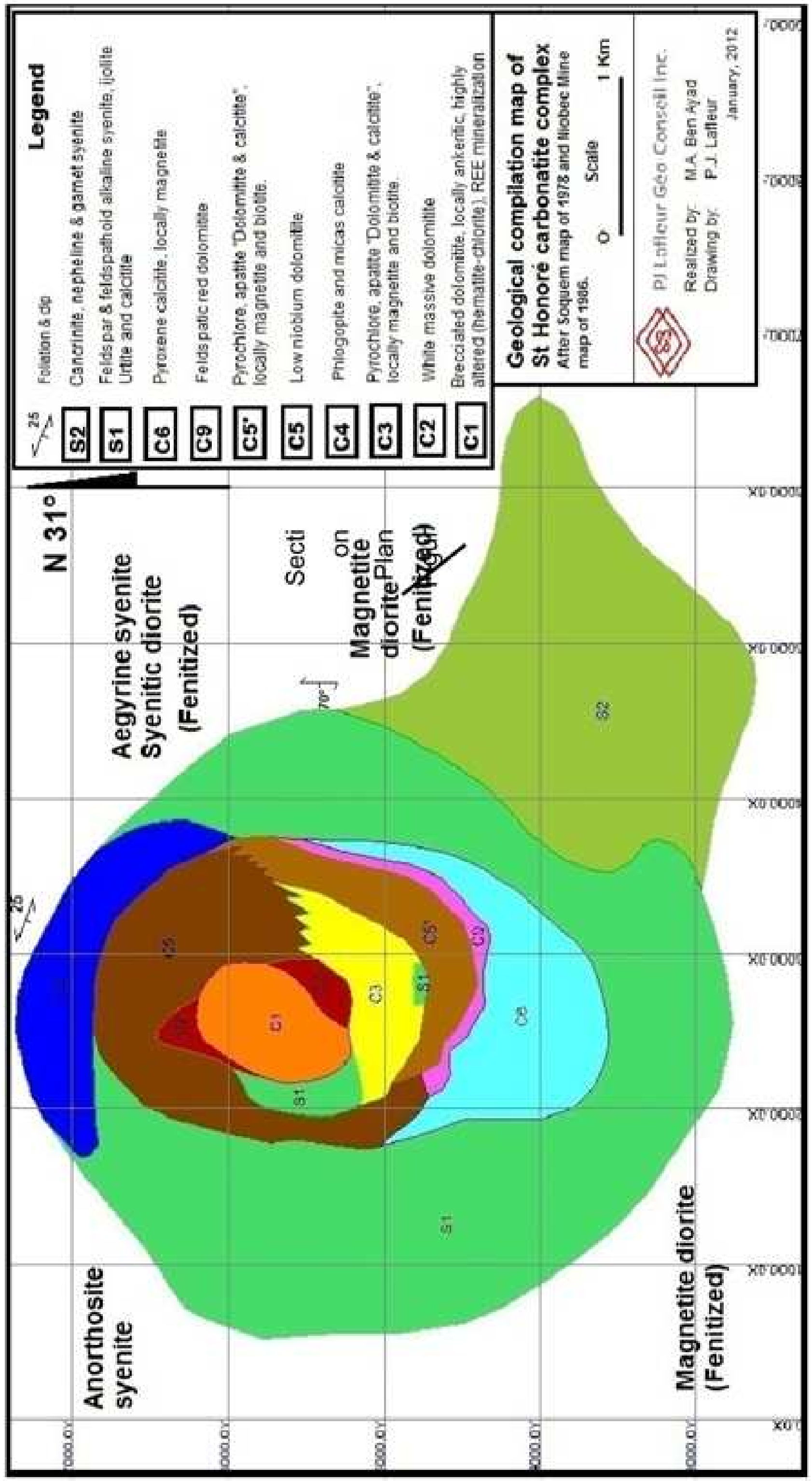


Figure 5 Geological compilation map of St-Honoré Carbonatite Complex

After Soquem Map of 1978 and Niobec map of 1986

7.2.1.2 St-Honoré Carbonatite complex geometry

The St-Honoré carbonatite complex is composed (Fortin, 1977; Figure 5) by a central carbonatite core, surrounded by mainly an alkaline syenite, a feldspathoid bearing syenite and syenitic foidites (Ijolites and urtites), where the elliptical carbonatite core is oriented mainly northeast-southwest. From the center to the periphery (Figure 5), this core includes (Fortin, 1977; Gagnon, 1979; modified):

- An eccentric core of brecciated dolomitite and ankeritite (C1), containing up to 4.5% total rare-earth elements as Cerium, Lanthanum, Neodynum and Europium in fine-grained fluorocarbonates minerals (Bastnaesite, Synchisite and Parasite (Fournier, 1993)),
- Two low REE and niobium dolomitites in small masses north and south of the brecciated core (C2) and probably a cone sheet of a syenite (S1) to the west,
- Ring dyke of a low-grade niobium and rare-earth dolomitite (C5) in the north, east and west part,
- Cone sheet of a high-grade niobium (>0.4% Nb_2O) white to pink dolomitites with apatite and magnetite in the southern sector (C3) enclosing a mega-xenolith of syenite in its southern limit,
- Cone sheet of pink dolomitites and calcitites (C5’), with high grade niobium mineralization, magnetite, phlogopite and apatite,
- Cone sheet of a barren red feldspathic dolomitite (C9) south of the mine area (C5),
- A cone-sheet of phlogopite calcitite at the northern extremity, with disseminated apatite (C4),
- A cone sheet of pyroxene calcitite, with disseminated apatite in variable thickness, at the southern limit of the core (C6),
- A circular outer ring containing feldspathic and feldspathoidal alkaline rocks mainly syenite (S1), urtite and ijolite,
- A triangular mass of cancrinite (Na-Ca-Al-silicate and carbonate mineral) and garnet syenite encountered at the extreme southeast part of the complex (S2).

Beside these ring-dykes and cone-sheets, numerous calcitic and dolomitic dykes, cogenetic to the dolomitite and calcitite cone-sheets, have been cross-cut by Soquem drill holes (Fortin, 1977).

Regarding the dip of these different ring-dykes and cones-sheets constituting this carbonatite complex, besides the shallow exploration drill holes data of Soquem interpreted with a 70° dipping structures (Vallée & Dubuc, 1970), mine drill holes data (surface and underground), show to a depth of 800m, a sub-vertical to 70° dipping to the north of the Mine carbonatite structures (C5 and C3).

Considering the concentric structure of this carbonatite complex, a conical geometry with a strong dip of the different units toward the center of the cones remains the more probable scheme for this carbonatite complex.

A northwest-southeast schematic geological cross section has been established, to better visualize and understand the spatial internal organization of the St-Honoré carbonatite complex (Figure 6).

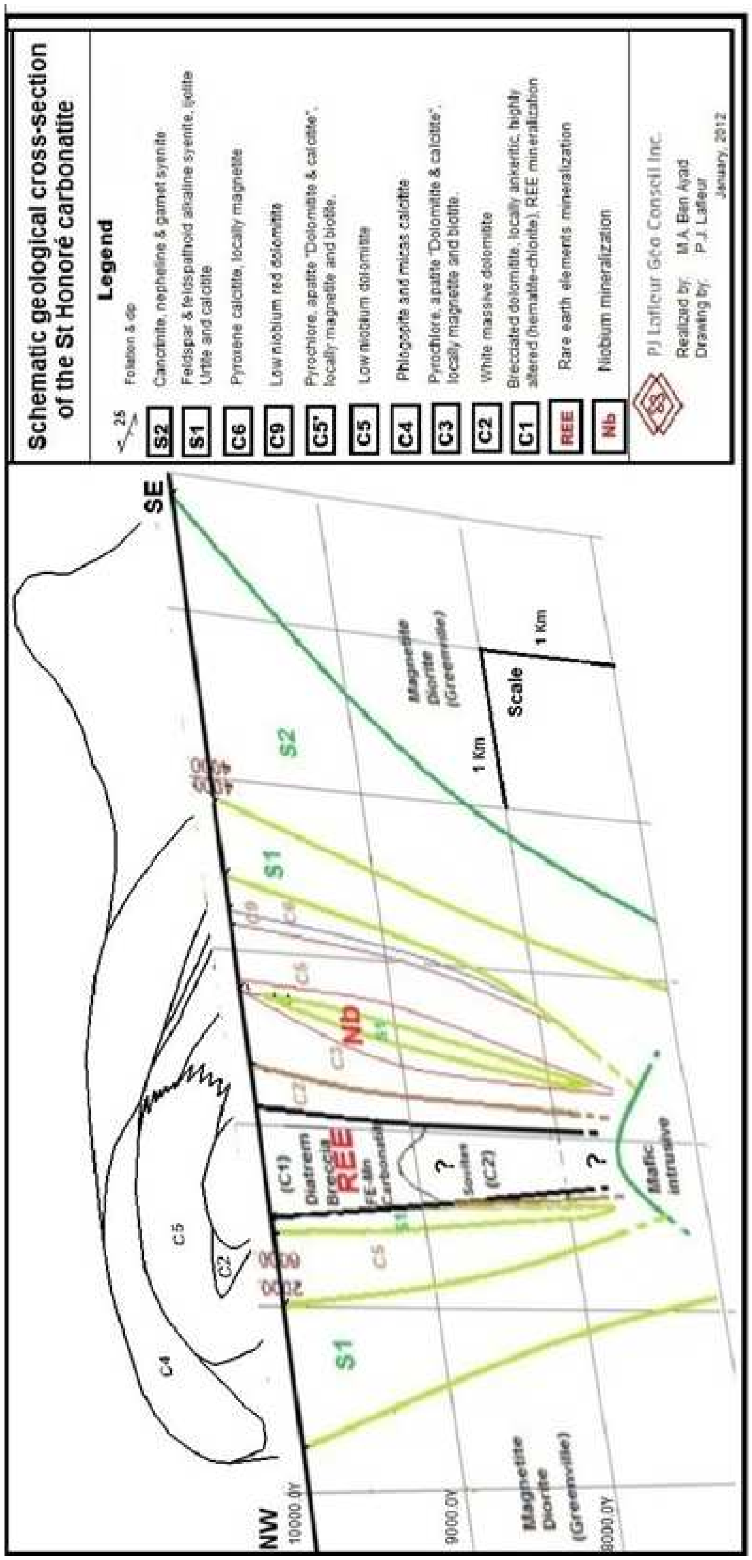


Figure 6 Geological schematic block diagram of the St-Honoré carbonatite complex (NW-SE cross section and legend)

7.2.1.3 The carbonatite complex zoning:

Following the petro-geochemical study of the carbonatite complex (Fortin, 1977), zoning seems to manifest itself between the different facies units of the carbonatite regarding their geochemical composition and their chronology, thus (Fortin, 1997):

- The carbonatite complex has a reniform shape and consist of a central portion of carbonatic rocks enclosed in an alkaline syenite;
- The age of the different units of the syenite show a chronologic evolution in the following magmatic suite from “Ijolite-Urtite-Foidite (to) syenite-Feldspathoidic syenite (to) Alkali syenite-Lamprophyre-Carbonatite”;
- The age of the different units of carbonates decreasing progressively inwards from alkali syenite, calcitite through dolomitite to ferro-carbonatite;
- The carbonatite comprises concentric lens which evolved from calcitite through dolomitite, to a brecciated core of ferrocarbonatite;
- The carbonatite shows an outward inward carbonate evolution expressed mineralogically by the suite “calcite- dolomite- ankerite-siderite”,

In spite of the similarities with other carbonatite complexes, (1) such as the presence of a carbonatite core bordered by a syenite in Oka, (2) zonality between calcitite and dolomitite as in Firesand carbonatite (Superior province, Ontario), the St-Honoré carbonatite complex is different by the absence of ultramafic rocks as in Oka (Fortin, 1977).

7.1.2.4 REE Zone geology

7.1.2.4.1 First Geology Model (Denommé, 1985)

The REE Zone forms the core of the complex (C1), and has an oval shape, elongated towards the northeast with an area of 650 000 m^2. This zone is differentiated from the Main Zone (Niobec mine area: C3 and C5) by its extensive brecciation, the presence of ankerite and high REE content.

Immediately surrounding it (C1), Dénommé (1985) describes a zone of extensively altered dolomitite, which is brecciated but does not host REE minerals. The 2011 drill holes by IAMGOLD-Niobec did not confirm this scheme. All the brecciated central core (C1) with the surrounding carbonatite facies (C2 and C5) or syenite (S1) has mineral potential and they are more or less highly mineralized depending on the area.

Three main types of breccia have been distinguished by different authors in the REE Zone:

- Reddish breccia corresponding to a rich hematitic breccia;
- Greenish breccia corresponding to a chlorite rich breccia;
- White to beige breccia, which looks like unaltered breccia.

A more recent petrographic, mineralogical and geochemical study (Fournier, 1993) allows a better description and understanding of the REE Zone.

7.1.2.4.2 Petrographic and mineralogical highlights of the REE zone (Fortin, 1977; Gauthier, 1979; Fournier, 1993)

At a macroscopic scale and below the deuteritic alteration zone (about 60m below surface), the brecciated dolomitite (C1 facies) is colored greenish to reddish, respectively, by chlorite and hematite present in the matrix, and varies from clast to matrixsupported with only thin “horizons” of carbonatite left intact. The clasts are rounded to sub-angular and composed of dolomite, ferroan-dolomite, ankerite and siderite. They range from 0.25 cm to a few centimetres in diameter. Locally, K feldspar clasts have been signaled in these brecciated facies, particularly in the chloritic breccia (Gauthier, 1979).

Dolomite, ankerite, siderite, calcite, feldspar K, hematite, chlorite, REE minerals (REE fluorocarbonates and monazite), sulphides (pyrite, sphalerite) are the chief minerals in the breccia and occur in varying proportions (Gauthier, 1978; Fournier 1993).

The unbrecciated horizons are whitish to buff colored, and are usually devoid of most of the accessory minerals (minor phlogopite, magnetite and apatite).

Late, 1-3 mm wide, partially to completely filled veins, containing euhedral calcite, barite and fluorite cut across the brecciated units and also across the unbrecciated dolomitite (Fortin, 1977; Fournier, 1993).

The uppermost 60 m of the REE Zone were heavily weathered to an orange or red color as a result of exposure of the carbonatite to the atmosphere prior to deposition of the Trenton limestone (Figure 7). At depth, red staining of carbonates IS a more local phenomenon, and the characteristics of the breccia are easier to recognize (Dénommé, 1985; Fournier, 1993).

At the microscopic scale (Fournier, 1993), dolomitite clasts range from an Mg-rich variety to a more iron-rich variety containing significant manganese. They make up a solid solution between dolomitite and ankerite, but some crystals of magnesian siderite are also found.

The carbonates cement of the breccia varies from ferroan dolomite to ankerite but is poorer in Ca than the associated clasts.

The chlorite is brownish colored, iron-rich and locally comprises up to 20% of the rock by volume in interstices between carbonates grains. This contrasts with the Mg-rich, greenish variety, which replaced phlogopite in the Niobium Zone (Fournier, 1993).

The apatite, which classifies as fluorapatite, has higher fluorine content and a more stoichiometric phosphorous content in the REE Zone than in the Niobium Zone. However, the REE content of apatite from the two zones does not differ significantly.

The principal REE minerals are fluorocarbonates and take the form of needles in radiating bundles or in parallel growth and measure a few microns in diameter and up to 20 micron in length. REE fluorocarbonates minerals are concentrated mainly in the breccia matrix where they are associated with either chlorite, hematite, dolomite or organic matter.

Monazite [(REE,Th) PO_4] occurs as irregular, micron size grains spatially associated with parisite but enclosed in bastnaesite; and thorite ($ThSiO_4$) as micron size, opaque, grains set in either chlorite or organic matter.

The oxide minerals in the REE Zone is hematite which is found either as discrete fine (<0.05 cm) metallic grains (specularite) or as a reddish coating on other minerals. The main sulfide mineral is pyrite which occurs as euhedral grains (0.02 to 0.05 cm) or stringers of sub- to anhedral crystals in breccia zones.

Euhedral crystals are commonly replaced or surrounded by hematite.

Pyrrhotite and chalcopyrite have also been observed, as inclusions within pyrite, and subhedral sphalerite is encountered with pyrite in the stringer.

Anthraxolite, a bituminous hydrocarbon of the asphaltite group, is commonly present in the upper, superficially altered portion of the carbonatite. The occurrence of anthraxolite is not restricted to the REE Zone as originally believed, but does appear to be confined to the superficial altered portion of the carbonatite.

Phlogopite in the REE Zone is a minor phase which occurs mainly as fine grains in breccia, surrounded by a chlorite halo.

Rare ilmenorutile, a niobium-bearing phase, form small euhedral crystals (<0.25 mm) in the breccias.

The occurrence of strontianite, celestite and rhodocrosite has been reported by Gauthier (1979).

Euhedral barite, fluorite and calcite are late minerals which fill veins and vugs.

7.1.2.4.3 Origin of the core breccia (Gauthier 1979; Fournier, 1993):

From the conical geometry of the REE Zone, two mechanisms have been proposed to explain its formation:

- Contraction cracking due to cooling (Gauthier, 1979),
- Hydro-brecciation from igneous activity (Fournier, 1993).

Gauthier proposed that the REE Zone breccias had formed by contraction during cooling, following the buildup of the multiples cones sheets corresponding to the different breccia facies defined in the deuteritic alteration zone. His model has been abandoned by different authors following the results of the deeper drill holes realized since 1985. Regarding the brecciation, it seems unlikely that such a small area of the complex would have been affected by this process, and even less likely that the latter could have caused such intense brecciation (Fournier, 1993).

On the other hand Fournier in his model of hydro-brecciation, consider the brecciation analogous to resurgent boiling in granitic systems and the residual melt could have been saturated with an aqueous phase due to insufficient crystallization of hydrous minerals. Separation of this fluid from the magma could have caused a sharp buildup in pressure, resulting in overpressures that could have exceeded the strength of the carbonatite. If this was the case, hydrofracturing would have initiated, and this could ultimately have led to the production of a breccia pipe by the escaping fluid.

Support for this interpretation is provided by the high proportion of secondary vapor inclusions (Fournier, 1993) in the primary dolomite and ankerite (not reported in Heinritzi et al, 1989).

7.1.2.4.4 Conclusion of the petro-mineralogical study of REE Zone

It is important to notice that this petrographic and mineralogical study used the drill holes cores of REE Zone of the different phases until 1985. Additional drilling of the REE Zone has been realized more recently (2011) by IAMGOLD-Niobec with 29 drillholes totaling 13 798 m.

The observation, at a macroscopic scale, of some of the core of these recent drill holes confirm all the macroscopic petrographic data mentioned above with additional and complementary information, thus:

- These breccia correspond to hydrothermal breccia related to igneous activity, attested by the multiple hydraulic breccia structures;
- Presence of multiple breccia phases (brecciation of breccia);
- Fluidal orientation of the breccia element along a sub-vertical axis;
- The REE zone is constituted by mainly ferrodolomitite breccia with the presence locally of, a mineralized or not, calcitite breccia facies;
- The breccia zone shows the existence of numerous clasts of highly altered syenite corresponding probably to xenoliths;
- Presence of at least two mineralized phases expressed by the presence of lanthanides in the carbonates elements of the breccia (impregnation) and mainly in the matrix of this breccia;
- Presence of at least a mineralized alteration front affecting all the core breccia (dolomitic and calcitic) testified by the existence of small barren zones of the different brecciated facies or small patches of different sizes in the mineralized zones.

These observations confirm the existence of multiple stages of igneous activity and a metasomatic replacement characteristic of the carbonatite complexes.

Based on petrographic observations, the paragenesis of REE Zone can be subdivided into four stages (Fournier, 1993):

- The first consisted of the crystallisation of a dolomite low in Nb and REE (C2),
- This was followed by brecciation (C1) and deposition of synchisite and possibly parisite, monazite and thorite. Ankerite, ferroan dolomite, hematite and chlorite were also introduced in this stage,
- The next stage, better developed in the dolomite of the main zone, consisted of the formation of veinlets of barite, fluorite and calcite,
- The last event was deuteric alteration which caused hematization.

This model is in accordance with the chronology of the whole carbonatite complex buildup, advanced by Fortin in 1977:

"The setting-up chronology could be, considering the petrographic observations, the geochemical study and carbonates common setting up order:

1. *Sovites (Calcitites) of the south (C6) and the north (C4) of the carbonatite complex,*
2. *Rauhaugites (Dolomitite) of the economic zones (C9, C5 and C3) and the low Niobium and REE dolomitite (C5),*
3. *Dolomitite of the central zone (C2 and C1 non brecciated),*
4. *REE carbonates like cement of the low REE rauhaugites cavities,*
5. *Sequent veinlets with calcite, quartz, barite and fluorite"*

Apatite-phlogopite geothermometry yielded magmatic temperatures between 1150 and 800°C for the complex, and for the REE Zone, the temperatures range between 380 and 346°C, and are interpreted to reflect subsolidus conditions. An independent chlorite geothermometry yielded similar temperatures (364 to 321°C) for the REE Zone breccia cement (Fournier, 1993).

A satisfactory model for the whole carbonatite was proposed by Fournier. A. in 1993 within the framework of his master study and is resumed by the author as follows:

"REE concentration in the magma was initially buffered by the crystallization of pyrochlore and apatite (Niobium zone), and was subsequently allowed to build up when these phases stopped crystallizing in the most evolved ferrocarbonatite. Saturation of this magma with water, late in its crystallization history, led to the separation of an acidic fluid into which the REE were strongly partitioned in fluorocomplexes. Analogous to boiling in granitic systems, this fluid brecciated the core of the carbonatite, and effervesced, causing an abrupt drop temperature due to adiabatic expansion, which combined with the pH buffering of the fluid by the dolomite, caused the precipitation of the REE as fluorocarbonate minerals".

It's important to note that these REE correspond essentially to LREE (Light REE) which is characteristic of the REE deposit associated to carbonatite, light REE minerals develop in the late stages of carbonatite emplacement (Kupta and Krishnamurthy, 2005).

In our case, the existence of heavy REE has been signaled by Fournier and the few analyses realized for REE in the Niobec mine gave also some interesting values for Tb, Yb and Lu.

7.3 Emplacement at a regional scale of the St-Honoré carbonatite complex in the Saguenay rift basin

The geological model proposed above for the buildup of the whole carbonatite complex of St-Honoré and for the formation of the REE Zone and associated mineralization needs the presence of deep faults necessary to carry first hydrothermal solutions from a deep magmatic chamber to surface (fenitisation), preceding and/or synchronous to the emplacement of the carbonatite complex.

A quick come back to the regional geological setting by insisting on the lapetan rift faults system allowed to note the presence, at a regional scale, of NNE lineaments (faults), sub-parallel to the St Laurent graben orientation. One of these NNE faults is located north of the St-Honoré carbonatite (Figure 6).

In this extensional environment, the NNE to NE-SW structures have been interpreted (Lamontagne. E, 1993) like "Transfer fault" (Figure 10) which control, with the principal NW-SE normal faults, the Saguenay graben geometry.

In this tectonic extensional pattern where the St-Honoré carbonatite took place, it's important to remind the oval geometry of this Carbonatite complex and its central part (brecciated and mineralized pipe) on the regional NNE axis, direction acquired probably from the NE transform fault which possible trace do still exist north of the carbonatite complex (Figure 7).

This pattern is in accordance with the different models accepted for carbonatites setting up where the presence, in a stable environment, of deep faults is necessary to carry first hydrothermal solutions from a deep magmatic chamber to surface (fenitisation), preceding and/or synchronous to the emplacement of the carbonatite complex.

In this scheme, a second axis can be deduced from the organization of the different cone sheets (C3, C5, C9 “C6”, and the SE “Cancrinite, nepheline and garnet syenite”), along a SE direction, which is the regional NW-SE major direction of the Saguenay rift structure.

Thus, the emplacement of the St-Honoré carbonatite seems to localize in the intersection of the regional NW-SE extensional fault and the NE-SW transform fault system.

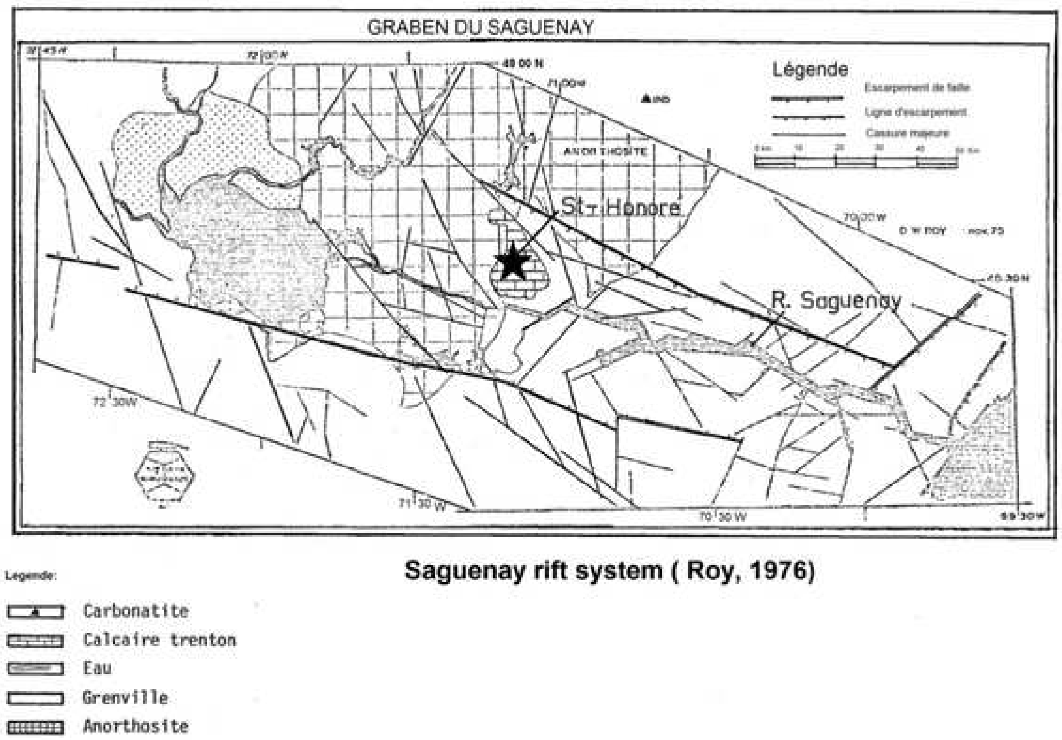


Figure 7 Location of the St-Honoré carbonatite in the Saguenay rift system

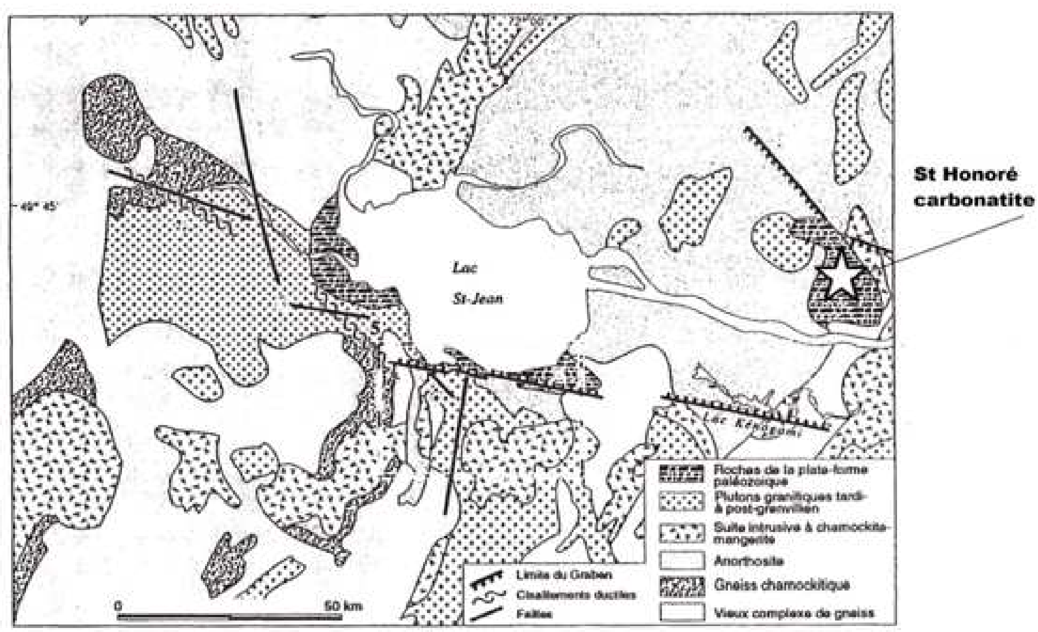


Figure 8 Geological and structural simplified sketch map of the Lac-St-Jean area, in Lamontagne. E, 1993

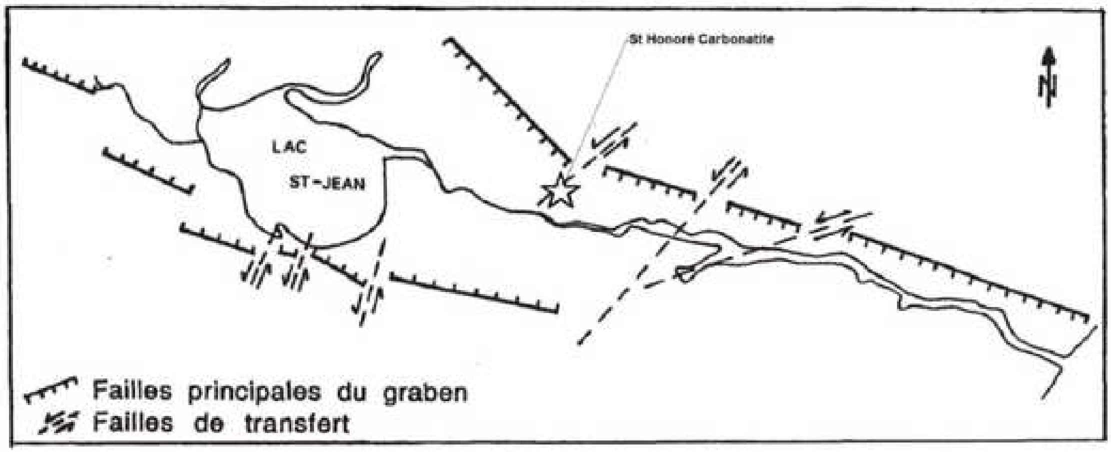


Figure 9 Relation between the principal rift faults and the transform faults (Lamontagne E., 1993)

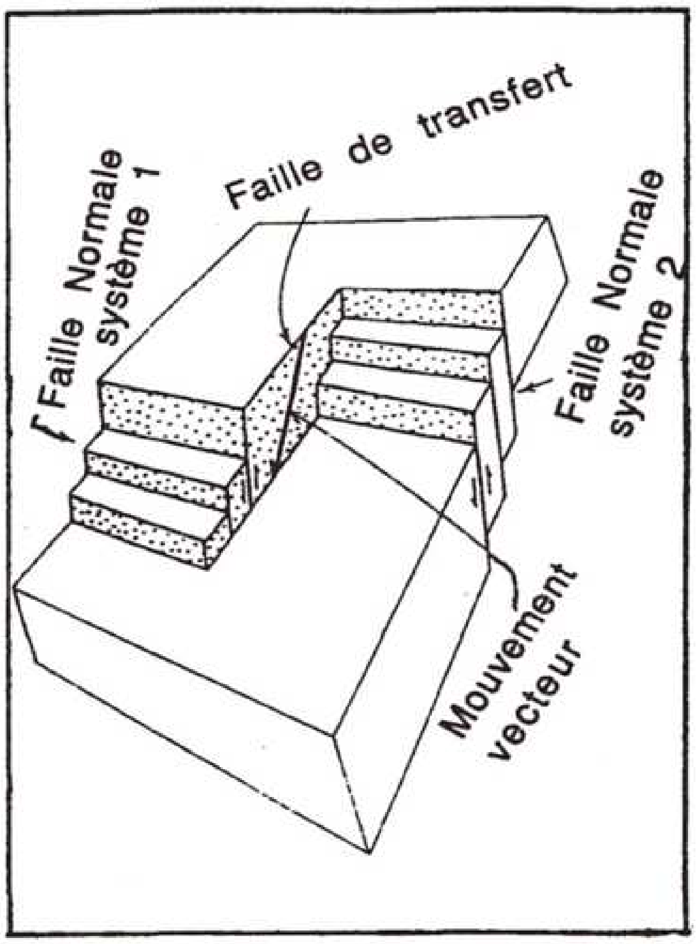


Figure 10 Relation between normal faults and transform faults (Lamontagne E. 1993).

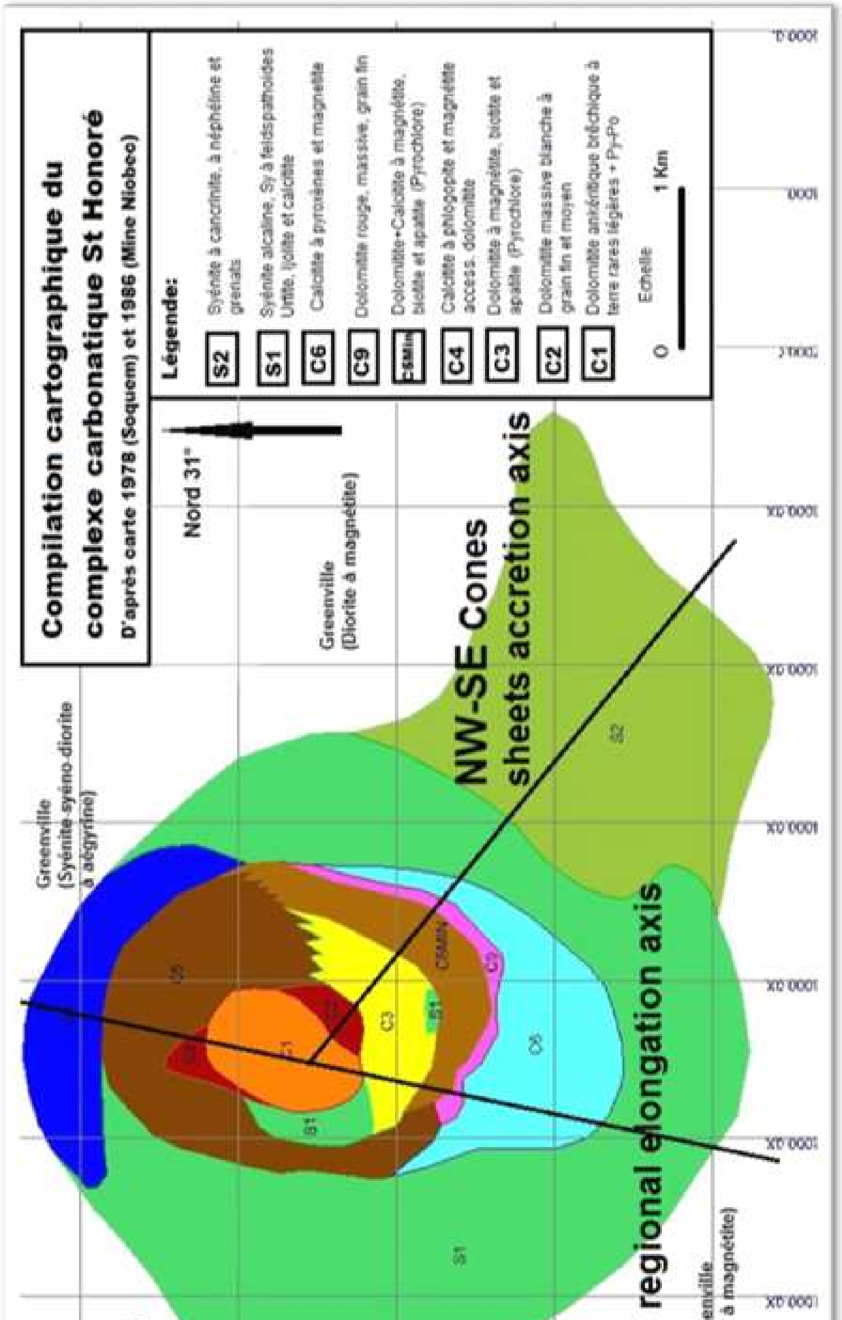


Figure 11 Evidence of North-south and North-west lineaments in the carbonatite complex.

7.4 Mineralization

7.4.1 Description of the REE mineralization

The principal REE minerals observed in the brecciated facies of the REE Zone, by different authors (Vallée & Dubuc, 1970; Nickel & Pinard, 1970; Gauthier, 1979) correspond first to basnaesite and monazite. They are often accompanied with minor amount of such minerals as pyrrhotite, chalcopyrite, huttonite ($ThSiO_4$) and molybdenite.

A more detailed metallographic study (Fournier, 1993) describes the REE minerals as other fluorocarbonates which take the form of needles in radiating bundles or in parallel growth typically measuring a few microns in diameter and up to 20 micron in length. These minerals represent a solid solution produced by interlayering of the end-member, Bastnaesite [$REEF(CO_3)$] and Vaterite ($CaCO_3$) and include the intermediate members; parasite [$(CaREE_2F_2(CO_3)$] and synchysite [$Ca_2REEF(CO_3)_2$]. The REE fluorocarbonates showed them (SEM imaging and qualitative EDS) to consist of an early Ca-rich phase, probably synchisite and possibly parisite, enclosed by a later Ca-poor phase, probably bastnaesite . It is, however, possible that some of the intermediate compositions reflect an additional phase, parasite (Fournier, 1993) .

Fluorocarbonates minerals are concentrated mainly in the breccia matrix where they are associated with either chlorite, hematite, dolomite or organic matter.

Monazite [$(REE,Th)PO_4$], and thorite ($ThSiO_4$) are the second important host of REE after the fluorocarbonates. Monazite occurs as irregular, micron size grains spatially associated with parisite but enclosed in bastnaesite; and thorite as micron size, opaque grain set in either chlorite or organic matter.

Besides the REE minerals (REE fluorocarbonates and monazite), an inventory of different minerals has been established by different authors, which compilation gives the following:

Carbonates: Dolomite, calcite, ankerite, siderite.

Fluorocarbonates : Bastnaesite, synchisite, parasite.

Silicates: Chlorite and phlogopite, feldspaths (K), quartz, vermiculite (?), zircon, amphiboles, pyroxenes and epidote.

Phosphates: Monazite and rare apatite.

Oxydes: Magnetite, hematite, ilmenite, rutile, goethite, pyrolusite and pyrochlore.

Sulfures: Pyrite, pyrrhotite, sphalerite, chalcopyrite, molybdenite (?)

Others: Baryte, fluorite, antraxolite, and numerous non identified minerals.

Based on petrographic and metallographic observations, a paragenesis succession (Table. 3) has been established (Fournier, 1993).

Table 3 A paragenetic sequence for the minerals of the REE Zone established from petrography (Fournier, 1993)

MINERALS	STAGE 1	**STAGE 2 ***	STAGE 3	STAGE 4
dolomite	———			
Ferroan dolomite	———	———		
ankerite		———		
chlorite		———		
specularite		———		
synchisite		———		
bastnaesite		———		
monazite		———		
pyrite	———	———	———	
phlogopite	———			
apatite	———			
calcite			———	
fluorite			———	
barite		———	———	
hydrocarbon				———
hematite		———	———	———
sphalerite			———	

* Stage 2: Mineralization stage

7.4.2 REE mineralization envelope

Considering the drill holes compilation map of the REE Zone, we can note the relative few drill holes (totaling 3,902 m) realized from 1968 until 1985, by Soquem (1968-1973, 1975 and 1985).

Recently in 2011, 13789 m have been realized by IAMGOLD-Niobec. The potential REE deposit area corresponding to the brecciated carbonatite (C1) core with a surface of about 1 km^2, is still not entirely recognized, with the actual grid of 100x200m, until the deep of 400 m.

The first major mineralization envelope keep the geological limit of the brecciated facies (C1) mainly altered (hematitized and/or chloritized) which seems to constitute the entire Central Zone (REE Zone) to a recognized depth of 400m.

The global geometry of this major mineralization envelope (C1), according to the magnetic and gravimetric surveys (Vallée & Dubuc, 1970), shows, beside the NE elongation of the REE Zone, a conical geometry down deep, characteristic of this type of carbonatite complex. This conical form is supported by a strong dip of more than 70° recognized locally in drill holes and in underground works.

Considering the distribution of the mineralization values for TREEO (Total REE oxides) in the brecciated facies which vary from 0.27% to 3.94%, the rich values (average 1.75 %) are abundant in the central and south part of the REE Zone and seem to correspond to a few and common particular brecciated facies, thus the hematitic brecciated facies and the chloritic brecciated facies (Photo 6).

The hematitic brecciated facies (Photos 2, 5 & 6) correspond to a white brecciated dolomitite, rarely calcitic, where pluri-millimetric to centimetric oriented oxide clots (Brown purple accumulations) are located in the dolomitite elements beside the matrix of this breccia which is generally highly impregnated with these oxides (Photo 1). Its width varies from few decimetres to few metres and seems to evolve along the core drill holes like an alteration front (repetitive indentation of different facies).

The chloritic brecciated facies (Photos 3 & 6) correspond to a greenish dolomitite facies where pluri-millimetric to centimetric sub-angular dolomitic clasts and rarely feldspathic clasts, are cemented by a chloritic dolomitite; impregnated with millimetric to centimetric oxide clots (Brown purple accumulations, photos 2 & 6).

Beside these two major evident facies, a multitude of other brecciated facies, more or less mineralized are present in the brecciated sequence of the REE Zone.

The REE Zone seems also to show a facies zonality, at least between “the brecciated altered (hematitic and chloritic)-mineralized facies” and “the brecciated non or weakly altered and mineralized facies” which seems highly present in the north and east part of the REE Zone.

At present, in the goal of this report, the limited existing data (facies description and analysis) do not permit to reach any possible internal facies organization pattern which could be used to draw any rich mineralized envelop inside the brecciated mineralized zone. At this stage, mineralization seems to be highly controlled by the porosity of the matrix breccia.

Photo 1

REE mineralization
Deuteritic alteration front

Photo 2

REE Mineralization
Dolomitite with REE impregnations
(Highly rich facies)

Photo 3

REE Mineralization
Chloritic breccia with dissemination of REE

Photo 4

REE Mineralization
Non brecciated « barren » dolomitite facies

Photo 5

REE Mineralization
Sulphides (Pyrite), hematite and REE

Photo 6

REE Mineralization
Hematitic and chloritic facies

Figure 12 Core Pictures of REE Minerals

8 DEPOSIT TYPE

The following is a summary of different papers regarding REE deposits and particularly a recent compilation of the British Geological Survey (BGS) published in November 2011.

8.1 REE Major deposit classes

REE mineral deposits are known (Walters A. & co., BGS) to occur in a broad range of igneous, sedimentary and metamorphic rocks. The concentration and distribution of REE in mineral deposits is influenced by rock forming and hydrothermal processes including enrichment in magmatic or hydrothermal fluids, separation into mineral phases and precipitation, and subsequent redistribution and concentration through weathering and other surface processes. Environments in which REE are enriched can be broadly divided into two categories:

- Primary deposits associated with igneous and hydrothermal processes, divided into two categories, one associated with carbonatites and related igneous rocks and the other with peralkaline igneous rocks (Samson and Wood, 2004).
- Secondary deposits concentrated by sedimentary processes and weathering (supergene process).

Within these two groups REE deposits can be further subdivided depending on their genetic association, mineralogy and form of occurrence.

The most commercially important REE deposits are associated with magmatic processes and are found in, or related to, alkaline igneous rocks and carbonatites.

8.2 Carbonatite-associated deposits

Carbonatites are igneous rocks that contain more than 50 per cent carbonate minerals (IUGS). They are thought to originate from carbon dioxide-rich and silica-poor magmas from the upper mantle. Carbonatites are frequently associated with alkaline igneous provinces and generally occur in stable cratonic regions, commonly in association with areas of major faulting particularly large-scale rift structures.

More than 500 carbonatites occurrences are documented worldwide, with the main concentrations in the East African Rift zones, eastern Canada, northern Scandinavia, the Kola Peninsula in Russia and southern Brazil (Woolley and Kjarsgaard, 2008). Carbonatites take a variety of forms including intrusions within alkali complexes, isolated dykes and sills, small plugs or irregular masses that may not be associated with other alkaline rocks. Pipe-like bodies, which are a common form, may be up to 3-4 km in diameter (Birkett and Simandl, 1999).

Intrusive carbonatites (Figure 13) are commonly surrounded by a zone of metasomatically altered rock, enriched in sodium and/ or potassium. These desilicified zones, known as fenite, develop as a result of reaction with Na-K-rich fluids produced from the carbonatite intrusion.

The REE are largely hosted by rock-forming minerals where they substitute for major ions. Higher concentrations of REE are required to form their own minerals (Miller, 1986). Around 200 minerals are known to contain REE, although a relatively small number are or may become commercially significant.

The REE in carbonatites are almost entirely LREE which occur in minerals such as bastnaesite, allanite, apatite and monazite (Gupta and Krishnamurthy, 2005).

REE do not occur naturally as metallic elements, they occur in a wide range of mineral types including halides, carbonates, oxides and phosphates.

The vast majority of resources are associated with just three minerals, bastnaesite, monazite and xenotime. ln some REE minerals, the LREE are particularly enriched relative to the HREE, which in others the opposite is the case. Bastnaesite and monazite are the primary source of the LREE, mainly Ce, La and Nd. Monazite has a different balance as it contains less La and more Nd and HREE. It is also significant to note that monazite contains the radioactive element thorium.

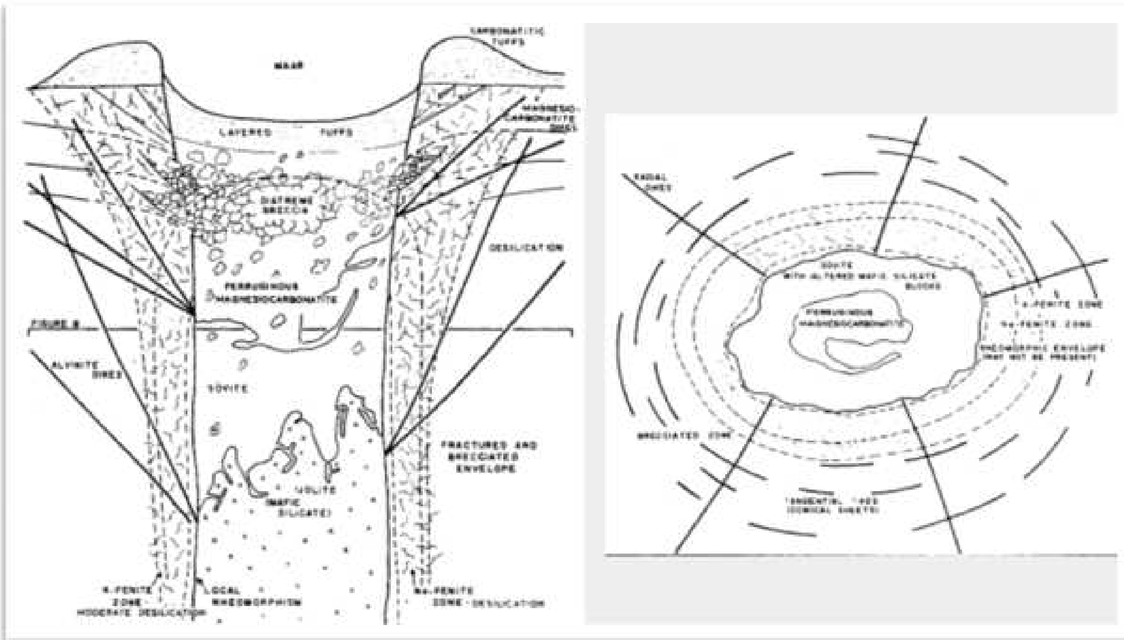


Figure 13 Schematic section and plan view of a carbonatite complex (SIDEX.ca)

Schematic section and plan view (mid-level) of a carbonatite complex, showing cylindrical shape of intrusion that evolves upwards into a diatreme breccia and layered tuffs. Late dikes (bold lines) display a radial or concentric pattern. The intrusion consists of three phases: sövite (calcite-rich carbonatite), iron-rich magnesian carbonatite, and ijolite (nepheline-pyroxene rock). The host rocks are fenitized (alkaline metasomatism) and desilicified.

9 EXPLORATION

Since 1985, no exploration works for REE have been done until the drilling campaign realized by IAMGOLD-Niobec which begun in 2011 and continues in 2012.

10 DRILLING

10.1 Surface Exploration Drilling History and Goals

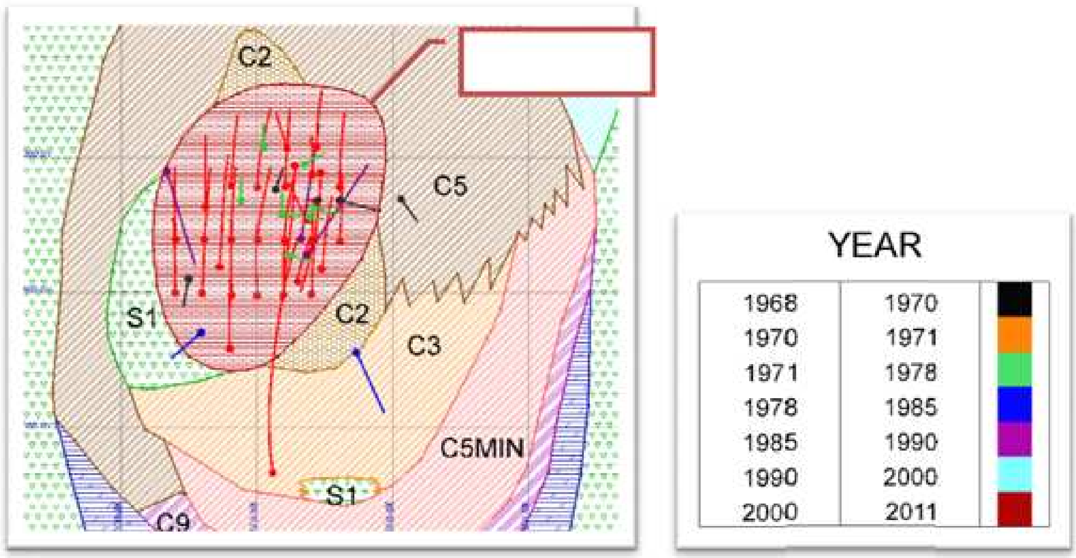
The goal of the 2011 drill program conducted by the Company on the REE zone was to establish the three dimensional "footprint" of mineralization, establish a preliminary REE mineral resources grade estimate and provide samples for preliminary metallurgical test work. The deeper holes demonstrate that the brecciated and mineralized facies of the REE zone persists uninterrupted at depth, although the resource estimate is reported only to a depth of 375 metres below surface. The Company initiated a 2,750 metres follow-up drill campaign in January 2012 to further define the lateral extent of the resource and establish the overall limits of REE mineralization with greater certainty. A second phase of drilling is also planned for resource definition useful to mine planning and to explore the deposit at depth.

Diamond drilling is the only method of investigation used by IAMGOLD-Niobec in 2011 (and 2012) to date on the REE Zone, as did the previous owners after the carbonatite discovery by Soquem in 1968 (Figure 14 (b) and Figure 15).

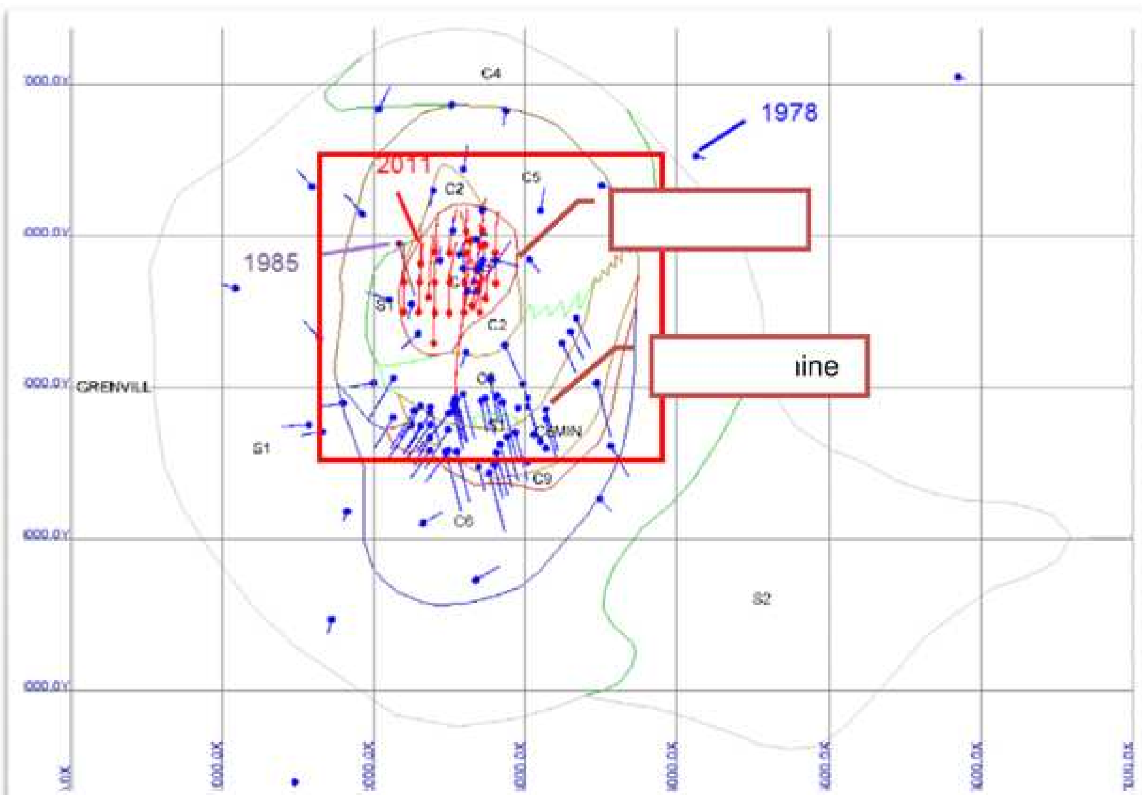
10.2 Drilling statistics

Table 4 Historical diamond drilling realized on the REE Zone of the St-Honoré carbonatite complex

Company name	Year	Number of Drill Holes	Average LENGTH	Longest DH LENGTH	Total LENGTH (metres)	% of Total LENGTH
SOQUEM	**1968**	5	141	226	706	4.0%
SOQUEM	**1975**	8	120	148	958	5.4%
SOQUEM	**1978**	2	336	443	672	3.8%
SOQUEM	**1985**	3	522	559	1,566	8.8%
IAMGOLD	**2011**	29	476	898	13,798	78.0%
Grand Total		**47**	**377**	**898**	**17,700**	**100.0%**



(a) Drillholes intersecting the REE Zone Only or Significant REE Samples



(b) All Surface Exploration Drillholes near the REE Zone

Figure 14 Map of Drillholes by Year (only in REE Zone above)

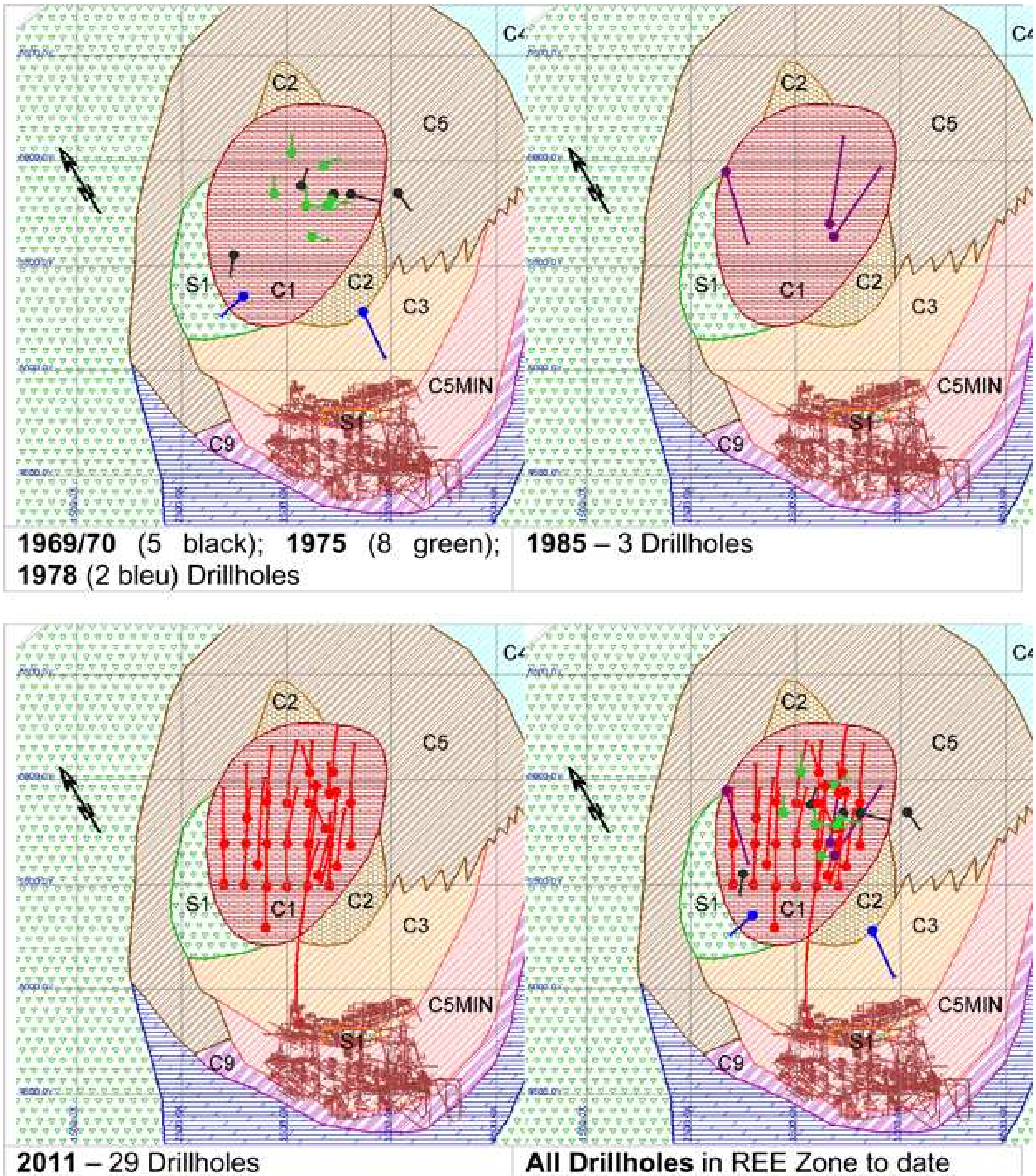


Figure 15 Drilling in the REE Zone

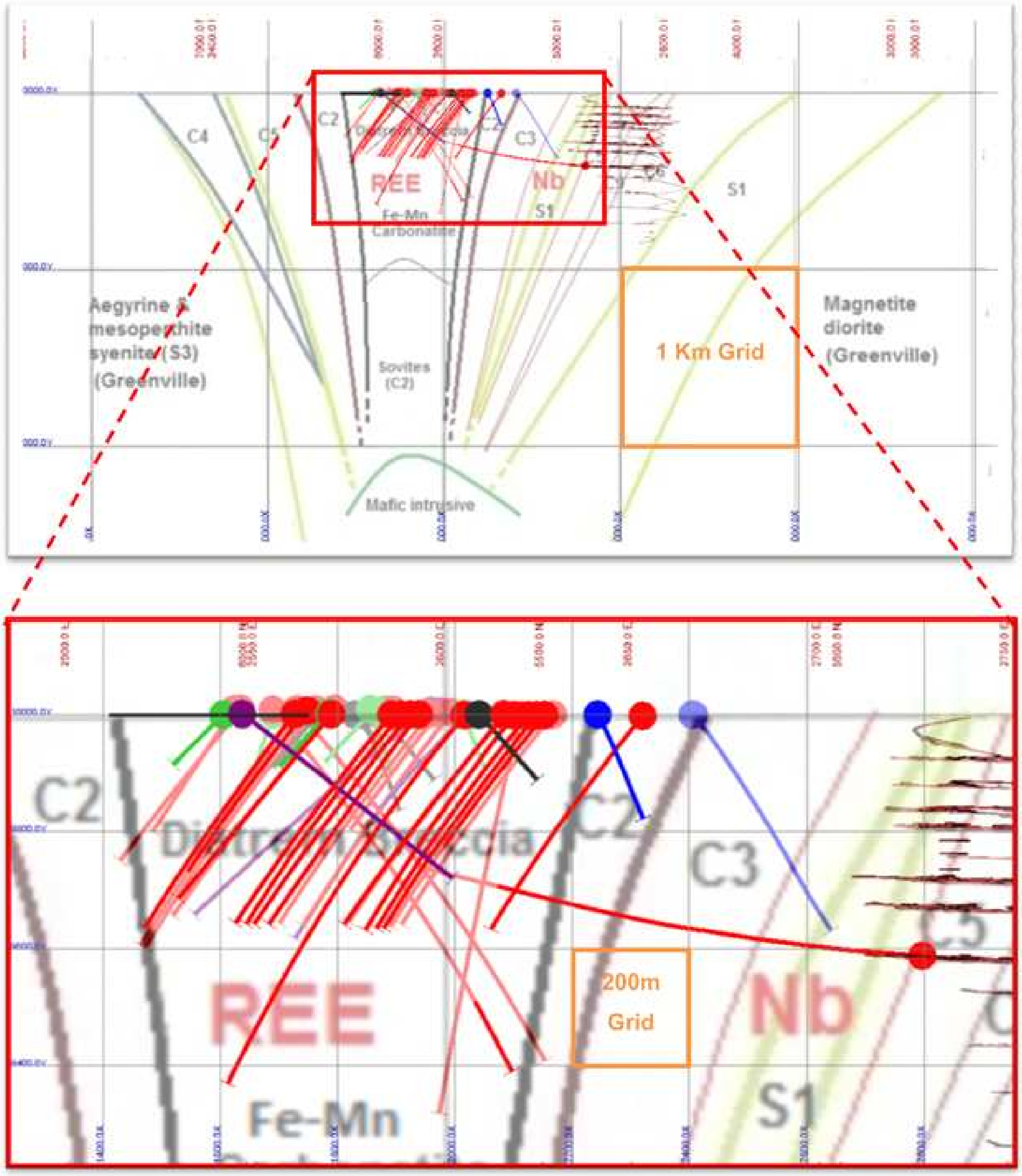


Figure 16 NS Section Showing Scope of Drilling (1000m grid above; 200m grid below)

10.2 Drilling realized by IAMGOLD

The drilling campaign realized by IAMGOLD-Niobec regarding the reconnaissance of the REE Zone corresponding to the central core of the carbonatite totals 13,798 metres (29 drill holes) at the end of 2011.

Table 5 Summary of drill holes realized in 2011 by IAMGOLD

Hole name	Easting (MTM Nad83)	Northing (MTM Nad83)	Elevation (m)	Lentgh (m)	Dip Degree	Hole type
2011-REE-001	256444.8	5378412.0	151.24	251	–50	NQ
2011-REE-002	256518.6	5378675.7	151.84	250	–55	NQ
2011-REE-003	256422.6	5378336.6	148.44	253.40	–52	NQ
2011-REE-004	256549.5	5378544.5	151.84	251	–54	NQ
2011-REE-005	256508.7	5378279.7	147.43	445.20	–50	NQ
2011-REE-006	256611.6	5378453.3	153.35	452	–50	NQ
2011-REE-007	256400.2	5378227.3	144.83	450	–50	NQ
2011-REE-008	256616.5	5378623.6	153.16	335	–50	NQ
2011-REE-009	256335.8	5378387.7	145.29	449	–50	NQ
2011-REE-010	256252.9	5378441.9	143.67	449	–50	NQ
2011-REE-011	256169.3	5378492.7	143.44	450	–50	NQ
2011-REE-012	256146.4	5378268.8	142.15	449	–50	NQ
2011-REE-013	256231.1	5378219.6	142.64	449	–50	NQ
2011-REE-014	256321.4	5378167.7	143.37	446	–50	NQ
2011-REE-015	256064.5	5378316.8	142.27	449	–50	NQ
2011-REE-016	256083.8	5378544.1	143.2	449	–50	NQ
2011-REE-017	255995.4	5378597.3	143.44	446	–50	NQ
2011-REE-018	255893.2	5378430.8	142.67	452	–50	NQ
2011-REE-019	255975.5	5378379	142.44	450	–50	NQ
2011-REE-020	256439.7	5378557.1	152	503	–50	NQ
2011-REE-021	256352	5378608.8	149.96	500	–50	NQ
2011-REE-022	255956.8	5378150.4	141.33	450	–50	NQ
2011-REE-023	256271.1	5378663.2	144.48	450	–50	NQ
2011-REE-024	256150.2	5378645.5	143.83	410	–50	NQ
2011-REE-025	256300.9	5378234.4	142.85	704	–50	NQ
2011-REE-026	256579.5	5378534.9	152.13	749	–50	NQ
2011-REE-027	256510.6	5378607.3	151.88	752	–50	NQ
2011-REE-028	256081.3	5378429.1	142.68	755	–50	NQ
S-3607	255858.4	5377677.2	-268.65	898	5	NQ

10.3 Methodology

The lack of geology personal forced IAMGOLD to use the services of a contractor, IOS Services Géoscientifiques Inc. (“IOS”), to take care of all field work for the exploration of the REE Zone. IOS carried out core logging, sampling and shipping of the samples to the laboratory under the close supervision of the Geology manager at the Niobec mine.

The chemist at the niobium mill laboratory looking after quality assurance and quality control (QA/QC) in the mine also did the work of QA/QC for the REE Zone. It included the purchase and preparation of blanks and standard samples for the REE and the compilation of results. However, no assays for REE were performed in the mine laboratory. Samples were sent to SGS and Actlab facilities. See Item 12 for details about the QA/QC procedures.

The REE project leader for IOS is responsible for all the steps necessary for the realization of a drill hole reconnaissance in such environment, including drill set-up, permits, positioning and orientation of the drill, supervision of drilling methods, procedures application, supervision of the rules for health and safety, environmental compliance and the restoration of the drill sites. Due to their location in a farmer’s field, surface casings were pulled out after each hole was finished. Therefore, it is now impossible to use the existing drillholes for any survey (position, radiometry, geophysics, etc.) or verification.

All the drill holes of this campaign have been realized by “Forage Boréal Inc.”, a drilling company from the Abitibi region in North-West Quebec. The drilling pattern was generally on the Mine grid at a spacing of 100 metres by 200 metres. The drill core size was NQ (47.6 mm diameter). The general direction of drilling was true N31° (0° North on the mine grid) with a magnetic declination of 18 °W, and a dip generally toward the North.

Deviation was measured with a multishot (Reflex EZ-shot) after the end of the hole. No additional in-the-hole survey was performed in the existing drillholes from 2011.

The first 4 drill holes were realized starting on February 24 th , 2011 and ended on March 26 th , 2011. Those were done for the metallurgical test work. The remaining of the 2011 drilling began on June 16, 2011 and ended on October 30 th, 2011 for a total of **13 798** metres (Table 5) in 29 drillholes, including one 898 metres underground drillhole (S-3607) heading approximately flat North from a mine level about 400m from the surface.

The realization of this drilling exploration campaign on the REE Zone by IAMGOLD-Niobec required the construction of a new core-shack with a fully equipped Logging tables. The diamond saw to split the core is equipped with a dust collector and ventilation to capture any radon gas emanations from core splitting for the safety of the staff cutting the samples.

Drill holes are planned by the geology manager of the Niobec mine in collaboration with the REE Zone project leader. Then the General Manager Exploration of IAMGOLD approves the planned drill holes.

Drilling was done in the field next to the mine office parking. The core shack is on the mine site less than 1 kilometer from the drill rig. Core is retrieved from the drill rods using conventional wire line techniques. The core is removed from the core barrel by the drill contractor employee and carefully placed in standard NQ wooden core boxes. A wooden bloc with the depth written on it is put in the box at the end of each run (3 metres). Once filled, core boxes are closed and sealed. Boxes are removed from the drill site twice daily (at the end of each shift) by drill contractor personnel and delivered to the project leader in the core shack, who proceed to the verification of all the boxes (Inscription on the boxes, core length and tags, continuity between the boxes, etc.).

Afterward the core is described by the project leader using the geological facies nomenclature in the mine, which is based on Soquem modified facies definition (C1, C2, C3, etc.). Description includes the alteration types, a visual quantification of the abundance of key minerals (Lanthanides, apatite), and percentages of others minerals accompanying the mineralization (magnetite, hematite, chlorite-biotite, pyrite, ankerite, barite, fluorite and sphalerite). Rock Quality Designation (RQD) is systematically measured.

All the core boxes are photographed and additional detail photos are taken at a smaller scale when necessary.

Since the core is slightly radioactive, two devices were used to measure the core radiometry: a BGO-SPEC SUPER RS-230 Radiation Solutions Inc. for radiometric readings in Gy/hr of thorium and uranium contents, and a sensor model 44-9 with 36 model reader of Survey Meter Ludlum Measurements Inc. allowing readings radiometry in µSv / hr.

Finally, the hole number, collar coordinates, azimuth, dip, final depth, down-hole survey data, facies description, radiometry core measures and assays (once they have been received) are incorporated, by the geological mine staff, on the computer log using Logger software of Gemcom.

Geological sections are then published using Gems software from Gemcom for the geological interpretation and grade visualization.

10.4 Drilling results and interpretation

At the end of 2011, 29 drill holes, totaling 13,798 metres, have been realized by IAMGOLD-Niobec on the whole REE Zone on a 100 x 200 metres N31° grid. The results, total of 8285 samples as shown on Table 9, indicted the presence of the REE mineralization in the various brecciated facies of the Central Zone (C1) with variable amount of total REO between 0.27% and 3.94% TREO 95% of the time with an average grade of 1.75%. A summary table for drill holes results is presented in Table 6.

Warning: Please note that 7 of the 54 elements assayed are reported in percent (%). The 47 other elements, including the 13 REE, are reported on assay certificates in PPM (equivalent to gram/T). All assays are reported in metal content (ions), i.e., the REE (rare earth elements). The REO (rare earth oxides) are calculated for the trioxide form (REE_2O_3) which is on average 86.6% REE and 13.4% Oxygen in weigh. Most REE are reported in the form of oxides in mineral resources but their prices are usually quoted in the metal form per kilogram (Kg) in US dollar or Chinese currency.

It's important to note that the Light REE (LREE) represent 98.1% of the total REE in the zone. They are La, Ce, Nd, Pr and Sm. Heavy REE (HREE) make the rest with 1.9% of the REE mass but they could represent approximately 30% of the Net Value. They are Eu, Gd, Tb, Dy, Ho, Er, Tm Yb and Lu.

The existence of heavy REE has been signaled by Fournier (1993) and the few analyses realized for REE in the Niobec mine gave some interesting values for Tb, Yb and Lu.

Regarding the ongoing program to outline the REE Zone in 2011, additional diamond drilling (2,750 metres) was projected for the first quarter of 2012 to complete the reconnaissance of the Central Zone.

10.5 Drill holes result discussion

As mentioned above, the REE Zone mineralization envelope corresponds first to the brecciated facies envelope. This brecciation which seems to affect the entire REE Zone is generally affected itself by disseminated type mineralization accompanied by alteration (hematitic and chloritic alteration).

The recognition of this disseminated mineralization in the conical geological envelope of the REE Zone has been realized first on an oriented pattern for drilling (Grid oriented N31°, 100 by 200 metres; Drill holes with an azimuth N31°, plunging at 45° to 55° North).

The presence of local REE mineralized zones with higher grade in some particular brecciated facies opens the possibility for the existence of "mineralized structures", not necessarily tectonic structures but probably a particular zonality shape of this rich facies in the brecciated and altered zone.

Presently, the potential to find in the geological data some high grade zone can be studied using geostatistics. Kriging could highlight some internal organization in the REE Zone. See Item 14.

Table 6 : Significant mineralized intercepts obtained from July to October 2011 drill program on the REE Zone at Niobec

						Light REO					Main Heavy REO					
Hole #	**From (m)**	**To (m)**	**Length (m)**	**TREO %**	**HREO %**	**Ce_2O_3 ppm**	**La_2O_3 ppm**	**Nd_2O_3 ppm**	**Pr_2O_3 ppm**	**Sm_2O_3 ppm**	**Dy_2O_3 ppm**	**Eu_2O_3 ppm**	**Gd_2O_3 ppm**	**Tb_2O_3 ppm**	**Nb_2O_5 ppm**	**Mo ppm**
2011-REE-005	**22.5**	**445.2**	**422.7**	**1.243**	**0.022**	5935	3307	1978	614	212	45	51	112	12	1553	58
2011-REE-006	**44.0**	**452.0**	**408.0**	**1.141**	**0.018**	5449	3008	1863	575	201	34	44	88	9	1279	68
	Incl.															
	44.0	302.0	**258.0**	1.384	0.019	6677	3805	2155	683	221	34	49	96	10	1084	100
	302.0	452.0	**150.0**	0.721	0.015	3336	1638	1362	390	167	35	36	74	8	1613	15
2011-REE-007	**5.2**	**450**	**444.8**	**1.780**	**0.029**	8405	4530	3166	889	354	32	82	164	16	1452	**184**
2011-REE-008	**44**	**335**	**291**	**0.956**	**0.016**	4570	2447	1610	497	182	28	40	83	8	1567	51
	Incl.															
	44	264.5	220.5	1.076	0.017	5159	2804	1761	557	196	31	43	91	9	1625	53
	264.5	335	70.5	0.581	0.011	2728	1329	1138	312	138	17	31	59	5	1386	49
2011-REE-009	**21.5**	**449**	**427.5**	**2.084**	**0.033**	9987	4933	3868	1140	424	48	90	176	15	1181	**219**
2011-REE-010	**38**	**449**	**411**	**2.144**	**0.032**	10137	5314	3934	1166	416	46	84	173	16	1483	**243**
2011-REE-011	**48**	**450**	**402**	**2.342**	**0.030**	11390	5716	4183	1259	425	46	83	158	14	1288	**236**
2011-REE-012	**11**	**449**	**438**	**1.810**	**0.036**	8447	4320	3375	987	422	61	93	185	18	1236	**163**
2011-REE-013	**11**	**449**	**438**	**1.884**	**0.032**	8936	4587	3367	1008	398	55	83	166	15	1657	**186**
2011-REE-014	**17.0**	**446**	**429**	**1.783**	**0.026**	8409	4637	3076	905	356	37	73	138	12	1277	147
2011-REE-015	**44**	**449**	**405**	**2.009**	**0.035**	9504	4746	3732	1079	427	71	53	202	20	1115	**213**
2011-REE-016	**51.5**	**449**	**397.5**	**2.403**	**0.030**	11686	5809	4397	1275	452	43	88	159	14	1460	168
2011-REE-017	**29**	**446**	**417**	**0.965**	**0.018**	4469	1849	2096	549	252	54	105	11	7	2105	87
	Incl.															
	29	177.5	148.5	1.601	0.025	3179	3508	915	402	37	82	149	12	4	1419	114
	177.5	446	268.5	0.613	0.014	1113	1315	347	169	53	38	80	10	9	2484	72
2011-REE-018	**69.5**	**452**	**382.5**	**1.902**	**0.030**	9159	4055	3899	1093	412	38	85	162	13	730	**197**
2011-REE-019B	**67.5**	**450**	**382.5**	**2.032**	**0.034**	9841	4800	3771	1057	398	46	83	195	14	588	**227**

2011-REE-020	**24.5**	**503**	**478.5**	**1.542**	**0.027**	7323	3878	2731	792	315	37	68	153	10	932	124
	Incl.															
	24.5	282.5	258	2.148	0.033	10324	5445	3748	1113	409	39	85	191	12	1016	138
	282.5	503	220.5	0.863	0.021	3945	2115	1596	430	212	34	50	113	8	863	111
2011-REE-021	**30.5**	**500**	**469.5**	**1.553**	**0.025**	7486	3706	2856	803	312	35	63	140	9	963	**162**
	Incl.															
	30.5	170	139.5	2.424	0.036	11797	5752	4403	1267	468	50	92	207	14	931	195
	170	500	330	1.185	0.020	5664	2841	2202	607	246	29	51	112	7	977	148
2011-REE-022	**52.5**	**450**	**397.5**	**1.723**	**0.040**	8145	4199	3069	878	356	63	82	238	19	1405	112
2011-REE-023	**36**	**450**	**414**	**2.091**	**0.031**	9811	5444	3755	1087	381	39	75	180	12	1000	114
2011-REE-024	**30.5**	**410**	**379.5**	**1.117**	**0.020**	5301	2685	2059	596	239	27	50	115	8	1320	143
	Incl.															
	30.5	312.5	282	1.213	0.022	5756	2872	2266	654	268	31	56	127	9	1482	169
	312.5	410	97.5	0.837	0.013	3986	2144	1459	428	155	18	32	78	5	855	70
2011-REE-025	**2.5**	**704**	**701.5**	**2.240**	**0.035**	10776	5766	3834	1122	407	46	84	206	13	974	**175**
2011-REE-026	**21.5**	**749**	**727.5**	**2.084**	**0.035**	10040	5115	3724	1028	430	45	88	200	13	856	**174**
2011-REE-027	**29**	**752**	**723**	**1.942**	**0.037**	9292	4480	3702	990	439	49	92	217	16	1017	**183**
2011-REE-028	**36.5**	**755**	**718.5**	**1.952**	**0.038**	9361	4462	3753	1007	414	51	89	222	17	826	**218**
S-3607	**492.9**	**556.9**	**64**	**0.752**	**0.016**	3455	1580	1524	428	186	36	39	76	8	2376	98
UG hole	**556.9**	**898.2**	**341.4**	**1.897**	**0.023**	9267	4653	3319	1033	333	35	64	122	11	1113	131

* TREO is for Total Rare Earth Oxides which include La_2O_3, Ce_2O_3, Pr_2O_3, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3 and Lu_2O_3.

** HREO is for Heavy Rare Earth Oxides which include Eu_2O_3, Gd_2O_3, Tb_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3 and. But only the 4 most important HREE elements are individually reported in the table, namely Eu_2O_3, Gd_2O_3, Tb_2O_3, and Dy_2O_3.

Notes :

1. Intersections represent down-hole intervals; many drill holes start and finish in the REE Zone.
2. All holes are diamond drill holes representing NQ core size.
3. Assays were performed on core sawed or split in half. The samples were assayed by using sodium peroxide fusion and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) for lanthanides over upper limit, and re-assayed by sodium peroxide fusion and a combination of Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) and ICP-MS for 55 elements. Assays were carried out at SGS Canada Inc. of Lakefield, Ontario and Actlabs Ltd of Ancaster, Ontario. Certified reference material, duplicate and blanks were inserted in the sample sequence for quality control.

11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

11.1 Sample preparation

From the discovery of the carbonatite in 1968 until now, drill holes sampling and assaying by different exploration and mining companies focused on the carbonatite core, excluding the syenite and the discordant Trenton carbonates and sediments.

11.1.1 Sample length and frequency

The length of the 334 samples for the first 4 drillholes in March 2011 was 2.0 metres equal length (standard). The other 24 surface drillholes in 2011 used a standard sample length of 1.5 metres for 7417 samples and 1.52 metres (5 feet) for 430 samples in one underground drillhole (S-3607). Previous surface drillholes produced over 670 samples between 1968 and 1985 mostly around 3.0 metres in length. *Note that 3.04 metres (10 feet) is the standard sample length in the Niobec mine (10 feet = 3.04 metres).*

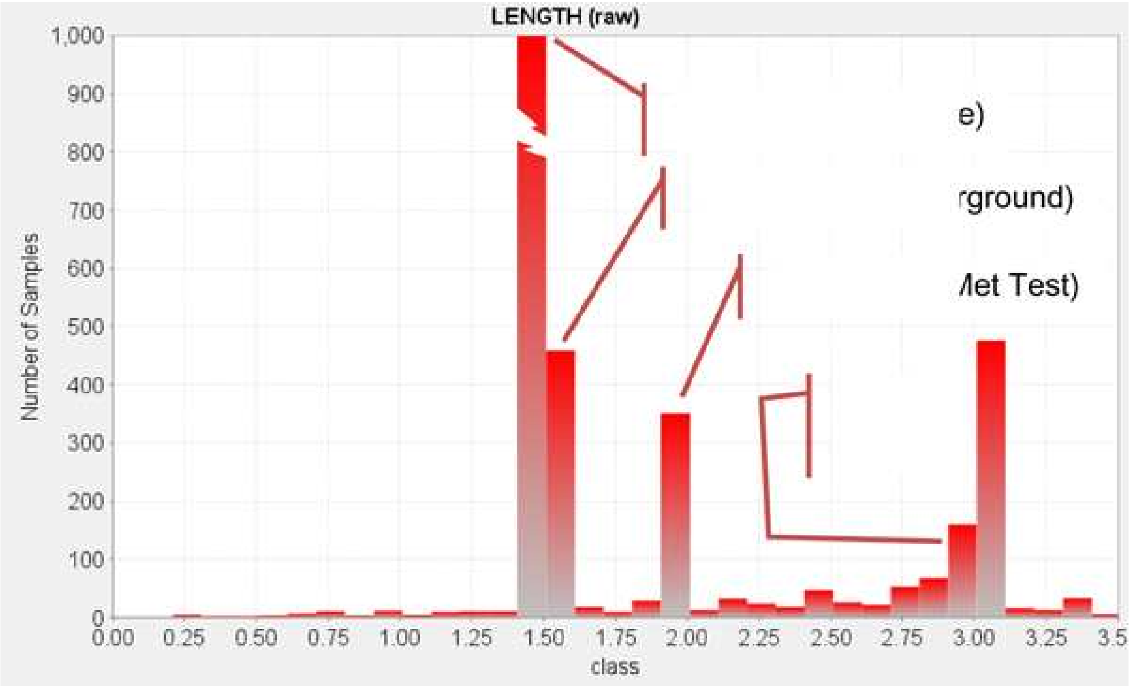


Figure 17 Sample Length 2011 drillholes (top) and all REE Zone drillholes (bottom)

11.1.2 Splitting, Bagging and Shipping

Once drill core is logged in the core shack, all drill cores are sampled from beginning to end except for the upper Trenton unit discordant with the carbonatite. The core is split using a diamond saw. Half the core is returned to the core box as material evidence, while the other half is bagged with the appropriate tag inserted in the bag (matching the one left in the core box). The sample number is also written on the plastic sample bag with a marker. Sample bags are labeled, sealed with tie wrap and then shipped in batches (metallic containers) to IOS warehouse, located at Laterrière (Chicoutimi area, Québec), before shipping to the laboratory where the samples are prepared and analyzed.

IOS is a geological service provider independent from IAMGOLD. Samples were prepared by IOS and shipped expeditiously. PJLGCI has known IOS for many years. The quality of their professional services is very high, particularly on issues of sampling and assaying.

Note that blanks, standard and duplicates samples from IAMGOLD are inserted alternatively every 10 samples (15 metres) approximately. The laboratories also use blanks, standard and duplicates samples of their own to verify their work. The blanks should return no significant REE value within one standard deviation, if applicable. The standard sample should return their certified REE values within one standard deviation. The duplicates should return the same value as the original sample within a reasonable range of variation. This QA/QC procedure applies only to the data produced in 2011. The details of the QA/QC of previous historical data (1968 to 1985) are not the same and not entirely documented.

11.1.2.1 Blanks

IAMGOLD is using blanks to check the laboratory. The blank is not a certified commercial blank sample. It is coarse material prepared by IOS from a quartz vein near Lac St-Jean. It does carry some very low TREE values (119 ppm) as would the background value of most rocks. The laboratories should return the “standard blank sample” measured low value grade within the range of measured standard deviation over multiple assays or values below detection limits for these blank samples.

Blanks are not like the certified commercial graded samples designed to test the final assay reading instrument. Those standard samples are delivered as fine powder to the laboratory. The blanks are designed to make sure the sample preparation (crushing, splitting and pulverizing) equipment are clean. Therefore, coarse material is sent to the laboratory in larger quantity (2 Kg) in the usual sample bag. It should have as little REE as possible, as is the case here. If it returns much higher values than its measured grade, it means the sample preparation facility needs to improve its procedure. Both SGS and Actlab have been informed of anomalies when they were detected and they applied solutions promptly. The results of using a blank sample in this fashion inevitably will produce results that are more variable than with the certified standard samples. See next section (12) for blank results.

11.1.2.2 Standard

Table 7 Standard Sample Values

STANDARDS	Ce	Dy	Er	Eu	Gd	Ho	La	Lu	Nd	Pr	Sm	Tb	Tm	Yb	Y	U	Th	*TREE*
Blanks	56	0.3	0.1	0.5	2.0	0.2	29	< 0.05	21	6.3	2.6	0.1	< 0.05	< 0.1	1			***119***
OREAS 101a	1651	38	23	9.3	54	6.9	897	3.1	475	155	52	7.4	3.4	20	198	482	42	***3,394***
OREAS 146	5771	272	108	154	428	45	3068	7.2	2758	656	549	57	12	65	1064	3.4	1119	***13,951***
GRE-02	19308	33	24	167	351	3.7	10449	0.8	8416	2234	866	27	0.7	5.7	69	0.0	0.0	***41,886***

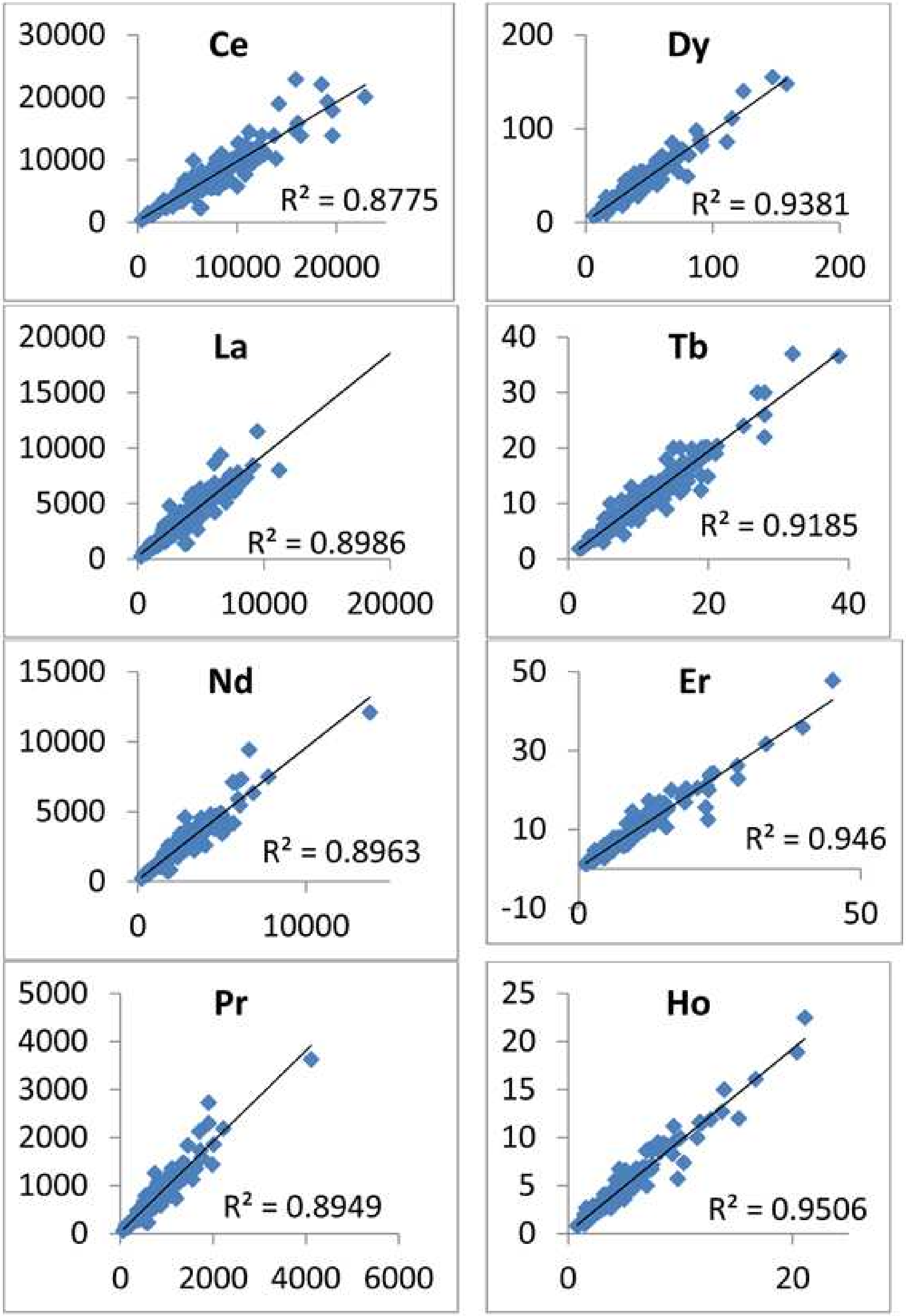
Three different commercial certified standard samples were used alternately:

1. Orea S 101a (low grade) and
2. Orea S 146 (medium grade) from Ore Research & Exploration PTY Ltd. and
3. GRE-02 (high grade) from Geostat PTY Ltd.

At the beginning of each hole, a low-grade standard, a high grade standard and a blank were inserted.

11.1.2.3 Check sampling (Duplicates)

IAMGOLD took 243 valid duplicate samples using split core to test repeatability of results. The laboratories duplicates would be made from crushed or pulverized rock from the split core. Laboratory duplicates are made of smaller portions that are more homogeneous. The results were good. Below are some scatter plots of these results.


Ce
30000
20000
10000
0
0
10000 20000
R² = 0.8775
Dy
200
100
0
0
100
200
R² = 0.9381
La
20000
15000
10000
5000
0
0
10000
20000
R² = 0.8986
Tb
40
30
20
10
0
0
20
40
R² = 0.9185
Nd
15000
10000
5000
0
0
10000
R² = 0.8963
Er
50
30
10
-10
0
50
R² = 0.946
Pr
5000
4000
3000
2000
1000
0
0
2000
4000
6000
R² = 0.8949
Ho
25
20
15
10
5
0
0
20
R² = 0.9506

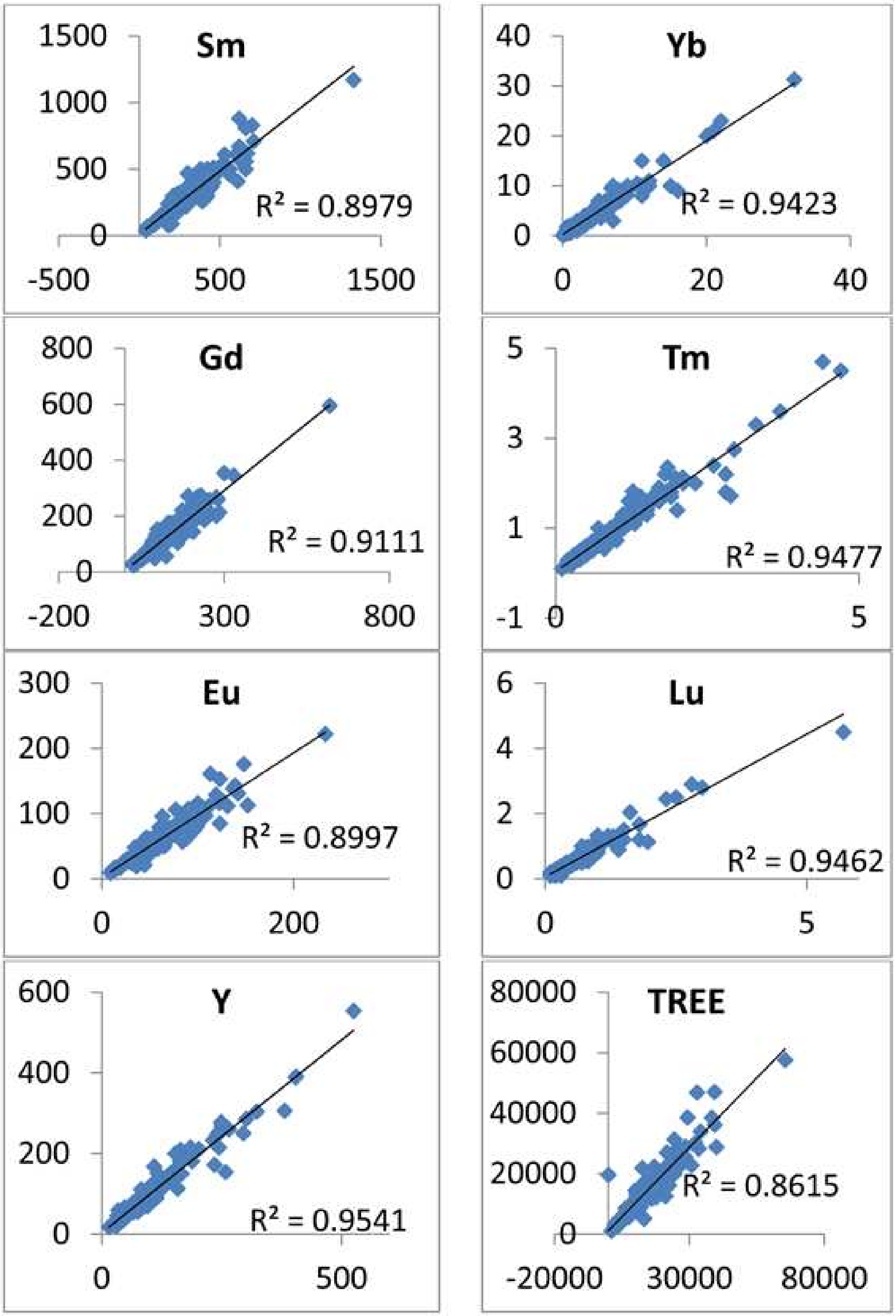


Figure 18 Correlation of duplicate samples from IAMGOLD

11.2 Sample Analysis

11.2.1 Assay Laboratory, Sample Preparation and Method of Analysis

Samples were sent mainly to **SGS Minerals Services (“SGS** ”) of Lakefield in Ontario and to **Activation Laboratories Ltd** . (“Actlabs”) of Ancaster also in Ontario, where all the samples were prepared (crushed, ground, dried) and analyzed (Table 8). Two assay laboratories were used to get results faster and were following the same protocol approved by IAMGOLD.

In this chapter, we will give the detailed information about SGS analysis preparation and techniques which are equivalent with Actlabs analysis techniques. Differences all along the different stages of preparation and/or analysis will be signaled when necessary. Detailed information about Actlabs and its different analysis techniques, similar to SGS (www.sgs.com), can be reviewed on their web site at www.actlabs.com . Differences along the stages of preparation and/or analysis will be specified when necessary.

As a routine practice with core, the entire sample is crushed to a nominal minus 10 mesh (2 mm), mechanically split via a riffle splitter in order to divide the sample into a 250 gr sub-sample for analysis and the remainder is stored as a reject. Samples are pulverized to 85% passing 75 micron (200 mesh) or otherwise specified by client.

Table 8 Quality control for sample preparation by SGS-Ontario

Crushing Parameters	Frequency	Quality Control Requirement
Prep. Blank	At the start of batch	To Clean Crusher
Prep. Replicates	every 50 samples	75% passing 10 mesh (2mm)
Passing Checks	Every 50 samples	75% passing 10 mesh (2mm)

For Actlabs laboratories, the samples are crushed up to 80% passing 2mm, riffle split (250g) and then pulverized with mild steel to 95% passing -200mesh

Regarding samples analysis, SGS laboratory and Actlabs used the following methods:

- **ICM90A** , for 55 elements, by sodium peroxide fusion and a combination of Inductively Coupled Plasma Optical Emission Spectrometry **(ICP-OES**), and Inductively Coupled Plasma Mass Spectrometry (**ICP-MS**).
- **IMS91B** by sodium peroxide fusion / ICP-MS, for lanthanides surplus upper limit.

Table 9 Some Sampling Statistics

	Year	2011			1985	1978	1975	1971	1970	1968	Total
		Number of Assays by Year by Assay Lab									
	Assay Lab	*Actlab*	*SGS*	*GEOSOL Lakefield*	*Unspecified*						
Some Assay Elements	Metres	5410	7158	137	1513	875	616	158	57	739	**16662**
	Avg Length	1.50	1.56	1.50	2.67	2.94	3.00	3.03	2.85	2.80	**1.72**
	TREO PPM	18102	16802	17060	18071	8618	27784	3196	2586	15938	**17432**
	TREO	3607	4587	91	566	130	205	34	6	171	**9397**
	La	3607	4587	91	566	130	205	35	6	171	**9398**
	Ce	3607	4587	91	196						**8481**
	Pr	3607	4587	91	566						**8851**
	Nd	3607	4587	91	566						**8851**
	Sm	3607	4587	91	196						**8481**
	Eu	3607	4587	91	566						**8851**
	Gd	3607	4587	91							**8285**
	Tb	3607	4587	91							**8285**
	Dy	3607	4587	91	566						**8851**
	Ho	3607	4587	91							**8285**
	Er	3607	4587	91							**8285**
	Tm	3607	4587	91							**8285**
	Yb	3607	4587	91							**8285**
	Lu	3607	4587	91							**8285**
	Y	3607	4587	91							**8285**
	Sc	3607	4587	91	196						**8481**
	Ga	3607	433	91							**4131**
	Th	3607	4587	91				3			**8288**
	U	3607	4587	91				17			**8302**
	Nb	3607	4587	91	566						**8851**
	Zn	3607	4587	91	566						**8851**
	Mo	3607	4587	91	566						**8851**

ICM90A

Crushed and pulverized rocks are fused by Sodium peroxide in graphite crucibles and dissolved using diluted HNO_3. During digestion the sample is split into 2 and half is given to ICP-OES and the other half is given to ICPMS.

The digested sample solution is analyzed by ICP-OES and ICP-MS. Samples are analyzed against known calibration materials to provide quantitative analysis of the original sample.

The results are exported via computer, on line, data fed to the SGS Laboratory Information Management System (SLIM) with secure audit trait.

This method has been fully validated for the range of samples typically analyzed. Method validation includes the use of certified reference materials, replicates and blanks to calculate accuracy, precision, linearity, range, limits of detection, limit of quantification, specificity and measurement uncertainty.

Table 10 Elements analyzed by ICM 90A

Element	Reporting Limit (ppm)	Upper Limit	Element	Reporting Limit (ppm)	Upper Limit	Element	Reporting Limit (ppm)	Upper limit	Element	Reporting Limit (ppm)	Upper Limit
Ag	1.00	0.01%	**Er**	0.05	0.10%	**Mn**	10	10%	**Tb**	0.05	0.10%
Al	0.01(%)	25%	**Eu**	0.05	0.10%	**Mo**	2.00	1.0%	**Th**	0.10	0.10%
As	5.00	10%	**Fe**	0.01(%)	30%	**Nb**	1.00	1.0%	**Ti**	0.01(%)	25%
Ba	0.50	1.0%	**Ga**	1.00	0.10%	**Nd**	0.10	1.0%	**TI**	0.50	0.10%
Be	5.00	0.25%	**Gd**	0.05	0.10%	**Ni**	5.00	1.0%	**Tm**	0.05	0.10%
Bi	0.10	0.10%	**Ge**	1.00	0.10%	**P**	0.01(%)	25%	**Ta**	0.50	1.0%
Ca	0.01(%)	35%	**Hf**	1.00	1.0%	**Pb**	5.00	1.0%	**U**	0.05	0.1%
Cd	0.20	1.0%	**Ho**	0.05	0.10%	**Pr**	0.05	0.1%	**V**	5.00	1.0%
Ce	0.10	1.0%	**In**	0.20	0.10%	**Rb**	0.20	1.0%	**W**	1.00	1.0%
Co	0.50	1.0%	**K**	0.01(%)	25%	**Sb**	0.50	1.0%	**Y**	0.50	0.1%
Cr	10	10%	**La**	0.10	1.0%	**Sc**	5.00	5.0%	**Yb**	0.10	0.1%
Cs	0.10	1.0%	**Li**	10	5.0%	**Sm**	0.10	0.1%	**Zn**	5.00	1.0%
Cu	5.00	1.0%	**Lu**	0.05	0.10%	**Sn**	1.00	1.0%	**Zr**	0.50	1.0%
Dy	0.05	0.1%	**Mg**	0.01(%)	30%	**Sr**	0.10	1.0%			

For Actlabs laboratories, the crushed samples then have a sodium peroxide fusion completed. Each tray of fusions included one fused blank and 20% QC. A fusion was repeated every 10 samples.

ICPMS

ICPMS diluted samples to be analyzed on Elan 9000 for 90A samples and Nexion for 91B packages.

Working Calibration solutions and 2 nd source calibration check solution was prepared for each analysis run. Re-calibration was done before the analysis of each tray. Additional fusion QC was analyzed every other tray in addition to the QC on each tray.

REE interference corrections were evaluated and corrected.

ICP/OES

Samples are analyzed with a minimum of 10 certified reference materials for the required analyses, all prepared by sodium peroxide fusion. Every 10 th sample is prepared and analyzed in duplicate; a blank is prepared every 30 samples and analyzed. Samples are analyzed using a Varian 735ES ICP or a Thermo 6500 ICAP and the method of internal standardization.

For High concentration of REE, the two laboratories used **IMS91B** analysis technic :

Crushed and pulverized rock, samples (0.20 gr) are fused by Sodium peroxide in glassy carbon crucibles in a muffle furnace and dissolved using diluted HNO_3.

For the Actlabs analytical technique, the main difference is that the 91B was run on the Nexion where the dilution factor is 5x more. (Detection Limits higher for this package). Also, the same internal standards were used for each method.

So, the fused solution sample is aspirated into the Inductively Coupled Plasma Dynamic Reaction Cell Mass Spectrometer (ICP-DRC-MS). Samples are analyzed against known calibration materials to provide quantitative analysis of the original sample.

The results are exported via computer, on line, data fed to the SGS Laboratory Information Management System (SLIM) with secure audit trail.

Table 11 Reporting limits for REE by IMS91B analysis technic.

Element	Reporting Limits (mg/kg)	Element	Reporting Limit (mg/kg)
Ce	50	Pr	10
Dy	1.0	Sm	10
Er	0.5	Tb	1.0
Eu	1.0	Th	5.0
Gd	5.0	Tm	0.10
Ho	0.10	U	1.0
La	50	Y	5.0
Lu	0.20	Yb	1.0
Nd	50		

Instrument calibration is performed for each batch or work order and calibration checks are analyzed within each analytical run. Quality control materials include method blanks, replicates, duplicates and reference materials and are randomly inserted with the frequency set according to method protocols at -14%.

Quality assurance measures of precision and accuracy are verified statistically using SLIM control charts with set criteria for data acceptance. Data that fails is subject to investigation and repeated as necessary.

For Actlabs, 91B was setup in the same way. (QC, repeats, Blanks, working calibrations, 2nd source calibration checks, interferences). Originally, the REE method was setup with re-calibration every two batches (fusion trays) of samples (60 samples). After that for more accuracy, re-calibration was done every Tray of 30 samples. Sample introduction checks (High flow valve maintenance) were implemented prior to each run to ensure more stable analysis.

Table 12 Database Structure and Data Sources Differences in Some Assay Certificates

GEMS Database			SGS					ACTLAB				
COLUMN IN TABLE	ELEMENT NAME	UNIT	COLUMN IN TABLE	ELEMENT NAME	UNIT	DETECTION LIMIT	METHOD OF ANALYSIS	COLUMN IN TABLE	ELEMENT NAME	UNIT	DETECTION LIMIT	METHOD OF ANALYSIS
1	AG	PPM						1	Ag	ppm	1	FUS-MS-Na2O2
59	AL	PPM	1	Al	%	0.01	ICM90A	2	Al	%	0.01	FUS-Na2O2
3	AS	PPM	2	As	ppm	5	ICM90A	3	As	ppm	5	FUS-MS-Na2O2
4	BA	PPM	3	Ba	ppm	0.5	ICM90A	4	Ba	ppm	0.5	FUS-MS-Na2O2
5	BE	PPM	4	Be	ppm	5	ICM90A	5	Be	ppm	5	FUS-MS-Na2O2
6	BI	PPM	5	Bi	ppm	0.1	ICM90A	6	Bi	ppm	0.1	FUS-MS-Na2O2
8	CA	PPM	6	Ca	%	0.1	ICM90A	7	Ca	%	0.01	FUS-Na2O2
7	CD	PPM	7	Cd	ppm	0.2	ICM90A	8	Cd	ppm	0.2	FUS-MS-Na2O2
								9	Ce	ppm	0.1	FUS-MS-Na2O2
11	CE	PPM	8	Ce	ppm	50	IMS91B	10	Ce	ppm	50	FUS-MS-Na2O2
10	CO	PPM	9	Co	ppm	0.5	ICM90A	11	Co	ppm	0.5	FUS-MS-Na2O2
9	CR	PPM	10	Cr	ppm	10	ICM90A	12	Cr	ppm	10	FUS-MS-Na2O2
14	CS	PPM	11	Cs	ppm	0.1	ICM90A	13	Cs	ppm	0.1	FUS-MS-Na2O2
24	CU	PPM	12	Cu	ppm	5	ICM90A	14	Cu	ppm	5	FUS-MS-Na2O2
								15	Dy	ppm	0.05	FUS-MS-Na2O2
44	DY	PPM	13	Dy	ppm	1	IMS91B	16	Dy	ppm	1	FUS-MS-Na2O2
								17	Er	ppm	0.5	FUS-MS-Na2O2
45	ER	PPM	14	Er	ppm	0.5	IMS91B	18	Er	ppm	0.05	FUS-MS-Na2O2
								19	Eu	ppm	0.05	FUS-MS-Na2O2
46	EU	PPM	15	Eu	ppm	1	IMS91B	20	Eu	ppm	1	FUS-MS-Na2O2
12	FE	PPM	16	Fe	%	0.01	ICM90A	21	Fe	%	0.05	FUS-Na2O2
47	GA	PPM						22	Ga	ppm	1	FUS-MS-Na2O2
35								23	Gd	ppm	0.05	FUS-MS-Na2O2
48	GD	PPM	17	Gd	ppm	5	IMS91B	24	Gd	ppm	5	FUS-MS-Na2O2
49	GE	PPM	18	Ge	ppm	1	ICM90A	25	Ge	ppm	1	FUS-MS-Na2O2
18	HF	PPM	19	Hf	ppm	1	ICM90A	26	Hf	ppm	1	FUS-MS-Na2O2
								27	Ho	ppm	0.05	FUS-MS-Na2O2
38	HO	PPM	20	Ho	ppm	0.1	IMS91B	28	Ho	ppm	0.1	FUS-MS-Na2O2
50	IN	PPM	21	In	ppm	0.2	ICM90A	29	In	ppm	0.2	FUS-MS-Na2O2
22	K	PPM	22	K	%	0.1	ICM90A	30	K	%	0.1	FUS-Na2O2
34								31	La	ppm	0.1	FUS-MS-Na2O2
13	LA	PPM	23	La	ppm	50	IMS91B	32	La	ppm	50	FUS-MS-Na2O2
15	LI	PPM	24	Li	ppm	10	ICM90A	33	Li	ppm	10	FUS-MS-Na2O2
								34	Lu	ppm	0.05	FUS-MS-Na2O2
32	LU	PPM	25	Lu	ppm	0.2	IMS91B	35	Lu	ppm	0.2	FUS-MS-Na2O2
16	MG	PPM	26	Mg	%	0.01	ICM90A	36	Mg	%	0.01	FUS-Na2O2
58	MN	PPM	27	Mn	ppm	10	ICM90A	37	Mn	ppm	10	FUS-MS-Na2O2

GEMS Database			**SGS**					**ACTLAB**				
COLUMN IN TABLE	ELEMENT NAME	UNIT	COLUMN IN TABLE	ELEMENT NAME	UNIT	DETECTION LIMIT	METHOD OF ANALYSIS	COLUMN IN TABLE	ELEMENT NAME	UNIT	DETECTION LIMIT	METHOD OF ANALYSIS
19	MO	PPM	28	Mo	ppm	2	ICM90A	38	Mo	ppm	2	FUS-MS-Na2O2
17	NB	PPM	29	Nb	ppm	1	ICM90A	39	Nb	ppm	1	FUS-MS-Na2O2
								40	Nd	ppm	0.1	FUS-MS-Na2O2
25	ND	PPM	30	Nd	ppm	50	IMS91B	41	Nd	ppm	50	FUS-MS-Na2O2
20	NI	PPM	31	Ni	ppm	5	ICM90A	42	Ni	ppm	5	FUS-MS-Na2O2
21	P	PPM	32	P	%	0.01	ICM90A	43	P	%	0.005	FUS-Na2O2
51	PB	PPM	33	Pb	ppm	5	ICM90A	44	Pb	ppm	5	FUS-MS-Na2O2
								45	Pr	ppm	0.05	FUS-MS-Na2O2
52	PR	PPM	34	Pr	ppm	10	IMS91B	46	Pr	ppm	10	FUS-MS-Na2O2
53	RB	PPM	35	Rb	ppm	0.2	ICM90A	47	Rb	ppm	0.2	FUS-MS-Na2O2
2	SB	PPM	36	Sb	ppm	0.1	ICM90A	48	Sb	ppm	0.5	FUS-MS-Na2O2
23	SC	PPM	37	Sc	ppm	5	ICM90A	49	Sc	ppm	5	FUS-MS-Na2O2
								50	Sm	ppm	0.1	FUS-MS-Na2O2
54	SM	PPM	38	Sm	ppm	10	IMS91B	51	Sm	ppm	10	FUS-MS-Na2O2
27	SN	PPM	39	Sn	ppm	1	ICM90A	52	Sn	ppm	1	FUS-MS-Na2O2
26	SR	PPM	40	Sr	ppm	0.1	ICM90A	53	Sr	ppm	0.1	FUS-MS-Na2O2
40	TA	PPM	41	Ta	ppm	0.5	ICM90A	54	Ta	ppm	0.5	FUS-MS-Na2O2
								55	Tb	ppm	0.05	FUS-MS-Na2O2
41	TB	PPM	42	Tb	ppm	1	IMS91B	56	Tb	ppm	1	FUS-MS-Na2O2
								57	Th	ppm	5	FUS-MS-Na2O2
42	TH	PPM	43	Th	ppm	5	IMS91B	58	Th	ppm	0.1	FUS-MS-Na2O2
28	TI	PER	44	Ti	%	0.01	ICM90A	59	Ti	%	0.01	FUS-Na2O2
57	TI	PPM	45	Tl	ppm	0.5	ICM90A	60	Tl	ppm	0.5	FUS-MS-Na2O2
								61	Tm	ppm	0.05	FUS-MS-Na2O2
43	TM	PPM	46	Tm	ppm	0.1	IMS91B	62	Tm	ppm	0.1	FUS-MS-Na2O2
36	TO	FT						63	U	ppm	1	FUS-MS-Na2O2
39	U	PPM	47	U	ppm	1	IMS91B	64	U	ppm	0.05	FUS-MS-Na2O2
30	V	PPM	48	V	ppm	5	ICM90A	65	V	ppm	5	FUS-MS-Na2O2
29	W	PPM	49	W	ppm	1	ICM90A	66	W	ppm	1	FUS-MS-Na2O2
								67	Y	ppm	0.5	FUS-MS-Na2O2
31	Y	PPM	50	Y	ppm	5	IMS91B	68	Y	ppm	5	FUS-MS-Na2O2
								69	Yb	ppm	1	FUS-MS-Na2O2
37	YB	PPM	51	Yb	ppm	1	IMS91B	70	Yb	ppm	0.1	FUS-MS-Na2O2
33	ZN	PPM	52	Zn	ppm	5	ICM90A	71	Zn	ppm	5	FUS-MS-Na2O2
			53	Zr	ppm	0.5	ICM90A	72				
56	**TREE**	**PPM**										
55	**TRREO**	**PPM**										

11.2.2 The St-Honoré Carbonatite REE Signature

The REE all have a normal distribution of values. In addition, the REE have a constant proportion inside a mineral deposit which makes its magmatic signature (Ref.: Chondrites (CI) data estimated by Taylor and McLennan., 1985). For some reason of nuclear physics, REE are found together in specific proportions across the REE deposit regardless of their grade concentration. This is verified in the REE Zone of the St-Honoré carbonatite. It has been verified by TREO grade variation as well as by depth and facies. Note that limited amount of REO has been measured by sampling outside the REE Zone. Fournier suggested in 1993, that there may be more HREE associated with niobium. This is an issue outside of the scope of this report and it has not been verified in the Niobec mine by the authors of this report.

When the magma is injected as intrusive rocks or lava, the REE proportion remains constant and is frozen in the hard rock minerals. This is so particular that geologists (volcanologists) use the specific REE signature to identify and differentiate lava flows from different sources. The St-Honoré carbonatite has a signature in the REE Zone (C1).

Niobec REO Signature, i.e., the ratio of grades for each REO over TREO in each sample is constant in the REE Zone. See Table 13 and Figure **20** .

Table 13 REE Signature Constant Proportions

BIN	Number	TREO	TREE	CE	LA	ND	PR	SM	GD	EU	DY	TB	ER	HO	YB	TM	LU	Y	Nb	Mo	Th
5000	192	4998	1.0	2.2	2.1	1.1	3.7	2.0	1.8	2.3	1.0	4.4	0.7	2.1	0.8	5.4	1.3	0.02	0.25	0.01	0.05
6000	220	5997	1.0	2.1	2.1	1.1	3.6	2.2	1.9	2.3	1.1	4.3	0.7	2.2	0.8	5.5	1.4	0.02	0.22	0.02	0.04
7000	234	6983	1.0	2.1	2.1	1.1	3.7	2.2	2.0	2.3	1.4	3.8	1.0	2.0	0.8	5.5	1.3	0.01	0.15	0.02	0.04
8000	249	7992	1.0	2.1	2.1	1.2	3.6	2.3	2.0	2.3	1.4	3.8	1.0	2.0	0.8	5.5	1.3	0.01	0.14	0.02	0.04
9000	223	8992	1.0	2.1	2.1	1.2	3.6	2.3	2.0	2.2	1.5	3.6	1.2	1.9	0.9	5.2	1.4	0.01	0.12	0.01	0.04
10000	258	10029	1.0	2.1	2.1	1.2	3.6	2.3	2.0	2.3	1.5	3.6	1.2	1.9	1.0	5.3	1.4	0.01	0.11	0.02	0.04
11000	306	11016	1.0	2.1	2.1	1.2	3.6	2.3	2.1	2.2	1.5	3.6	1.2	1.9	1.0	5.3	1.4	0.01	0.09	0.02	0.04
12000	304	11971	1.0	2.1	2.1	1.2	3.6	2.4	2.0	2.3	1.5	3.5	1.2	1.9	0.9	5.3	1.4	0.01	0.09	0.01	0.04
13000	363	13016	1.0	2.1	2.1	1.2	3.6	2.4	2.0	2.3	1.6	3.4	1.3	1.8	1.0	5.2	1.4	0.01	0.08	0.01	0.04
14000	370	13994	1.0	2.1	2.1	1.2	3.6	2.4	2.0	2.3	1.6	3.4	1.3	1.9	1.0	5.2	1.4	0.01	0.07	0.01	0.04
15000	403	15019	1.0	2.1	2.0	1.2	3.5	2.4	2.1	2.2	1.7	3.4	1.3	1.9	1.0	5.2	1.4	0.01	0.07	0.01	0.04
16000	427	16003	1.0	2.1	2.1	1.2	3.6	2.4	2.1	2.3	1.7	3.3	1.4	1.9	1.0	5.2	1.4	0.01	0.06	0.01	0.03
17000	361	16966	1.0	2.1	2.0	1.3	3.5	2.5	2.1	2.3	1.6	3.4	1.4	1.8	1.0	5.1	1.4	0.01	0.06	0.01	0.03
18000	375	18002	1.0	2.1	2.0	1.3	3.5	2.5	2.1	2.3	1.6	3.3	1.4	1.8	1.1	5.1	1.5	0.01	0.06	0.01	0.03
19000	409	19012	1.0	2.1	2.0	1.3	3.5	2.5	2.1	2.2	1.7	3.3	1.4	1.8	1.2	4.4	1.5	0.01	0.05	0.01	0.03
20000	369	19993	1.0	2.1	2.0	1.3	3.5	2.5	2.1	2.3	1.7	3.2	1.5	1.8	1.2	4.9	1.5	0.01	0.05	0.01	0.03
21000	316	21012	1.0	2.1	2.0	1.4	3.5	2.6	2.1	2.3	1.8	3.2	1.5	1.8	1.1	4.9	1.5	0.01	0.04	0.01	0.03
22000	291	21971	1.0	2.1	2.0	1.4	3.5	2.6	2.0	2.3	1.8	3.2	1.6	1.7	1.2	4.8	1.5	0.01	0.04	0.01	0.03
23000	238	23012	1.0	2.1	1.9	1.4	3.4	2.7	2.0	2.3	1.7	3.3	1.4	1.9	1.1	5.0	1.5	0.01	0.04	0.01	0.03
24000	246	23995	1.0	2.1	1.9	1.4	3.4	2.7	2.2	2.2	1.9	3.2	1.5	1.8	1.2	4.7	1.6	0.01	0.04	0.01	0.03
25000	219	24958	1.0	2.1	1.9	1.4	3.5	2.7	2.1	2.2	1.8	3.2	1.5	1.8	1.2	4.7	1.6	0.01	0.04	0.01	0.03
26000	180	25968	1.0	2.1	1.8	1.5	3.5	2.6	2.2	2.2	1.9	3.2	1.6	1.8	1.3	4.6	1.5	0.01	0.03	0.01	0.03
27000	160	27010	1.0	2.1	1.9	1.4	3.6	2.6	2.2	2.2	1.8	3.2	1.5	1.8	1.3	4.2	1.0	0.01	0.03	0.01	0.03
28000	148	27985	1.0	2.1	1.9	1.5	3.5	2.7	2.2	2.2	1.9	3.2	1.6	1.7	1.3	4.6	1.5	0.00	0.02	0.01	0.03
29000	113	28988	1.0	2.1	1.8	1.5	3.5	2.7	2.2	2.2	1.9	3.2	1.6	1.8	1.2	4.7	1.6	0.00	0.03	0.01	0.03
30000	95	29959	1.0	2.1	1.9	1.5	3.4	2.8	2.1	2.3	1.9	3.2	1.5	1.8	1.2	4.5	1.6	0.00	0.03	0.01	0.03
31000	82	31022	1.0	2.1	1.8	1.5	3.5	2.7	2.1	2.3	2.0	3.1	1.6	1.8	1.1	4.7	1.6	0.00	0.03	0.01	0.03
32000	72	32055	1.0	2.1	1.7	1.6	3.5	2.8	2.2	2.3	2.0	3.2	1.6	1.7	1.3	4.4	1.5	0.00	0.02	0.01	0.02
33000	69	33027	1.0	2.1	1.7	1.5	3.6	2.8	2.1	2.3	1.9	3.2	1.7	1.7	1.3	4.5	1.5	0.00	0.02	0.01	0.02
34000	61	34039	1.0	2.1	1.9	1.4	3.4	2.9	2.3	2.2	1.9	3.2	1.7	1.6	1.5	4.3	1.7	0.00	0.02	0.01	0.02
35000	44	34996	1.0	2.1	1.9	1.4	3.5	2.7	2.3	2.1	2.0	3.1	1.6	1.8	0.9	6.2	0.7	0.00	0.02	0.00	0.04
36000	42	36002	1.0	2.0	2.0	1.4	3.4	2.9	2.4	2.1	2.0	3.1	1.6	1.7	1.1	5.0	1.5	0.00	0.01	0.01	0.02
37000	39	37030	1.0	2.1	1.9	1.5	3.5	2.8	2.1	2.3	1.9	3.1	1.7	1.8	1.2	4.9	1.5	0.00	0.02	0.00	0.03
38000	35	37972	1.0	2.1	1.9	1.6	3.3	2.8	2.3	2.1	2.1	3.1	1.7	1.7	1.2	4.9	1.6	0.00	0.01	0.01	0.03
39000	34	38914	1.0	2.0	1.9	1.4	3.4	2.9	2.2	2.2	2.0	3.1	1.8	1.7	1.4	4.7	1.6	0.00	0.02	0.01	0.02
Average	**8285**	**17469**	**1.0**	2.1	2.0	1.3	3.5	2.5	2.1	2.3	1.7	3.4	1.3	1.9	1.0	5.0	1.4	0.01	0.06	0.01	0.03

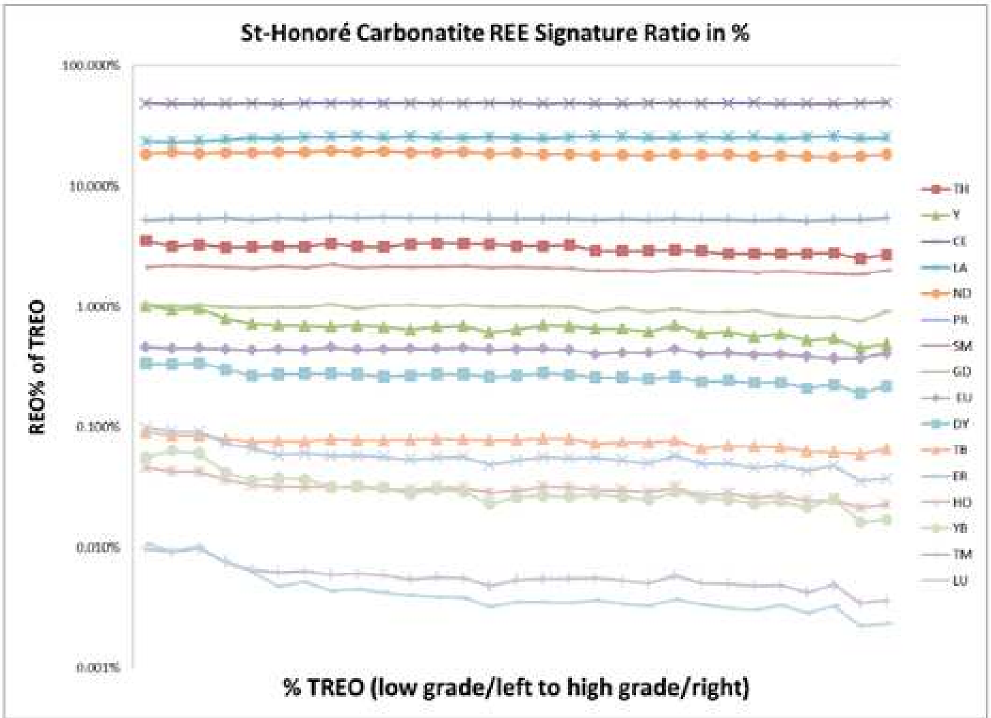


Figure 19 St-Honoré REE Constant Ratio Signature

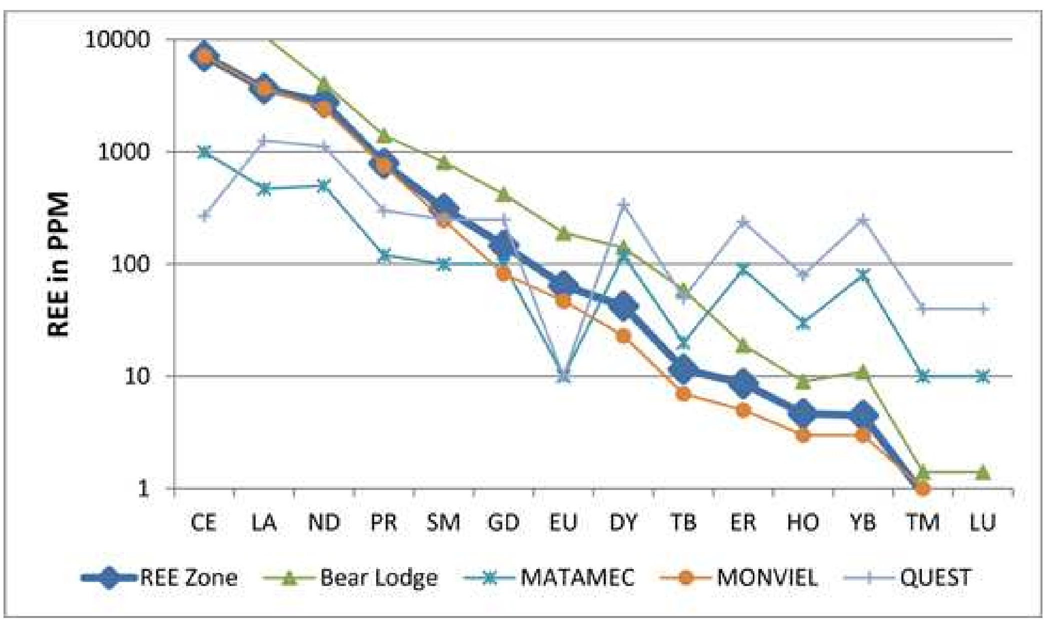


Figure 20 St-Honoré REE Signature average grade

11.2.3 Database verification

No matter what sample you take in a REE deposit with a single source, the proportion of each element with respect to the TREE is constant. This means that regardless if the sample is high grade or low grade, the St-Honoré carbonatite will always have 47.7% Ce, 24.5% La, 18.5% Nd, etc. of the 100% TREE. These numbers change for each source but they remain constant inside the deposit no matter what the sample grade is or where it comes from. See Table 13 and Figure 19.

This feature of REE is itself a way to check individual assays in any sample. The average proportion of REE (as % of TREE) of all the samples becomes the standard as a certified standard sample used to verify assaying quality.

This feature also means that if only some of the REE are tested accurately, the other REE elements content of the sample can be calculated with accuracy. PJLGCI tested this method to fill the gaps in the historical data with missing REE values. Conversely, the block model in the resource model can be used to interpolate the TREE or TREO and calculate the 14 REE from that cumulative value. It also means that all histogram and variogram of each or all REE, including LREE and HREE subgroup should be the same. Any differences would be due to sampling and assaying variance. See Figure 21 Histogram of TREO and LREE, plus Table 14 below.

11.2.4 Basic Statistics

All the REE in the data from surface exploration drillholes in 2011 have the same statistical pattern. They display a normal distribution bell shape histogram with little skewness and few high grade outlier values. By stretching or shrinking the grade X axis scale and frequency Y axis scale, they can be made to look almost all the same. (See Figure 30 Histograms of REE and Other Elements in Appendix) The exceptions are usually some low grade HREE (Lu, Yb) or other grade elements such as Mo, P, Sn and even Nb probably because they suffer from low grade detection limits. IAMGOLD should increase the lower grade detection limits for those elements in the future assay protocol if possible and economically justified (*grades of interest*).

Some histogram displays a bimodal distribution pattern (Ce, TREE, Nd, Pr, Sm). Scatter plot and other rock code analysis (See Table 23 and Table 24 in Appendix: Analysis by Rock Type) have demonstrated that it is due to rock type differences. The C1 has the highest grade peak around 1.70% TREO and the C2 as well as other carbonatite facies in the St-Honoré complex have their peak around 0.5% TREO. This confirms visual observation of the presence of REE bearing minerals which are visible in the core.

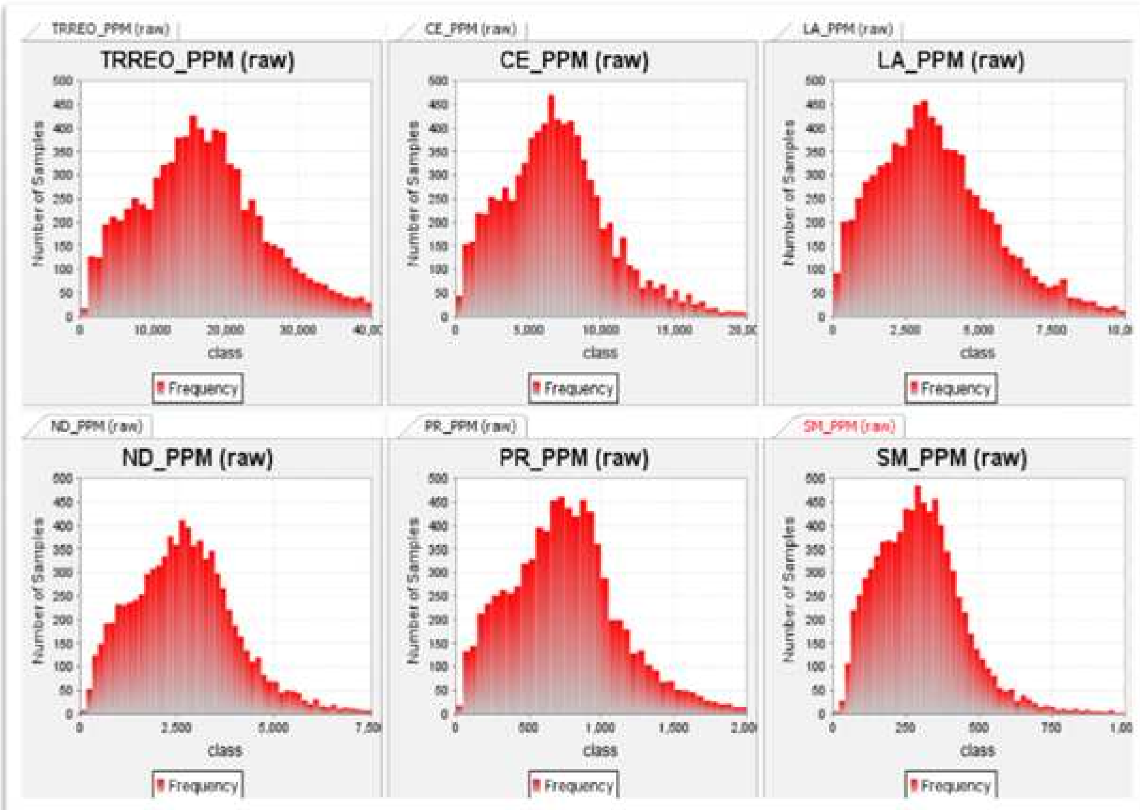


Figure 21 Histogram of TREO and LREE

Table 14 Complete list of Grade elements and Units with Statistics (1985 and 2011)

Element	Unit	Atomic number	Average	Min	Max	Number	% of TREO	
LI	PPM	**3**	22	0	870	8481		
BE	PPM	**4**	15	0	360	8851		
MG	PER	**12**	6.99	0.01	18.60	8285		
AL	PER	**13**	0.80	0.00	11.70	8285		
P	PER	**15**	0.36	0.00	18.90	8285		
K	PER	**19**	0.31	0.00	7.50	8285		
CA	PER	**20**	16.82	0.01	37.70	8285		
SC	PPM	**21**	38	0	330	8481		
TL	PPM	**22**	113	0	20500	8285		
V	PPM	**23**	73	0	650	8481		
CR	PPM	**24**	36	0	1650	8481		
MN	PPM	**25**	12074	0	100000	8285		
FE	PER	**26**	9.81	0.05	42.30	8285		
CO	PPM	**27**	11	0	2950	8481		
NI	PPM	**28**	19	0	5780	8481		
CU	PPM	**29**	16	0	6480	8481		
ZN	PPM	**30**	506	0	17800	8851		
GA	PPM	**31**	52	1	349	4040		
GE	PPM	**32**	6	0	48	8285		
AS	PPM	**33**	33	0	1560	8218		
RB	PPM	**37**	5	0	194	8285		
SR	PPM	**38**	2479	16	10000	8285		
Y	PPM	**39**	101	5	964	8285		
NB	PPM	**41**	844	0	12720	8851		
MO	PPM	**42**	161	0	3720	8851		
AG	PPM	**47**	14	0	523	4144		
CD	PPM	**48**	2	0	86	8481		
IN	PPM	**49**	1	0	13	8285		
SN	PPM	**50**	20	0	1470	8285		
SB	PPM	**51**	3	0	1210	8285		
CS	PPM	**55**	0	0	67	8207		
BA	PPM	**56**	4147	0	47000	8851		
LA	PPM	**57**	3670	17	30600	8851	24.5%	
CE	PPM	**58**	7144	25	52600	8481	47.7%	
PR	PPM	**59**	793	0	5470	8851	5.29%	
ND	PPM	**60**	2768	15	22300	8851	18.5%	
SM	PPM	**62**	312	2	3860	8481	2.08%	98.1%

Element	Unit	Atomic number	Average	Min	Max	Number	% of TREO	
EU	PPM	**63**	64	0	828	8851	0.429%	
GD	PPM	**64**	147	0	1630	8285	0.983%	
TB	PPM	**65**	12	0	90	8285	0.0773%	
DY	PPM	**66**	42	0	412	8851	0.283%	
HO	PPM	**67**	5	0	62	8285	0.0311%	
ER	PPM	**68**	9	0	192	8285	0.0577%	
TM	PPM	**69**	1	0	46	8285	0.00594%	
YB	PPM	**70**	4	0	122	8285	0.0299%	
LU	PPM	**71**	1	0	78	8285	0.0042%	1.90%
HF	PPM	**72**	2	0	60	8278		
TA	PPM	**73**	2	0	39	8254		
W	PPM	**74**	9	0	2830	8283		
TI	PER	**81**	0.16	0.00	10.30	8283		
PB	PPM	**82**	39	5	1570	8481		
BI	PPM	**83**	2	0	203	8285		
TH	PPM	**90**	476	0	13900	8285		
U	PPM	**92**	3	0	92	8285		
TRREO	**PPM**		**17419**	**81**	**122597**	**8851**		
TREE	**PPM**		**14975**	**70**	**105415**	**8851**		

11.3 Security

Validation of the database has been difficult due to the differences in the formats of the Assay Certificates and the database structure. IAMGOLD has been using Logger from Gemcom to make the drillhole reports. The assays were imported into Gems separately. The manipulation of the data in Excel in various formats, including conversion of units, adding oxygen to make oxides instead of the reported metallic ions, has been a potential source of some data corruption. Those are errors easy to capture and correct but with 54 assays, 71 with re-assays for over the limits samples, in more than 8,000 samples, in 47 drillholes with some historical drillholes with a different format, plus the blanks, the standards, the duplicates and the checks from both IAMGOLD and two laboratories, validation of the data is tedious to say the least. Those issues have been addressed but the difficulty of IAMGOLD to recruit qualified personnel for the project, including a database manager, has compounded the security issue for the data.

For example, SGS would report separately the values that reached the detection limit previously with the **IMS91B** method, i.e., filling the gaps of the final assay results.

Actlabs reported in the same certificate all the values, including the ones measured with the over the range limits, which would be slightly different and presumably less accurate for lower value of REE, and reported lower detection limit warnings for that method. Some certificates had Ag or Zr assays, others not. Some Actlabs certificates, but not all, included the weight of the samples received, offsetting the systematic format of results of assays. All these small differences and the multitude of formats, assay methods and units (some assays in percent) caused a lot of problems to make, verify and validate the database.

12. DATA VERIFICATION

12.1 Verification with laboratory certificates

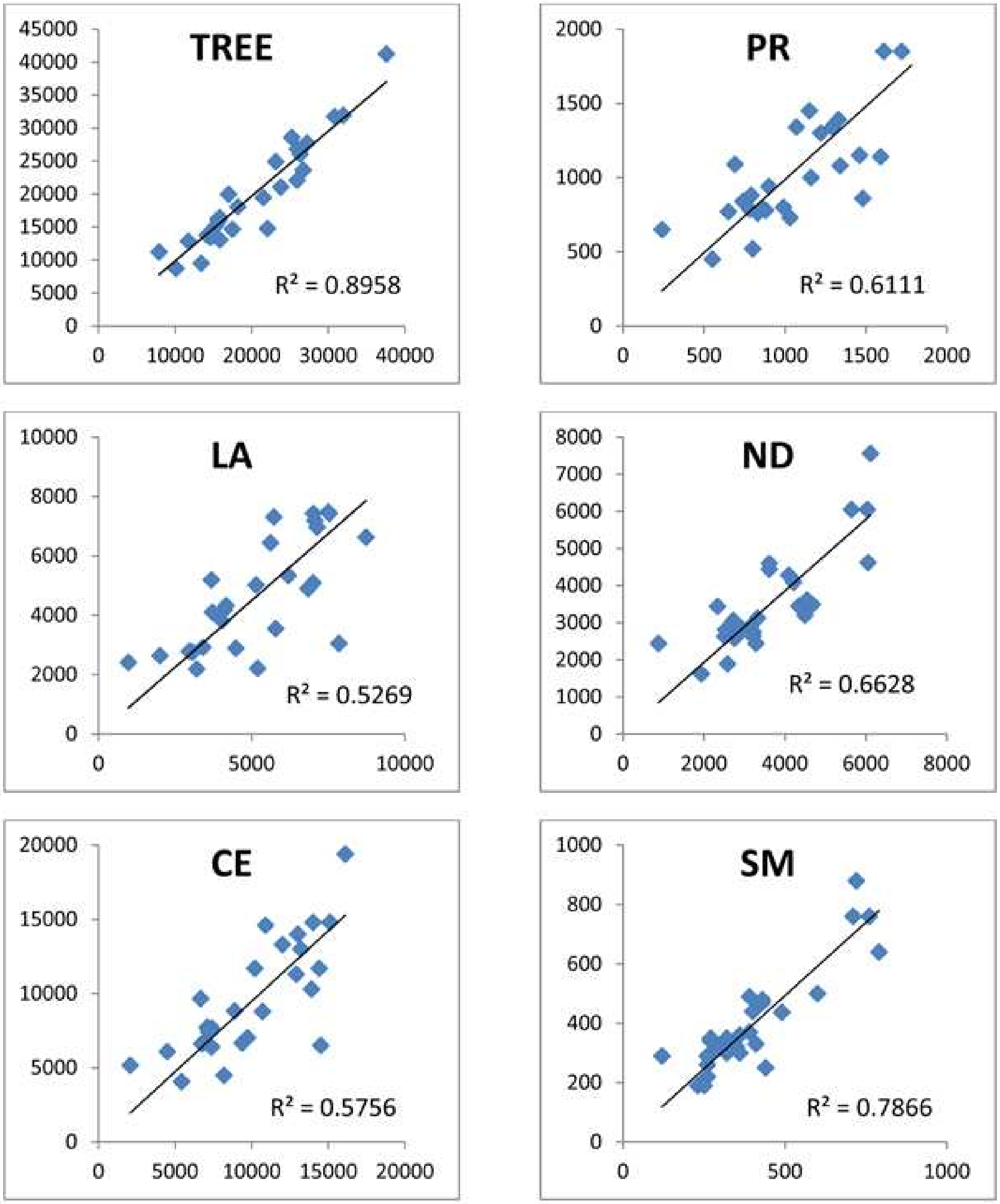
IAMGOLD was receiving electronic Laboratory certificates during the site visit by PJLGCI. PJLGCI was provided with copies of the electronic certificates. We discussed in details the format of the certificates, the elements used, the method used for assaying, the detection limits and the units used in reporting.

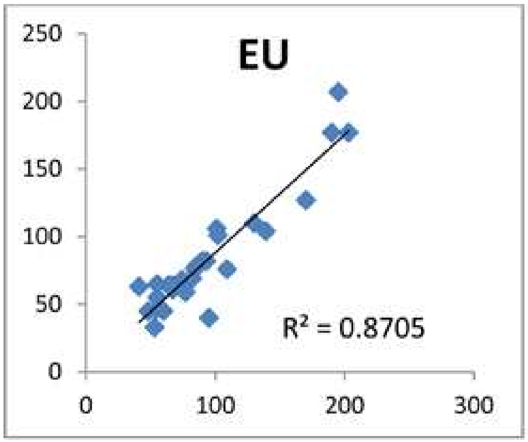
Two laboratories were used for sample preparation and assaying: SGS and Actlab. They were given the same specifications. However, there were minor differences in the format. See Table 12 in section 11. Some certificates had sample weights on reception, other not. The formats to report assays when the superior detection limits were met were different from one laboratory to the other. These differences in the presentation of the certificates caused some errors when the data was imported in the database initially. It made the verification very tedious.

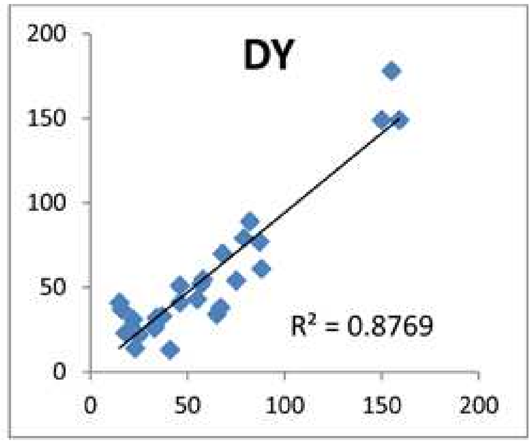
12.2 PJLGCI Check Samples

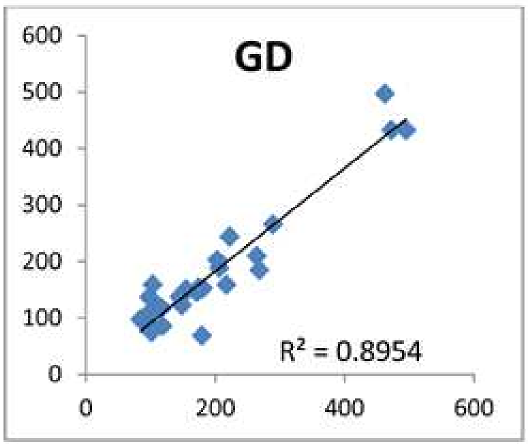
PJLGCI took 30 samples to check the procedure followed by IAMGOLD. M Ali Ben Ayad, one of the QP with PJLGCI, selected some available split core boxes of interest, re-logged them. Thirty one samples were prepared using the same protocol as IAMGOLD under PJLGCI supervision. Selected core sections were split in $^1/_4$ of the core with a diamond saw. The samples were bagged, tagged and sent to SGS laboratory by IAMGOLD for assaying using the same procedure as IAMGOLD. The data set is relatively small but the results are deemed acceptable.

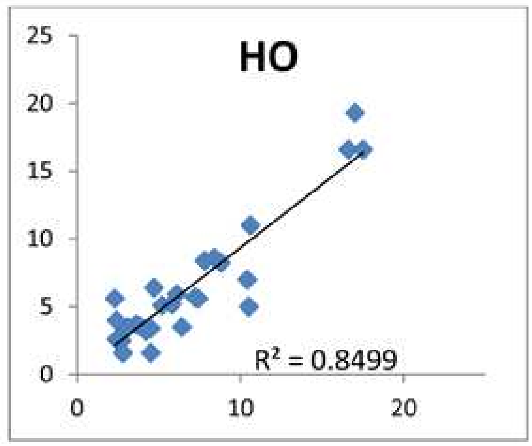
In general, the correlations are good but two major REE elements had poor correlation: La and Ce. Some very low grade HREE (Yb and Lu) also had less than desirable correlations but that usually comes with the grade. Niobium had a good correlation. Some display good visual correlation but with some data that went astray (Tm). In spite of some data misbehaving, the TREE has a good correlation with an R^2 factor of 0.8958. Some results are shown in Figure 22 below.

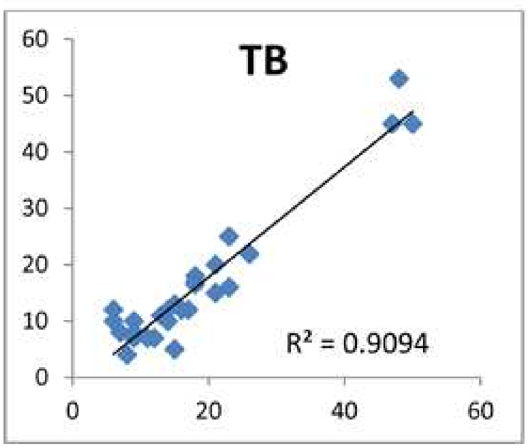

TREE
R² = 0.8958
PR
R² = 0.6111
LA
R² = 0.5269
ND
R² = 0.6628
CE
R² = 0.5756
SM
R² = 0.7866

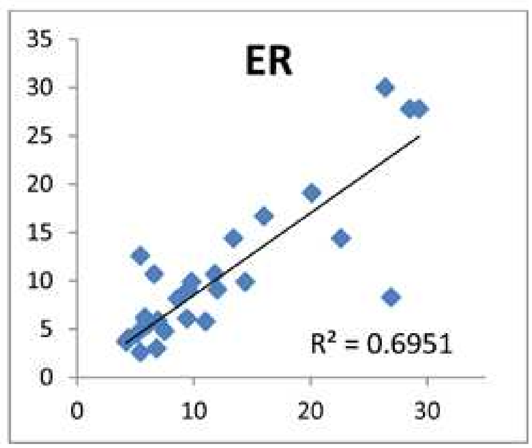

EU
$R^2 = 0.8705$
0
50
100
150
200
250
0
100
200
300

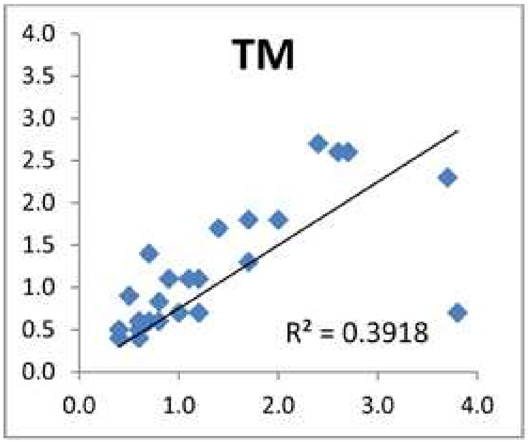

DY
$R^2 = 0.8769$
0
50
100
150
200
0
50
100
150
200

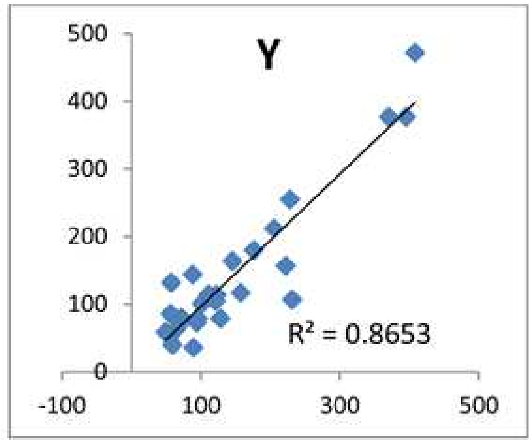

GD
$R^2 = 0.8954$
0
100
200
300
400
500
600
0
200
400
600

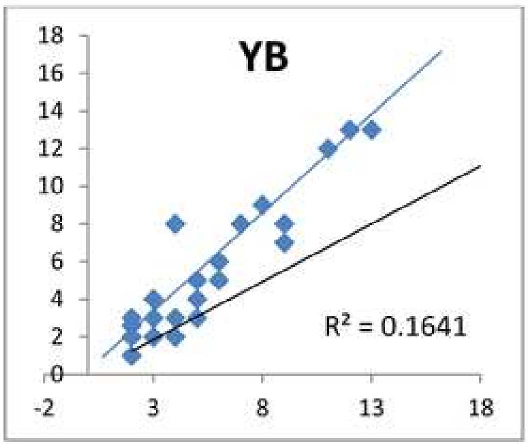

HO
$R^2 = 0.8499$
0
5
10
15
20
25
0
10
20

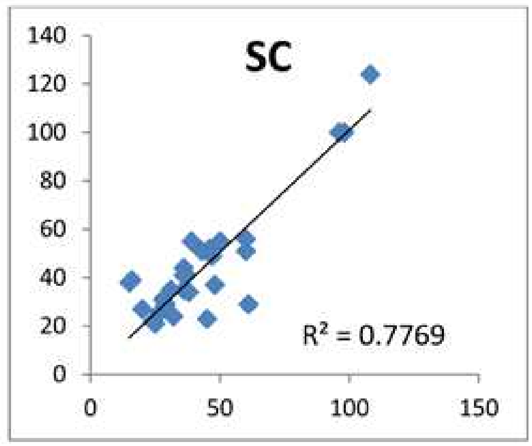

TB
$R^2 = 0.9094$
0
10
20
30
40
50
60
0
20
40
60

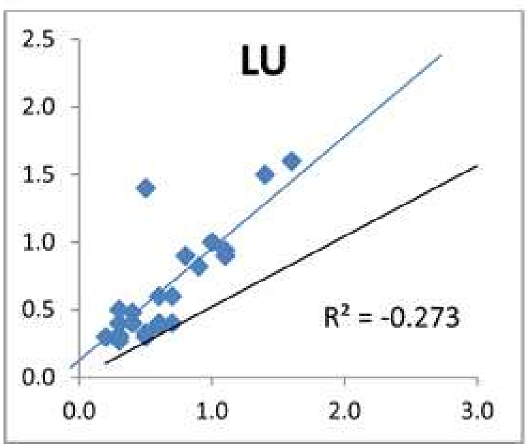

ER
$R^2 = 0.6951$
0
5
10
15
20
25
30
35
0
10
20
30

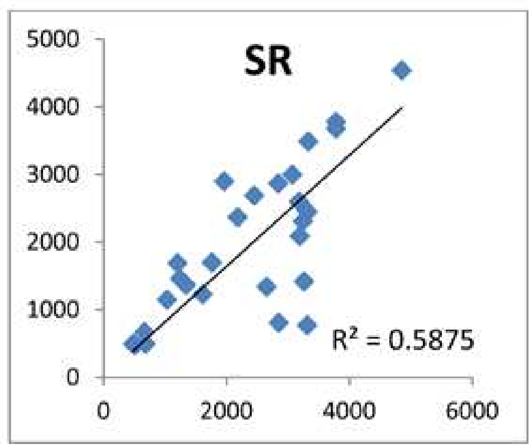

TM
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
R² = 0.3918
0.0
1.0
2.0
3.0
4.0


Y
500
400
300
200
100
0
R² = 0.8653
-100
100
300
500


YB
18
16
14
12
10
8
6
4
2
0
R² = 0.1641
-2
3
8
13
18


SC
140
120
100
80
60
40
20
0
R² = 0.7769
0
50
100
150


LU
2.5
2.0
1.5
1.0
0.5
0.0
R² = -0.273
0.0
1.0
2.0
3.0


SR
5000
4000
3000
2000
1000
0
R² = 0.5875
0
2000
4000
6000

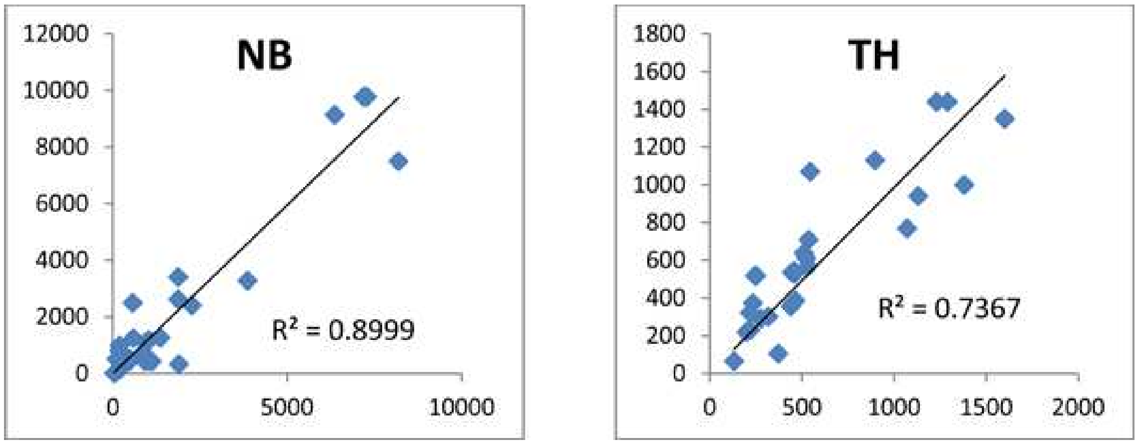


Figure 22 Duplicate Samples by PJLGCI

12.3 QA/QC program

IAMGOLD carried out a program of QA/QC as described in section 11 with blanks, 3 standards REE samples with low, medium and high grade, plus some duplicates, not to mention the laboratories own check assays and duplicates. There are no particular anomalies in the data found by this program. The large number of assays, 15 for REE plus 5 associated elements (Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sm, Tb, Tm, Yb, Y, Sc, Nb, U, Th), involving 2 laboratories included in the QA/QC program shows some exceptions.

The blank sample which is not a certified commercial blank is not truly blank. It has a very low grade of 119 ppm TREE on average. It has a relatively high Coefficient of variation averaging 12%. See Figure 23 and Table 15 below. The blanks were used 143 times to check Actlabs which averaged 253 ppm TREE, more than twice the value of the original "blank" sample. Data from the SGS laboratory is worse with an average grade of 694 ppm TREE. However, those are very low values just below 0.07% TREE which is near background value for REE.

There are some differences between laboratories and some assays show significant deviation from the certified standards. However, the difference between the certified sample with values and the assays resulting from using the standard on the total REE varies between -2.0% and 2.2% on average. See Figure 24 and Table 16 below.

Table 15 Summary of Standard Blanks Check Results

Blanks																	
	REE	**Ce**	**Dy**	**Er**	**Eu**	**Gd**	**Ho**	**La**	**Lu**	**Nd**	**Pr**	**Sm**	**Tb**	**Tm**	**Yb**	**Y**	**Total**
	Average Value	56	0	0	0.5	2	0.2	29	0.05	21	6	3	0.1	0.05	0.1	1	119
	Tolerance (1STD)	21	0.1	0.0	0.2	0.8	0.2	11		9	2.5	1.1	0.0			0.4	14.3
	Coefficient of variation	38%	46%	44%	44%	40%	117%	38%	0%	40%	39%	43%	27%	0%	0%	36%	12%
Spiring (Met Test)																	
	Number of samples	**17**	**17**	**15**	**17**	**17**	**11**	**17**	**2**	**17**	**17**	**17**	**14**	**2**	**4**	**17**	**TREE**
	Average Value	119	1	0	1.2	4	0.5	63	0.1	43	13	5	0.3	0.1	0	2	251
	1 STD	873	7.2	2.0	9.2	34.3	0.8	681	46.4	447	121.5	71.3	5.3	0.3	1.4	22.3	671
	Coefficient of variation	733%	983%	1103%	791%	810%	159%	1075%	61857%	1029%	937%	1396%	2038%	354%	514%	1019%	267%
	% Difference on average	113%	133%	145%	115%	112%	164%	119%	50%	102%	105%	100%	135%	60%	175%	99%	1.1
SGS																	
	Number of samples	**88**	**32**	**11**	**51**	**17**	**32**	**49**	**11**	**40**	**52**	**19**	**6**	**2**	**2**	**14**	**TREE**
	Average Value	232	3	1	3.1	13	0.3	199	20.2	153	37	27	2.2	0.4	2	11	694
	1 STD	873	7.2	2.0	9.2	34.3	0.8	681	46.4	447	121.5	71.3	5.3	0.3	1.4	22.3	598
	Coefficient of variation	376%	272%	187%	292%	272%	223%	342%	230%	291%	325%	260%	235%	71%	71%	194%	86%
	% Difference on average	315%	742%	1347%	483%	530%	87%	587%	40253%	614%	491%	977%	1938%	700%	1900%	944%	485%
ACTLABS																	
	Number of samples	**143**	**127**	**86**	**116**	**143**	**46**	**133**	**5**	**133**	**143**	**143**	**104**	**5**	**16**	**97**	**TREE**
	Average Value	121	1	0	1.1	3	0.1	61	0.1	48	13	5	0.2	0.2	0.4	2	253
	1 STD	93	1.9	1.1	0.6	3.5	0.4	48	0.2	31	8.0	3.4	0.4	0.2	1.1	8.4	62
	Coefficient of variation	76%	306%	612%	54%	137%	270%	78%	130%	65%	63%	69%	189%	111%	294%	458%	25%
	% Difference on average	116%	95%	147%	103%	27%	22%	112%	156%	121%	100%	91%	86%	200%	263%	66%	113%

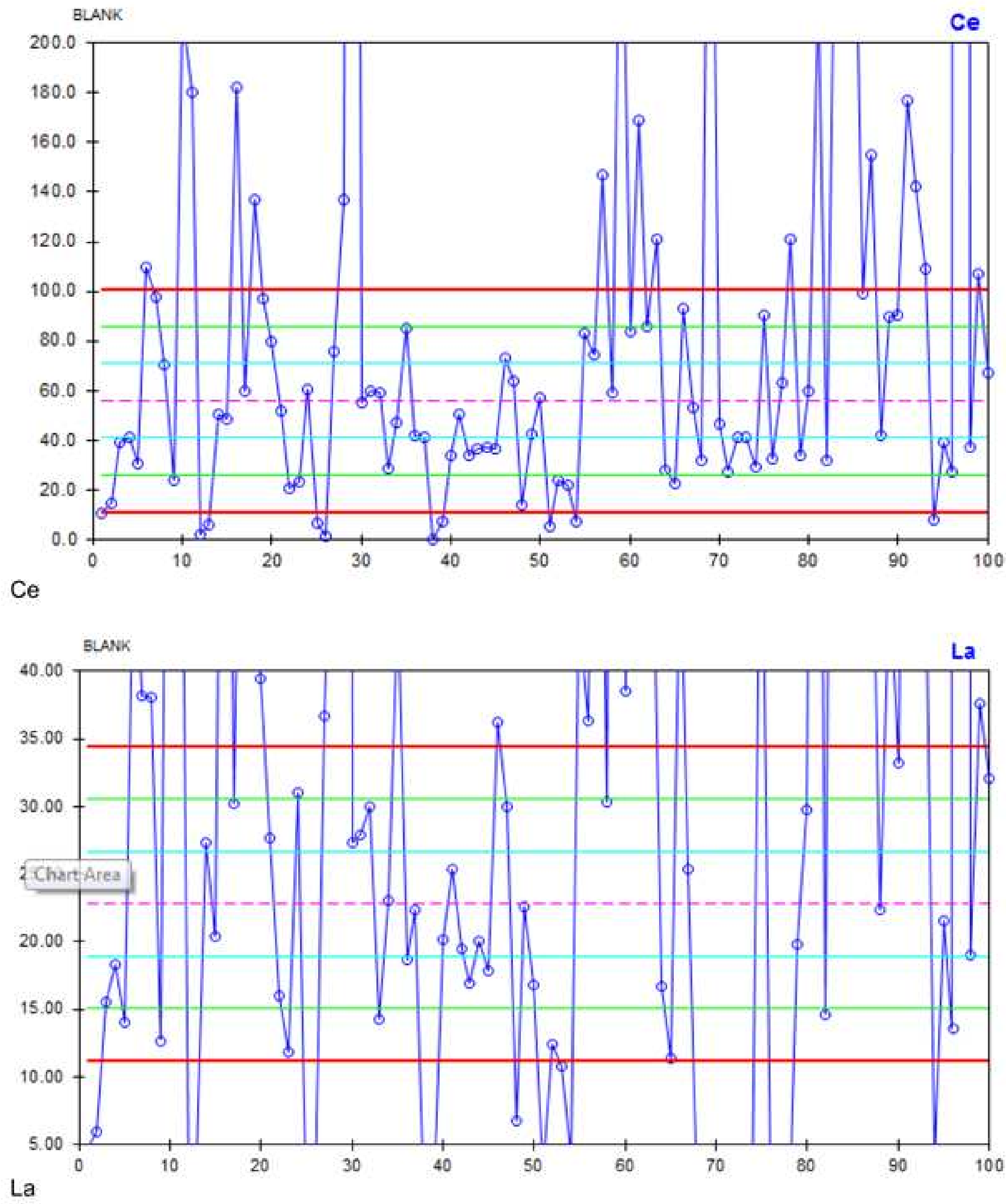
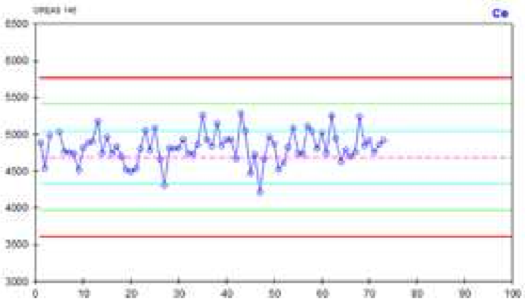


Figure 23 Graphics of Blank Checks for Actlab

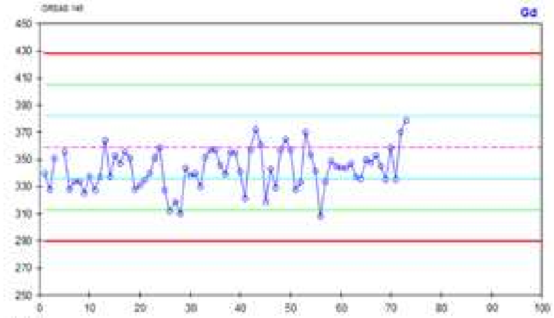
Table 16 Summary of Standard Check Results

OREAS 101a																		
REE	**Ce**	**Dy**	**Er**	**Eu**	**Gd**	**Ho**	**La**	**Lu**	**Nd**	**Pr**	**Sm**	**Tb**	**Tm**	**Yb**	**Y**	**U**	**Th**	**Total**
Certified Value	1396	33	20	8.1	43	6.5	816	2.7	403	134	49	5.9	2.9	18	183	422	37	2938
Tolerance (1STD)	85	1.4	1.0	0.4	3.5	0.1	27	0.1	24	7.0	1.1	0.5	0.2	0.8	5.0	20	1.7	54.8
Coeficient of variation	6%	4%	5%	5%	8%	2%	3%	5%	6%	5%	2%	8%	6%	5%	3%	5%	5%	2%
SGS																		
Number of samples	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**83**	**TREE**
Average Value	1430	32	19	8.0	36	6.5	836	2.6	405	136	50	5.4	2.8	18	171	396	37.9	2987
1 STD	66	1.4	0.8	0.3	2.1	0.3	39	0.2	18	7.4	2.2	0.5	0.1	0.8	7.4	17	4.5	48
Coeficient of variation	5%	4%	4%	4%	6%	5%	5%	6%	4%	5%	4%	9%	5%	5%	4%	4%	12%	2%
% Difference on average	2%	3%	2%	1%	17%	0%	2%	2%	1%	1%	3%	9%	4%	2%	7%	6%	4%	2%
ACTLABS																		
Number of samples	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**62**	**TREE**
Average Value	1367	32	19	8.1	42	6.5	800	2.5	395	130	50	5.3	2.8	18.3	164	394	36	2879
1 STD	93	1.9	1.1	0.6	3.5	0.4	48	0.2	31	8.0	3.4	0.4	0.2	1.1	8.4	24	3.1	66
Coeficient of variation	7%	6%	6%	7%	8%	6%	6%	7%	8%	6%	7%	7%	6%	6%	5%	6%	9%	2%
% Difference on average	2%	3%	1%	0%	4%	0%	2%	5%	2%	3%	3%	11%	4%	5%	10%	7%	3%	2%
OREAS 146																		
REE	**Ce**	**Dy**	**Er**	**Eu**	**Gd**	**Ho**	**La**	**Lu**	**Nd**	**Pr**	**Sm**	**Tb**	**Tm**	**Yb**	**Y**	**U**	**Th**	**Total**
Certified Value	4691	224	87	127	359	36.8	2513	6.3	2182	548	441	47	9.9	54	905	3	903	11326
Tolerance (1S)	360	16	7.0	9.0	23.0	2.7	185	0.3	192	36.0	36	3.4	0.8	3.9	53.0	0	72	241.5
Coeficient of variation	8%	7%	8%	7%	6%	7%	7%	5%	9%	7%	8%	7%	8%	7%	6%	9%	8%	2%
SGS																		
Number of samples	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**TREE**
Average Value	4828	226	83	126	343	36.3	2572	6.4	2225	572	448	45	9.8	52	884	3	901	11572
1 STD	215	9.2	3.3	5.5	14.6	1.4	122	0.4	91	26.1	21.3	2.1	0.4	1.8	40.6	0	41.3	143
Coeficient of variation	4%	4%	4%	4%	4%	4%	5%	6%	4%	5%	5%	5%	4%	4%	5%	17%	5%	1%
% Difference on average	3%	1%	4%	1%	5%	1%	2%	2%	2%	4%	2%	5%	1%	3%	2%	1%	0%	2%
ACTLABS																		
Number of samples	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**69**	**TREE**
Average Value	4844	228	85	129	370	36.0	2525	6.2	2211	549	456	44	9.7	53	863	3	890	11548
1 STD	259	11	4.1	6.7	19	2.0	135	0.4	114	30	24	2.4	0.5	2.8	43	0	49	170
Coeficient of variation	5%	5%	5%	5%	5%	6%	5%	6%	5%	5%	5%	5%	5%	5%	5%	14%	5%	1%
% Difference on average	3%	2%	2%	2%	3%	2%	0%	1%	1%	0%	3%	6%	2%	1%	5%	4%	1%	2%
GRE-02																		
REE	**Ce**	**Dy**	**Er**	**Eu**	**Gd**	**Ho**	**La**	**Lu**	**Nd**	**Pr**	**Sm**	**Tb**	**Tm**	**Yb**	**Y**	**U**	**Th**	**Total**
Certified Value	16797	29	8	140	262	2.9	9786	0.4	7048	1883	769	15	0.5	3.0	56			36743
Tolerance (1S)	837	1.5	5.3	9.1	29.6	0.3	221	0.1	456	117.0	32.2	4.1	0.1	0.9	4.4			535.9
Coeficient of variation	5%	5%	**66%**	6%	**11%**	9%	2%	**33%**	6%	6%	4%	**28%**	**13%**	**31%**	8%			1%
SGS																		
Number of samples	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**			**TREE**
Average Value	16827	26	5	139	222	2.8	9753	0.3	7218	1983	756	13	0.5	2.0	51			36947
1 STD	472	1.1	0.2	5.3	14.0	0.1	372	0.0	195	77.0	30.4	1.9	0.0	0.2	1.5			356
Coeficient of variation	3%	4%	5%	4%	6%	4%	4%	11%	3%	4%	4%	15%	8%	9%	3%			1%
% Difference on average	0%	8%	41%	1%	15%	1%	0%	26%	2%	5%	2%	11%	9%	31%	10%			1%
ACTLABS																		
Number of samples	**44**	**88**	**88**	**88**	**88**	**88**	**80**	**86**	**88**	**44**	**88**	**88**	**88**	**85**	**88**	**88**	**88**	**TREE**
Average Value	16659	27	5	134	294	2.6	9615	0.4	7002	1880	748	11	0.5	3	49	12	76	36381
1 STD	1026	2	1.8	8.2	32	0.2	517	0.1	452	111	44	2.0	0.1	2.0	2	1	5	701
Coeficient of variation	6%	6%	38%	6%	11%	7%	5%	32%	6%	6%	6%	18%	12%	69%	5%			2%
% Difference on average	1%	5%	41%	4%	12%	10%	2%	5%	1%	0%	3%	23%	12%	1%	13%			1%

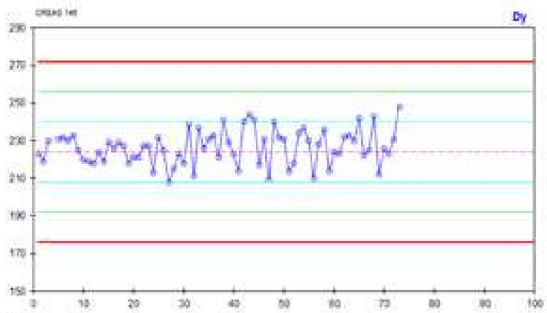
Note: Variations above 10% are marked in yellow. Variation on the high grade standard GRE-02 are high on the low grade values. This is “normal” for high grade samples of this nature (REE). Also notice the low count (44) for high grade values due to results being “above detection limits”.



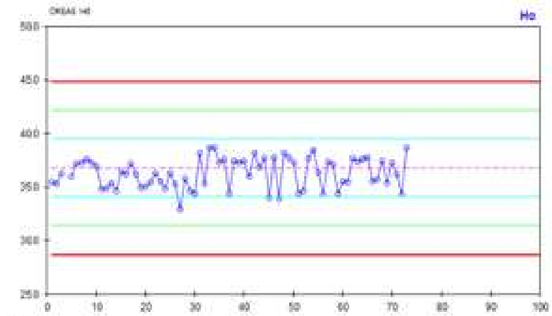
Ce



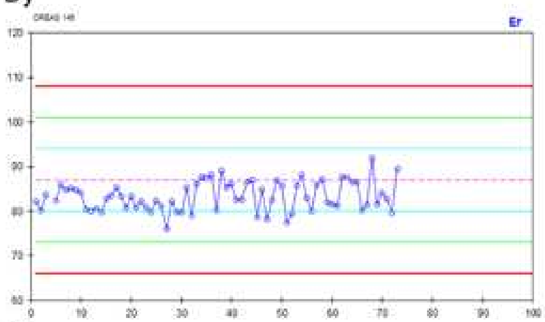
Gd



Dy



Ho



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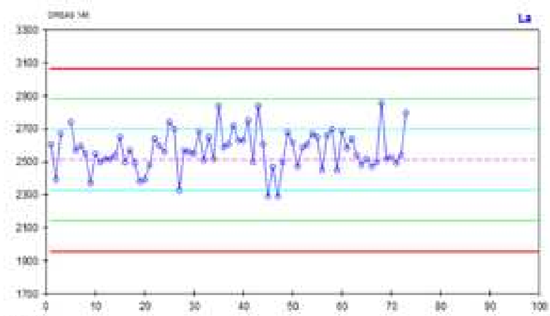
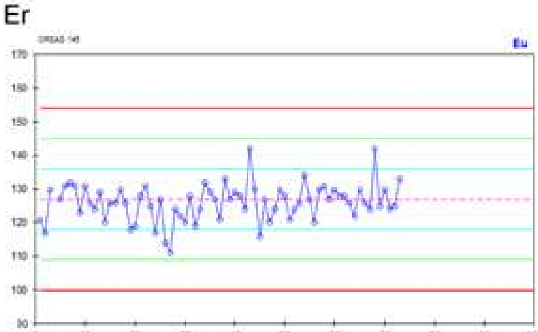
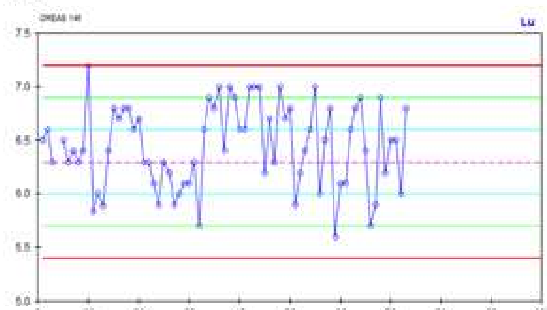


La



Eu



Lu

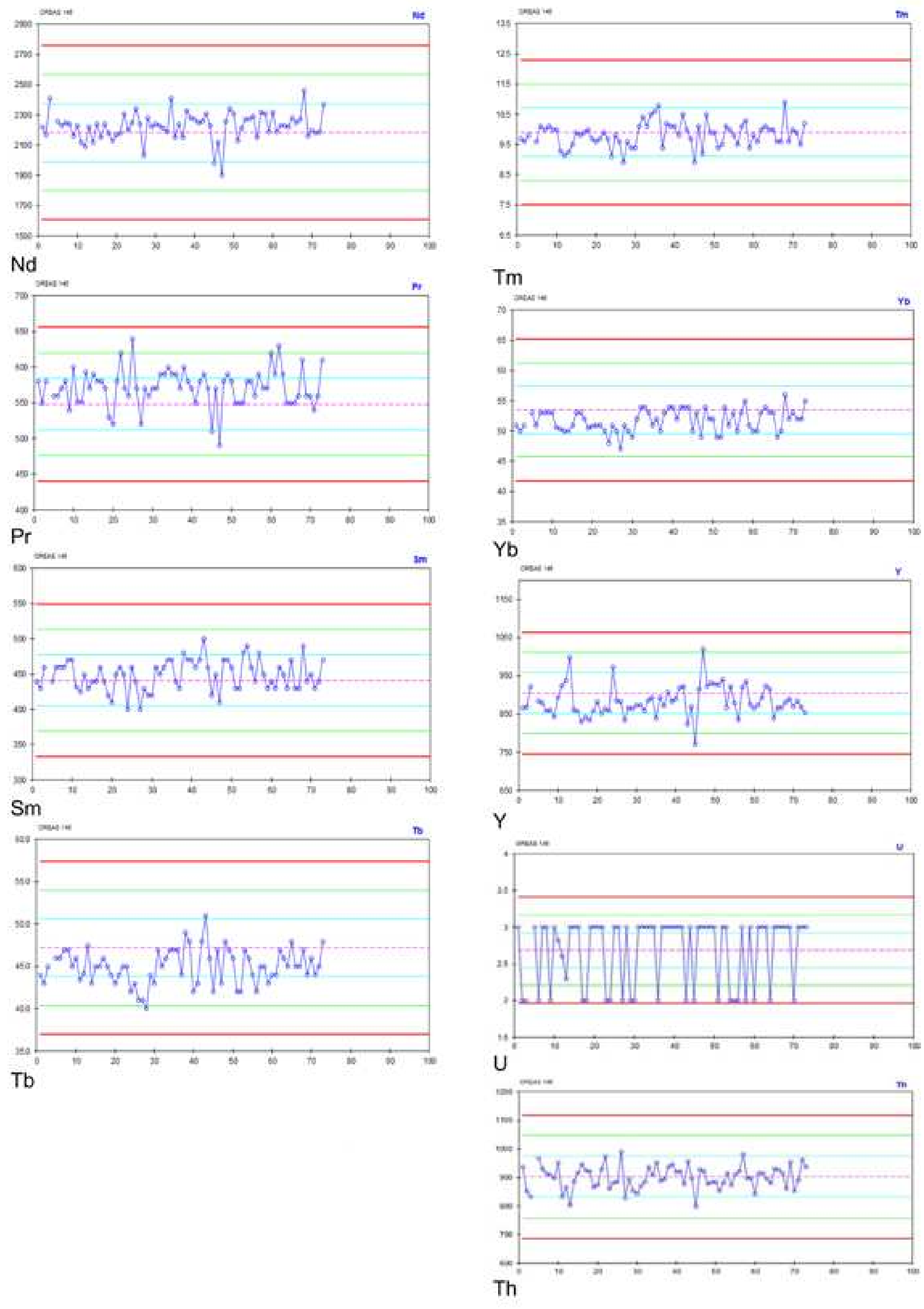


Figure 24 QA/QC for Standard Sample OREA 146

12.4 Historical Data Verification

Data generated after the discovery in 1968 up to 1978 included some 546 samples tested for REE over 2,444 metres inside and outside the REE Zone. Most of the assays done on a regular basis were reported on the “paper” (*now in PDF*) logs for La_2O_3. The few of those drillholes inside the REE Zone are either surrounded by new data, therefore of no importance, or a good temporary support where new data is in progress, for example to close the SW side of the REE Zone. The older historical data identified the presence of REE but this data is shallow compared with more recent data (1985 and 2011).

The data from the surface drillholes 85-01, 85-02 and 85-03 were compared to the data produced by IAMGOLD in 2011. The quality of the data is better today. Nonetheless, the data from 1985 is deemed compatible with the new data and it carries useful information where new drillholes are not available. Eventually, more detailed drilling in the future will make the older data of perhaps lesser quality obsolete or at least insignificant in number.

At this stage of exploration of the project, the older historical data is useful and all the data that can be used was extracted from it. The mineral resources was estimated with and without the older data and the impact (*less than 5% in tonnage at the same average grade*) was deemed more useful than not to complete the REE Zone outline. The exploration drilling program in the REE Zone in 2012 will definitely close that gap and render the older data obsolete.

Table 17 Summary Table of Historical Drilling, Sampling and Assaying

	Assay			Number of Assays																		
Year	Metres	Avg Length	TREO PPM	TREO	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y	Th	U	Nb
2011	12705	1.53	17371	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285
1985	1513	2.67	18071	566	566	196	566	566	196	566			566									566
1978	875	2.94	8618	130	130																	
1975	616	3.00	27784	205	205																	
1971	158	3.03	3196	34	35															3	17	
1970	57	2.85	2586	6	6																	
1968	739	2.80	15938	171	171																	
Total	16662	1.72	17432	9397	9398	8481	8851	8851	8481	8851	8285	8285	8851	8285	8285	8285	8285	8285	8285	8288	8302	8851

12.5 Conclusions about Data Verification

PJLCGI is of the opinion that there are no critical flaws in the data generated by the 2011 exploration surface drilling and sampling program conducted by IAMGOLD.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Processing and Metallurgy testwork

Preliminary metallurgical testwork was initiated at two laboratory facilities. Four metallurgical drill holes were executed in March 2011 to provide the metallurgical samples. Samples from two drill holes were combined to make a master composite to begin the metallurgical testwork.

13.2 Mineralogy

Mineralogy (QEMSCAM) has been done on three historical drillhole core samples and two additional on two selected new core samples from 2011 drillholes. The objectives of those mineralogy tests were to identify the major REO minerals, grain size and form (shape and other physical properties). The major REO identified are Bastnaesite and Monazite in fine cluster assemblage.

Additional mineralogy (QEMSCAM) will be performed on new drillholes to try to do a mapping of the REO minerals to confirm their types and particle size variability inside the deposit.

13.3 Metallurgical testwork

Preliminary metallurgical testwork are ongoing on the master composite. Different physical separation methods are investigated including gravity, magnetic, flotation and attrition scrubbing. Preliminary testwork showed results in the range of 58% to 70% REO recovery in a 25% to 40% mass pull respectively. Flotation as per other methodologies continues to improve concentration ratio. Preliminary pre leach tests showed a mass reduction in the range of 80% with the majority of the REO reporting to solid. Additional pre leach test are ongoing as well as REO extraction leach tests.

An average recovery of TREO of 53.5% was assumed for the valuation of the mineral resources.

14 MINERAL RESOURCES ESTIMATES

14.1 Presentation of the REE Zone Mineral Resources Estimates

The 2011 drill program conducted by the Company on the REE zone aimed to establish the three dimensional “footprint” of mineralization, provide a preliminary REE grade estimate and provide samples for preliminary metallurgical test work. The campaign was completed on a grid spacing of 100 by 200 metres to programmed drill depths of about 450 metres. Four holes exceeded 700 metres in total length, and to a maximum length of 750 metres. The deeper holes demonstrate that the brecciated and mineralized facies of the REE zone persists uninterrupted at depth, although the resource model is reported only to a depth of 400 metres. Further exploration and infill drilling is expected to extend the resource model below the current depth parameters, and to close the REE Zone outline to the south and southwest. The Company initiated a 2,750 metres follow-up drill campaign in January 2012 to further define the lateral extent of the resource and establish the overall limits of REE mineralization with greater certainty. A second phase of drilling is also planned for resource definition and to explore at depth.

The REE resource corresponds to an enriched zone of Light REEs (“LREE”) which is characteristic of the annular carbonatite type. LREEs comprise 98% of the weight of the Total REEs (“TREE”), with the remaining 1.9% Heavy REEs (“HREE”) that could potentially add significant economic value. As indicated in the tables below, the REE zone contains total Inferred Resources of 466.8 Million Tonnes at an average grade of 1.65% Total Rare Earth Oxides (“TREO”), including 0.031% Heavy Rare Earth Oxides (“HREO”), to a depth of approximately 400 metres (the surface lies at a reference elevation of 10,000m).

REE Mineral Resources by Grade Groups				**Light REO**					**Main Heavy REO**			
Grade Groups **% TREO**	Tonnage Million Tonnes	% TREO	**ppm HREO**	**Ce_2O_3** ppm	**La_2O_3** ppm	**Nd_2O_3** ppm	**Pr_2O_3** ppm	**Sm_2O_3** ppm	**Gd_2O_3** ppm	**Eu_2O_3** ppm	**Dy_2O_3** ppm	**Tb_2O_3** ppm
> 2.50	13.2	2.93	552	14020	7173	5384	1538	603	284	124	81.3	22.2
2.00 to 2.50	80	2.16	408	10359	5300	3978	1137	445	210	91.6	60.1	16.4
1.75 to 2.00	123.8	1.87	353	8961	4585	3441	983	385	182	79.3	52	14.2
1.50 to 1.75	98	1.64	309	7845	4014	3013	861	337	159	69.4	45.5	12.4
1.00 to 1.50	99.2	1.26	237	6020	3080	2312	661	259	122	53.3	34.9	9.5
0.5 to 1.00	52.6	0.81	153	3890	1990	1494	427	167	79	34.4	22.6	6.2
Total/Average Grade	**466.8**	**1.65**	**311**	**7913**	**4048**	**3039**	**868**	**340**	**161**	**70**	**45.9**	**12.5**
	Niobec TREO Signature		1.88%	47.90%	24.50%	18.40%	5.26%	2.06%	*0.97 %*	*0.42 %*	*0.28 %*	*0.08 %*

REO Mineral Resources by Depth				**Light REO**					**Main Heavy REO**			
DEPTH SLICES m	Tonnage Million Tonnes	% TREO	**ppm HREO**	**Ce_2O_3** ppm	**La_2O_3** ppm	**Nd_2O_3** ppm	**Pr_2O_3** ppm	**Sm_2O_3** ppm	***Gd_2O_3*** *ppm*	***Eu_2O_3*** *ppm*	***Dy_2O_3*** *ppm*	***Tb_2O_3*** *ppm*
Surface at 9975	5.4	1.9	358	9102	4657	3495	999	391	*185*	*80.5*	*52.8*	*14.4*
9950 (+/-25m)	60.5	1.77	333	8467	4332	3251	929	364	*172*	*74.9*	*49.1*	*13.4*
9900 (+/-25m)	72.7	1.65	311	7895	4040	3032	866	339	*160*	*69.8*	*45.8*	*12.5*
9850 (+/-25m)	72	1.61	303	7704	3941	2958	845	331	*156*	*68.1*	*44.7*	*12.2*
9800 (+/-25m)	70.2	1.61	303	7709	3944	2960	846	331	*156*	*68.2*	*44.7*	*12.2*
9750 (+/-25m)	66.7	1.63	308	7816	3999	3001	858	336	*159*	*69.1*	*45.3*	*12.4*
9700 (+/-25m)	61.8	1.64	309	7854	4018	3016	862	338	*159*	*69.5*	*45.5*	*12.5*
9650 (+/-25m)	57.4	1.66	312	7928	4056	3044	870	341	*161*	*70.1*	*46*	*12.6*
Total/Average Grade	**466.8**	**1.65**	**311**	**7913**	**4048**	**3039**	**868**	**340**	***161***	***70***	***45.9***	***12.5***

* TREO is for Total Rare Earth Oxides which include: La_2O_3, Ce_2O_3, Pr_2O_3, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, and Lu_2O_3.

** HREO is for Heavy Rare Earth Oxides which include: Eu_2O_3, Gd_2O_3, Tb_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, and Lu_2O_3. But only the 4 most important HREE elements are individually reported in the table, namely Eu_2O_3, Gd_2O_3, Tb_2O_3 and Dy_2O_3.

Table 18 Mineral Resources of the REE Zone

NOTES:

- Results are presented in situ, unconfined and undiluted
- Resource modeling used 6,731 samples from the 2011 drill program with 54 elements assayed (with re-assays for high grade samples). 564 samples from 1985 historical surface drilling program were also incorporated although 21 elements were assayed in the earlier programs instead of 54. A further 422 samples were incorporated from historic surface drill holes that were assayed only for La2O3; TREO values were recalculated from the elemental ratios established by the 2011 program.
- In Table 21 on the next page, there is a report for other REE and some other elements of interest not listed in the main report for mineral resources in section 14.

The estimated resource is enclosed within the core breccias of the carbonatite complex. The near surface “footprint” of mineralization has been confirmed in three directions in 2011. Drilling planned in early 2012 should confirm the known outline to the south. Given the narrow range (approximately 1% to 2%) of grade values in the block model and the wide drill hole spacing, it is difficult to outline low and high grade zones inside the REE resource at this time. Whereas sporadic higher grade REE values are encountered near surface and to a depth of 50 metres, mineralization in the resource model shows low variability below that depth. Four drill holes extending well below the resource model and to a maximum depth of 750 metres show comparable grades to other intercepts in the resource model. Based on all of the preceding information, the Mineral Resources have been classified as Inferred.

All assay results are reported in Total Rare Earth Element Oxides (“TREO”). Main rare earths found are LREEs: Cerium (Ce), Lanthanum (La), Neodymium (Nd), Praseodymium (Pr) and Samarium (Sm), and HREEs: Gadolinium (Gd), Europium (Eu), Dysprosium (Dy) and Terbium (Tb).

Background information on the REE industry can be found by clicking on the following link:

http://www.iamgold.com/Theme/IAmGold/files/REE101.pdf

14.2 Methodology

14.2.1 Software

The Gems and Logger software application from Gemcom Software International Inc. were used for core logging, database management, modeling the geology, analyzing the data, to perform the grade interpolations, to create and manage the block model as well as report the mineral resources. The software was used by Pierre-Jean Lafleur, a QP according to the NI 43-101 as well as a Senior Business Analyst at Gemcom Software.

14.2.2 Historical Data

The systematic drilling in 2011, confirmed the results found in the historical drillholes. The question was raised as to whether the historical data should be used in the mineral resource estimation in 2011. Every project goes through the same process of discovery and evaluation from sparse data to detailed data. Each activity from exploration through development and production has different goals and method of investigation. Between 1968 and 1985, the carbonatite hosting the REE Zone was discovered and studied using various means, including but not limited to drilling, airborne and ground geophysics, mapping, bulk sampling, petrographic and mineralogy studies, etc. Some 22 shallow surface drillholes were assayed for REE, some sporadically (1968 to 1978), some systematically (1985) and 18 drillholes reportedly intersected the REE Zone. The original hand written drill logs (*in PDF*) report values for La2O3 (*to represent the REE group*) only in the first 15 drillholes (1968 to 1978) of this short list. The 3 drillholes from 1985 report 22 assays, including the major REE. They were captured into Gems database and used to calculate TREO values using the 2011 REE signature ratios for modeling and comparison with new data.

All historical drillholes compared favorably to the 2011 drilling results. Most of this data, especially from the period of 1968 to 1978 does not have the QA/QC support to comply with the NI 43-101 standards but there is no evidence that it would not comply with it. They are historical data deemed to match the geology and the grades (available) with the new data. In fact, it made little difference whether it was used or not. It made no difference in the grade as the old data is completely surrounded by new data except in the south and south-west area where current 2012 drilling is ongoing. The old data does help confirm the geology in this area to confine the mineral resource model designed in this report. It also helps define grade contours inside the REE Zone apparently. Since the mineral resources are classified as inferred, PJLGCI is of the opinion that it makes no significant difference to include or not historical data. As new data is acquired in increasing detail, the historical data (1968 to 1985) should be put aside to favor a more uniform quality of data to be used to value the project.

This model including the historical data does offer subtle differences locally, filing gaps in the grade model, that appear to support the geological model better, such as structural geology, mineralogy and deposit type. The model using the historical data provides a better interpretation on sections and plan view by benches or levels. This is the main reason why this model was selected for the current publication of the REE Zone mineral resources.

14.2.5 Composites

Compositing is a set of techniques to split, group and regroup existing samples to make them "even" and ready for the interpolation process on a regular 3D grid, the block model. Drilling and sampling is not even. It is done on line, sections and levels where access is available to take samples most efficiently. It is also a process to discover the shape of the mineral resources in increasing detail as drilling and sampling is going on. For the interpolation process of grades to assign to each block, blocks and samples should have a matching rock type.

For the estimation of the REE Zone mineral resources, several sets of data were tested against several geological models. Those are:

- Up to 9,398 original assay data from the ICP table in variable length but mostly 1.5m;
- 3,126 5m composites including all drillholes intersecting the REE Zone;
- 2,871 5m composites for 1985 to 2011 drillholes exclusively;
- 1,672 10m composites including all drillholes intersecting the REE Zone.

Because the drillhole samples in the REE Zone vary in length and the 2011 data is made mostly of very short samples, it was deemed valid to group samples in equal length. Composites of 10 metres appear to be a good choice according to the geology, sampling statistics and the variography, but the final length of 5m was retained after looking at different block models on sections and plan view with the corresponding data from drillholes. Composites of larger size smooth the data. Five metres equal length composites appeared to be a better choice than 10m to preserve a certain level of details in the grade model.

No top grade capping value was used before or after compositing. This can be done dynamically during interpolation in Gems.

14.2.6 Variography

The variography indicates a total cumulative grade variance is about 22% at very short range (1m to 2 m), 55% within 20m, and 100% up to 200m. The nugget effect is relatively low and the grade continuity has a relatively long range. The variogram is very good in the vertical axis, the direction of drilling. It is good in the NE-SW (actually almost the mine *grid at Azimuth 31° plus 15 ° East of the grid North*) axis which is in line with drill sections and some predominant geological features. The continuity appears shorter in the NW-SE direction.

The set of rules would be the same for all REO as for TREO except the limits on grade for the **Top Cut Value** and the **Cut-Over High Grade Value** would have to be adjusted accordingly.

The general and final variography equation would look like this:

$$\gamma^2 = C_0 + C_1/R_1 + C_2/R_2$$ Expression

$$\gamma^2 = 0.22 + 0.33/20m + 0.44/200m$$ Omnivariogram

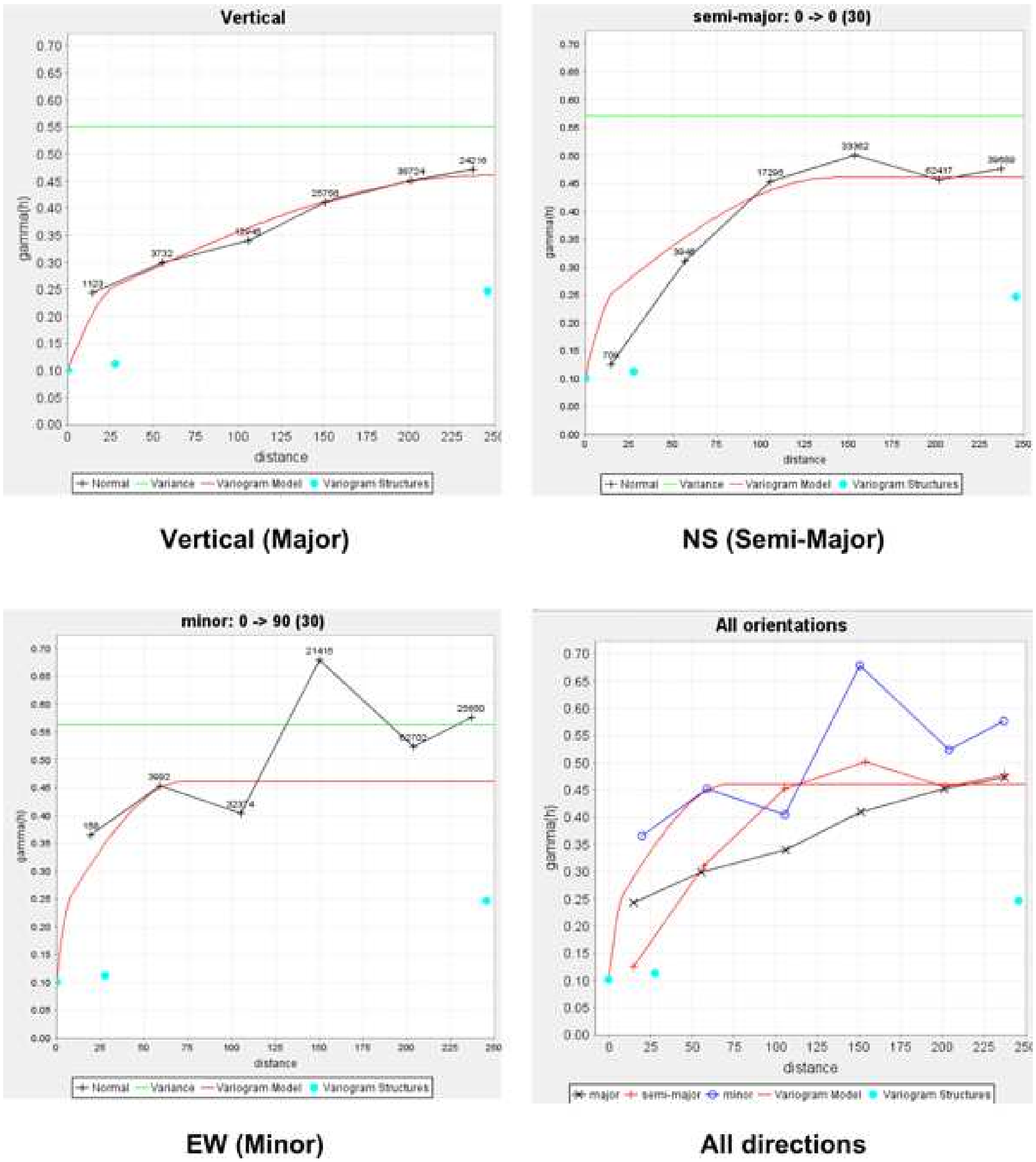


Figure 25 Variography of TREO

14.3 Domain and Volume

The REE Zone mineral resources model is limited to the C1 (brecciated carbonatite with reddish REO rich gangue) rock type which is surrounded by the C2 (massive carbonatite). The geological model to outline the host rock for the REE was drawn from the surface outline using the map compilation. See section 7 and 8 of this report. The vertical projection was drawn from the surface map using a 70° dip cone shape truncated at a 1000m depth below the topographic surface. It is adjusted to the drillhole rock type description and assay values to obtain a 3D cone shape to confine the grade interpolation process. The C1 outline is not a sharp contact in the core. The breccias (C1) to massive carbonatite (C2) transition may run over several metres, a relatively short distance compared to C1 size at surface (800m x 1000m).

Therefore, the grade model is limited inside the C1 to areas with sufficient data.

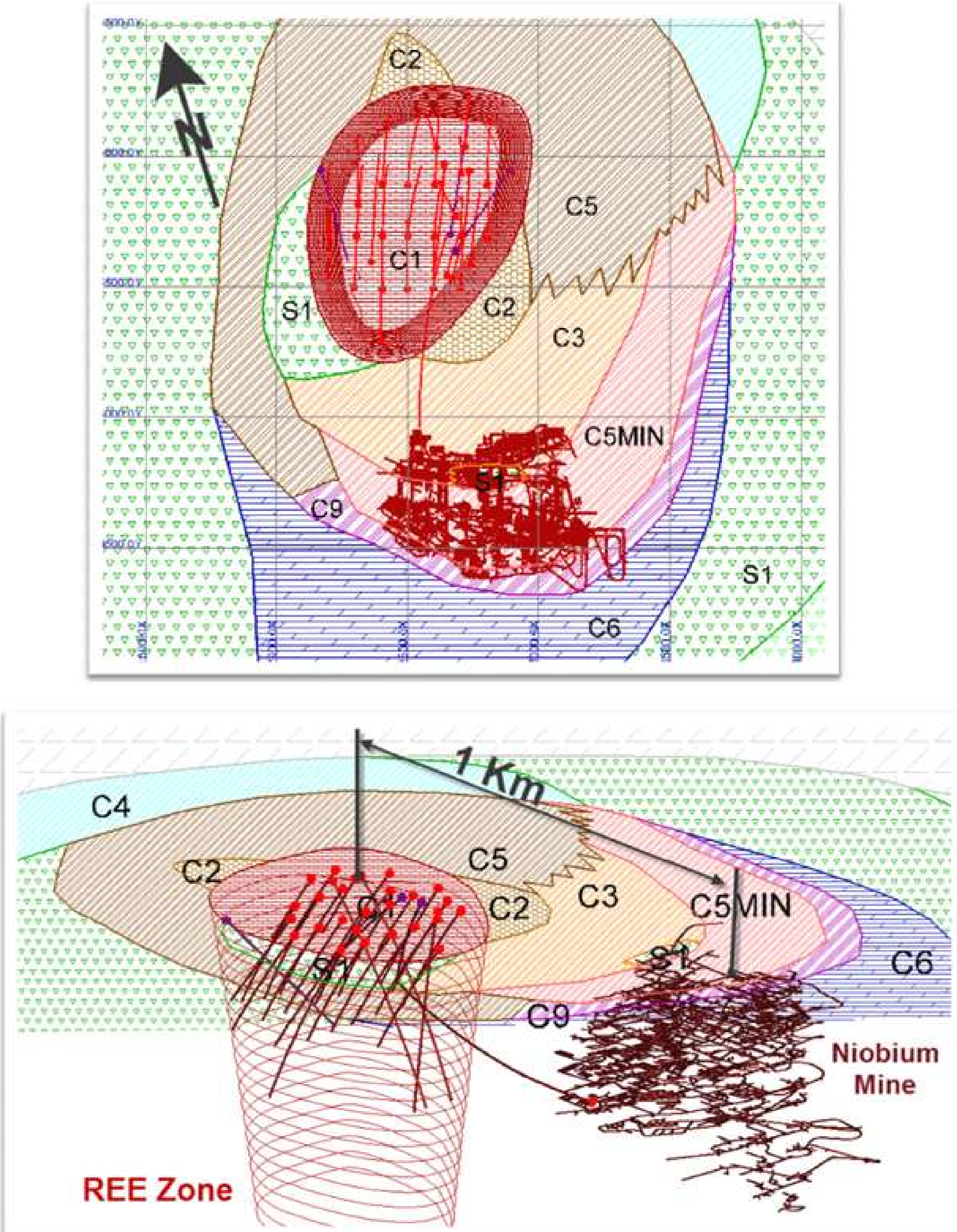


Figure 26 3D Shape of REE Zone (left) and Niobec mine (right)

14.4 Specific Gravity (SG)

A density measure is also realized for every different geological facies found in the core. SG was measured on 107 core samples averaging 2.86 t/m ^{3}. The SG value was interpolated with a default value of 2.86 t/m ^{3} for blocks with insufficient data for interpolation results.

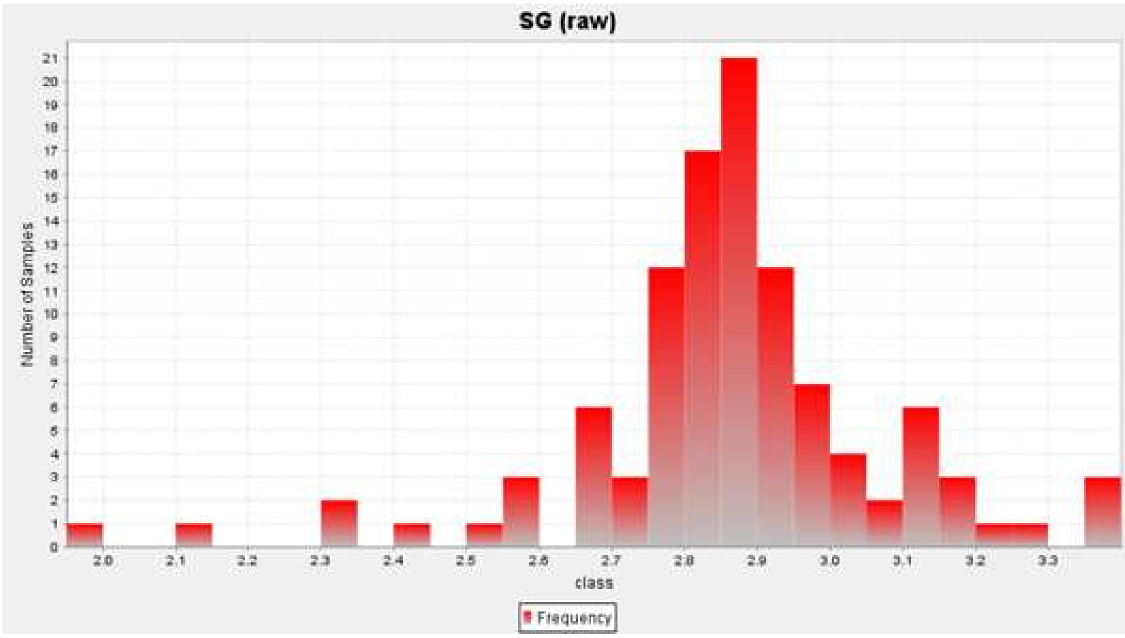


Figure 27 Histogram of 107 Density Measures

14.5 Block Model

The estimated mineral resources have been modeled using a 10-metre cubic block model and grades were estimated using Ordinary Kriging.

A second model using 25-metre cubic block was also created to compare results. The larger blocks represent a lower factor of mining selectivity. It was used to measure the effect of grade smoothing or "dilution". The results showed that the rather huge size of the REE Zone and its good grade continuity had little impact on the difference between the 2 models. The larger block model (25m ^{3}) could represent an open pit situation. The smaller block model (10m ^{3}) could be deemed more suitable for underground mining. The last one was retained for this report because it provides more details. However, the level of details with this block size is limited from the drill spacing.

In any case, the variation of grades in the block model did not highlight any particular sustainable grade contouring pattern in planview or sections. Some pattern could be drawn but not carried too far. The actual data is insufficient to say if it will be possible to draw the outline of high grade and low grade in the REE Zone consistently. This is a known problem in the Niobec mine located in the facies C5 of the same carbonatite.

Note: The author of this section of this report performed a Conditional Simulation study in the Niobec mine many years ago. The REE Zone appears to share similar characteristics.

Table 19 Interpolation Rules

Interpolation Rules

Block Model	**Min**	**Max**	**% TREO**	**X**	**Y**	**Z**
origin (Gems Mine Grid)				2000	5000	10100
Rotation Angle	0					
block Size				10	10	10
number of blocks				120	140	110
Method of Interpolation						
Ordinary Kriging						
Sample number	4	25				
Block Discretization				3	3	3
Data Source	*5m Composites*					
By rock code (domain)	*Yes*					
Max Samples per DH	3					
Top Cut Value			10.0			
Search Ellipse						
Rotation Angle				150	90	0
Range				250	125	100
Cut-Over High Grade Value			2.15			
Range High Grade				125	62	50
Octant rule	2	4				
Variography	**Abs**	**Relative**				
C0	0.1	22%				
C1/R1	0.15	33%		20	40	20
C2/R2	0.2	44%		200	70	40
GAMMA	0.45	100%				

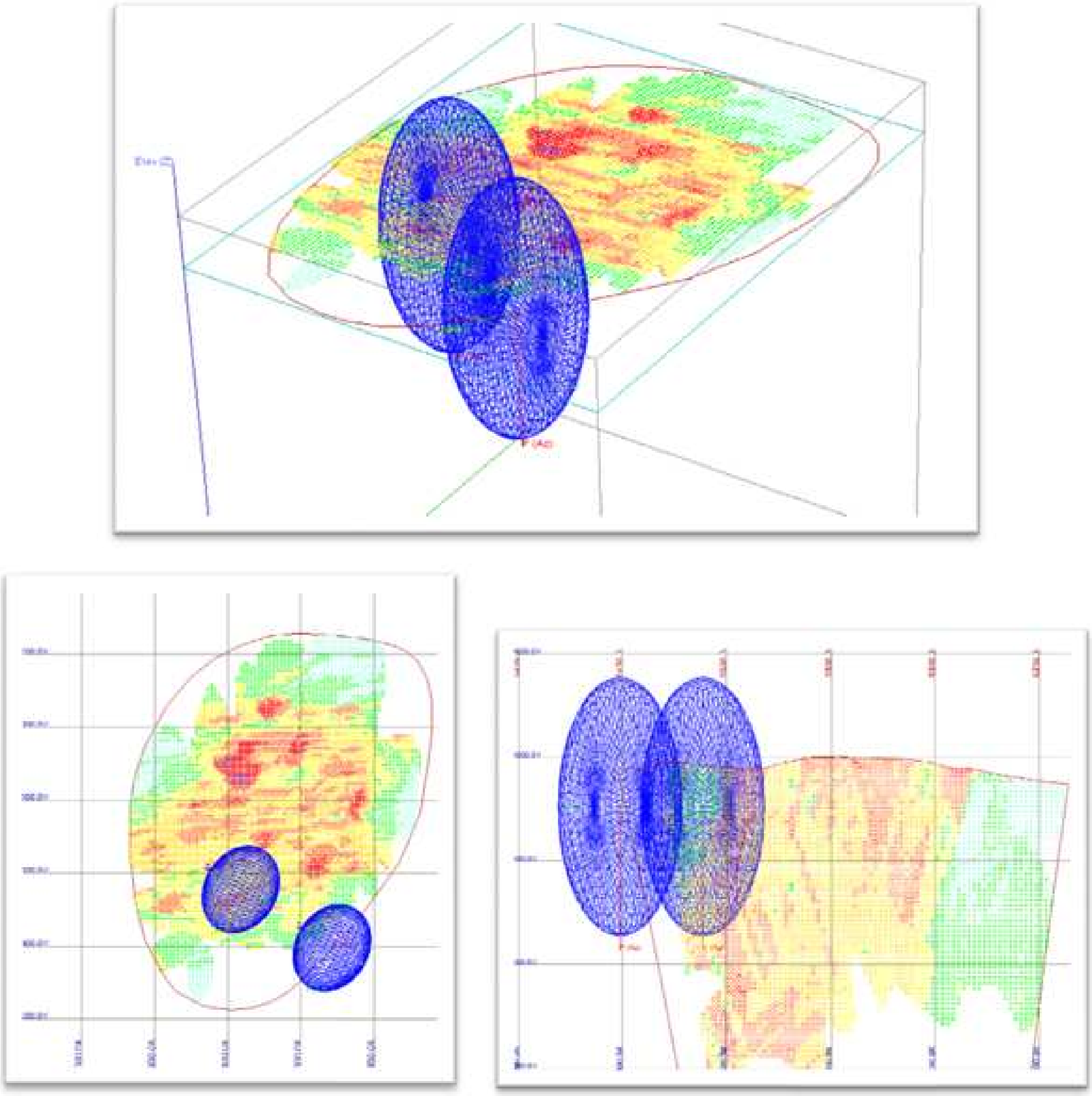


Figure 28 Search Ellipse and Variography

14.6 Grade Interpolation

All the blocks were estimated using a minimum of 4 and a maximum of 25 (5m) composites. The Inverse Distance Square interpolation method was used only for comparison with Ordinary Kriging. Kriging was performed with a numerical digitation of the block 3 x 3 x 3.

A grade model for the major LREE was tested and compared with a model using the TREO only. The REE signature discussed in section 11 indicates that a single model of TREO can be used and the REE individual grades calculated using the proportional effect measured in the samples. This method was used, with cross checks on Ce, La and other REE, as the preferred way of reporting. It greatly simplifies the process of generating report for the REE Zone mineral resources.

There is a feature to use a top value capping in Gems which simplifies this matter in the interpolation profile. It allows adjusting the top capping value quickly and efficiently. In this case, a value of 10% TREO was used for this purpose. In addition, Gems allow reducing the range of influence of high grade values. A high grade cut-over grade of 2.5% for TREO was used for that purpose which corresponds to 16% of the data being affected by this rule. The high grade values are used in the interpolation up to 10% with a range half of the rest of the data. This way, if a cluster of high grade value is intersected, Gems will generate a high grade zone in the block model. Otherwise, an isolated high grade value will be discounted more heavily.

Each REE grade model has to be adjusted accordingly.

A search ellipse 100m x 125m x 250m was used to find (5m) composites for each block in the interpolation process. The octant rule was used and set at a minimum of 2 octants and a maximum of 4 samples per octant. The interpolation settings above gave the best results to minimize modeling artifacts such as streaks and lineation in the model. It favors interpolation over extrapolation too.

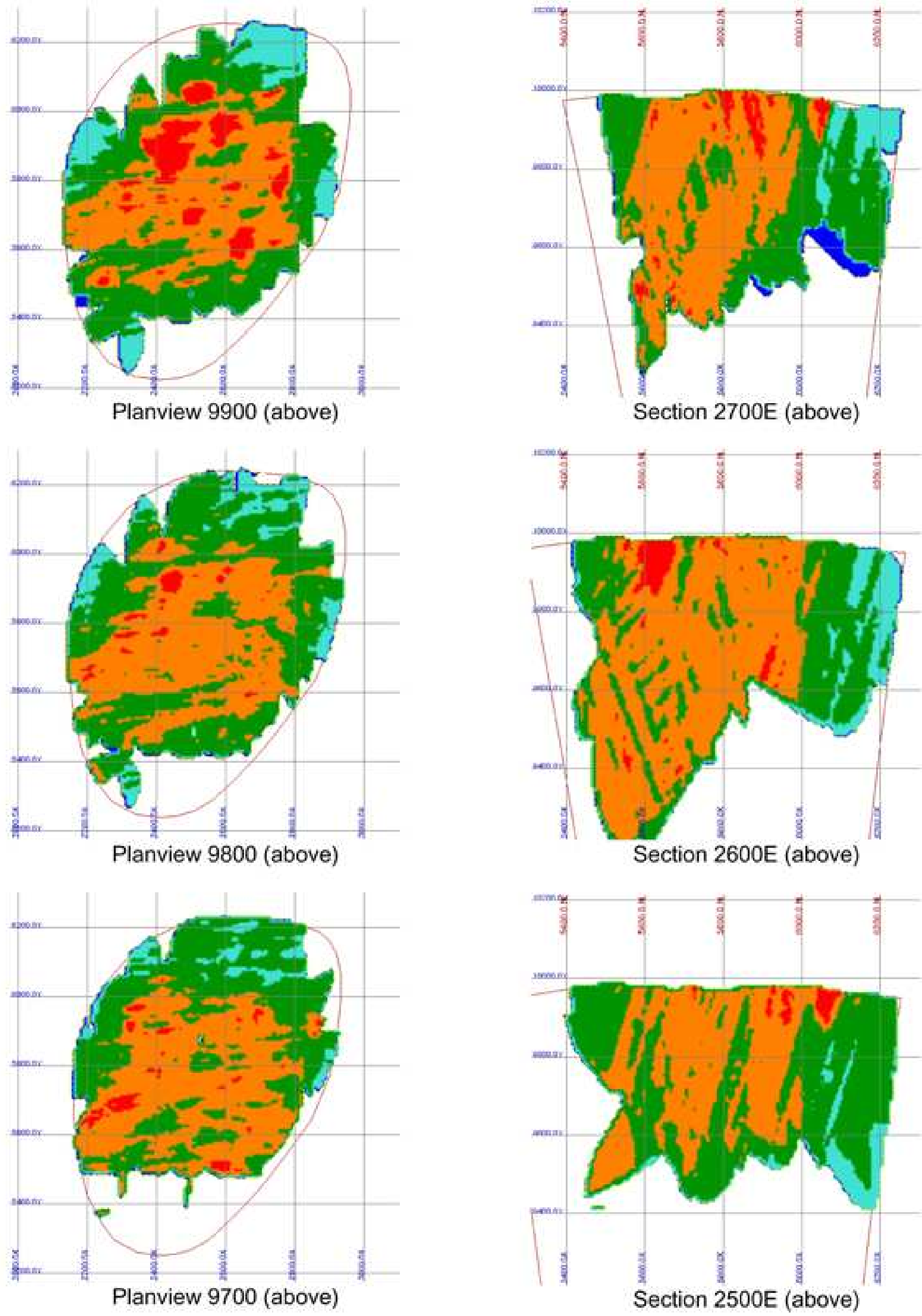


Figure 29 Some Planviews and Sections showing TREO grade model

(High grade +2% red; Intermediate to High grade 1.5% orange; Intermediate grade 1.0% green; Low grade -0.5% bleu).

14.7 Classification

The drilling grid was about 100m x 200m in 2011. At that level of detail, the grid outlines the host rock (C1) for the REO on 3 sides: North, East and West. The South-West side has not been closed completely with the 2011 drilling. However, some historical drilling previous to 1985 does indicates the limits of the C1 and ongoing drilling in 2012 is intended to confirm and close the outline at this level. The REE Zone remains open at depth. See Figure 6. The current drilling program is basically completed down to a depth of 400m, with the exception above (SW side). Some (4) drill holes have reach a depth of 750m indicating the REE Zone continue with no apparent changes in grade. See Table 18.

The current model was sensitive to the modeling parameters. This indicates that the data is “wide spaced”. When the mineral resources become more stable in spite of changes of methodology, it indicates that the data “speaks for itself”, hence it is deemed more robust. Based on limited experience in drilling in the REE Zone, knowledge of the geology and IAMGOLD general experience in mining, further detailed drilling will be required to define mineral resources into the categories of Measured and Indicated. Perhaps a drilling grid of 50m x 50m will allow making some mine planning to achieve that goal, after establishing some economic factors in a preliminary economic assessment. For example, it would be advantageous to outline inside the REE Zone, areas of lower and higher grades. With the existing data, it is not possible to give that concept any specific shape. On some levels or sections, circular shapes appear to show up, on others linear features may line up with regional structures. Changing the model parameters changes those internal shapes. More detail drilling should confirm the correct shape to use for mine planning eventually, if they exist.

For those reasons, the mineral resources have been classified as Inferred and limited to projections to a depth of 400 metres from surface. The fact that the Niobec mine, 1 km south of the REE Zone, has now reached a depth of 800m in development (*mining has not reached that depth yet*) can be considered as materially significant for the future valuation of the REE Zone.

Sections 15 to 22 are required for advanced project only

15 MINERAL RESERVES ESTIMATES

No mineral reserves estimates were outline for the REE Zone at this stage.

16 MINING METHODS

No mine plan was drawn for the REE Zone. However, the proximity to the existing IAMGOLD Niobec underground mine makes it an obvious choice as long as the value of the mineral resources is equal or higher than the niobium ore. The value of the REE Zone material has been more valuable than the niobium ore recently with the peak in REE prices but that was not always the case historically. The alternative of mining at surface with an open pit is also attractive given the facts:

- The REE Zone outcrops or is under less than 30m Trenton limestone and overburden;
- it would be a lower cost operation than underground near the surface; however contemplating a very deep pit is much less attractive;

The REE Zone could be mined from surface and underground at the same time also.

17 RECOVERY METHODS

Preliminary metallurgical test work results of a REO bulk concentrate shows recoveries between 58% and 70%. Optimization test will continue throughout 2012 and preliminary leach tests as well as extraction leach tests are ongoing. A final recovery of 53.5% of the REE is for the moment assumed.

18 PROJECT INFRASTRUCTURE

There is no specific project infrastructure for the REE Zone at the moment. However, IAMGOLD owns Niobec Inc which operates an underground niobium mine just 1km from the REE Zone with an on-site mill and tailings disposal facilities.

19 MARKET STUDIES AND CONTRACTS

This section will be addressed when IAMGOLD produces a preliminary economic assessment or scoping study.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

This section will be addressed when IAMGOLD produces a preliminary economic assessment or scoping study.

21 CAPITAL AND OPERATING COSTS

This section will be addressed when IAMGOLD produces a preliminary economic assessment or scoping study.

22 ECONOMIC ANALYSIS

This section will be addressed when IAMGOLD produces a preliminary economic assessment (PEA) later in 2012. It will determine with more accuracy the economic factors that should apply to the valuation of the REE Zone. For this report and to draw the outline of the mineral resources, PJLGCI used a cut-off grade of 0.5% TREO.

To calculate the cut-off grade, PJLGCI took into consideration a broad range of REE prices from long term historical (USGS adjusted to CPI) to current Asian market trading to generally more prudent banking (CIBC) long term forecast looking forward. PJLGCI acknowledges that the current economic perspective indicates that the REE, like most commodities, are probably near a multiple year cyclical peak.

The fact that IAMGOLD is operating the Niobec mine through its 100% owned Niobec Inc subsidiary only 1 kilometer from the REE Zone and has a strong operation experience with many other mines in production helped to establish the range of mining methods and costs to establish the economic perspectives for the REE Zone. The potential immediate availability of mining infrastructures and permits favored the use of current metal prices and Niobec mining costs to draw the mineral resources cut-off grade. However, the reader should be warned that those existing infrastructures are busy with the mining of the Niobec mine. They are not designed for or do not have extra capacity to address the needs of the REE Zone exploitation. So PJLGCI used similar mining costs based on a fair comparison basis only. The main cost for the REE Zone is probably the processing cost. The processing cost would be about 10 times higher than the mining cost underground, which in turn would be higher than open pit mining costs.

Table 20 on the next page summarizes the economic factors used to define the REE Zone mineral resources at this early stage. The current estimated recovery of 53.5% in the process is supported with very preliminary metallurgical ongoing test done by IAMGOLD. See Section 13 for more details. The reference for the total operation costs in the amount of $175 to $225 per tonne is supported with the Niobec costs structure environment. Process recovery and cost estimation are somewhat in line with IAMGOLD experience at the Niobec mine.

Regarding the prices and costs forecast, PJLCGI favored the current market price based Asian Metals web site which relies on real contracts. But the figures of that source appear somewhat lagging behind the more speculative figures of Metal Page, another Asian based source of information for REE prices. Metal Page includes REO for the more expensive REO missing on Asian Metals web site. CIBC is a more long term "conservative" banking forecast missing some REO prices. The USGS is a long historical projection lagging far behind that is adjusted to inflation. Note that there are many blanks in the table because some sources do not provide those REO Prices.

The cut-off grade is the grade required to pay for processing and mining costs. PJLGCI calculated the **net value** of the TREO in US$ per kilogram to be $40.64 per kg in the mineral resources based on actual market prices (averages of Metal Page and Asian Markets) and after process recovery (53.5%) and total operating costs ($175 to $225/T). At that net value, it takes about 4.2 Kg to 5.5 Kg (or 0.42% to 0.55%) of TREO per tonne of ore to pay for the total operating costs. One Kg of TREO is equivalent to 0.1% of the ore grade. Hence, the cut-off grade should be around 0.5% which corresponds to the "natural" cut-off grade which is the distribution of grades in the block model on plan views and sections.

PJLGCI think the cut-off grade could be revised and be higher depending on the market conditions or mining scenario retained. It is noted approximately 11% of the actual estimated resource only was classified in the range of the 0.5% to 1.0% TREO grade range. But a cut-off grade between 0.5% and 1.0% nibbles at the edge of the REE Zone, or it could transform the REE Zone into a "Swiss cheese". See Figure 29. Very low grade and higher grade material will be difficult to separate. The grade model is not clearly delineated inside the REE Zone at the current level of definition to suggest selective mining methods. PJ Lafleur knows by experience that this is a problem in the niobium mine at the moment. In other words, trying to be selective in a bulky material with no sharp edges makes it impossible to draw the line between ore and waste (low grade in fact). It also draws the costs way up and reduces ore recovery.

Table 20 Economic Factors

			Asian Metal		Metal Page		**Base Case AM&MP**		Bear Lodge 6% TREO	CIBC	USGS adjusted to CPI
Metal Name		**Grade PPM**	**Metal Price $/kg**	**%Net Value**	**Metal Price $/kg**	**%Net Value**	**Metal Price $/kg**	**%Net Value**	**Metal Price $/kg**	**Metal Price $/kg**	**Metal Price $/kg**
Light REO	**Lanthanum**	3708	5	1.5%	65	7.1%	35	7.1%	5	17	350
	Cerium	7256	86	53.2%	75	32.2%	81	32.2%	86	12	300
	Praseodymium	797	42	2.9%	255	6.5%	149	6.5%	42	75	500
	Neodymium	2798	136	32.5%	205	26.3%	171	26.3%	136	77	475
	Samarium	315	5	0.1%	138	1.2%	72	1.2%	5	14	350
Heavy REO	**Europium**	64.9	1,400	7.8%	4,900	11.3%	3,150	11.3%	1,400	1,393	7,000
	Gadolinium	150	13	0.2%	205	0.9%	109	0.9%	13	55	500
	Terbium	11.7	537	0.5%	2,800	1.1%	1,669	1.1%	537	1,056	2,000
	Dysprosium	42.9	320	1.2%	2,570	3.4%	1,445	3.4%	320	688	500
	Holmium	4.69		0.0%	50,000	6.5%	25,000	6.5%			1,100
	Erbium	8.93	266	0.2%	266	0.1%	266	0.1%	266		700
	Thulium	2.05		0.0%	60,000	3.4%	30,000	3.4%			7,000
	Ytterbium	4.71	99	0.0%	99	0.0%	99	0.0%	99		1,600
	Lutetium	0.67		0.0%	300	0.0%	150	0.0%			
Others	**Scandium**	37.3	400	1.3%	400	0.8%	400	0.8%	400		20,000
	Gallium	51.1	600	2.6%	600	1.7%	600	1.7%	600		
	Yttrium	101	10	0.1%	160	0.5%	85	0.5%	10	67	480
	Niobium	831		0.0%	40	0.9%	20	0.9%			
	Thorium	481	100	4.1%	100	2.7%	100	2.7%	100		
	Uranium	3.15	100	0.0%	100	0.0%	100	0.0%	100		
	Process Recovery		53.5%		53.5%		53.5%		53.5%	53.5%	53.5%
	TREO $/Kg		**21.26**		**60.02**		**40.64**		**26.13**	**8.67**	**144.56**

23 ADJACENT PROPERTIES

There are no known properties considered prospective for REE elements and/or niobium mineralization adjacent to the project area.

24 OTHER RELEVANT DATA AND INFORMATION

Given the interest for REE deposits in the world at the moment, it may be of interest to mention that at least 2 REE exploration projects in carbonatites are found in Quebec at the moment: the Oka project owned by Niocan inc. (Oka region) and the Montviel.project owned by Geomega Resources Inc. (north of Lebel-sur-Quevillon). There are at least two more projects related to alkaline complex: one in a peralkaline granite, the Strange Lake B Zone of Quest Rare Minerals (north-east of Shefferville) and the Kipawa project of Matamec Exploration hosted in a syenite layered complex (Temiscamingue area). Some are found in Ontario and the rest of Canada. There are some in the US. Among those, the famous Mountain Pass rich REE mine (carbonatite hosted) is said to be reopening. The Bear Lodge project located in Wyoming is worth mentioning and constitutes a diatreme and breccia complex related to a carbonatite and is progressing towards production. Brazil is claiming to have found some high grade REE deposits. Tanzania Ol Doinyo Lengaï is the only active carbonatite volcano in the world today but some 250 other deposits of REE are being explored, developed or mined in the world according to the CIBC (Canadian Bank of Commerce) while China continue to mine the famous Bayan Obo deposit.
http://en.wikipedia.org/wiki/Rare_earth_element

Table 21 on the next page reports other REE and some other associated elements of interest found in the REE zone of Niobec and not listed in the main report for mineral resources in section 14. It should be noted that Y_2O_3 behaves in synch with TREO. It is often reported with TREO as part of the REE. It was not added to TREO in the table below. It has an average grade of 94 ppm or 0.5% of TREO and a net value ($) of 0.5% of TREO. It should be noted that niobium is inversely proportional to TREO, i.e., it decreases with increasing TREO. Nb_2O_5 increases from 700 ppm to over 1000 ppm when TREO falls below 0.5%. Niobium has an economic potential below 1% net value ($) compared to TREO in the REE Zone. It is worth mentioning that Uranium grade is about 5 ppm and therefore it has no economic interest which is why it is not in the table.

REE Mineral Resources by Grade Groups				Other Heavy REO					Other Elements of Interest				
Grade Groups % TREO	Tonnage Million Tonnes	% TREO	ppm HREO	Er_2O_3 ppm	Ho_2O_3 ppm	Yb_2O_3 ppm	Tm_2O_3 ppm	Lu_2O_3 ppm	Sc_2O_3 ppm	Sr_2O_3 ppm	Y_2O_3 ppm	Nb_2O_3 ppm	Th_2O_3 ppm
> 2.50	13.2	2.93	552	*16.8*	*8.9*	*8.8*	*3.9*	*1.5*	*50.7*	1541	*127*	743	567
2.00 to 2.50	80	2.16	408	*12.4*	*6.6*	*6.5*	*2.8*	*1.1*	*50.1*	1580	*108*	711	519
1.75 to 2.00	123.8	1.87	353	*10.8*	*5.7*	*5.7*	*2.5*	*1.0*	*48.7*	1612	*104*	717	497
1.50 to 1.75	98	1.64	309	*9.4*	*5.0*	*4.9*	*2.2*	*0.8*	*43.7*	1603	*99*	750	439
1.00 to 1.50	99.2	1.26	237	*7.2*	*3.8*	*3.8*	*1.7*	*0.6*	*35.1*	1594	*82*	734	305
0.5 to 1.00	52.6	0.81	153	*4.7*	*2.5*	*2.5*	*1.1*	*0.4*	*25.4*	1352	*56*	702	181
Total/Average Grade	**466.8**	**1.65**	**311**	*9.5*	*5.0*	*5.0*	*2.2*	*0.8*	*42.4*	1569	*94*	726	414
	Niobec TREO Signature		1.88%	*0.06 %*	*0.030 %*	*0.030 %*	*0.013 %*	*0.005 %*					

REO Mineral Resources by Depth				Other Heavy REO					Other Elements of Interest				
DEPTH SLICES m	Tonnage Million Tonnes	% TREO	ppm HREO	Er_2O_3 *ppm*	Ho_2O_3 *ppm*	Yb_2O_3 *ppm*	Tm_2O_3 *ppm*	Lu_2O_3 *ppm*	Sc_2O_3 ppm	Sr_2O_3 ppm	Y_2O_3 ppm	Nb_2O_3 ppm	Th_2O_3 ppm
Surface at 9975	5.4	1.9	358	*10.9*	*5.8*	*5.7*	*2.5*	*1.0*	46.0	1502	113	901	541
9950 (+/-25m)	60.5	1.77	333	*10.2*	*5.4*	*5.3*	*2.3*	*0.9*	43.7	1351	104	768	452
9900 (+/-25m)	72.7	1.65	311	*9.5*	*5.0*	*5.0*	*2.2*	*0.8*	41.5	1398	96	729	416
9850 (+/-25m)	72	1.61	303	*9.3*	*4.9*	*4.9*	*2.1*	*0.8*	42.4	1544	93	726	412
9800 (+/-25m)	70.2	1.61	303	*9.3*	*4.9*	*4.9*	*2.1*	*0.8*	43.1	1640	91	728	405
9750 (+/-25m)	66.7	1.63	308	*9.4*	*4.9*	*4.9*	*2.1*	*0.8*	43.0	1693	91	723	403
9700 (+/-25m)	61.8	1.64	309	*9.4*	*5.0*	*5.0*	*2.2*	*0.8*	42.4	1724	92	706	406
9650 (+/-25m)	57.4	1.66	312	*9.5*	*5.0*	*5.0*	*2.2*	*0.8*	40.6	1658	90	680	395
Total/Average Grade	**466.8**	**1.65**	**311**	***9.5***	***5.0***	***5.0***	***2.2***	***0.8***	42.4	1569	94	726	414

* TREO is for Total Rare Earth Oxides which include La_2O_3, Ce_2O_3, Pr_2O_3, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, and Lu_2O_3.

** HREO is for Heavy Rare Earth Oxides which include in this table the 4 most important HREE elements, namely Eu_2O_3, Gd_2O_3, Tb_2O_3 and Dy_2O_3.

Table 21 Mineral Resources of the REE Zone – Other REO and complementary elements

25 INTERPRETATION AND CONCLUSIONS

25.1 Geology, drilling and geophysics

25.1.1 Geological compilation:

To comply with the NI43-101, the technical report on the REE Zone which was initially discovered in 1968 at the same time as the niobium zone (actual Niobec mine) includes a geological compilation following the review of considerable different geological and petro-mineralogical works that were necessary to consolidate the actual geological knowledge of the St-Honoré Carbonatite Complex.

This geo-scientific compilation allowed a better understanding of this carbonatite setting and the geometry of its different phases by the establishment of a rigorous compilation map which allowed the realization of interpretative geological sections. These schematic sections help to better visualize the internal organisation of the carbonatite, particularly the relation between the Niobec mine and the REE Zone and their deep-seated evolution.

At a regional scale, new regional exploration guides have been established where the carbonatite seems strictly associated to the intersection of NNE to NNW lineaments with the known NW-SE normal faults of the Saguenay rift.

At the scale of the carbonatite complex, the REE mineralization keeps strictly associated to the REE Zone which corresponds to the central brecciated core (the pipe) of the carbonatite complex. This REE mineralization is a disseminated type mineralization associated to the ferrocarbonatite matrix of the breccia accompanied with a hematitic and /or chloritic alteration which eventual zoning has not yet been established.

25.1.2 Drilling

IAMGOLD drill holes campaign of 2011 (29 holes totalling 13 789 m) realized on the REE Zone confirms the presence of the REE mineralization in the brecciated facies which constitute all the central core of the carbonatite. This drilling campaign confirms the grades found in the historical campaign, has outlined new mineralized sections with more high values of TREE and gives a better scheme for the mineralization distribution. Concerning this last point, the north and north-east limit of this REE Zone keeps weakly mineralized until a depth of 300m.

It is important to notice that this drilling campaign used a N031°grid of 100X200m (to keep the same orientation as the mine grid) and recognized the zone on a regular spacing to a depth of about 400m. As the REE Zone has a conical form, a unidirectional drilling grid could delineate eventual rich structures in the north-east direction. Given additional drilling on a tight grid of 50x100m is likely required, we recommend, at least partially, one or two grid lines of drilling on a perpendicular direction of the elongation axis of the REE Zone.

Finely, the 2011 drill campaign, drill core handling, logging and sampling protocols are according to conventional industry standards and conform to generally accepted best practices.

25.1.3 Exploration

At the scale of the St-Honoré carbonatite complex, no geophysical exploration works have been done since the discovery work of Soquem. A geophysical compilation of all these data (aerial and ground geophysic surveys) was undertaken by Lambert, 2003 and highlighted that new geophysical methods, using high resolution techniques, could be tested on the known mineralized zones. The presence of the Trenton unit all over the St-Honoré Carbonatite could hide potential mineralized zones, particularly of Niobium mineralization, but also other minerals, in the south-east cone-sheets zone.

25.2 Mineral resources estimation – REE zone

There is nothing in particular to add about the mineral resources. All the conclusions and interpretations are already mentioned along the procedure to establish their value in section 14, 22 and 24.

26 RECOMMENDATIONS

At the scale of the REE Zone, we recommend the following:

- A better description of the different brecciated facies of the REE Zone in the aim to put in light an eventual spatial organization of the altered and mineralized facies simultaneous to an eventual alteration zoning, at least between the hematitic and the chloritic alteration;
- To try to recognize an eventual pattern for the rich mineralized zones (facies spatial organization or tectonic structures) first by a drilling recognition in two different orientations. The actual grid is oriented N031 and we propose a recognition perpendicular to the elongation axis of the REE Zone, thus northwest-southeast;
- Systematic geological sections drawing and interpretation with the goal to put in light an eventual spatial organization of these different breccia facies;
- Radiometry has yet to be correlated with REE grade for calibration, if possible. Perhaps it should be performed in the drillholes rather than on core boxes and evaluated to see if it could be of any use at a more advanced stage of grade estimation. Radiometry is used systematically in coal and uranium (even for water), not to replace assaying, but to have an immediate response at the fraction of the costs of assaying. Measuring gamma rays in the hole, overcomes core recovery problems and tells the geologist about the nature and relative value of potential ore outside the drillhole to a certain range up to a few metres, in a much larger space than in the relatively thin core. It is very useful where applicable usually;
- Minimum sample length should be at least 3 metres to minimize assay costs, and this, without decreasing the level of details that can be defined in that kind of broad disseminated mineralization zone;
- Drilling on a 50 x 50 metre grid is recommended but the final grid will depend on the mining method selected;
- The geology team should use Lab Logger form Gemcom and streamline the capturing of assays and laboratory certificates to reduce errors.

At the scale of the whole Carbonatite complex:

- To continue the geological compilation by making use of all the regional historical drill holes data in the aim to improve the geological map;

- Exploration should be oriented along the regional NW-SE cone sheets accretion axis which potential is highlighted by the presence of the Niobec mine;
- Exploration drilling should be oriented to complete the picture of the circular shape of the mineral zones as well as to trace structural features that are linear such as regional and local faults;
- To complete the geophysical compilation of all the ancient works (aerial and ground geophysic surveys), after which new geophysical methods, using high resolution techniques, could be tested on the known mineralized zones. The presence of the Trenton unit all over the St-Honoré Carbonatite could hide potential mineralized zones, particularly niobium mineralization, but also for others minerals.

Finely, at regional scale, to reconsider the geophysical anomalies of the aerial survey in the light of the new guides thus the intersection of the NW-SE lineaments and the NNW-SSE to NNE-SSW lineaments.

IAMGOLD should pursue the next stage of development for the REE Zone and of the PEA in 2012 at the earliest time possible. This is currently being planned.

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DATE AND SIGNATURE PAGE

/s/ Pierre-Jean Lafleur
Pierre-Jean Lafleur

March 15th, 2012
Date

/s/ Mohamed Ali Ben Ayad
Mohamed Ali Ben Ayad

March 15th, 2012

Date

QUALIFICATIONS CERTIFICATE

Mohammed Ali Ben Ayad , PhD, MBA, do hereby certify that:

- I, a professional geoscientist with a PhD degree from the University of Toulouse III of France (1987) and an MBA of the University of Sherbrooke, Québec, Canada (2002), am a consulting geologist since 1997. Since 2006; I am an associate geologist with P.J. Lafleur Géo-Conseil Inc. Since 2007 I am also an associate geologist with Watts, Griffis & McOuat.
- I have been a member of the APGGQ (Association Professionnel des Géologues et Géophysiciens du Québec) before the recent creation of the OGQ (Ordre des Géologues du Québec) where my membership number is 1273.I have been a member of AMBAQ (Association des MBA du Québec) in 2002-2003.
- I have more than 20 years of experience in the mining industry, as a mine geologist; senior mine exploration geologist and senior exploration geologist in different geological environments for different precious, semi-precious metals and base metals companies.
- I have been involved in different mineral and mining projects at various stage of development in North Africa since 1987, in Abitibi Greenstone Belt (Québec, Canada) since 1992; in West Africa since 1996 and recently in the establishment of the 43 101 Technical report for different companies having projects around the world (West Africa; North and South America and Southeast Asia).
- I have read the definition of “Qualified Person” set out in Regulation National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in Regulation 43-101) and past relevant work experience, I fulfil the requirements to be a “qualified person” for the purpose of Regulation 43-101.
- I am responsible for the preparation of the report titled “NI 43-101 Technical Report for section 4 to 11, 25 and 26 **.** I have been on the property twice, between the 5 th and 9 th December 2011 and the 20 th and 21th December 2011.
- I never had any prior involvement with the property that is the subject of the Technical Report,
- I am independent of the issuer (IAMGOLD) applying all of the tests in Section 1.4 of Regulation 43-101.
- Information relating to permitting, legal, title, action and related issues were verified partially in this mission. I have relied on information provided to me by Mme Marie France Bugnon, General Manager Exploration for IAMGOLD.

- I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclosure which makes the Technical Report misleading.
- I consent to the filling of the technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites accessible by the public, of the Technical Report.
- As of the date of this certificate, to the best of my knowledge, information and belief, the Technical report contains all scientific and technical information that is required to be disclosed to make the technical Report not misleading.
- All the data used to prepare this report, recuperated from the Niobec Mine geology department, are based on the past assessment files (GM) existing, at this date of report signature, on the E-Sigeom EXAMIN engine research at the "Ministère des Ressources Naturelles et de la Faune du Québec" (MRNF. Web site: www.mrn.gouv.qc.ca).

Prepared in Montreal, this March 15 th , 2012:

/s/ Mohammed Ali Ben Ayad

Mohammed Ali Ben Ayad, PhD, MBA.

(OGQ, No. 1273)
6009, Boulevard Rosemont
Montreal, H1M 1G8, Quebec, Canada
GSM: 514 947 4300
E-mail: alibenayad1@hotmail.com

QUALIFICATIONS CERTIFICATE

I, Pierre Jean Lafleur, Professional Engineer, do certify that:

- I am president of P.J. Lafleur Géo-Conseil Inc. located at 933 Carré Valois, Ste-Thérèse, Québec, Canada, J7E 4L8 (Tel. 450-979-6488), a Corporation managing my professional services to IAMGOLD Corporation, a Canadian corporation having its head office at 401 Bay Street, Suite 3200, Toronto, Ontario (M5H 2Y4)
- This Certificate applies to the 43-101 Technical Report for the Mineral Resources at the Rare Earth Elements Zone near the Niobec Mine, Saguenay, Quebec completed in March 2012 for IAMGOLD Corporation
- I have practice my profession in exploration, geology and mining for more than 30 years, and I have experience in gold, base metals and industrial minerals as well. I have worked for Consolidated Goldfields (1980-81), Falconbridge (1981-84), Audrey Resources (1985-1993). I have been a consulting P.Eng. since 1987. I have worked in Canada and abroad. I have specialised in computer modeling of mineral resources and mine planning. I am also a Senior Business Associate of Gemcom Software International Inc.
- I am a registered Professional Engineer in the Province of Québec (OIQ # 39862).
- I am a member of the Canadian Institute of Mines and Metallurgy.
- I am graduated from École Polytechnique of Montreal (B. ENG.) in Geology in 1976.
- I have visited the Project site in December 2011.
- I am responsible in part for section 10 to 26, except section 13, of the 43-101 Technical Report for the Mineral Resources at the REE Zone Project of IAMGOLD Corporation
- I have not had prior involvement with the property that is the subject of the Technical Report.
- I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report or the omission to disclose which makes the Technical Report misleading.
- I am an independent consultant in the sense set out in section 1.4 of NI 43-101.
- I have not received, nor do I expect to receive directly or indirectly any interest in any form for the REE Zone project, or any property or project from IAMGOLD Corporation

- As of the date of this certificate, to the best of my knowledge, information and belief, the Technical report contains all scientific and technical information that is required to be disclosed to make the technical Report not misleading.
- I have read NI 43-101 and Form 43-101 F1, and the Technical Report has been prepared in compliance with that instrument and form 43-101 F1.

Prepared in Ste-Therese, this March 15 th, 2012

/s/ Pierre Jean Lafleur, P.Eng.,

Pierre Jean Lafleur, P.Eng.,

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Appendix

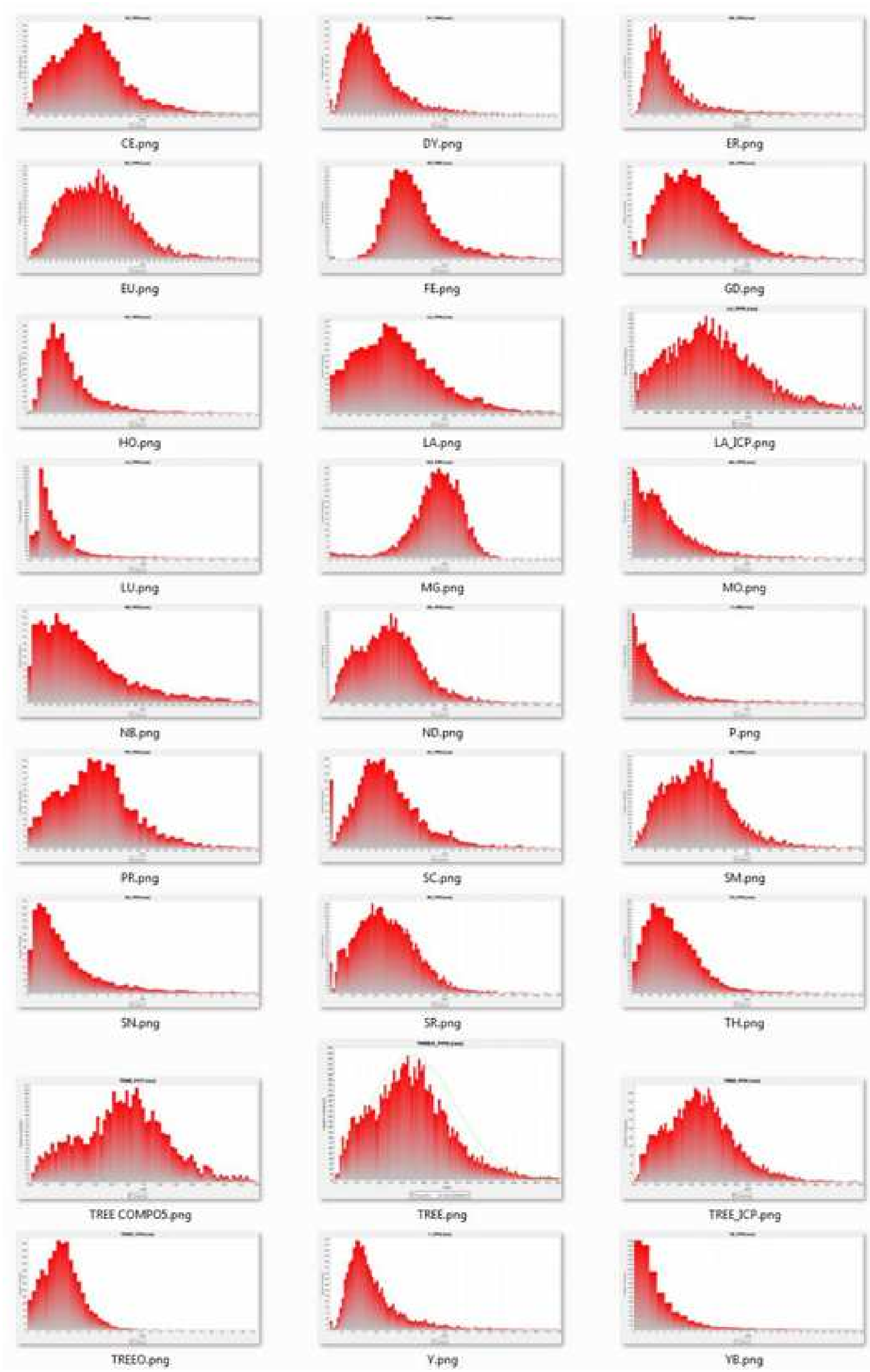
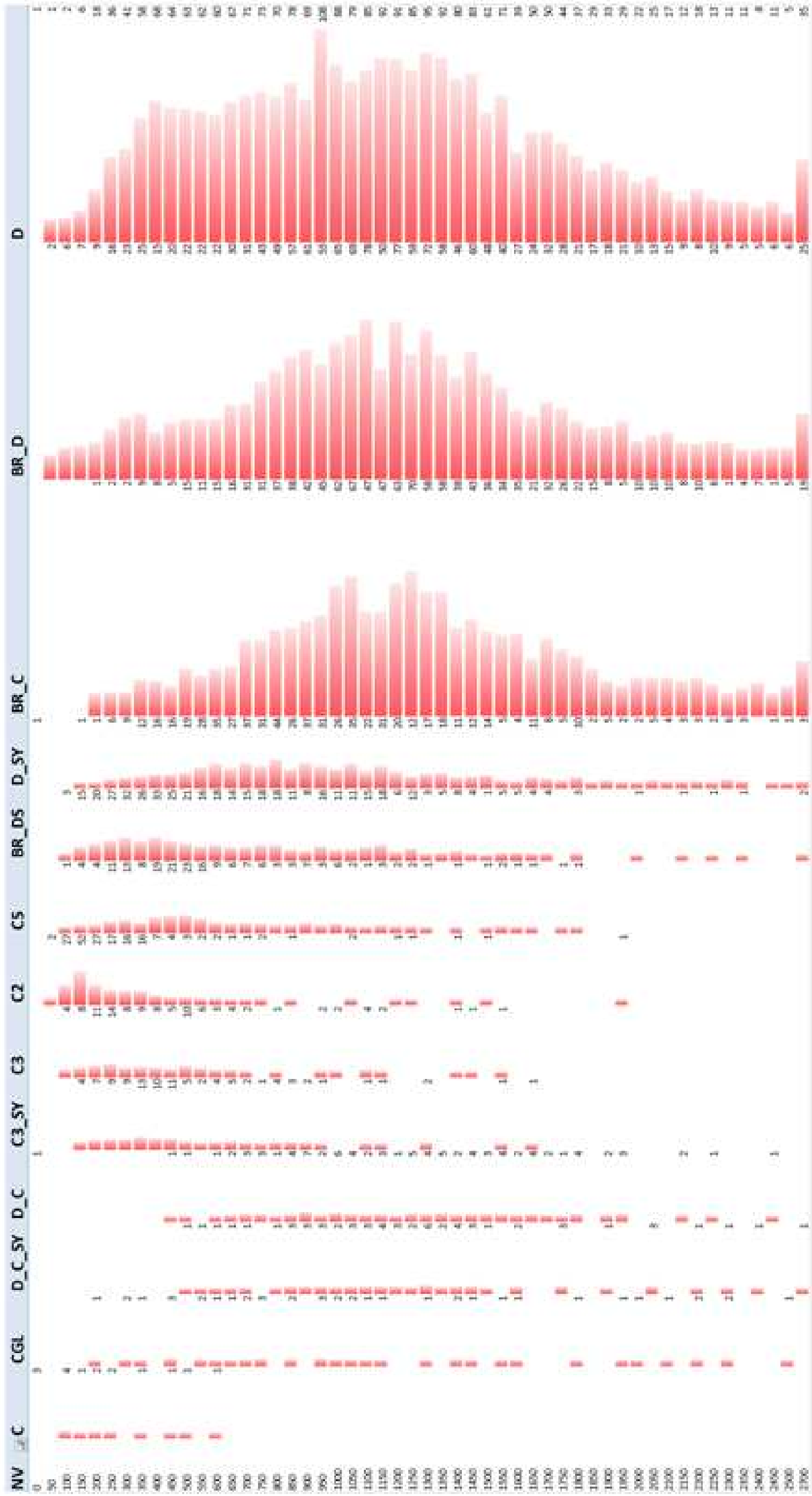


Figure 30 Histograms of REE and Other Elements

Table 22 List of Drillholes with Sampling Statistics

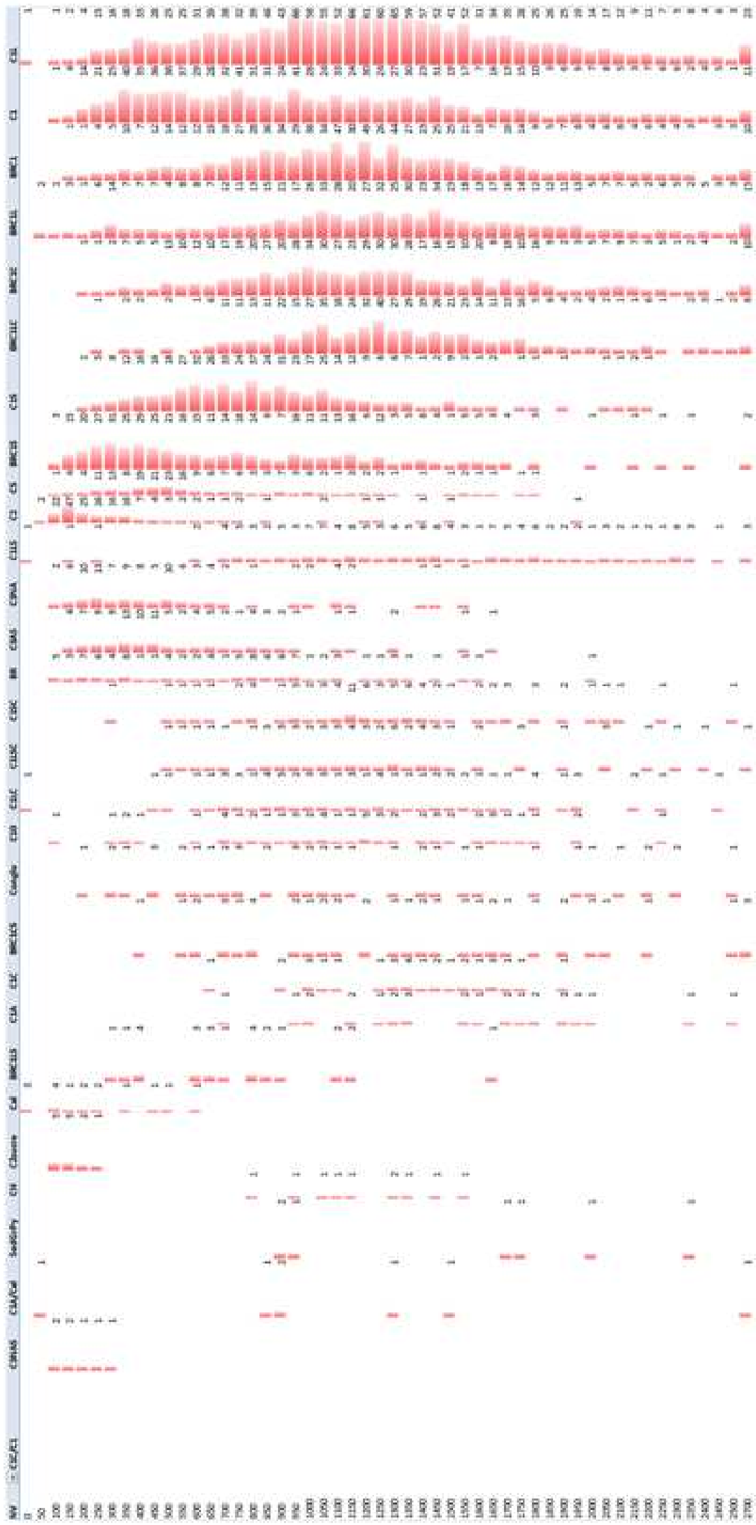
		Assay			Number of Assays																		
Year	HOLE-ID	Metres	Avg Length	TREO PPM	TREO	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y	Th	U	Nb
2011	2011-REE-001	233	1.97	20829	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
	2011-REE-002	221	1.94	14162	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
	2011-REE-003	228	2.85	19347	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
	2011-REE-004	238	1.97	14319	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
	2011-REE-005	423	1.49	12211	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283
	2011-REE-006	408	1.50	11222	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272
	2011-REE-007	445	1.50	18127	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297
	2011-REE-008	291	1.50	9421	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194
	2011-REE-009	428	1.50	20576	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285
	2011-REE-010	411	1.50	21232	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274
	2011-REE-011	401	1.50	23152	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267
	2011-REE-012	438	1.50	17829	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292
	2011-REE-013	438	1.50	18533	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292
	2011-REE-014	432	1.50	17482	288	288	288	288	288	288	288	288	288	288	288	288	288	288	288	288	288	288	288
	2011-REE-015	405	1.50	19797	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
	2011-REE-016	399	1.50	23728	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266
	2011-REE-017	417	1.50	9410	278	278	278	278	278	278	278	278	278	278	278	278	278	278	278	278	278	278	278
	2011-REE-018	383	1.50	18817	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255
	2011-REE-019B	383	1.50	20097	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255
	2011-REE-020	480	1.50	15184	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
	2011-REE-021	473	1.50	15239	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315
	2011-REE-022	399	1.50	16832	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266
	2011-REE-023	416	1.50	20529	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277
	2011-REE-024	383	1.50	10955	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255
	2011-REE-025	702	1.50	19401	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468
	2011-REE-026	732	1.50	20469	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488
	2011-REE-027	725	1.50	19144	483	483	483	483	483	483	483	483	483	483	483	483	483	483	483	483	483	483	483
	2011-REE-028	720	1.50	19244	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480
	S-3607	658	1.52	11494	432	432	432	432	432	432	432	432	432	432	432	432	432	432	432	432	432	432	432
Total 2011		12705	1.53	17371	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285	8285
1985	85-1	537	2.74	17871	196	196	196	196	196	196	196			196									196
	85-2	445	2.70	15437	165	165		165	165		165			165									165
	85-3	531	2.59	20381	205	205		205	205		205			205									205
Total 1985		1513	2.67	18071	566	566	196	566	566	196	566			566									566
1978	782-901	398	2.97	11044	37	37																	
	782-907	183	2.96	6613	62	62																	
	782-908	154	2.91	11362	26	26																	
	782-911	139	2.90	1268	5	5																	
Total 1978		875	2.94	8618	130	130																	
1975	782-801	79	3.02	29924	26	26																	
	782-802	76	3.02	44824	25	25																	
	782-803	79	3.05	14682	26	26																	
	782-804	86	2.95	23535	29	29																	
	782-805	62	2.93	23677	21	21																	
	782-806	144	2.99	27322	48	48																	
	782-808	91	3.05	30806	30	30																	
Total 1975		616	3.00	27784	205	205																	
1971	782-102	40	2.83	2863	13	13																	
	782-104	8	2.69	1984	2	3																	
	782-105	38	3.81	4722	10	10																	
	782-106	11	2.69	2116	3	3																	
	782-107	11	2.68	2877	4	4																	
	782-751	50	2.96	1190	2	2															3	17	
Total 1971		158	3.03	3196	34	35															3	17	
1970	782-101	57	2.85	2586	6	6																	
Total 1970		57	2.85	2586	6	6																	
1968	782-701	221	2.66	6875	43	43																	
	782-704	98	2.14	32210	41	41																	
	782-705	55	2.76	10361	18	18																	
	782-706	145	3.55	1020	7	7																	
	782-708	85	2.84	5718	22	22																	
	782-709	92	2.89	19727	28	28																	
	782-712	42	3.50	19775	12	12																	
Total 1968		739	2.80	15938	171	171																	
Total		16662	1.72	17432	9397	9398	8481	8851	8851	8481	8851	8285	8285	8851	8285	8285	8285	8285	8285	8285	8288	8302	8851

Table 23 TREO by New Rock Types



Breccias carry the REE. The Dolomite ("D") includes both breccias and more massive rock.

Table 24 TREO by Old Rock Type



The above table shows the same statistics with the actual logged rock code.