A young professional's first encounter with the world sampling community. Report from World Conference on Sampling and Blending WCSB6, 2013, Lima, Peru

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As a fairly new Quality Management MSc graduate, I have been working with method development within QC, Sampling and Analysis control for a few years. In a large mining company like LKAB, sampling is really one of the key aspects to QC, but the few of us working in this area *always* meet a lot of skepticism to the perceived efforts (in time and resources) that sampling requires. And at the same time, the view regarding laboratory equipment is the total opposite, where traditionally a lot of money and other resourses are spent to improve capacity and precision without any questions asked. Regarding the primary sampling, far too often I have heard the phrase, "Why don't we just use a shovel, how much do you need for the analysis?".

At LKAB we have begun systematic work on developing our primary sampling procedures, mainly focused on how to improve representativity. The only "problem" is to get everyone from drillers, process engineers, project leaders, geologists, laboratory personnel and managers to understand how important it is to collect a representative primary sample (both from stationary or process lots), and that it is well worth the time and effort. In almost every situation, the first reaction to our recommendation for sampling is positive and almost everyone trusts our judgement on how to perform representative primary sampling. But when it comes to the practical side of things and the driller realises he might have to wait a few minutes before starting to drill, for the sample to be collected, the complaining starts. Or when the project manager realises that a Vezin sampler is twice the cost of a hammer-sampler, our efforts sometimes seem pointless. What I miss the most in my everyday work is the ability to simply make everyone understand that without a representative sample, none of the investment in time, money or resources for either primary sampling, sample preparation or analysis is worthwhile. So with this lack of tools my colleagues and I started looking around the world to find ways to learn more about TOS and practical sampling to gain the ability to spread the understanding on the necessity of representative primary sampling.

After some research and participation in a basic TOS-course in South Africa, we learnt about WCSB. When reading information and articles from previous conferences we realised that this was one of the things we had been looking for. I have just started in the field of sampling so to get the opportunity to participate in WCSB6 in Lima was quite an eye-opener. To understand that the world sampling community indeed comes across the same questions and skepticism that we do, and to start to learn about how to motivate good sampling, was both interesting and uplifting. As a fairly new professional, still having quite limited experience from practical sampling problems—and especially with TOS, the possibility to participate in both a short course in TOS and to listen to the many oral presentations, was inspiring and it gave me the possibility to start to develop my own TOS knowledge systematically. The experience and expertise from leading TOS researchers and consultants was very inspiring to listen to, although at the same time, a relatively low participation from other engineers working in the process industry was a bit disappointing. WCSB would be able to be an even more comprehensive conference if more presentations came directly from the mining and processing industries, discussing real life sampling problems and solutions. To be able to network, not only with leading researchers and consultants, but also other industry professionals would be an amazing opportunity for everyone facing the challenges of sampling every day at work.

Even if I missed hearing more presentations directly connected with industry sampling problems, I left the WCSB6 with a significantly improved understanding, inspiration and some new practical approaches

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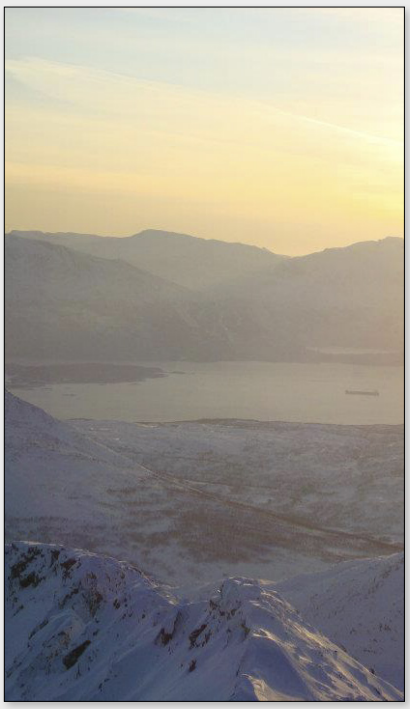
Blast hole drilling in Svappavaara, one of the more interesting sampling situations we face at LKAB today.



A cape size vessel with LKAB Iron ore leaving Narvik harbour in Norway (as seen from ski-touring to the peak of Nonstinden).

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to be able to better handle the sampling problems that I face daily. It also gave me the incentive to learn more about TOS and how this can help us to collect representative samples and improve our quality control throughout the entire processing chain. In some parts of the process I do believe that LKAB have a vast amount of experience and are well aware of the need for representative sampling. While in other stages of the process we are falling behind and still have a long way to go to reach a situation with representative primary sampling. This means that the knowledge of TOS is very much needed, not only for us working with designing primary sampling every day, but for everyone working with and around the sampling situations and managers at all levels.

I look forward to WCSB7 in Bordeaux in 2015—and I hope to see more quality and process engineers and other sampling professionals from industry both attending and presenting at this important conference.

After graduating with a MSc in Quality Technology and Management at Luleå University of Technology, the decision to start my career within the mining industry in the north of Sweden was an easy one. To be able to combine a career in the expanding mining industry in Sweden with the possibility to spend all my spare time in the mountains to go skiing, rock climbing, mountain biking and trail running is the perfect life for me. Since I started at LKAB in 2010, I have been working within Method Development in Quality Control, with a main focus on sampling and measurement uncertainty.