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Lithium

I really loved my uncle Yuri Bobukh.

As a child, I did not see him very often, as we were living a thousand miles apart. But sometimes he visited us, and one of those visits I remember particularly well. This was around 1986. He came for a whole week. He and I – a little excited kid! – worked together on repairing grandma’s house, climbing on its roof and down to the basement. We also took a daytrip across the country.

Upon leaving, Yuri gave me a gift. It was a calculator.

It’s hard to explain to modern readers what that meant in late USSR. None of my friends or schoolmates had a calculator. My mother, an engineer who maintained the integrity of telephone communications across a sizeable chunk of what’s called Kyrgyzstan today, did not have a calculator in her office either and had to do all the computations on a piece of paper.

But there was more to that. This was... a Western calculator! From the looks, from the touch, it felt so different to crude Soviet reality around as to be a piece of alien’s technology. As if some sci-fi suddenly came live in the midst of an abandoned construction site.

The thing had everything in English on it. Buttons, inscriptions. And the logo: **Lithium-Power**



My English-Russian paper dictionary had the word “Power”, but no mentioning of “Lithium”. Needless to say, nobody around had an idea either. Back then, I decided it must’ve been a brand name.

Only in 1990s, while attending the university, I saw the Periodic Table in English and realized that Lithium was, well, Lithium. A soft, very chemically reactive metal. Most people would never see it in their entire life. Yet almost everybody depends on Lithium. Because Lithium

powers things around us. Cell phones, laptops, flash lights, Teslas and Priuses – they all run on Lithium batteries. This is the metal that just works for billions of people.

About half of Lithium is mined in open pits, probably similar to this one:



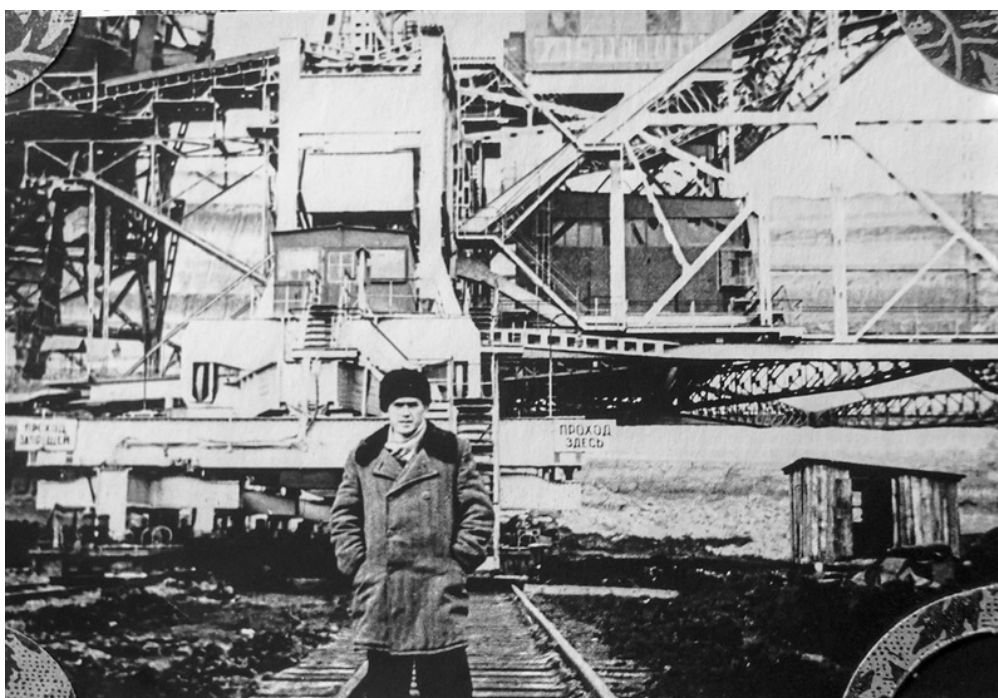
[Image credit: <https://www.mining.com/tiangji-injects-382-million-greenbushes-lithium-mine-expand/> and [Talison Lithium](#)]

That mining is often done with giant excavators, probably similar to this one:



And my uncle Yuri Bobukh happened to be one of the chief designers of those at [Kramatorsk Machinebuilding Factory](#) in what is called Ukraine today. He joined that facility in 1950s and dedicated his entire life to inventing, designing, and improving those machines. So that they, like Lithium, just work, for everyone.

And popular they were, even outside of the USSR, at least among the nearby countries. Yuri traveled to those countries a lot, helping to strike deals and making sure the machines... just work. He's been to India, to East Germany, and to what's called Serbia now, assisting mining industries of those countries with Kramatorsk-built giant machines.



That was Serbia where he bought the calculator. Made in Japan, it miraculously reached Eastern Europe and then, thanks to Yuri, ended up in the hands of a little kid in Central Asia. That kid was me.

The calculator was non-programmable and rather primitive. Yet, combined with a [slide rule](#) it enabled surprisingly rich computations to support my studies of math, physics, and chemistry. You'd be amazed at what a childhood's drive and creativity can sometimes do :)

Yuri Bobukh passed away in 2019. This is how I remember him towards the end of his life:



The rotary excavators he designed still work across the world, and quite possibly that some mine Lithium for batteries.

The batteries that, with no change, power the calculator Yuri gave me in 1986 that still works as of 2021.

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So it **does** seem fair to say that Lithium **is** a brand, in fact. A brand of people who spend lives making high quality things that keep working, no matter what. Just like my uncle Yuri.

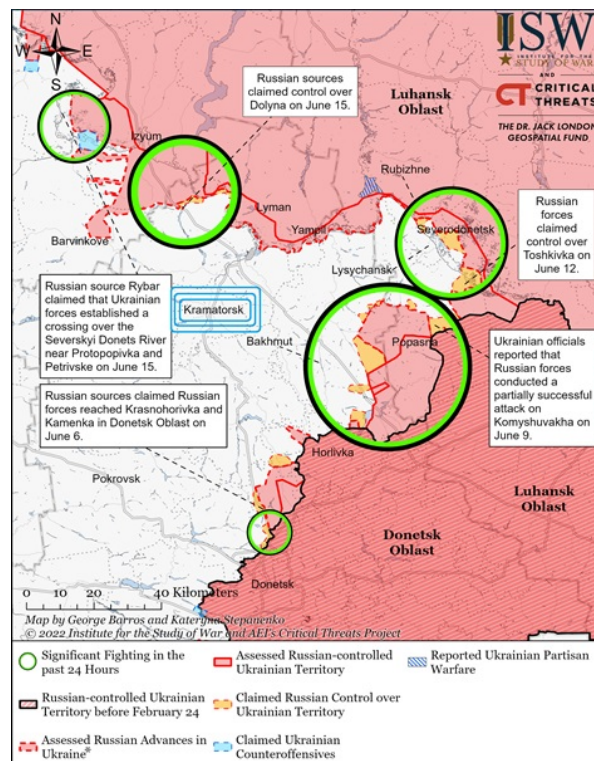
He spent most of his life in the beautiful city of Kramatorsk:





And that city is probably coming to an end.

Today, Kramatorsk is in the very focus of the war waged by Russia against Ukraine:



Day by day, Russian military makes slow, gnawing advances. They do that neither via some kind of high military art, nor with an advanced military technology. They simply concentrate excessive, overwhelming, enormous density of artillery pieces on narrow stripes of land and "just obliterate" everything there. Literally. See this cratered land?



When done, they creep onto the freshly made moonscape and repeat the cycle. They don't seem to care about people lives or economic value of the land they are taking. Cities they "liberated" are piles of rubble. Soon, the same will happen to Kramatorsk, and to the factory in it, which has already suffered hits:



When that happens, the Kramatorsk city that I knew would cease to exist.

And I feel sad about that.

Eugene

07.2022

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