

Gold Exploration in Japan

IT MAY BE A SURPRISE TO SOME THAT GOLD MINING IN JAPAN HAS A PROLIFIC HISTORY.

by Dr. Edward Schiller

In recent times, Japan has produced metals sourced from ores mined in countries throughout the world but produced little metal from homeland mines, however, about 35 years ago Japan produced significant amounts of copper, zinc, lead, gold and silver. With over 20 operating smelters, both small and large, Japan has been successful in sourcing ores of all principle metals from third parties and Japanese joint owned mining operations worldwide.

Japan has created the facilities to process the world's metals and profit from its indigenous smelter capacity. Japan's metal

mining history dates back to over 2,000 years ago where evidence of alluvial gold mining has been recorded. Japan's productive mining history started from about 1370 and continued until 1980 with sporadic production from about 76 mines over a 600+ year period.

In 1981, Sumitomo Metal Mining Company discovered the Hishikari Mine in Kyushu province and since production commencement in 1985 has produced 224.2 tonnes of gold as of the end of March 2016 from ores at an average grade of 30-40 g/t gold with an annual 200,000-225,000-

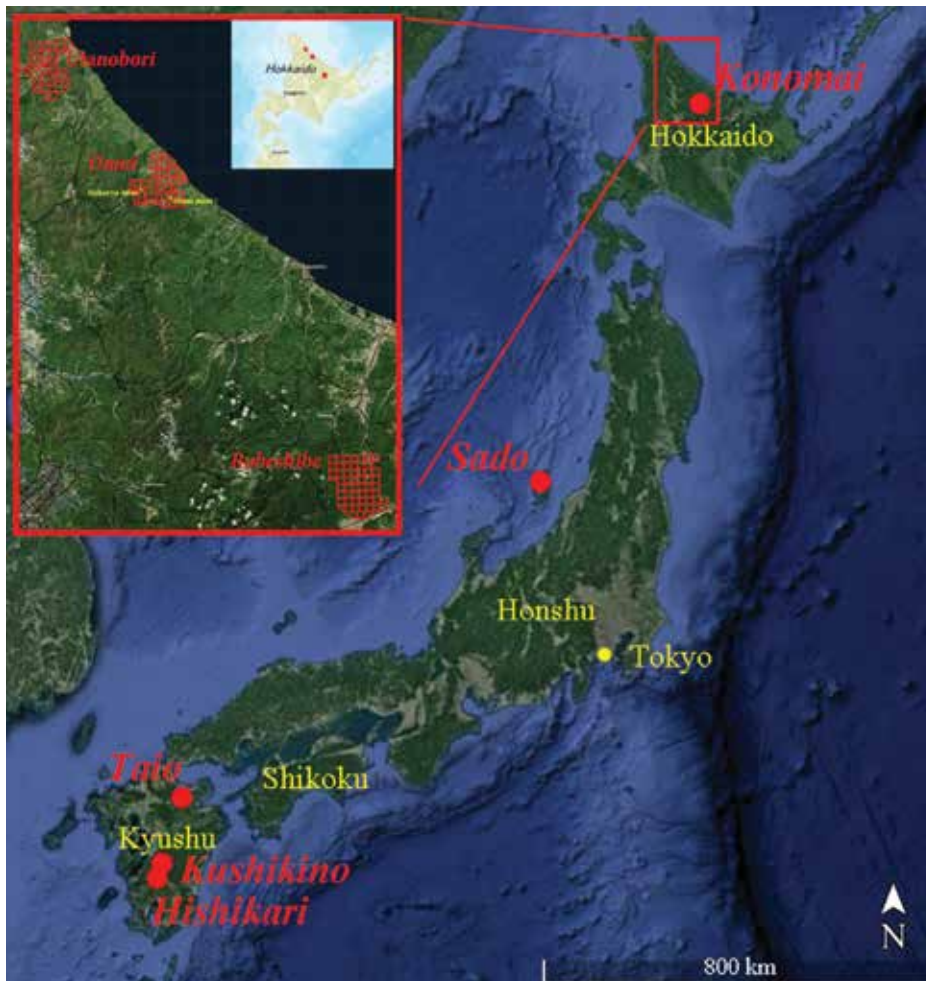
ounce output.

Gold reserves and resources are not reported but estimated to be substantial. Since 1601 over 20 million ounces of gold have been produced from Japanese mines. The top five are Hishikari (currently in production), Sado, Konomai, Kushikino and Taio – all from classic epithermal deposits of high-grade gold and silver hosted in volcanic strata of Tertiary and Quaternary age (< million years old). See map.

Due to the high silica content of the Hishikari gold vein ores, Sumitomo ships these ores milled or concentrated using hand or optical sorters rather than conventional milling processes directly to their base metal smelters in Japan where the high silica ores act as a flux for smelting base metal ores. See photo. Historically, this has been the practise of many of the operating Japanese mines.

Due to the astuteness of a Vancouver-based Japanese mining executive, Akiko Levinson, whose history of mineral exploration know-how (via her now deceased husband), and supported by experienced geologists and importantly connected to Japanese-based organizations, was able to implement a property acquisition program securing permit applications to promising areas with gold potential.

Commencing in 2015, **Irving Resources Inc.** [IRV-CSE], through its wholly-owned subsidiary Irving Resources Japan GK, has taken a commanding land posi-



Map showing location of Japan's five largest gold mines – Sumitomo Metal Mine's producing Hishikari, and four former producing mines – Sado, Konomai, Kushikimai and Taio, and Irving Resources three prospecting license applications on Hokkaido Island – Omui, Utanobaori and Rubeshibe. Map courtesy Irving Resources Inc.



Typical gold-bearing quartz vein from an underground stope at Sumitomo's Hishikari gold mine in Japan. Photo courtesy Sumitomo Metal Mining Co. Ltd.

tion in three prospecting permits on the island and province of Hokkaido. They are 1) Omui: 131 km² of prospecting license applications, a 2.98 km² mining license, and 0.48 km² of surface rights. 2) Utanobori: 121.55 km² of prospecting license applications and a recent second prospecting license application of 33.41 km², and 3) Rubeshibe: 188.80 km² of prospecting license applications.

On all three permits anomalous gold and silver anomalies have been found associated with banded quartz-rich veins typical of epithermal deposits. The Omui permit is located adjacent to the former producing

Hokuryu and Omui mines.

The Japanese gold deposits fall into the category of low sulfidation epithermal types. The best comparable deposit is the Fruta del Norte deposit in Ecuador now being developed by Lundin Gold with reserves of 4.82 million ounces of gold and 6.34 million ounces of silver.

The 2017 Irving exploration program will comprise rock and soil sampling, mapping and ground-based geophysics of permitted applications and the continued search for new prospective areas. In addition, Irving has exploration project venture agreements (PVA) with **Japan Oil,**

Gas and Metals National Corporation (JOGMEC) in Tanzania, Madagascar and Malawi with Mitsui Mineral Development Engineer Co. Ltd. (MINDECO as contractor and operator of the PVA programs).

Irving recently staked 25 prospecting licenses covering 86.53 km² on Sado Island, a small island west of Honshu Island, Japan. Sado Island is host to Mitsubishi's Sado Kinzan gold mine which was mined continuously for 388 years and produced 2.51 million ounces of gold grading 153 g/t. Irving geologists believe its new ground is prospective for veins mineralization similar to Sado Kinzan. Fieldwork is planned for later this year.

Vancouver-based **Japan Gold Corp. [JG-TSXV]** has, by way of its wholly-owned subsidiary Southern Arc Minerals Japan KK, 148 prospecting rights license applications accepted on Hokkaido Island for a combined area of 49,150 hectares over 10 separate projects. Nine of these have been granted as Prospecting Rights. All project areas are underlain by former producers and prospective workings and were selected due to anomalous gold and silver anomalies hosted by epithermal rock types. ■