



Gold in Japan

“A Unique Opportunity, A Unique Strategy”

www.irvresources.com

March 1, 2019

IRV:CNX | IRVRF:OTC

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Dr. Quinton Hennigh, the Company’s Technical Advisor and Director and a Qualified Person as defined by National Instrument 43-101, has approved the technical contents of this presentation.



Capital Structure (February 2019):

Shares Outstanding:	43,532,077
Options Outstanding:	3,241,667
(Directors, Officers, Employees and Consultants)	
Warrants Outstanding:	5,985,593
5,038,410 at \$0.55 – November 10 & 22, 2019	
947,183 at \$1.75 – November 26, 2020	
Issued Shares – Fully Diluted:	52,759,337
Management/Directors (FD):	25.42%



Akiko Levinson, President, CEO, Director – Ms. Akiko Levinson has over 20 years of experience in the junior mining market including mining finance and ‘end-to-end’ rare earth mineral investment. Ms. Levinson was previously the President and a director of Gold Canyon Resources Inc. and is currently a director of Novo Resources Corp.

Quinton Hennigh, Director and Technical Advisor – Dr. Quinton Hennigh is an economic geologist with more than 25 years of exploration experience with major gold mining firms including Homestake Mining, Newcrest Mining and Newmont Mining. Currently, Dr. Hennigh is Chairman, President and director of Novo Resources Corp. and director of Miramont Resources Corp, TriStar Gold, Inc., Precipitate Gold Corp and NV Gold Corp.

Dr. Kuang Ine Lu, Director – Dr. Lu has extensive experience in various roles in the mining industry including technical advisor, director and CEO of a producing mining company. Dr. Lu holds a Ph.D. in Economic Geology from the University of Tokyo.

Kevin Box, Director – Mr. Kevin Box is a Geographic Information Systems Analyst specializing in mineral exploration for over 14 years. Mr. Box is currently the GIS and Research Manager for Irving Resources and Novo Resources Corp.

Lisa Sharp, CFO – Ms. Lisa Sharp, CPA, CGA has over 20 years of senior management experience in a variety of industries including mining, environmental technology and remediation. For the past decade, she has focused on public companies listed on the TSX, TSX Venture Exchange and AMEX.

Hidetoshi Takaoka, Chief Mining Engineer, Irving Japan- Mr. Hidetoshi Takaoka is a geologist with more than 40 years exploration and mining experience. Mr. Takaoka spent the majority of his time with Sumitomo Metal Mining Co. Ltd. (SMM) where he was instrumental in early exploration at Hishikari Mine, Japan and was responsible for the discovery of the world class Pogo Mine, Alaska. Mr. Takaoka’ guidance has proved invaluable as Irving has acquired its strategic landholdings in Japan.

Mitsui Mineral Development Engineering Co., Ltd. (“MINDECO”) - Mr. Haruo Harada, a director and geologist, is the team leader for MINDECO which supports Irving with most facets of operating in Japan including filing applications, permitting and field work. MINDECO has an extensive track record of working in the natural resource industry in Japan from which Irving benefits greatly.

Mr. Toshiyuki Goto, General Manager, Irving Japan – Mr. Toshiyuki Goto is a mining engineer with 25 years experience in operations and development of Sumitomo Metal Mining Co. Ltd.’s Hishikari gold mine, the largest gold mine in Japan.



Working in Japan

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Working in Japan is all about building relations and trust.

Irving is uniquely qualified to explore in Japan:

- **Our team is mostly Japanese.**
- **Mitsui Mineral Development Engineering Co., Ltd. (“MINDECO”) is our lead contractor.**
- **Built a long-standing relationship with Japan Oil, Gas and Metals National Corporation (“JOGMEC”).**
- **Developed close connections with many Japanese mining houses.**
- **Established strong relations with the Japanese academic community.**
- **Earned a good report with Japanese government authorities.**
- **Developed excellent relations with local communities and forestry association.**

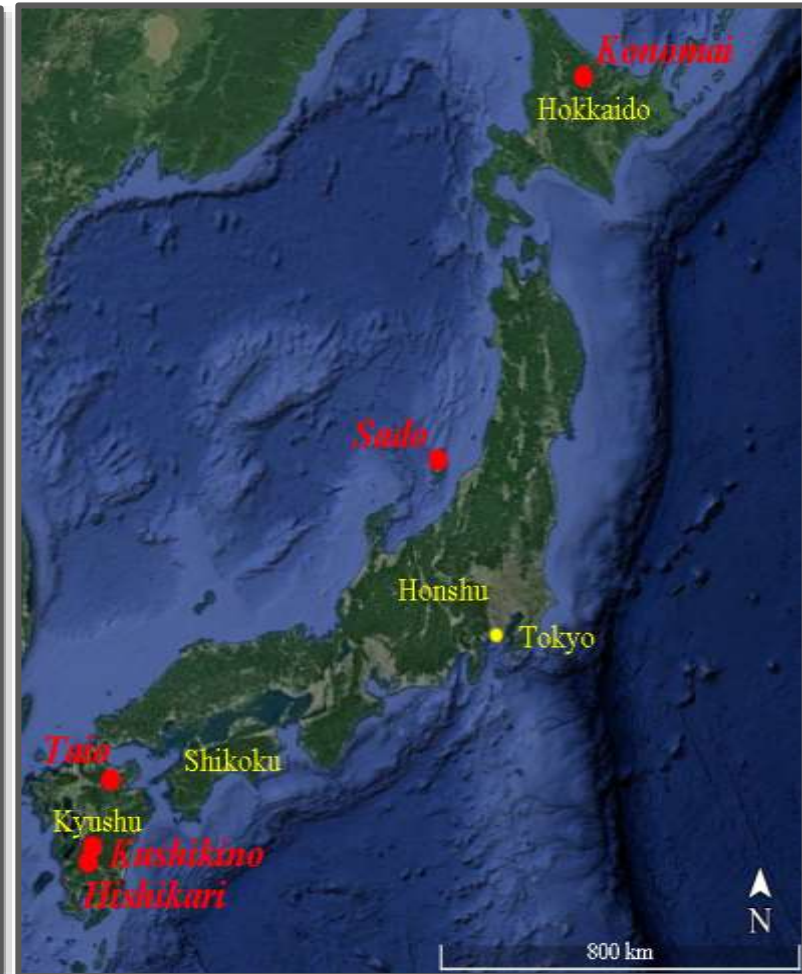




Gold Mining in Japan

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- Since the beginning of the Edo period (1601), over 20 Moz of gold have been produced from Japanese gold mines...the top five being *Hishikari*, *Sado*, *Konomai*, *Kushikino* and *Taio*. All of these mines exploit high-grade epithermal deposits.
- *Hishikari* mine (Sumitomo Metal Mining Co. Ltd.), Japan's largest gold mine, has produced over 7 Moz Au (as of March, 2015) since its discovery in 1981. Current head grades are around 30 gpt Au. Considerable reserves and resources remain.
- Japan's second largest gold mine, *Sado* Kinzan (Mitsubishi Materials Corporation), produced 2.51 Moz Au and 74 Moz Ag over a continuous mine life of 388 years beginning in 1601. Grades averaged 5.2 gpt Au and 153 gpt Ag.
- *Konomai* mine (Sumitomo Metal Mining Co. Ltd.), Japan's third largest gold mine, produced 2.35 Moz Au and 38.6 Moz Ag between its discovery in 1915 and mine closure in 1973.





Modern Gold Mining in Japan

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- Hishikari mine is the largest active gold mine in Japan. Gold production is about 225 Koz per year. A head grade of 30 gpt Au is achieved by ore sorting, optical ore sorters used for small pieces of rock and hand labor used for sorting larger pieces (*right*).
- Hishikari has no mill. High-grade ore is shipped to Sumitomo Metal Mining's smelters where it is utilized as smelter flux. Gold and silver are recovered during smelting and refining of copper resulting in high recoveries and low processing costs.
- Similarly, silica-rich gold ores ("keisan-ko") from the Akeshi mine (Mitsui Kushikino Kozan Co. Ltd.) and Kasuga and Iwato mines (Nippon Mining) are utilized for smelter flux.
- The Kushikino mine complex (Mitsui Kushikino Kozan Co. Ltd.) is the only operating gold mine utilizing a CN mill for processing. Gold-bearing industrial waste and low grade ore from Hishikari are also treated at this facility.





Modern Gold Mining in Japan

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- Japan is an environmentally conscientious country. Although mining is still active, it must be conducted in the utmost responsible manner. Tolerance for large open pit mining and commensurate milling complexes and tailings dams is low.
- Hishikari is an underground mine with a very small surface footprint (*upper right*). Ore is shipped offsite and waste rock is either returned underground or crushed and used for road aggregate. This is the ideal Japanese mine.
- Sumitomo Metal Mining Co. Ltd. has done an exquisite job reclaiming the Konomai mine site to its native state (*lower right*). Such responsibility is what the Japanese people expect from modern mining companies.





Smelter Flux Industry in Japan

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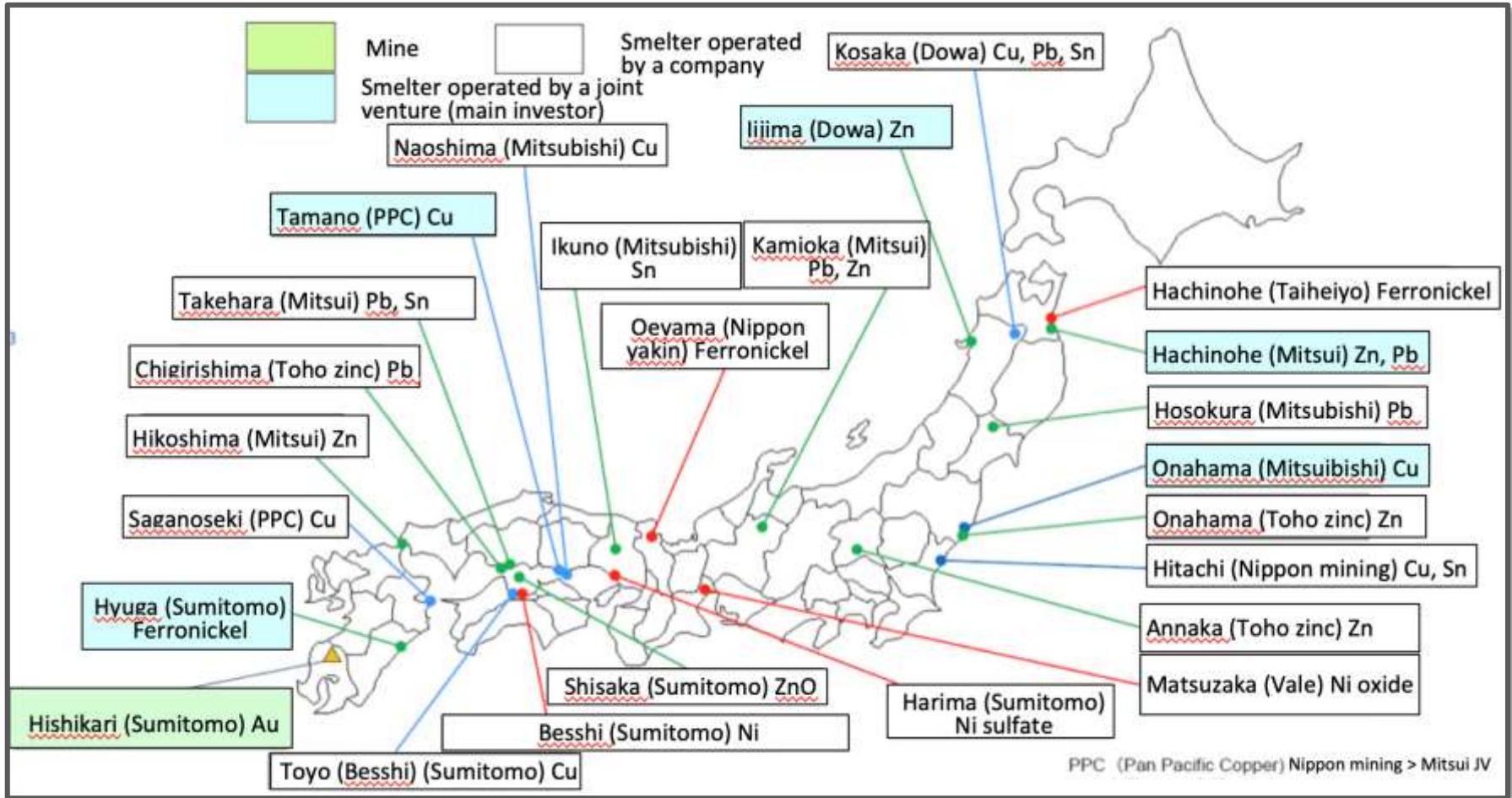
- Mining silica-rich gold ores and using them for smelter flux has a very long history in Japan.
- Each year, Japanese smelters require many hundreds of thousands of tonnes of silica flux.
- Mitsui, Sumitomo Metal Mining, Sumitomo Corporation, Nippon Mining (JX), Mitsubishi, Dowa and Toho Zinc operate smelters.
- Silica flux from Japanese gold mines (Hishikari, Akeshi, Kushikino) is currently used in some smelters. Others rely on silica from various other domestic and international sources.
- Demand for new sources of silica-rich gold ores is strong.





Smelters in Japan

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Irving recognizes the sensitivity of mining gold in Japan and has developed a strategy to honor this. Criteria Irving uses to select exploration targets include:

- **High-silica, precious metal-rich veins that are suitable as smelter flux. No milling will be required.**
- **Deposits with low sulfur and deleterious elements including As, Sb and Hg, thus making them environmentally friendly and suitable as smelter flux.**
- **Deposits that will have a small surface footprint when mined.**
- **Ideally near shipping facilities enabling easy transport to Japanese smelters.**
- **Low impact on communities, cultural heritage and environmentally sensitive areas.**

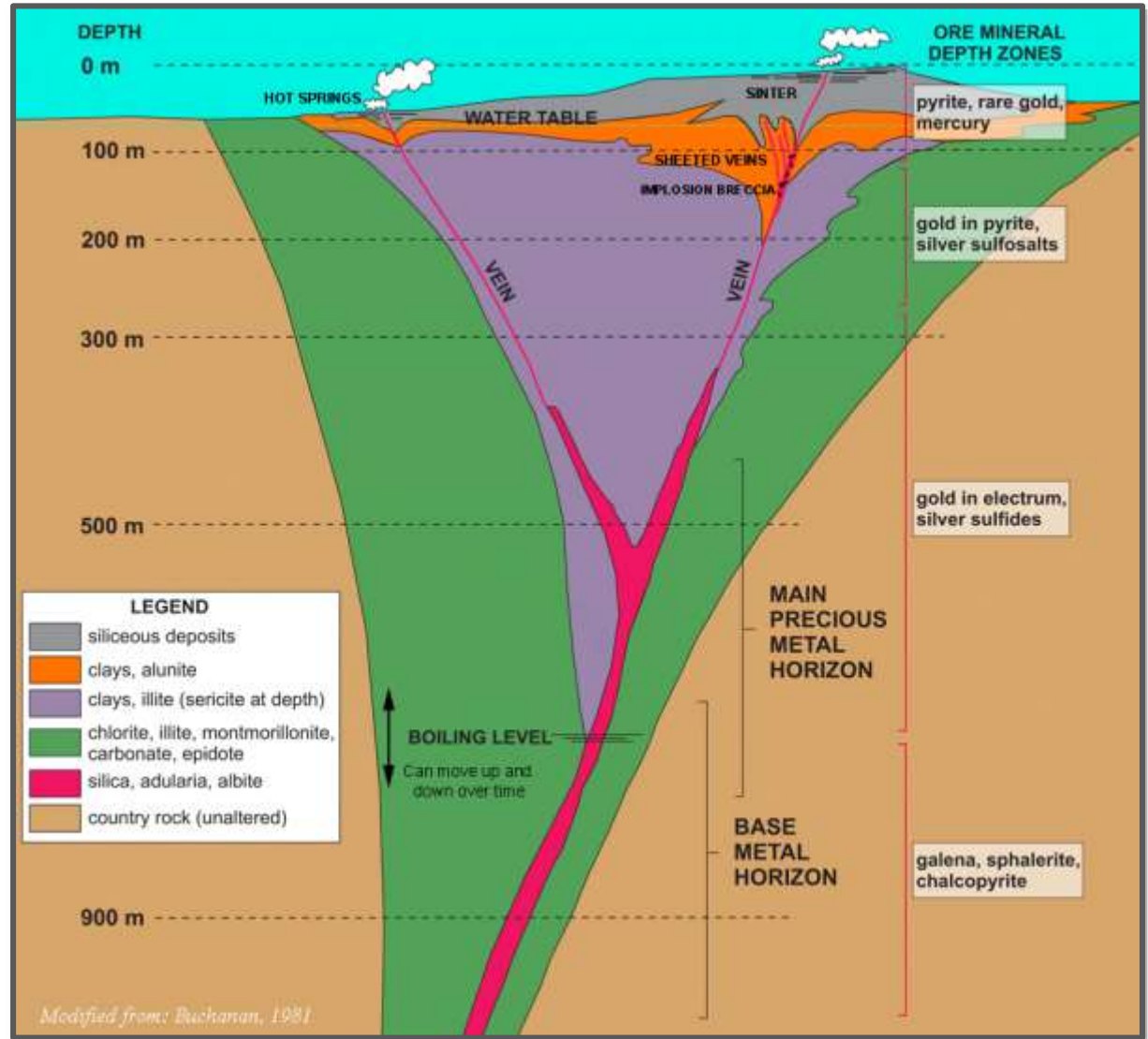


Low Sulfidation Epithermal (“LSE”) Veins

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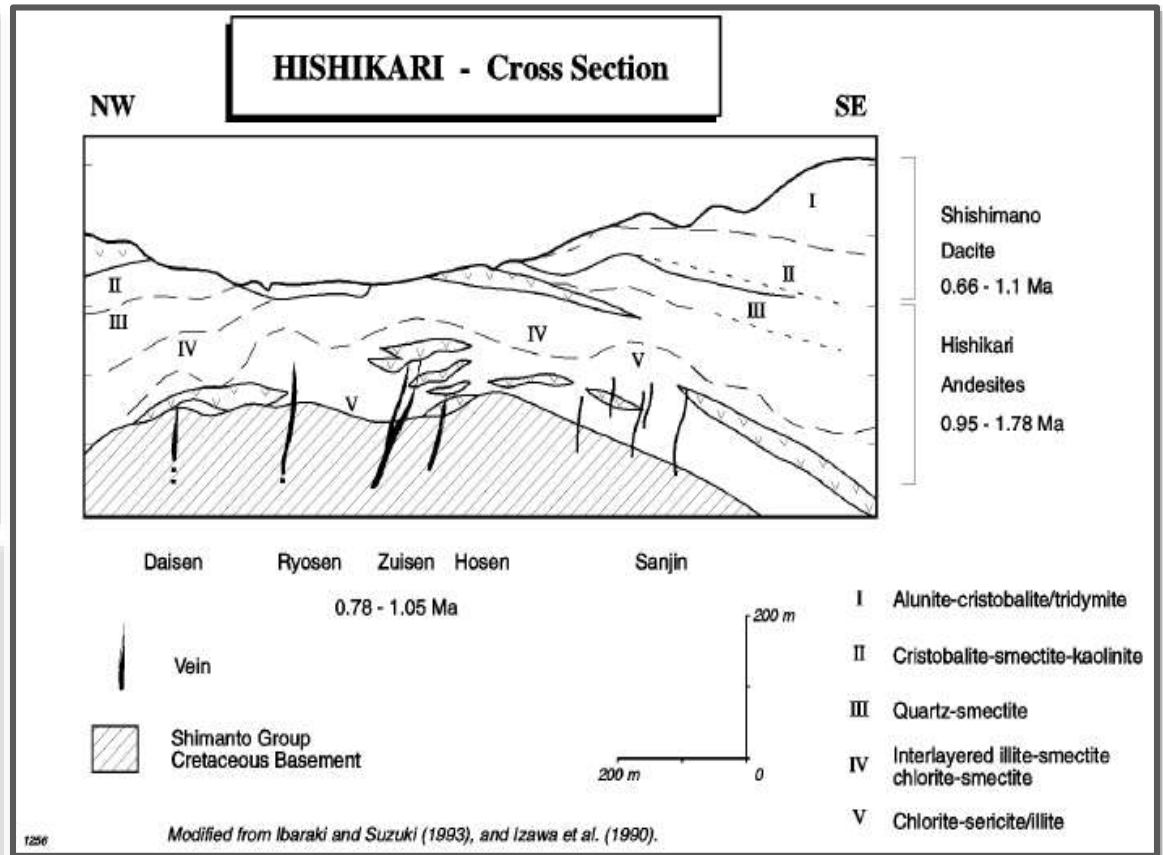
This is the classic hot spring epithermal vein model in which gold and silver precipitate in response to boiling as geothermal waters rise toward surface (*right*).

Deposits of silica (sinter) and clay form at surface such as at Yellowstone Park, USA (*below*).





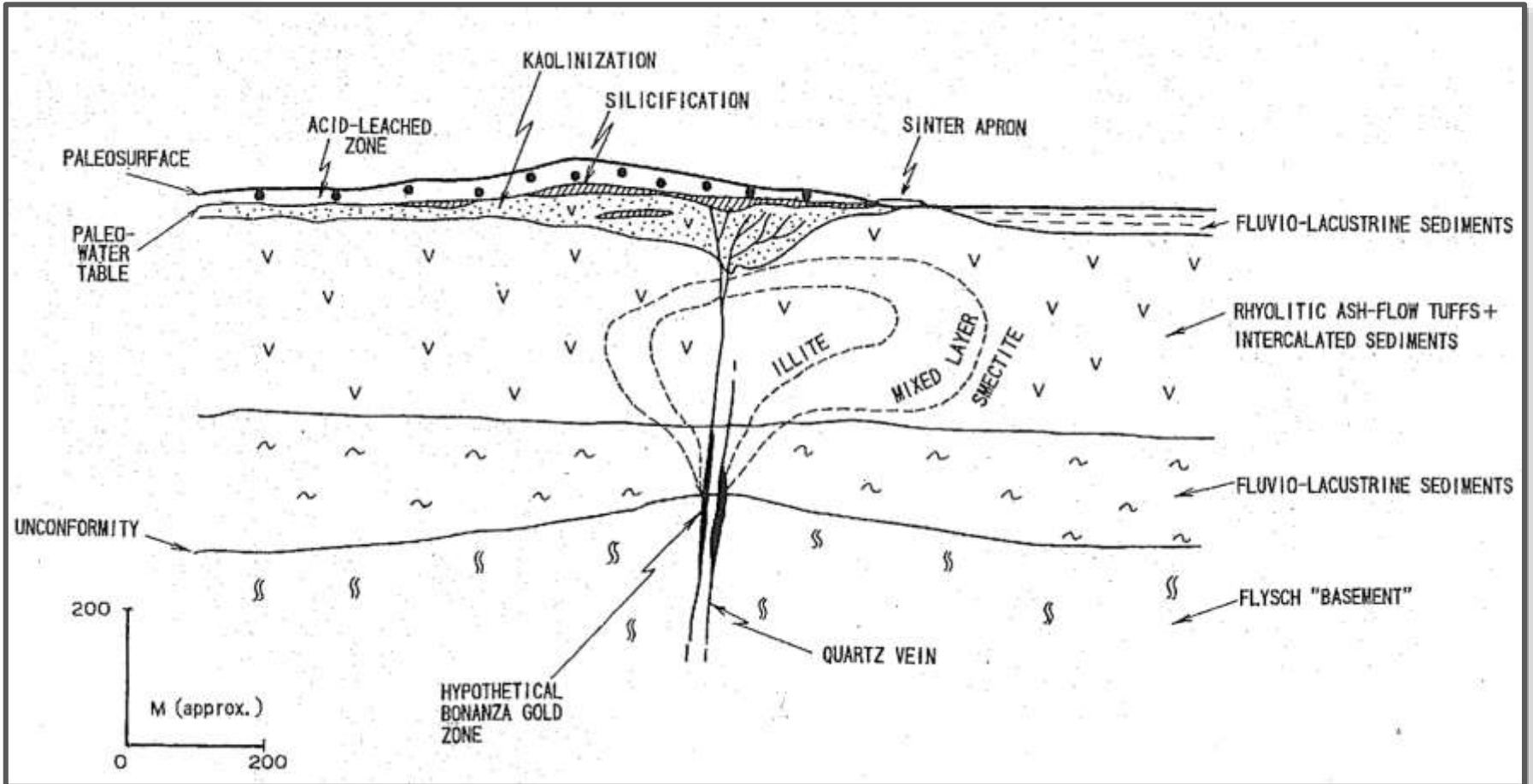
- At Hishikari, veins preferentially occur near a major unconformity between Cretaceous sedimentary rocks and overlying Tertiary volcanic rocks (*right*). Extensive clay alteration is present at surface.
- Veins locally bear abundant ginguero, banded silver sulfosalts, and electrum (*below*).





Hokkaido Model

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Sillitoe's Model for exploration in Hokkaido based on Hishikari.

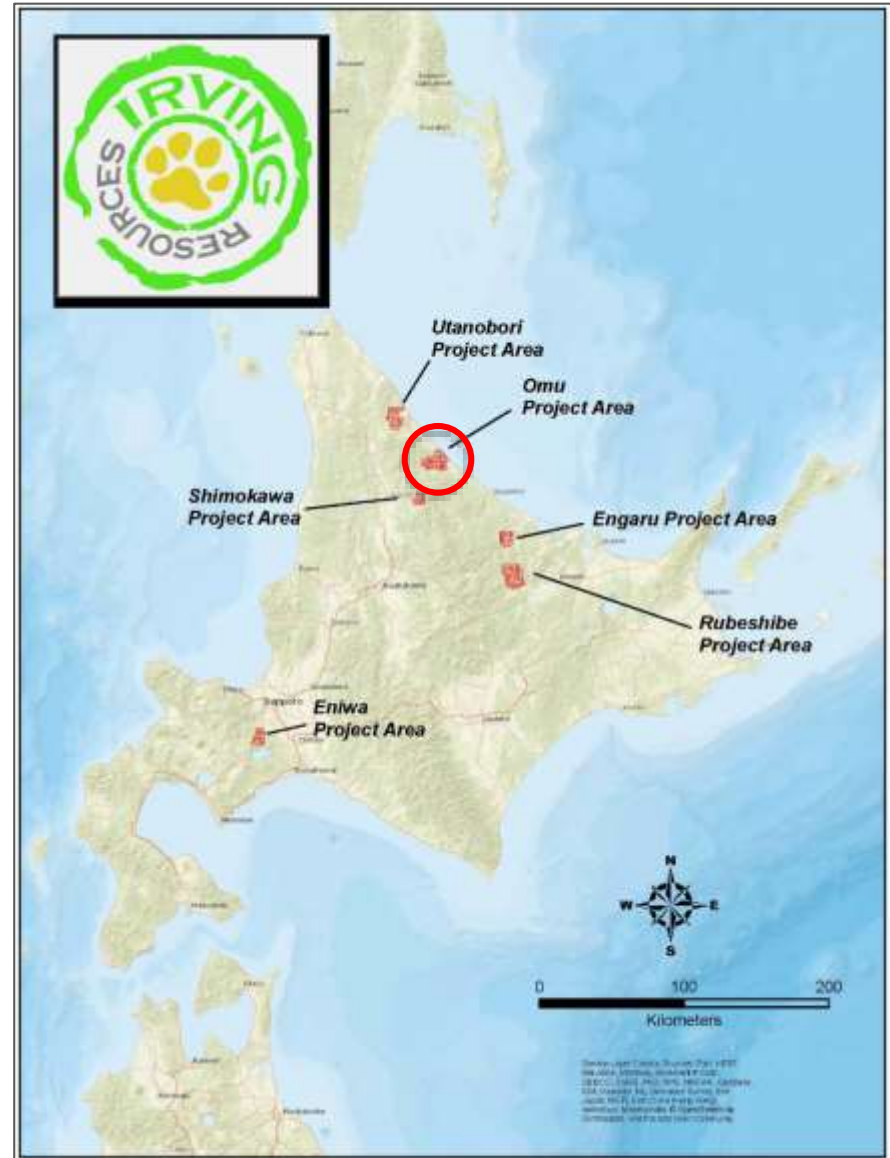


Irving's Omu Project

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Most of Irving's recent exploration efforts have focused on Omu including:

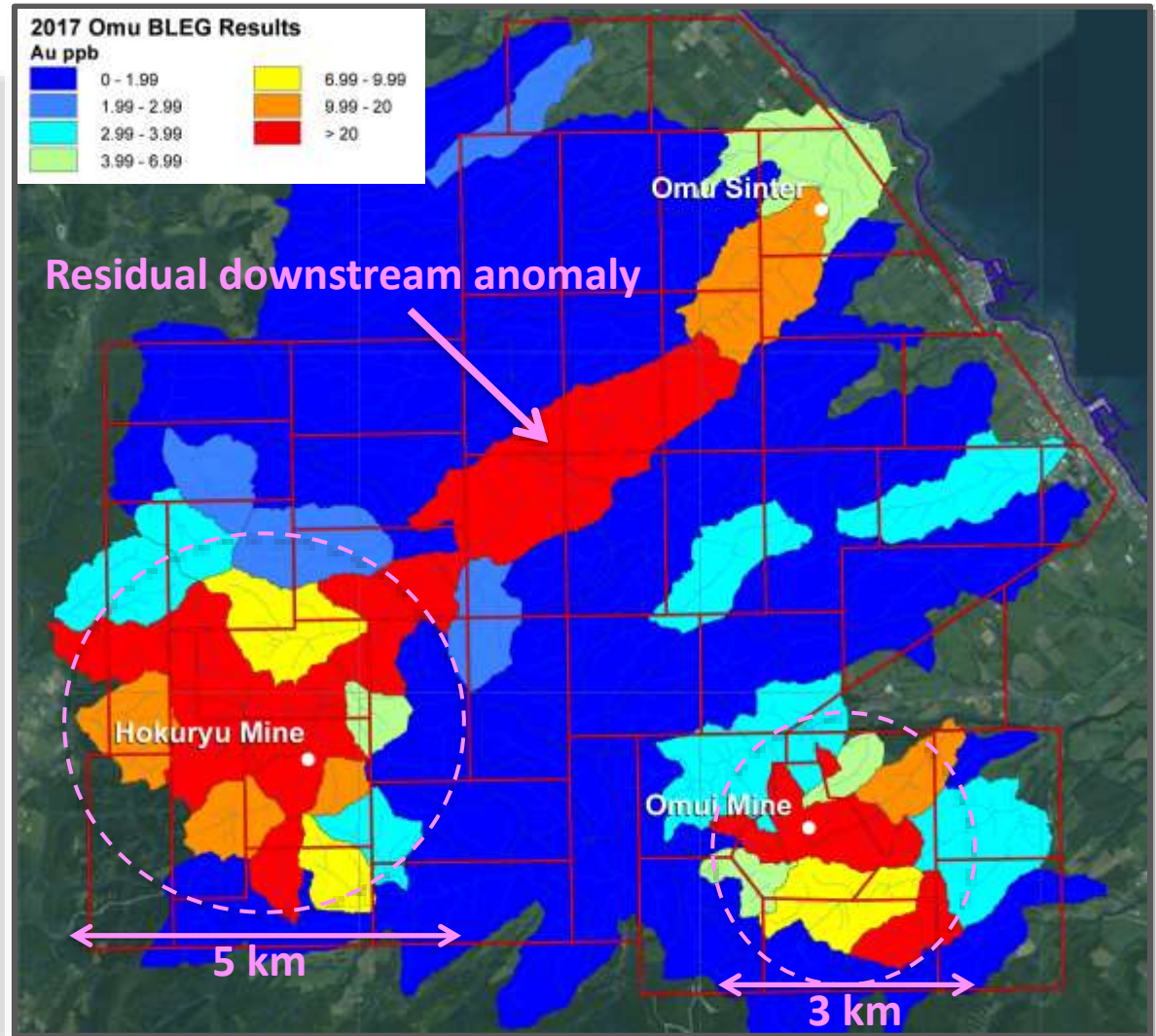
- Specialized stream sediment sampling (BLEG - bulk leach extractable gold) to identify mineralized areas.
- Close-spaced gravity measurements to help evaluate the structural framework of the hydrothermal "plumbing" system at Omu.
- Airborne (drone-based) magnetics to help evaluate structure and identify areas of hydrothermal alteration.
- Soil sampling over the Omui Mining Right and surrounding prospecting applications to help define anomalies for drill targeting.





Gold:

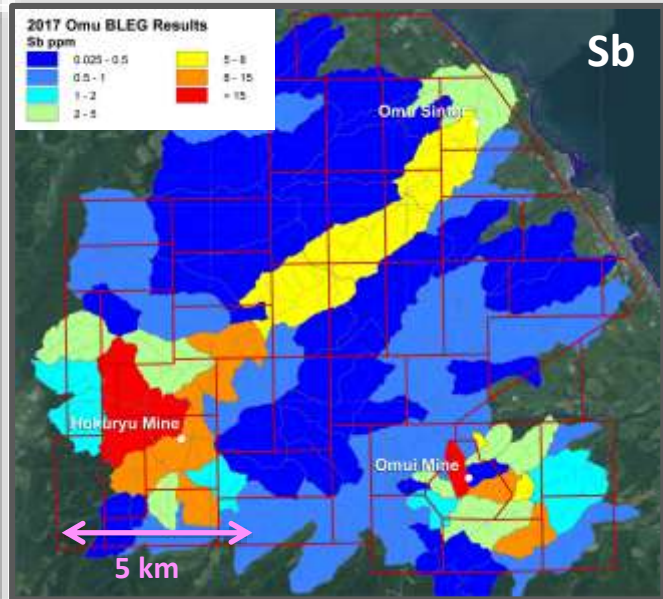
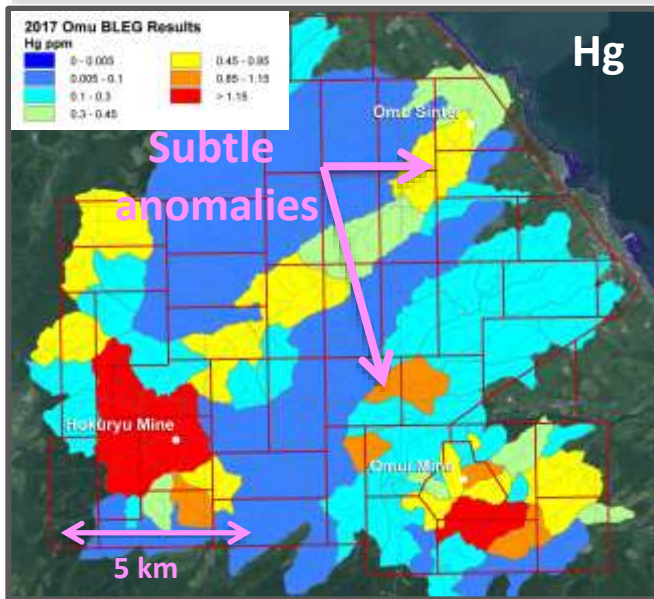
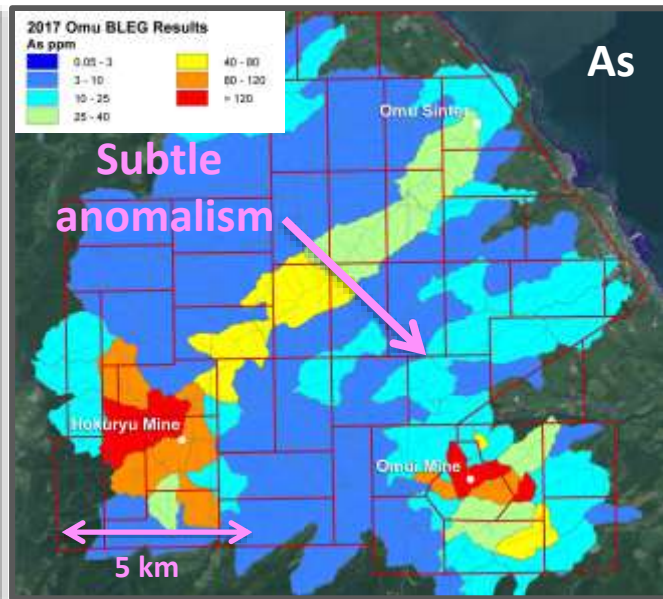
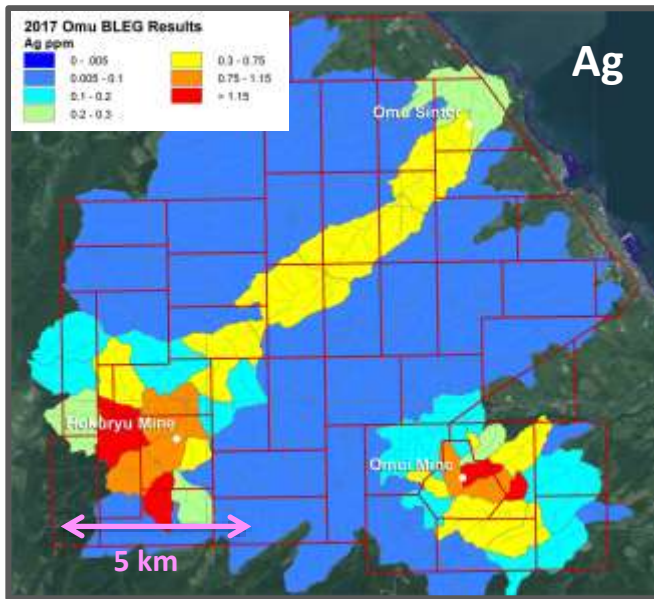
- Both the Omu and Hokuryu historic mining areas are well defined by BLEG gold results.
- Gold anomalism extends to areas well east and southeast of the Omui mine site.
- Gold anomalism covers a vast area northwest of Hokuryu mine.
- Irving plans follow up prospecting in each area in 2018.





BLEG Results

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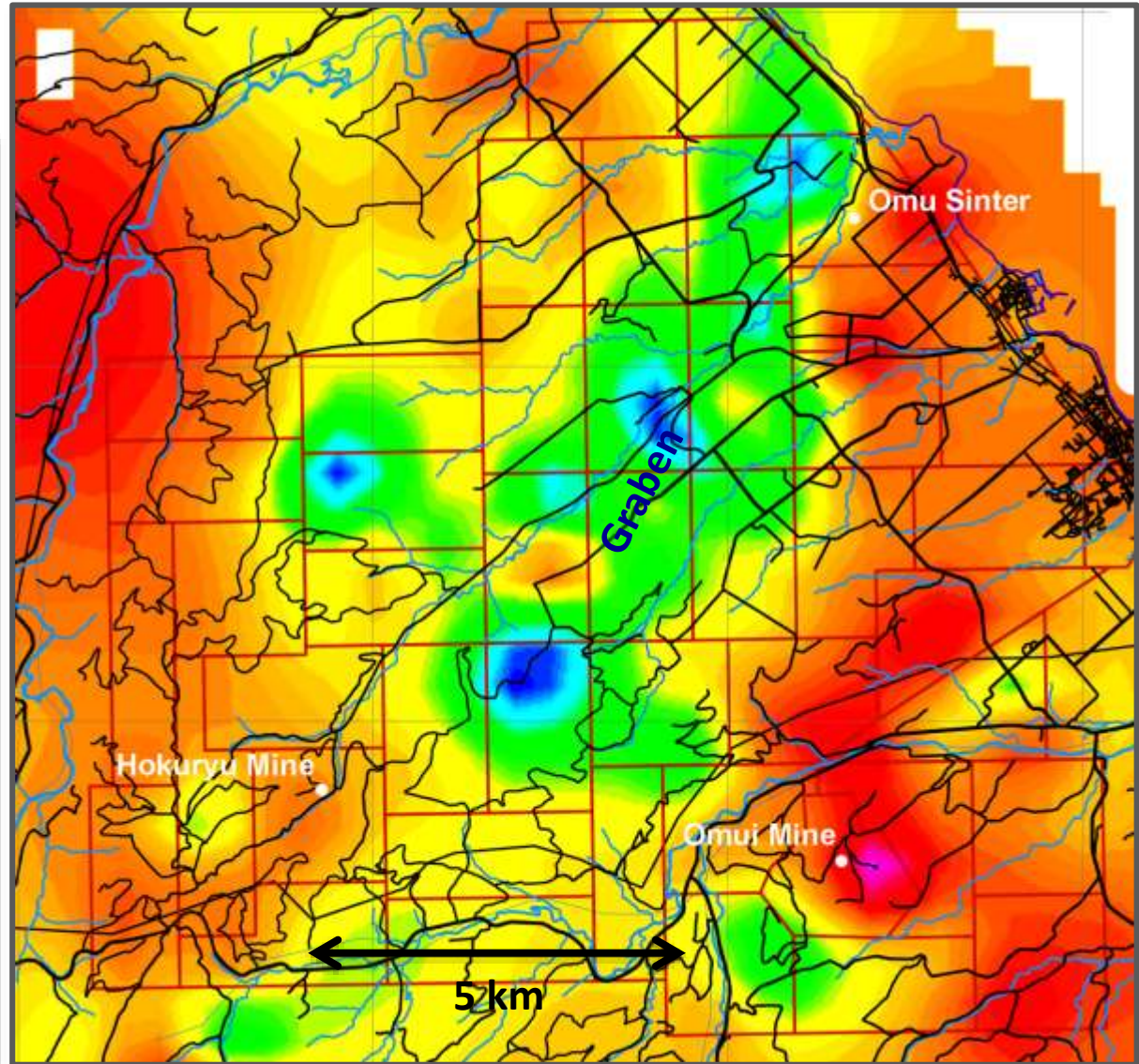




Gravity Results

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- Bouguer gravity first vertical derivative shows a north-northeast trending low extending across the area (blue and green). This is presumed to reflect a volcanic graben, a downthrown block, filled with low density volcanic rocks.
- The three known mineralized centers, Omui, Hokuryu and the Omu sinter, sit atop or on the edges of gravity highs (orange and red). These likely reflect shallowly buried dense basement rocks. Such gravity highs are closely associated with mineralization at the large Hishikari gold deposit, Kyushu Island, Japan.

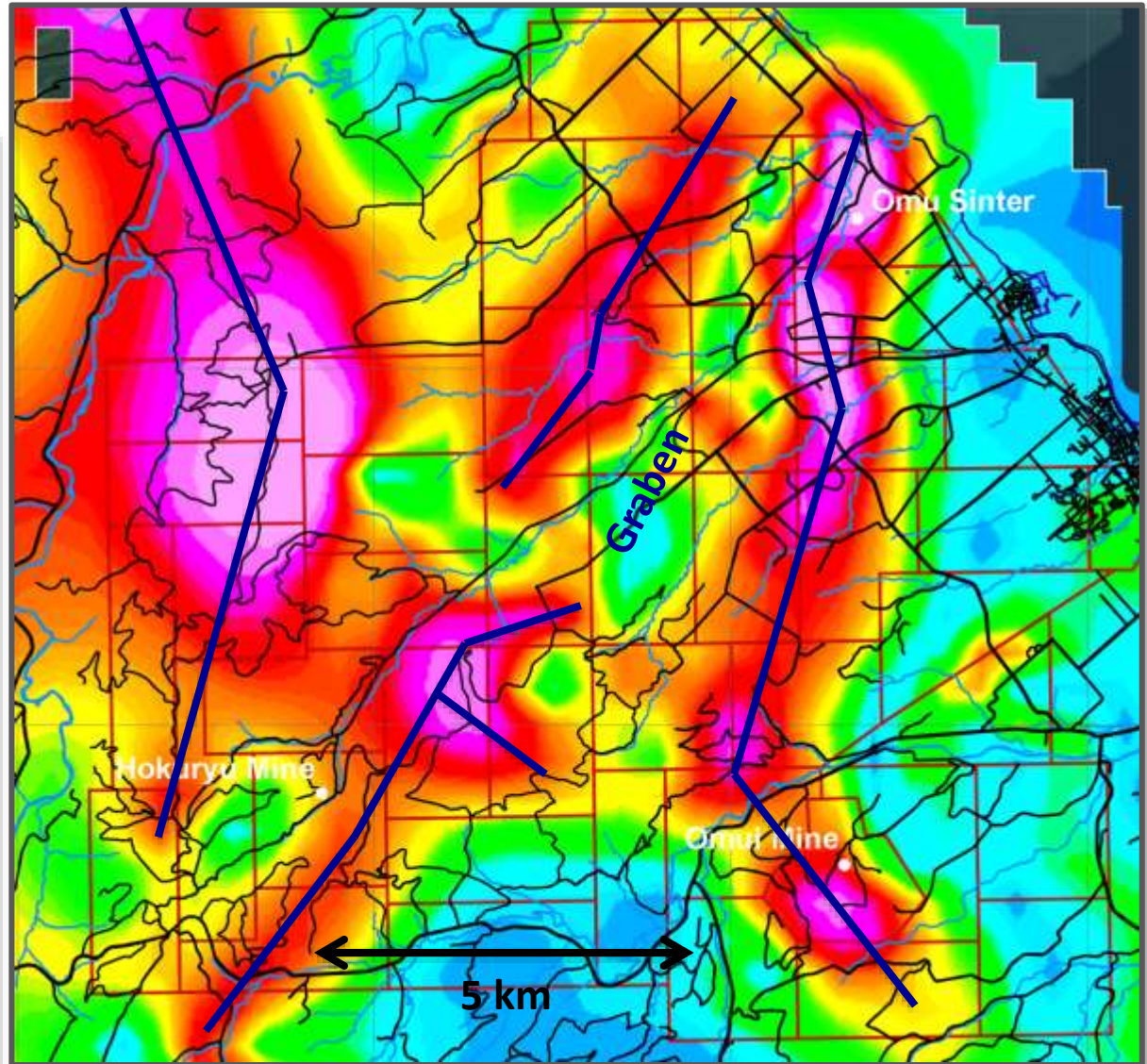




Gravity Results

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- Bouguer horizontal gradient clearly highlights major fault structures, ones that likely control the “plumbing” of the hydrothermal systems at Omu.
- Graben-bounding structures are evident. Note that Omui mine and the Omu sinter are connected along faults defining the eastern margin of the graben. Hokuryu sits astride faults defining the western margin.





Drone-based Magnetics

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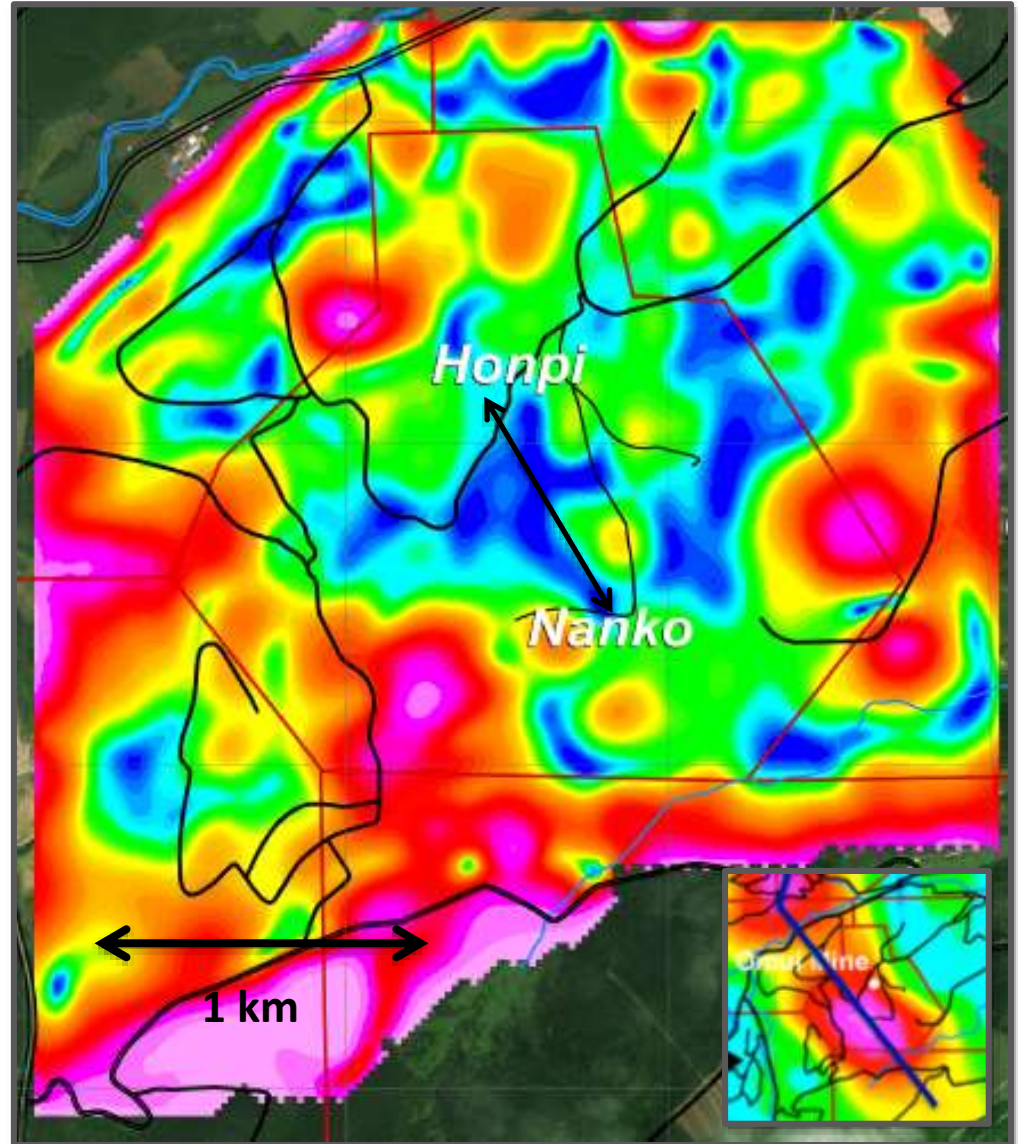


- After recognizing the challenge of undertaking ground-based magnetics surveys in dense bamboo, the decision was made to develop a drone-based magnetics system in early June, 2017.
- By September, MINDECO completed engineering and construction of a drone-based magnetics system. Surveys were conducted at Omui mine site and the Omu sinter in October.



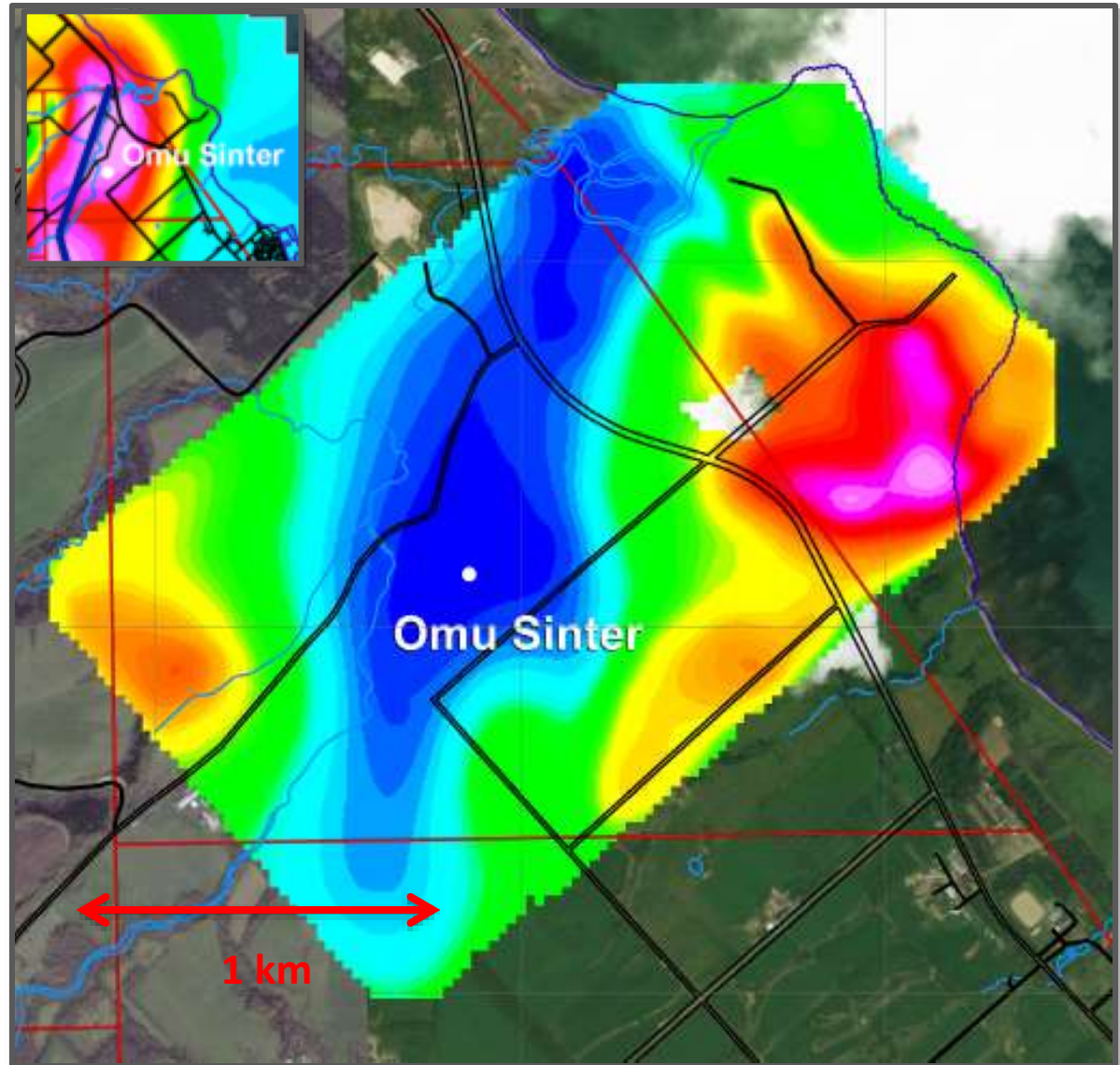


- At Omui mine site, a plot of magnetic analytic signal shows a complex network of low magnetic intensity (blue) where hydrothermal alteration has obliterated traces of magnetite in volcanic rocks, a possible indication of vein systems at depth.
- Note, the northwest-trending zone of low magnetic intensity extending from the Nanko prospect through the historic Honpi mine site. This is parallel to a prominent gravity gradient highlighting a graben-bounding fault underlying this area (lower right).





- At Omu sinter, a plot of residual magnetic intensity shows a profound north-northeast trending zone of low magnetism (blue) where hydrothermal alteration has obliterated traces of magnetite in volcanic rocks. Irving views this zone as a robust target prospective for high-grade epithermal vein mineralization.
- Note, this zone is coincident with a prominent gravity gradient highlighting a graben-bounding fault underlying this area (upper left).

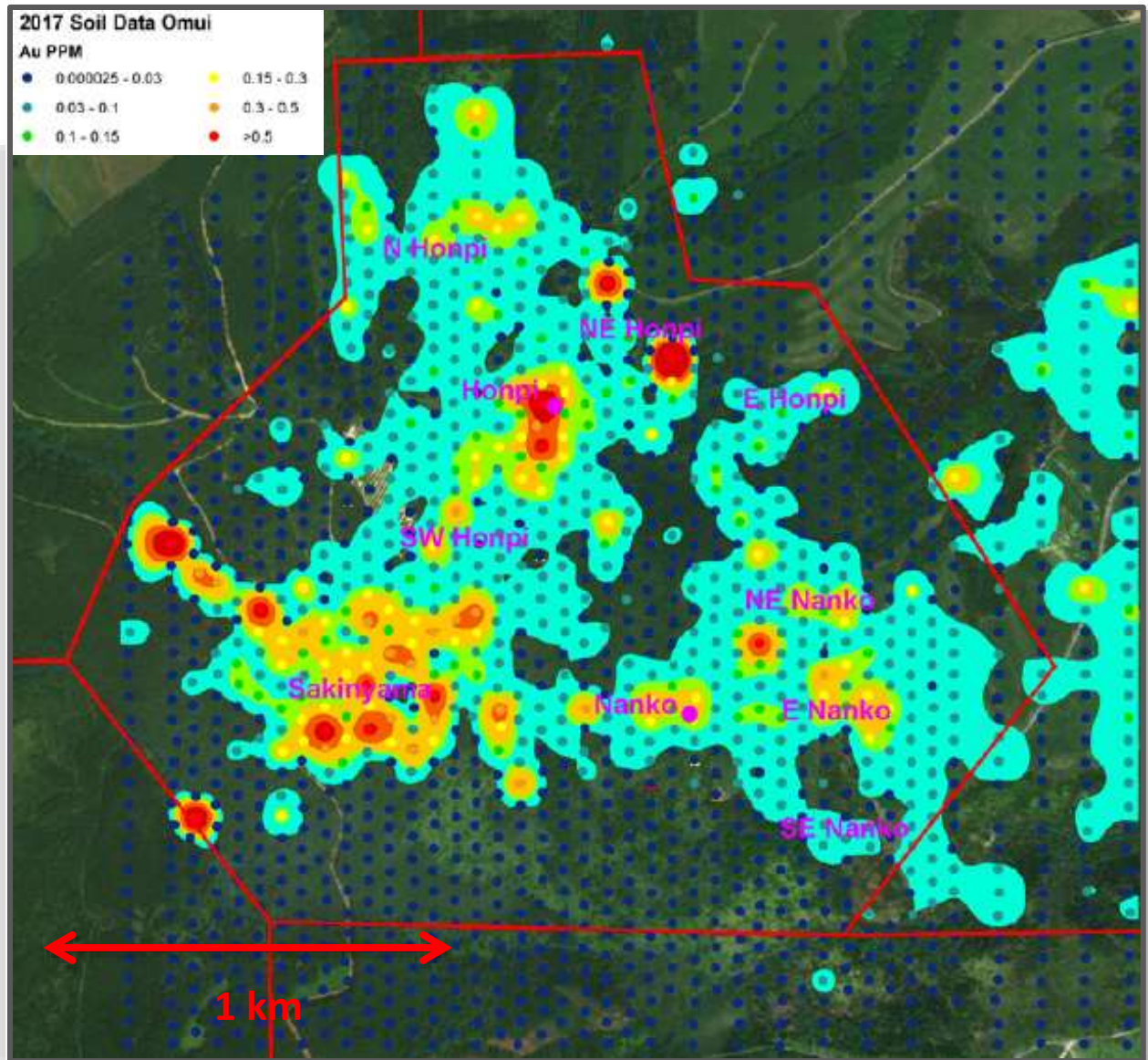




Omui Soil Sampling Results

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- Soil gold anomalism is extensive at Omui. At Honpi and Nanko, many “hot spots” are evident, a likely indication that more veins have yet to be discovered.
- A robust soil gold anomaly has emerged at Sakinyama. No historic hard rock mining is recorded from this area, but it is quickly emerging as an important target.
- Mineralization is open to the east.

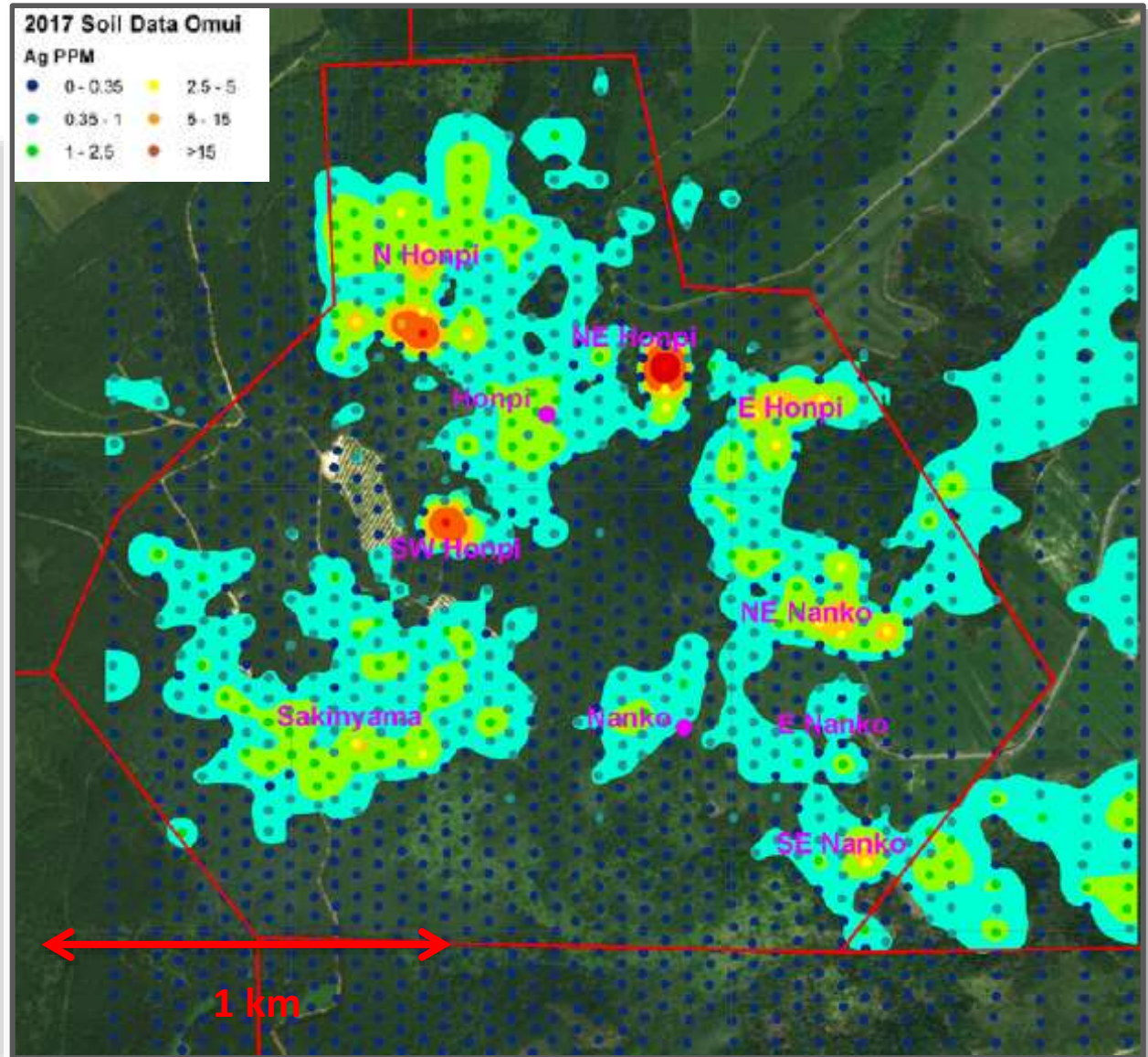




Omui Soil Sampling Results

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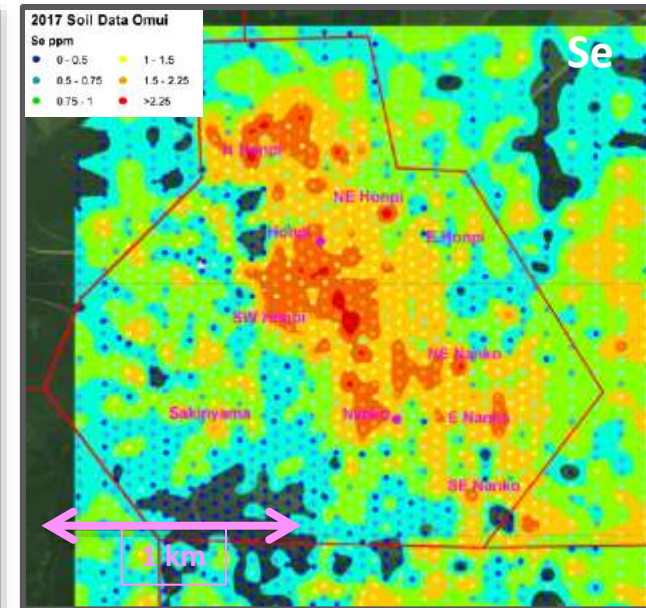
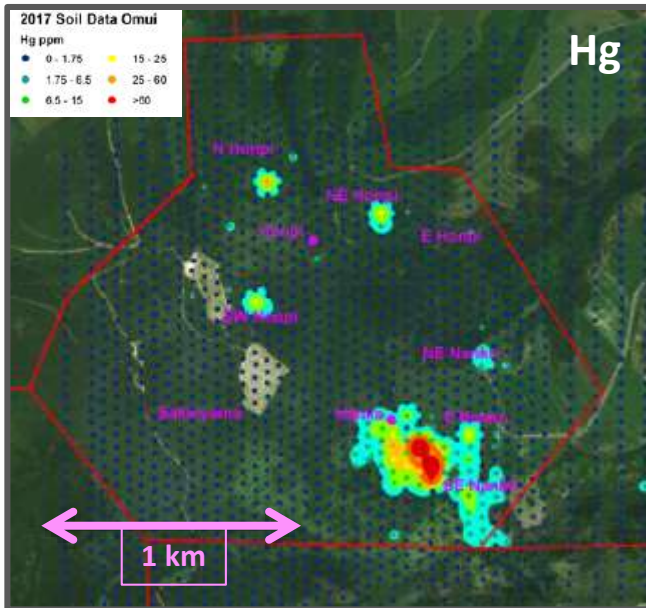
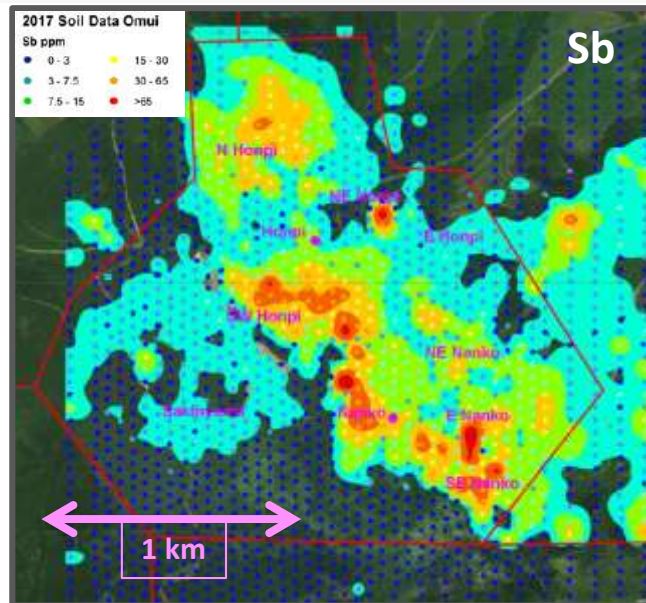
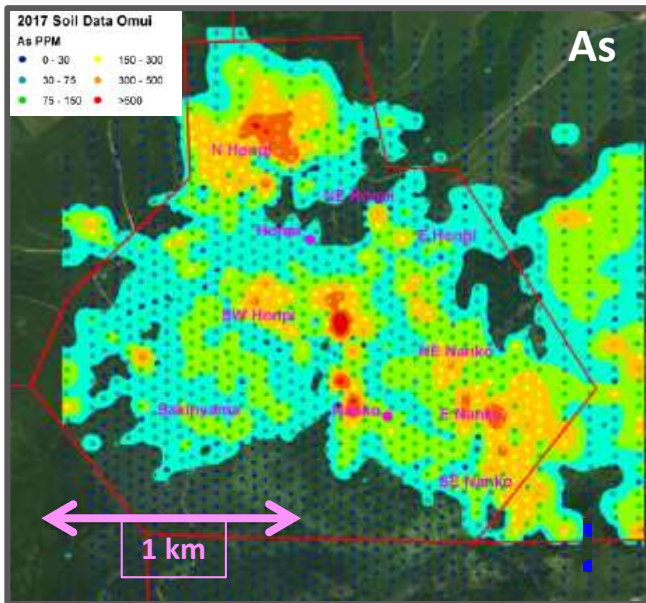
- Like gold, soil silver anomalism is extensive at Omui. For the most part, silver mimics gold.
- N Honpi stands out as a robust silver target.
- Soil silver is somewhat subdued at Sakinyama.
- Mineralization is open to the east.





Omui Soil Sampling Results

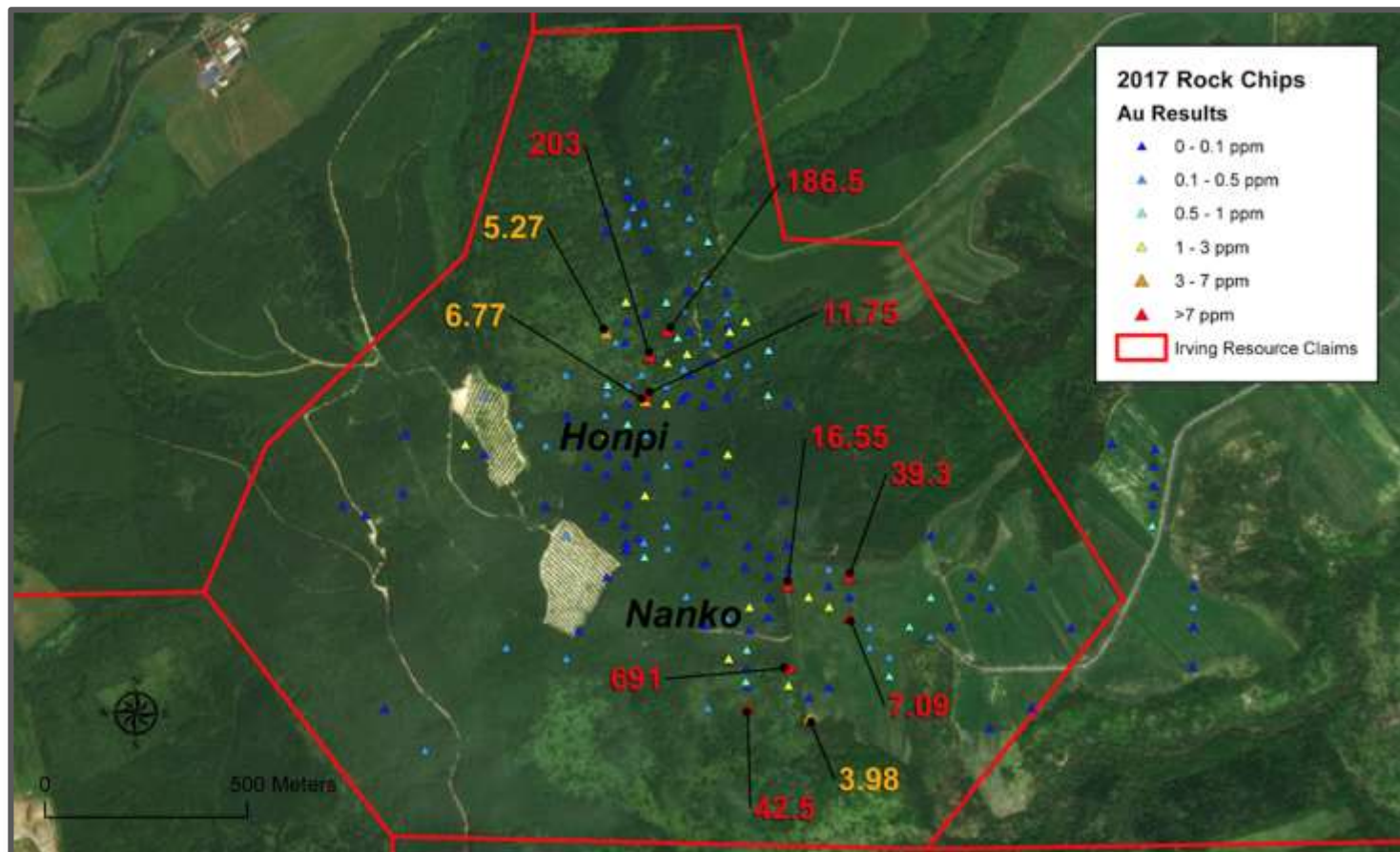
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“Soil” Rock Chip Results

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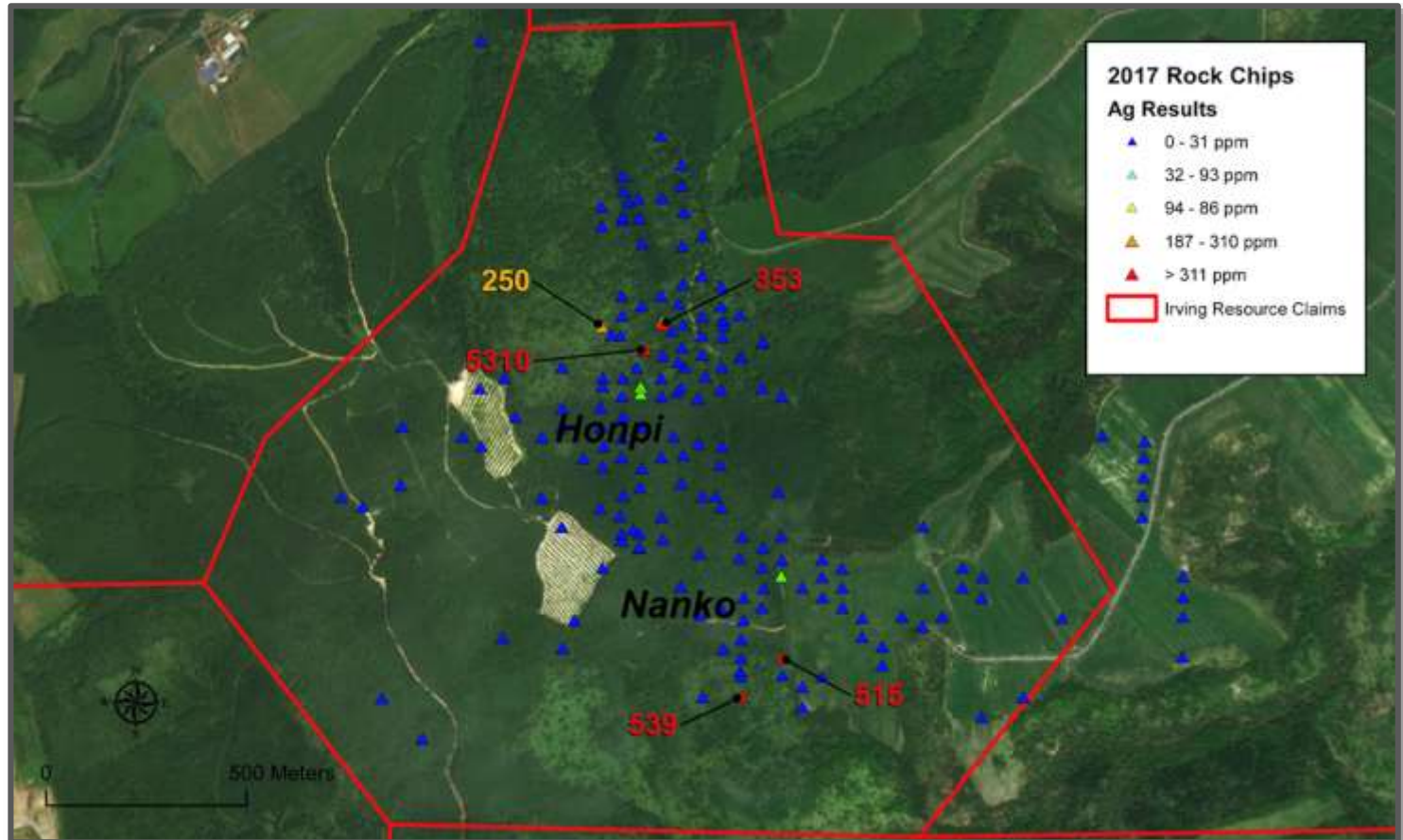


- Random rocks encountered during soil sampling were routinely assayed for Au and Ag.
- High grade vein samples were encountered at Honpi including 203 gpt Au and 186.5 gpt Au.
- Nanko also returned high grade vein samples over a broad area including 691 gpt Au, 42.5 gpt Au, 39.3 gpt Au and 16.6 gpt Au.



“Soil” Rock Chip Results

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- High silver grades returned from vein material encountered during soil sampling at Honpi including 5,310 gpt Ag and 353 gpt Ag.
- Vein samples from Nanko also returned high silver assays including 539 gpt Ag and 515 gpt Ag.



High-Grade Veins at Honpi

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Vein textures including implosion breccias, poly-stage vein formation and cross-cutting veins suggest mineralization at Honpi formed in a dynamic near-surface setting.



Implosion breccia, 480 gpt Au, 9,660 gpt Ag



Cross-cutting veins; un-assayed



Banded vein+ginguro, 67.6 gpt Au, 1,060 gpt Ag



Sinter at Nanko

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At Nanko, most rocks display characteristics of sinter, near-surface silica deposited by hot springs, suggesting good potential for high-grade mineralization at depth.



Finely laminated sinter



Laminated sinter/sandstone



Possible fossil stromatolite



Omu Sinter

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In 2016, Irving discovered a large sinter terrace north of the town of Omu (*right*). Geophysics indicates a major, potentially vein-hosting, fault lies nearby.

A sulfidized sample collected from the base of the terrace (*below*) returned appreciable gold, silver and pathfinder elements suggesting high-grade mineralization may be present at depth.



Sulfidized sinter: 14.6 gpt Au, 50.8 gpt Ag, 676 ppm arsenic, +100 ppm mercury, 1,675 ppm antimony and 93 ppm selenium



8 m high sinter terrace exposed in cliff



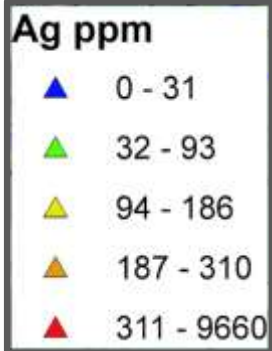
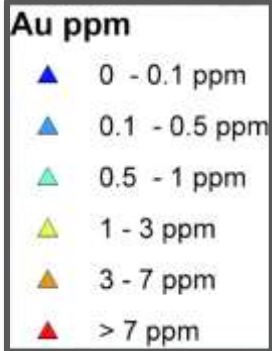
High-Grade Veins at Hokuryu

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Samples collected from the Hokuryu mine site display high gold and silver grades.

Veins are well-banded with ginguero, and probably formed at a deeper level than those at Omui mine site.

Areas around Hokuryu are virtually unexplored.

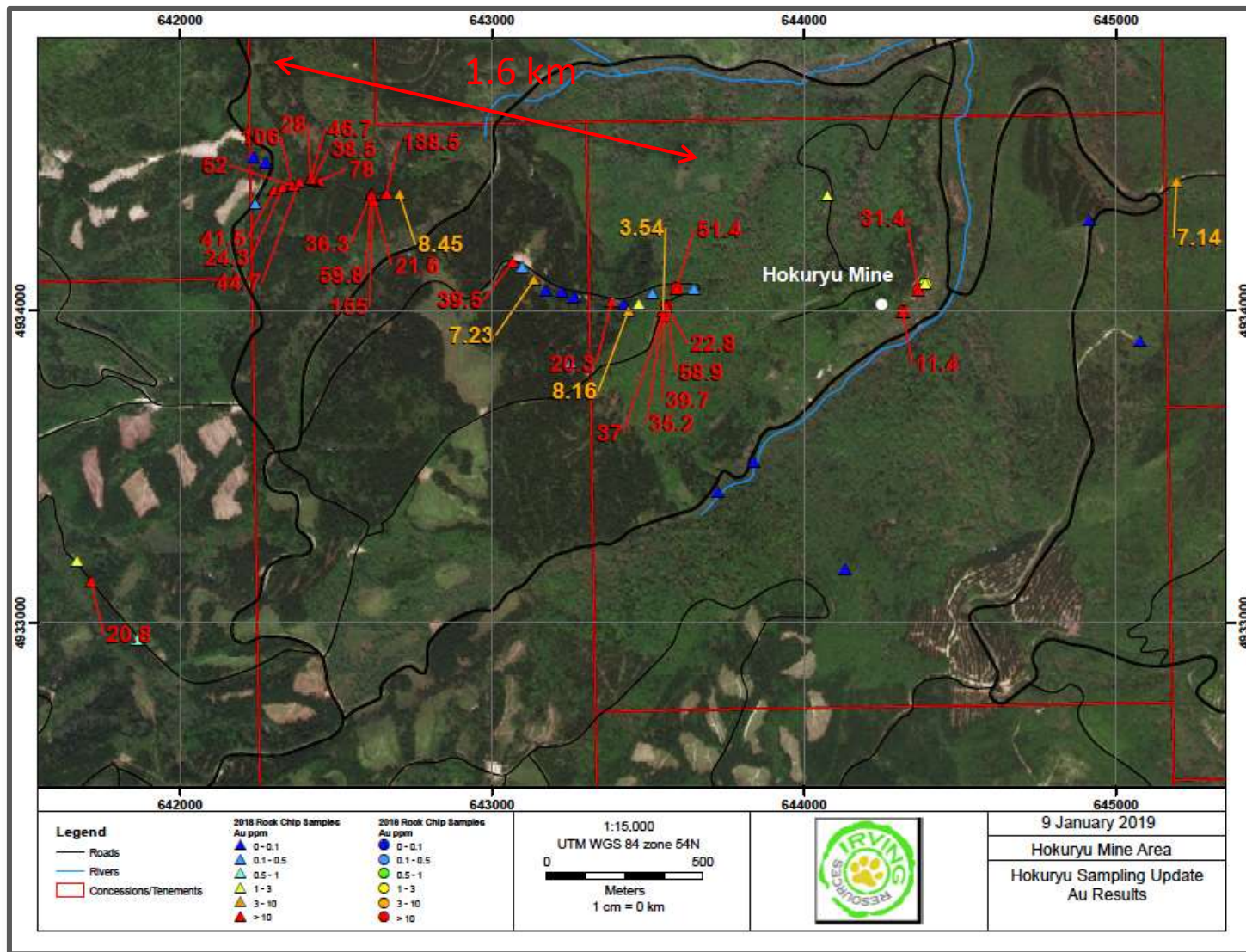


Hokuryu vein, 51.4 gpt Au, 637 gpt Ag



Hokuryu West

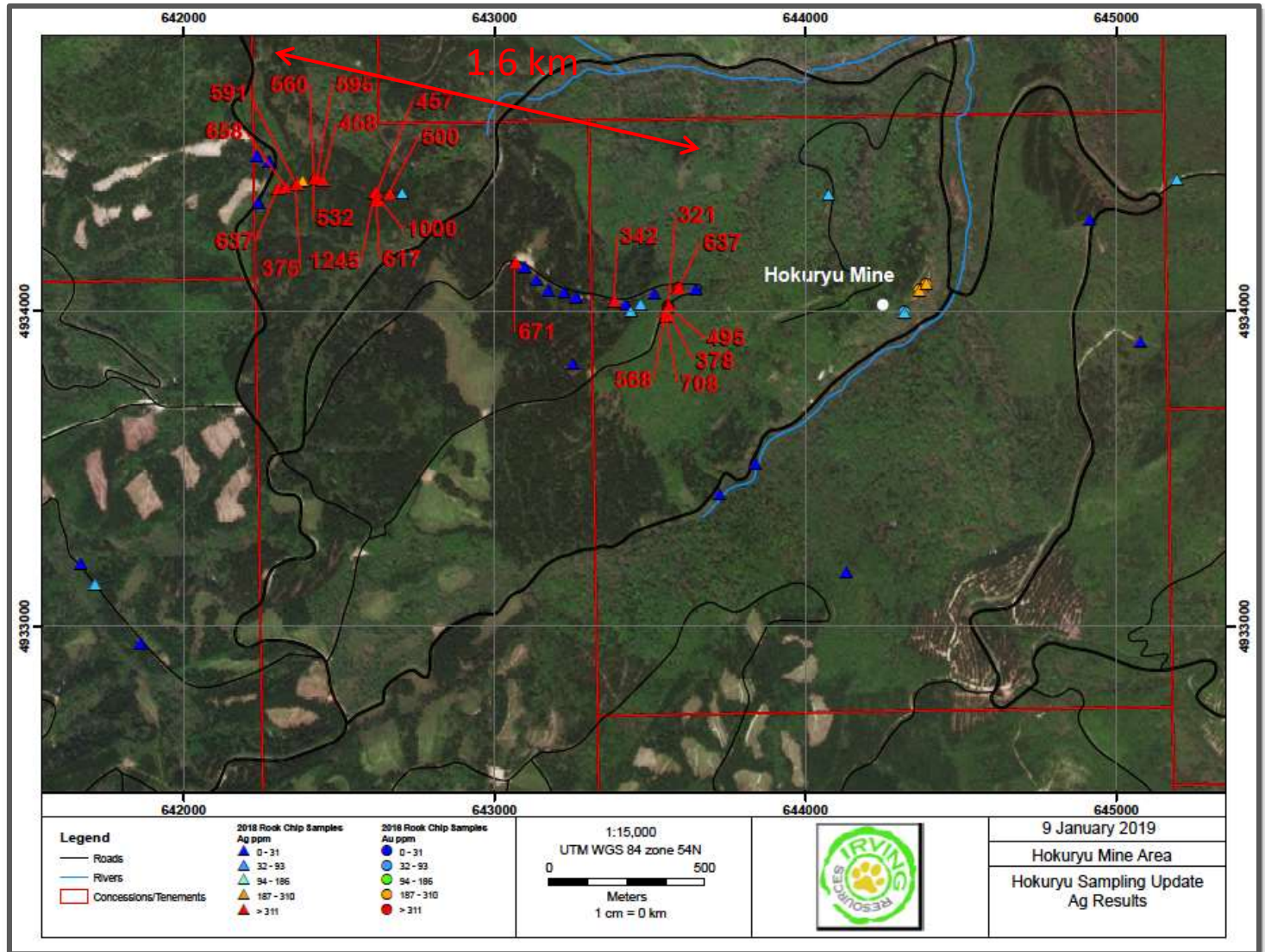
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Hokuryu West

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Hokuryu West

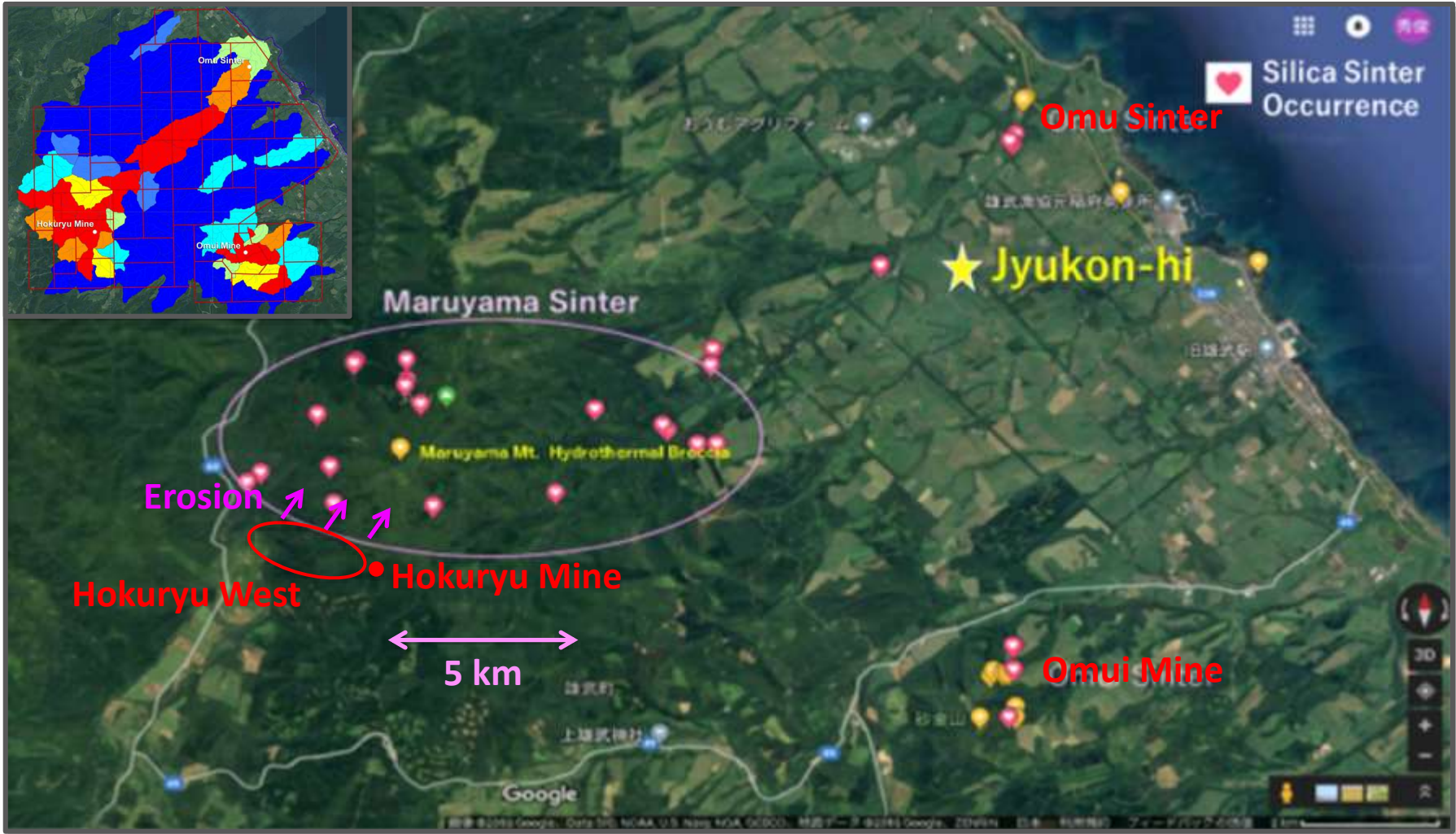
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Maruyama

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- **Irving's 2019 Omu exploration program includes:**
 - **Drill test the Omu sinter target. (Spring)**
 - **Trench and bulk sample (1,500 tonnes) on the Omui mining license. Bulk sample will be shipped to Kushikino mill. (Summer and Fall)**
 - **Drill test multiple targets at Omui including Honpi, Nanko and Sakinyama. (Summer and Fall)**
 - **Expand prospecting around Hokuryu. (Summer)**
 - **Soil sampling over West Hokuryu and areas to the north. (Summer)**
 - **Geophysical surveys over Hokuryu, West Hokuryu. (Summer and Fall)**
 - **Expediting grant of Hokuryu prospecting licenses and drill permitting. (Fall)**



African PVA with JOGMEC

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Irving holds Project Venture Agreements (PVA) with Japan Oil, Gas and Metals National Corporation (JOGMEC) for the joint exploration programs in the United Republic of Tanzania, the Republic of Madagascar and the Republic of Malawi.

Spring Stone Limited, a wholly-owned subsidiary in Malawi, holds an Exclusive Prospecting License to explore for rare earth elements in Mulanje District of Malawi.

Mitsui Mineral Development Engineering Co., Ltd. (MINDECO), in Japan, has been contracted as the operator of PVA programs.





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