



Rockstone Research

July 3, 2019

Report #10

Diamonds in Finland and
Canada



A group of investors from Europe and Canada visited the Timantti Diamond Project near Kuusamo, Finland in May 2019 (the picture shows part of the Grey Wolf Kimberlite excavated after less than 2 m of overburden).

The First Diamond Mine in Europe? 50 km south of the Arctic Circle, Arctic Star aims to make that happen!

Site-Visit Report on the Timantti/ Diamond Project in Finland

Rockstone has been following Arctic Star Exploration Corp. for several years now. In light of the recent discovery in Finland of the world's newest diamond field, the time has come to visit the project and meet the team behind Arctic Star.

Although I am already a shareholder of Arctic Star, I must admit that the site-visit somewhat changed my perspective about this project and that

I plan to participate in the next equity financing to increase my position.

Frankly put, I don't want to miss the chance when the big picture gets recognized by the market as not only I, but the entire team behind Arctic Star, believes that this has great potential to become a diamond mine, which actually would be the first ever diamond producer in the European Union.

Company Details

Arctic Star Exploration Corp.

1111 West Georgia Street

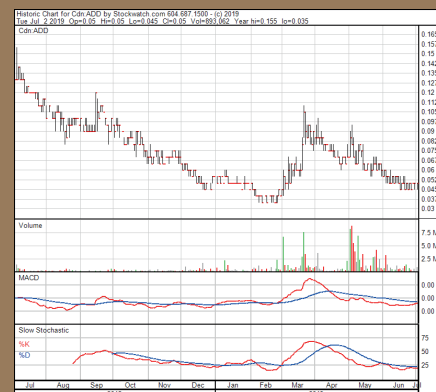
Vancouver, B.C. V6E 4M3, Canada

Phone: +1 604 689 1799

Email: info@arcticstar.ca

www.arcticstar.ca

Shares Issued & Outstanding: 128,514,274



▲ Chart Canada (TSX.V)

Canadian Symbol (TSX.V): ADD

Current Price: \$0.05 CAD (07/02/2019)

Market Capitalization: \$6 Million CAD



▲ Chart Germany (Tradegate)

German Symbol / WKN: 82A1 / A2DFY5

Current Price: €0.032 EUR (07/02/2019)

Market Capitalization: €4 Million EUR



When you watch the short site-visit video (3 minutes), you can only catch a glimpse of the project and what we have actually seen and discussed during our 4 day stay in Finland.

When you watch the presentation by **Hugh O'Brien** from the Geological Survey of Finland (GTK) in combination with the presentation by **Roy Spencer**, you may also come to the conclusion that this diamond project has encouraging signs to become a success, especially when considering that the people behind this project are highly experienced and have been extremely successful in diamond exploration (Buddy Doyle and Roy Spencer have discovered multi-billion-dollar diamond mines in Canada and Russia).

Now, they are fully dedicated and eager to find the next diamond mine – this time in Finland, to be precise on the same craton where Roy discovered the Grib Diamond Pipe in Russia approximately 450 km away.

About Dr. Hugh O'Brien

(Senior Research Scientist at Geology Survey of Finland, GTK)

After his Bachelor of Science degree in Geology at the University of Minnesota in 1982 and receiving a Ph.D. in Geology from the University of Washington in 1988, Dr. O'Brien went straight to Finland to work several years as a Research Scientist at the [Geological Survey of Finland](#) (GTK). After a 5 year stint back in the US, he returned to GTK in 1997 as a Senior Research Scientist and started consulting for various diamond exploration and production companies.

About Roy Spencer

(Finland Country Manager and Director of Arctic Star Exploration Corp.)

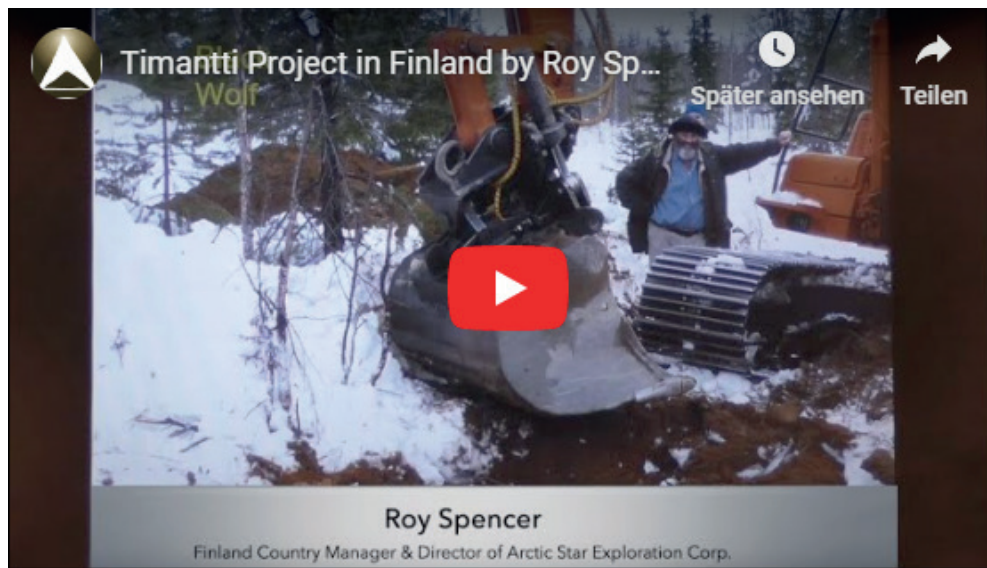
Roy Spencer (P.Geo.) joined De Beers in 1966 and has been involved with exploration and deposit evaluation for gemstones and other commodities throughout his career. As technical director of Peregrine Diamonds Ltd., he discovered the first kimberlites on the Pilbara Craton in Western Australia in 1989, and as Leader of the Owners Team for Archangel Diamond Corp. he was largely responsible for the discovery



Watch on YouTube: <https://youtu.be/prncOgcjUH8>



Watch on YouTube: <https://youtu.be/BH4p3dCxMal>



Watch on YouTube: <https://youtu.be/-VQmmpIM7xY>

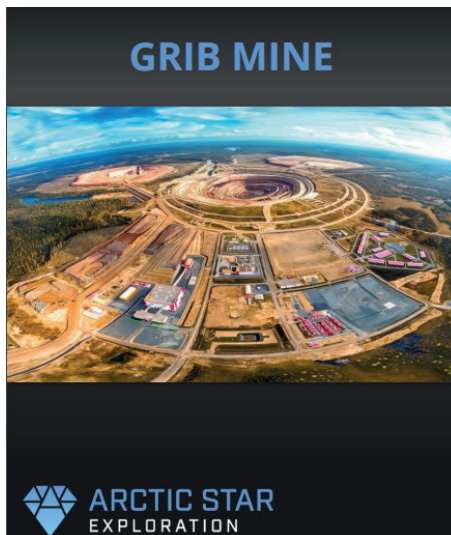


of the world-class Grib Kimberlite in northern Russia (February 1996). In 1998, Roy created and raised the seed finance for Ilmari Exploration Oy to explore for gold, base metals and diamonds on the Karelian Craton in Finland. Ilmari went public in 2000 and discovered the Lentiira kimberlite cluster in central Finland in 2003. In 2006, as CEO of London-based diamond explorer European Diamonds, Roy led the Owners Team which brought the Lqhobong Kimberlite (Lesotho) into commercial production on time and under budget. In mid-2007, Roy left European Diamonds, a company which had evolved into a successful mid-tier diamond producer and marketer after having raised £23 million over a 6-year period. Since that time, Roy has continued in gemstone exploration and deposit evaluation in Africa, Finland and western Russia for a variety of junior and senior mining companies. Roy's tertiary education was at the University of Natal and Rhodes University in South Africa, and is a member of the Geological Society of South Africa and a Fellow of the Aus.I.M.M.

It's the People that Make it Happen

Arctic Star has some of the best people to advance the Timantti (Finnish for "Diamond") Project in Finland with state-of-the-art exploration techniques, which have the objective of establishing a world-class diamond deposit in the Finnish portion of the Karelian Craton – comparable to the world-class, multi-billion-dollar diamond mines found on the Russian portion of the same Karelian Craton. This highly technical team is not only experienced with diamonds exploration but has also had great successes.

Buddy Doyle (*VP of Exploration and Director of Arctic Star Exploration Corp.*) Buddy worked for Rio Tinto for over 23 years, where he was a key member of the team which discovered the multi-million-ounce Minifie Gold Deposits at Lihir in 1987. He also led the team which discovered the Diavik Diamond Deposit in Canada in 1994. Today, Diavik is a multi-billion-dollar diamond mine, one of the largest in North America.



GRIB MINE



As already mentioned above, **Roy Spencer** discovered the Grib Diamond Pipe in Russia, located on the same geological belt (Baltic Shield / Karelian Craton) as the Timantti Diamond Field about 450 km from Kuusamo in Finland. Roy lives in London, UK, from where he can get direct flights (seasonal) to Kuusamo or via Helsinki (daily).

Arctic Star also has **Terhi Tulenheimo**, an experienced geologist who lives in Finland, representing Arctic Star's Finnish subsidiary Foriet Oy. As she has been working with Roy for almost 20 years, she is an invaluable asset overseeing all activities locally.

With **Hugh O'Brien** working for the Geological Survey of Finland (GTK), Arctic Star has an independent consultant highly experienced and specialized in diamonds and geology.

MULTI BILLION DOLLAR DIAMOND MINE DISCOVERY



Roy Spencer (Photo above) leader of the team that discovered the Grib Diamond Mine in Russia. Same geological setting as our Timantti diamond project.

Otkritie Industrial Investments purchased Grib for 1.45B. AGD Diamonds recently consolidated with Otkritie

Hugh has been living in Finland for more than 25 years and has good contacts with the government and with Finnish exploration and mining companies.

Arctic Star's President and CEO, **Patrick Power**, pulls all the strings from Vancouver, Canada. He has been involved in the diamonds exploration business for many decades, has a large network of contacts within the industry, and is key for the company to raise funds as an adept financier. His wealth of experience as a savvy deal-maker will be key for the company going forward. [See video interview here.](#)

We also had the chance to meet **Benny Jassal** during the site-visit, who is Arctic Star's CFO (+20 years of accounting experience) and an important member of the team working on the financial and corporate side of the operations.



DIAVIK MINE



MULTI BILLION DOLLAR DIAMOND MINE DISCOVERY



Buddy Doyle (Photo above) leader of the exploration team that discovered the Diavik Diamond Mine in Canada. Diavik has produced over 100 million carats since 2003. Vice President Exploration Arctic Star Exploration Inc.

Diavik is operated by Rio Tinto and sold 40% to the Washington Group for \$1.2B.



Arctic Star's Director, **Sean Charland**, was also on site, a seasoned communications professional with experience in marketing and financings (he has helped to raise over \$150 million CAD during his career), having a large network of contacts within the financial sector in North America and Europe.

Besides a group of investors from Europe and Canada, **Eric Lemieux** also participated in the site-visit. He is a Quebec geologist with 25 years of experience in mineral exploration, project valuation and expertise in gold, base-metal, diamond, uranium and Quebec shale gas and oil exploration. Read Eric's report "[Site Visit – Timantti advancing gradually as a possible tantalizing diamond play](#)"

Initial Results

Most importantly, it is key to understand that the results thus far obtained from exploration (sampling from excavating, trenching and drilling) are very encouraging for the first phase of exploration. As Roy summarized in his presentation:

"A total of 950 kg of core from the first 3 kimberlites produced 1,700 diamonds. I have been in this business for a few years now and this is about as good of a result I have ever seen."

It is absolutely normal that "only" micro-diamonds have been found so far as larger stones are typically not absent but distributed erratically throughout a diamondiferous kimberlite body. Even the most productive diamond mines in the world don't produce large stones from every ton of kimberlite processed, though the average grade may be a carat per ton or more.

Hugh explained in his site-visit presentation that "Economic ore can be as little as a few carats per 100 tons – the size of your small fingernail in 1 cubic meter of rock or the weight of a 2 Euro coin in 100 tons of rock. Consequently, it is very rare to find diamonds in exploration samples", which normally are in the range of a few tens of kilograms. However, "luckily



Location of the Timantti Project near Kuusamo in Finland as well as the Grib and Lomonosov Diamond Mines in Russia.



A fairly large pyrope-garnet crystal in kimberlite matrix found near surface at the Grey Wolf Kimberlite during the site-visit.



other mantle minerals associated with diamond are much more common in kimberlite, which are indicative that diamonds may be present in the target kimberlite body. DIM (Diamond Indicator Minerals), such as **pyrope-garnets** and **chromite**, are a great sign that diamonds are near-by – both of which Arctic Star has found after digging up some kimberlite samples near surface (less than 2 m of overburden) at the Grey Wolf Kimberlite during our site-visit.

What I have also learned during the site-visit is that when you look at the kimberlite rock, the size of **olivine** crystals is indicative of how large the diamonds could be. As you can see in the picture on the previous page, there are not only plenty of olivine crystals in the kimberlite but also pretty big ones, which is an indication that diamonds with similar sizes may be present, scattered throughout the kimberlite body. Consequently, diamond explorers must do bulk sampling of many hundreds to thousands of tons of kimberlite to get an indication of the diamond size distribution within the kimberlite body.

Instead of now doing bulk sampling of the already discovered 4 kimberlites, Arctic Star has decided to first look for more kimberlites on its property, because kimberlites typically occur in clusters, i.e. groups of many kimberlite bodies in proximity. By first finding as many kimberlites as possible, and sampling those for DIM and micro-diamonds, allows Arctic Star to thereafter decide which kimberlites are interpreted to be the most promising for bulk sampling. Keep in mind that bulk sampling is a costly endeavour and considering that we don't have a bull-market in diamonds or commodities at the moment, the company needs to be savvy on how to spend its funds.

No Competition

Back in the good days, a new diamond field discovery as such in Finland by Arctic Star would have likely resulted not only in much larger investors' interest but also in more competition surround-



Olivine is a common mineral in the earth's subsurface and the primary component of the earth's upper mantle some 150 km below surface, where diamonds also originate from. Olivines and diamonds are carried from the upper mantle toward the surface by the kimberlite magma, finally erupting as small volcanoes whose remnants are referred to as kimberlite pipes. The back side of the kimberlite sample shown above included a pyrope-garnet (see next page or the 3-minute video).

ding any new discovery. Normally, an acquisition/staking-rush in the region would occur after an initial discovery – a clear sign for investors that something big could be going on. Certainly, this would have been helpful for Arctic Star getting more attention, but on the other

hand the company thought it to be more important to get the jump early on any potentially evolving competition by securing a district-scale land package, because there is something every diamond explorer knows by heart as Roy [explained](#):

33

KOLHILASOMAT Päritie 20, hakuu 2018

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Oletko lkenut Kalle Päästien iljki-aijia?

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tuohinen@kolhilasomat.fi

Samasta löytyi kaarteja

Arctic Star Exploration Corporation kerää rahaa viitaten Kuusamossa käynnissäolevaan malminetsintään

Jari Välikangas

Arctic Star on löytöretkellä Kuusamossa. Arctic Star Exploration Corporation on yhdessä kolhilaisten kanssa.

Tuohinen on kertonut, että Arctic Star on löytöretkellä Kuusamossa. Arctic Star Exploration Corporation on yhdessä kolhilaisten kanssa.

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Kuusamon kirkon kirkonkylä Kuusamossa.

Kalle Päästien

Kimberlittipilppi

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VAIMOSUON TINTITALTAUS

Arctic Star Arctic Star Exploration Corporation on Kuusamossa.

Kuusamon kirkon kirkonkylä Kuusamossa.

"Jos siihen tulisi kaivos, niin silti ajetaan koiravaljakkoilla"

Jari Välikangas

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Meillä on nyt uusi toimintatila

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Arctic Star Arctic Star Exploration Corporation on Kuusamossa.

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MMM: Peronhoitoltain uudistustarvian arvioi aikanaan seuraava hallitus

Kari

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Asemakaava muutetaan Talvikosken keskustassa

Kari

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Arctic Star Arctic Star Exploration Corporation on Kuusamossa.



Koillissanomat (April 26, 2018)

A few days later, another follow-up article was published in the Koillissanomat newspaper, including an interview with Roy Spencer who said: "Timantit irrote-taan ilman kemikaaleja" ("Diamonds are separated without chemicals"). He was introduced as "Timanttiyhtiön johtaja Roy Spencer löytänyt aiemmin miljardiesiintymän" ("Roy Spencer, Manager of the diamond company, has found a world-class diamond deposit earlier in his career"), showing the Rockstone report ["Another Grib Diamond Mine in Finland?"](#) (Roy discovered the Grib Diamond Pipe).

No Chemicals in Diamond Mining

As Roy pointed out in the above newspaper interview, there are no chemicals involved with diamond mining. This is in stark contrast to most other commodity mines (e.g. precious and base metals, rare earths, or hard-rock lithium), where acids are required to separate the metals from each other and/or the host rock.

Diamond mining is a very straightforward process with little impact on the environment. After removing the kimberlite rock (either by an open-pit or by underground mining methods), the rock is only crushed to free the diamonds. This is a relatively clean and safe procedure when compared to metals mining and processing. As such, CAPEX (capital expenditures) and OPEX (operating expenditures) can be minimized to operate a diamond mine.

Remarkable Location

Another major factor impacting CAPEX and OPEX is the location and infrastructure of any exploration and mining project. As Roy pointed out at the very end of his presentation, it costs about \$2 billion CAD to set up a mine in Canada, simply because "most Canadian diamond mines are located many hundreds of kms from logistical centres & grid power". Consequently, "Canadian mines require a grade of +1 cpt [carat per ton] and a value of +\$100/ct" to be economic", Roy figured out and added that "these kimberlites are exceedingly rare geological features".

Another Grib Diamond Mine in Finland?

published 13 Jul 2017

Full version / After Lukoil reported nearly \$340 million USD in revenue from sales of around 4.5 million carats of rough diamonds from its Grib Mine in Russia in 2016, the mine was sold for \$1.45 billion USD to Russia's largest privately-owned financial company. (Photo: Shutterstock)

COMPANY INFO

Name: Arctic Star Exploration Corp.
Canada Symbol: ADD
Germany Symbol: WKN: B2A1 / A2DEYS
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Kun Arctic Star tiedotti viime kesänä haltuunsa hankkimasta etsintäalueesta Vaimosuola, uutisoitlin se mahdollisena toisena Grib-löytönä kaivosalan melleissa maail-malla. Kuvassa heinäkuun 13. päivänä vuonna 2017 julkaistu uutinen kaivosrahoitukseen erikoistuneen mediatyhtiö Rockstonen sivustolta.

Timantit irrotetaan ilman kemikaaleja

Kaivosyhtiön johtaja Roy Spencer löytänyt aiemmin miljardiesiintymän

Jani Väisänen

Tässä vaiheessa olemme löytäneet vain pieniä timantteja.

Timanttien kaivamista varten joutuisi mahdollisesti tekemään avolouhoksen, jolloin sivukiveäkin pitäisi siirtää, kertoo Kanadalaisen timanttien etsintäyhtiö Arctic Star Exploration Corporation -yhtiön toimitusjohtaja Roy Spencer. Hän kertoo, että yhtiö ei etsi timanttien lisäksi muita mää-nälejä tai metalleja.

Spencerin mukaan timant-tien irrottamisessa kivistä ei tulisi käytettävän ollekaan kemikaaleja, kuten esimerkiksi kulkakaivosten malmien rikas-tumisessa yleisesti tehdään.

Kaivokseen on joka ta-pauksessa hyvin hyvin pitkä matka tässä vaiheessa, kertoo Spencer.

Spencer kertoo, että ei voi ar-

vioida todennäköisyyttä, jolla timanttikaivos perustettaisiin. Kaivostoiminnan aloittami- seen Vaimosuola olisi hänen mukaansa aikaa useita vuosia, jos se tapahtuu sittenkään.

– Tässä vaiheessa olemme löytäneet vain pieniä timant-teja.

YHTIÖ ei Spencerin mukaan tiedä tässä vaiheessa tarpeek-

si timanttien laadusta.

– Kesästä vielä noin kuukau- den, ennen kuin ensimmäisten näytteen analyysi valmistuu.

Näytteitä analysoidaan Spencerin arvion mukaan vä- hitiäntä kolmen kuukauden ajan.

Kanadalainen yhtiö toimii Suomessa Foriet Oy -nimisen tytäryhtiön kautta.

SPENCER kertoo etsineen- sä timantteja neljäkymmen- tä vuotta ympäri maailmaa, muun muassa Venäjällä, Poh- jois-Amerikassa, Australiassa ja Etelä-Amerikassa. Kuusa- mossakin hän on etsinyt hyö- dynnettyinä olevia timantti- esiintymiä 2000-luvun alussa. Timantteja esiin nostavia kai- voksiakin on perustettu Spen- cerin löytöjen perusteella, hän

kertoo.

– Sellaisia ovat esimerkiksi esimerkiksi Grib-kaivos Arkan- gelin lähistöllä, Anglen esiin- tymä Australiassa ja muuta- mia kaivoksia Etelä-Afrikassa, Spencer luettelee.

Grib-kaivos myytiin Venäjäl- lä toissavuonna 1,5 miljardin dollarin hintaan. Vaimosuon mahdolliseen kaivokseen on kuitenkin vielä pitkä matka.

– Timantteja sisältävän kin- berliittiveä on sisällä useita tai ne ovat korkeintaan hyvin hy- vin vähäisiä määriä, Spencer sanoo.

MAAILMALLA esiintyvistä kimberliittipiirustista vain noin viidestä prosentista löytyy ti- mantteja, kertoo Spencer.

– Ja näistäkin vain noin vi- deessä prosentissa on timant-

teja, jotka ovat taloudellisesti hyödynnettävissä, hän jatkaa.

Yhtiö korjaa Koillissanomis- sa olleen tiedon, että timant- tien etsintään liittyvä kaivamis- työ olisi alkanut jo kesällä. Yhtiön mukaan timanttien varsi- nainen etsintäkaivannon al- loi Vaimosuola vasta syksyllä.

– Aloitimme muistaak- se mukaan siinä loka- marras- kuussa, Spencer kertoo.

KANADALAINEN etsintäyhtiö on kerättyä rahaa timanttien etsimiseen Kuusamossa.

– Aloitimme rahoituksen ke- räämisen puoli vuotta sitten.

Spencer sanoo, että kanada- laisella yhtiöllä ei ole mitään te- kermistä australialaisen Dragon Mining -nimisen kaivosyhtiön kanssa. Foriet Oy:stä kerrotaan, että Foriet Oy siirtyi Arctic Sta-

rilte Britanniaan rekisteröityä Dragon Equities Limited -yhti- öksi, joka kuuluu niin ikään Bri- tannian rekisteröityyn Dragon Group Limitediin.

Kun Arctic Star mainostaa Kuusamontimantiesiintymän rinnalla tietoja etsijöiden aikai- semmista timanttilöydöistä, kuten esimerkiksi Spencerin mainitsemasta miljardiluokan Grib-kaivoksesta.

Yhtiö kiinnittää mainonmas- saan huomion myös Suomen sallivana pidettyyn kaivoslain- säädintään. Tiedotteissaan yhtiö viittaa vertailuun, jonka mu- kaan Suomen lainsäädäntö on kaivoksia perustaville yrityksil- le edullisin maailmassa. Maail- man parhaaksi kaivosmaaksi Suomen julisti liberaarinen Fraser-ajatushautomo.





The Timantti Property is located just a few kilometers from the world-famous ski resort **Ruka Village** (pictured above), 17 km from Kuusamo and 400 m off the highway. The property can be reached from Kuusamo International Airport within a 25-minute drive. There is even a bus stop 2 km from the property. The municipality of Kuusamo (population: 15,800) lies on the crossroads of 2 major highways and is part of the national energy grid, whereas there is also a 6 MW electricity grid in town which uses sawmill rejects. The main industries are tourism (around 1 million visitors annually), forestry and reindeer herding.

Bottom Line

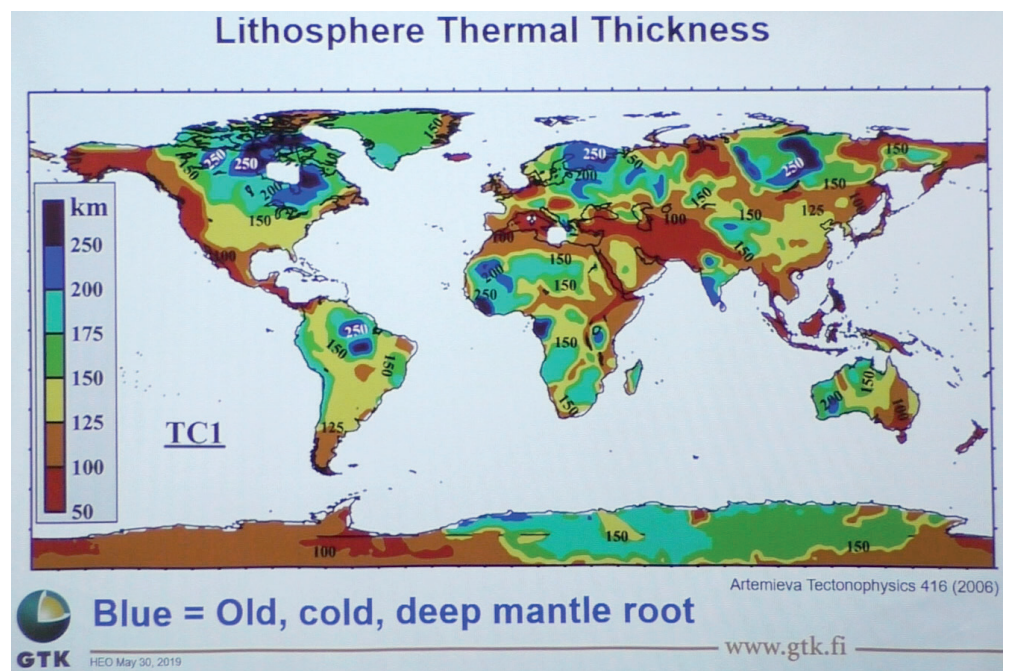
Patrick Power pointed out during the site-visit: "In 1995, there were 151 TSX-listed companies looking for diamonds. Today, there are only 5." For many years, new diamond field discoveries have become very rare and there was no bull-market in diamonds or commodities. On the other hand, there is also something positive attributed to this circumstance: It has given Arctic Star the ability to basically chose the geological and jurisdictional settings in the world that they want, because there is little serious competition out there anymore.

I don't know of any other place on the planet where a new diamond field is being discovered and delineated at the very moment as most of the favorable places for kimberlites have already been investigated. Finland appears to be the latest "hot spot" for the discovery and development of a new diamond field. When you look at the following slide from Hugh's presentation, you can see that there are not many places in the world favorable for diamonds and that Finland is one of the last places with pristine chances of finding a new diamond mine.

As per the following slide (see next page) from Hugh's presentation, the Arkhangelsk diamond area, which includes the producing Lomonosov Mine, hosts a group/cluster of kimberlite bodies, some of which are small and some of which do not contain any diamonds at all or do not contain any commercial-sized diamonds.



Ruka is Finland's most popular ski resort and "has turned into a diverse centre whose year-round usage is growing", according to Wikipedia. "In winter there are for example Nordic skiing World Cup competitions. FIS Nordic Combined season starts yearly in Ruka (Nordic Opening). There are also annual national competitions in alpine and freestyle skiing, and there have been international competitions in these sports, too. Ruka has one of the longest ski seasons in Europe, starting usually in October and ending in June. During the main season ski lifts are open daily from 9.30 am until 7 pm. There's also night skiing on Fridays 7-11 pm (usually from December until mid-April)... In the summer the snow melts and Ruka becomes a hiking and mountain biking centre with the Oulanka National Park and world-famous Karhunkierros, 80 km hiking trail, on its doorstep. Other activities on offer are canoeing, white water rafting, fishing, birdwatching, hiking with huskies, lake cruises, bear watching, water skiing and ATV safaris."



The thickest parts of the earth's rigid crust (highlighted in blue) are some of the best places to look for diamonds, because these delicate gems can not „survive“ for millions and billions of years in the hot mantle but only in those few old, cold, deep and rigid bodies of mantle, such as the Karelian Craton in Finland and Russia. (Source: [Presentation by Hugh O'Brien, Geological Survey of Finland; May 30, 2019](#))

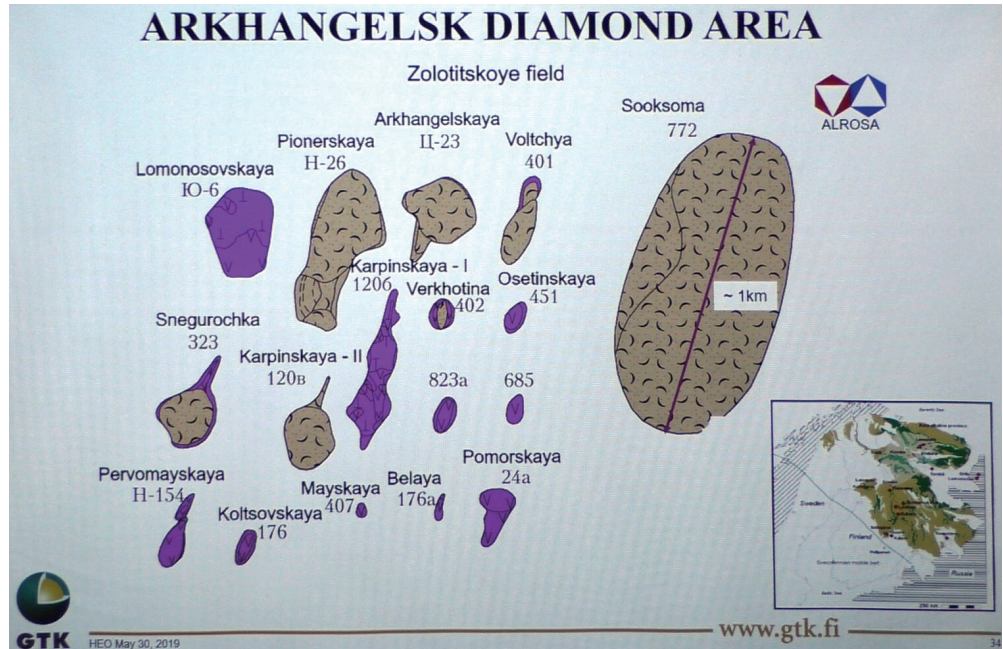


For example, the 1 km large **Sooksoma Kimberlite** does not contain any diamonds. For such reasons, Arctic Star feels it's important to first find more kimberlites on its property, whereafter bulk sampling is planned for the best ones.

According to following slide from Hugh's presentation: Of all the kimberlites identified in the Arkhangelsk diamond area in Russia, only the **Arkhangelskaya Kimberlite** hosts high diamond grades of around 1 carat/ton, while the **Karpinskaya - I Kimberlite** averages 0.65 carats/ton (probably still very economic). Other kimberlites have uneconomic grades as low as 0.09 carats/ton (**Pomorskaya Kimberlite**). In essence, not every diamondiferous kimberlite hosts economic grades, hence making it more important to find as many kimberlites in the field as possible to then decide which ones are most prospective to contain economic grades.

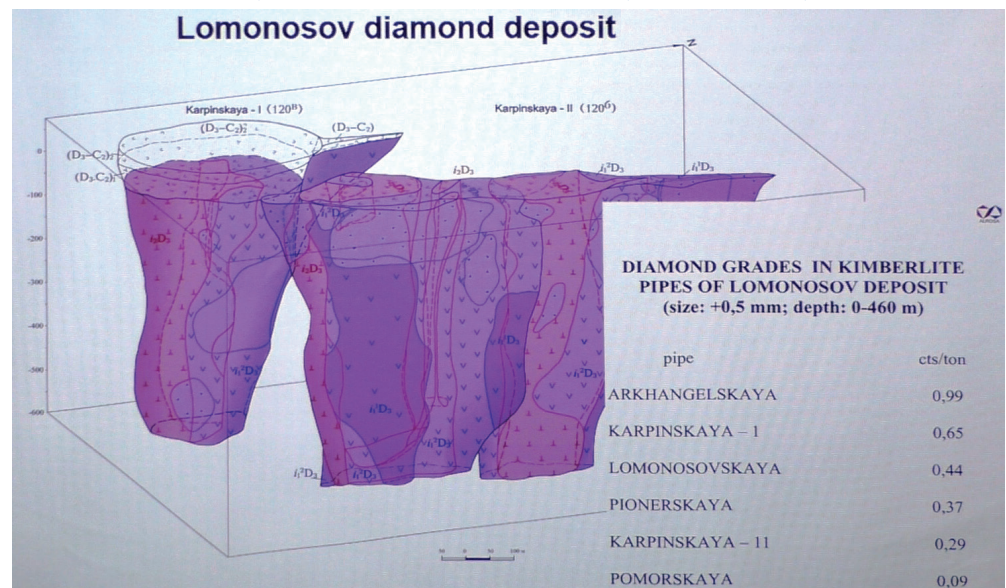
As Roy noted in his presentation, a group of prospectors found a 2.8 carat diamond (from till sampling) across the Russian border, which got transported away from its source by glaciers / ice sheets some 10,000 years ago: "All of these till sheets that cover this whole area [in Russia] have come from Finland. So, I am pretty confident that most of the indicator minerals and certainly the diamonds that we found up here [in Russia], have not come from Russia at all, they have come from Finland." This 2.8 carat diamond find (a very, very rare event) demonstrates that there may also exist large diamonds in the Finnish part of the Karelian Craton, the source of which has yet to be found.

The ice sheets mentioned can be followed all the way to the Arkhangelsk diamond fields (Lomonosov and Grib Mines) some 450 km east of Kuusamo. As these huge ice sheets moved from the west to the east, they dragged along not only indicator minerals and diamonds from kimberlite sources but also rocks/ sediments from the surface of the area. In this context, note Roy mentioning that the Arkhangelsk diamond field has 65 m of completely barren sediments sitting above the kimberlites, so there was a good portion of luck involved



Surface outlines of some of the kimberlite pipe discoveries in the Arkhangelsk Area.

Source: [Presentation by Hugh O'Brien, Geological Survey of Finland; May 30, 2019](#)



Source: [Presentation by Hugh O'Brien, Geological Survey of Finland; May 30, 2019](#)



Source: [Presentation by Roy Spencer; May 30, 2019](#) (after Svendren et al, 2004)



in discovering these. It's a completely different picture in the Kuusamo diamond field, where the kimberlites discovered so far have as little as 1-3 m of overburden, making exploration less dependent on luck. The kimberlites on the Timantti Property are easier to excavate and drill due their near-surface occurrence.

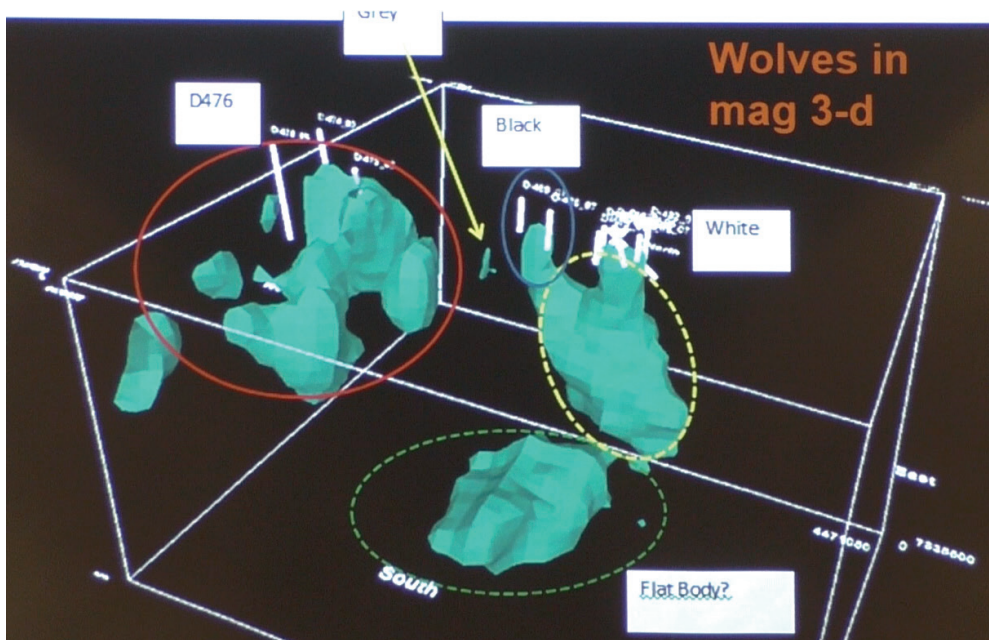
What's next?

As Roy stated in his presentation: "I'm a great believer in magnetics" and showed the following image – the results of a magnetics survey over the area where the 3 kimberlites (Grey, Black and White Wolf) have been discovered near surface and in proximity to each other.

The distance between the Black and White Wolf is about 50 m, whereas magnetics suggests that the two kimberlite bodies at the surface connect at depth to form one body. The white lines show past drilling (up to 50 m from surface) – and that virtually only the surface was scratched / or the top of the kimberlite – because all of the green area is predicted to be kimberlitic. There appears to be a flat body beneath Black/White Wolf, so it would be highly interesting to drill down Black/White Wolf to eventually hit (and sample) that flat looking body. A few hundred meters to the west is D476, which has the exact same magnetics signature as both the bodies in the east. Overall, this is "a very, very persuasive argument that at least we should be focussing on this area to see what the rest of the green areas are all about".

Besides the above shown area of the 3 Wolves, there are several other high-priority magnetics targets to the west, north-west and east, where Arctic Star is looking at the moment and working in the field, which is planned to be part of a much more extensive excavator and drilling program going to test all of those anomalies.

In conclusion, Arctic Star is getting ready for more discoveries. This is only the beginning, but a fabulous start to say the least – even if the market does not yet recognize the potential.



Source: [Presentation by Roy Spencer; May 30, 2019](#)



On the flight back from Kuusamo to Zurich, I reflected having travelled the world for many years in search of the next big winner and being invested in a bunch of junior exploration and mining companies with projects scattered all over this planet. I imagined the Timantti Project becoming a diamond mine – in Europe, which place I call home – and thought "Oh dear, maybe one of the most compelling success stories is happening right now, right here at home. I better load up and fasten my seat belts as this could take off any time now."



Previous Coverage on the Timantti Project in Finland

[“Diamonds in Finland: Searching for the Leader of the Wolf Pack”](#)

[“Arctic Star wows with latest drill results from its Timantti Diamond Project in Finland”](#)

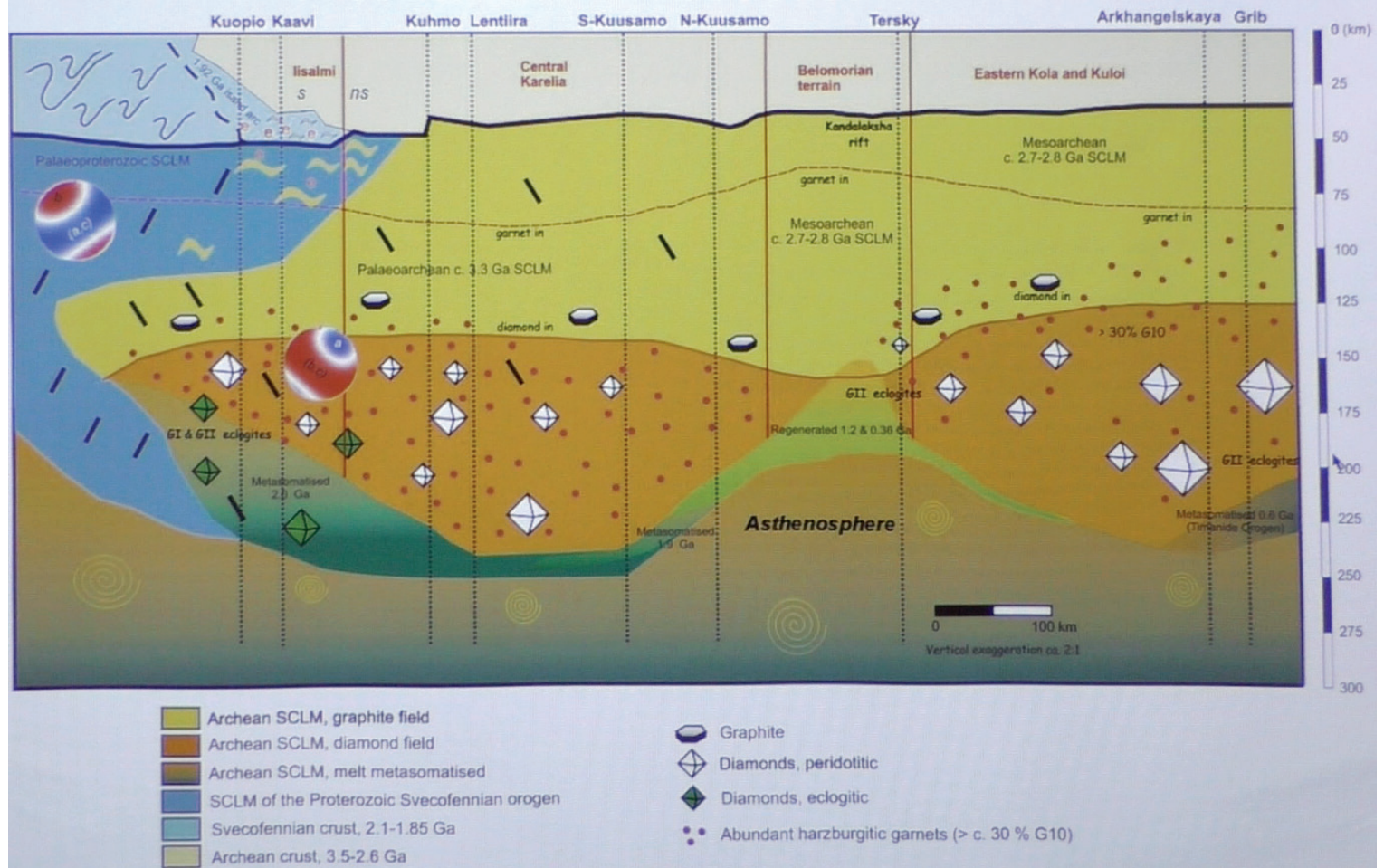
[“Diamond Discovery in Finland”](#)

[“Time to Bet on 4 High-Carat Hot-Shots”](#)

[“Another Grib Diamond Mine in Finland?”](#)



A 1000-km-long mantle transect Kuopio-Arkhangelsk



Simplified cross-section of the Karelian lithosphere (Lehtonen, 2009); Source: [Presentation by Hugh O'Brien, Geological Survey of Finland; May 30, 2019](#); see also [Technical Report](#) as of June 20, 2017



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(Dortmund, Germany), the European Business School (London, UK) and the University of Queensland (Brisbane, Australia). Under [Prof. Dr. Hans J. Bocker](#), Stephan completed his diploma thesis ("Gold In A Macroeconomic Context With Special Consideration Of The Price Formation Process") in 2002. A year later, he marketed and translated into German Ferdinand Lips' bestseller "Gold Wars". After working in Dubai's commodity markets for 5 years, he now lives in Switzerland and is also the CEO of [Elementum International AG](#) specialized in duty-free storage of gold and silver bullion in a high-security vaulting facility within the St. Gotthard Mountain in central Switzerland.

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