# Celts

Silicon analogous low-sulphidation steam cap hidden in the Walker Lane

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# Project Summary

- Untested cell of advanced argillic alteration centered on a rhyolite dome
- Alteration indicative of steam-heating, implying a boiling zone and possible gold-silver mineralization at depth
- Steam cap remains untested perhaps due to being mistaken as a barren extension of the peripheral high-sulphidation Goldfield district
- Peripheral gold occurrences define a four-square kilometre exploration play
- Analogous to AngloGold Ashanti's recent Silicon discovery- 4.2 million ounces of gold in current global resource[1]

**Photo of advanced argillic alteration in the rhyolite dome at Celts.**
**Photo looking towards the northeast.**



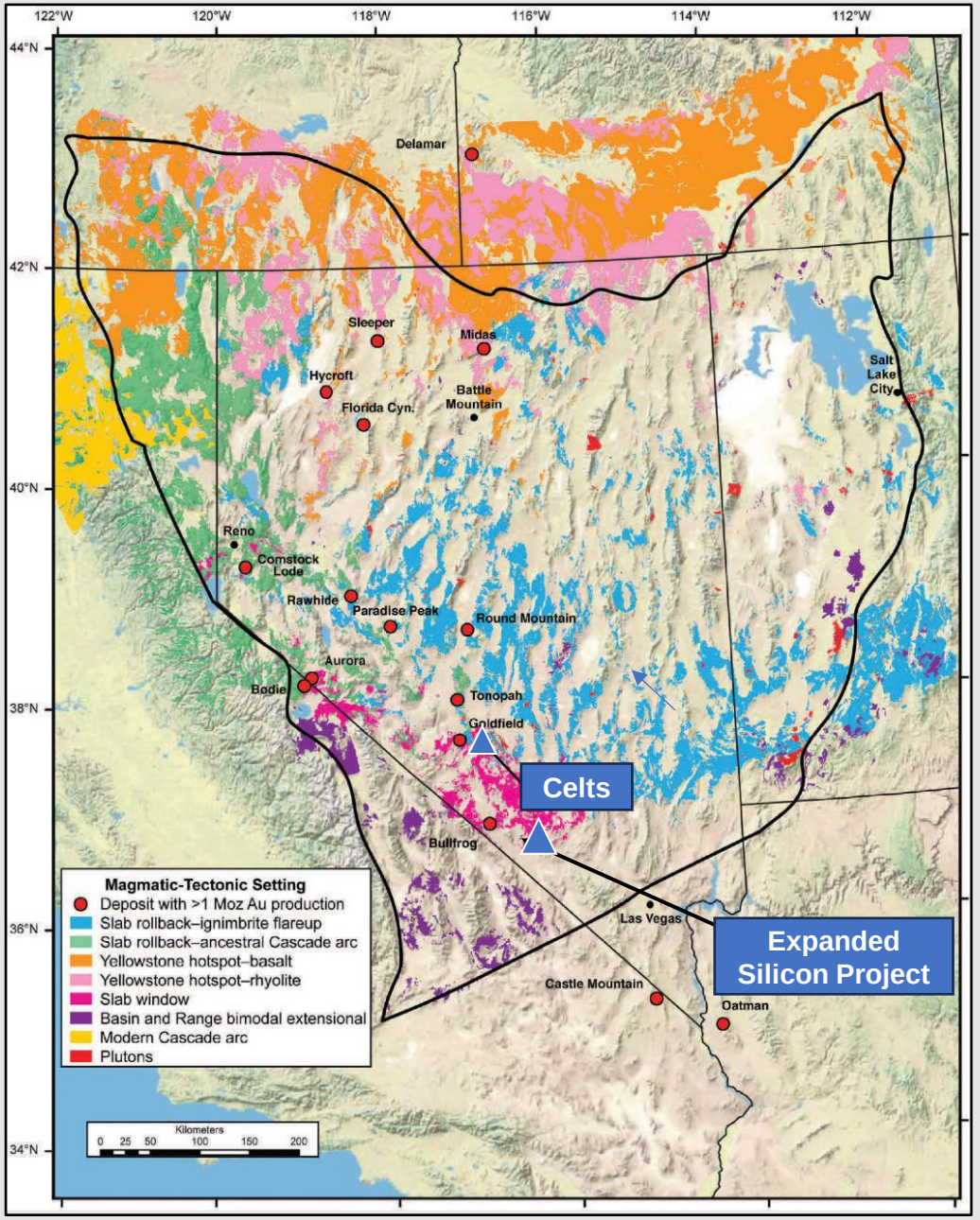
1. https://reports.anglogoldashanti.com/23/wp-content/uploads/2024/04/AGA-RR23.pdf

# Location

- Project is thirteen kilometres northeast of Goldfield, Nevada (Historic Production of 4.2 Moz Gold and 1.5 Moz Silver)
- One hundred kilometres northwest of the Silicon discovery
- Sixty-seven claims located on BLM ground covering 5.6 km$^2$ (560 Ha)
- Easily accessible on dirt roads from Highway 95

# Regional Geology

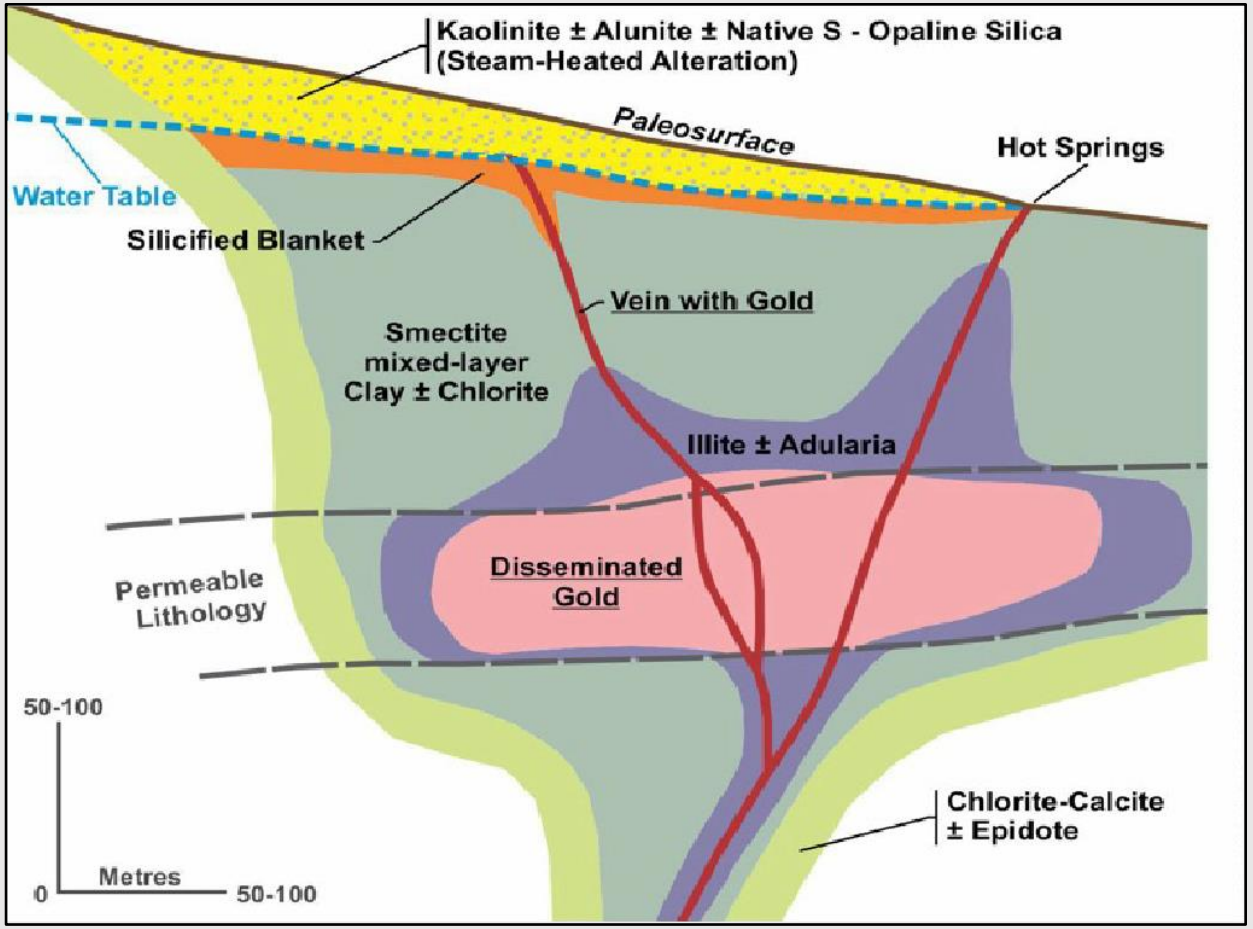
- Located in the Walker Lane trend, a 100 kilometre wide northwest oriented structural corridor containing many Tertiary epithermal gold deposits
- Multiple historical and operating low and high sulphidation epithermal gold mines
- Deposits are related to extensive Cenozoic magmatism
- Low-sulfidation systems linked to slab rollback, the ancestral Cascade arc, and slab window magmatism
- Celts one of few epithermal systems in the Walker lane associated with slab window magmatism like Silicon and Merlin.




Adapted from Henry and John, 2020

# Exploration Methodology

- Advanced argillic alteration forms in multiple environments, some prospective for gold and some not
- Orogen has spent the last ten years working on strategies to rapidly distinguish environment of formation based on alteration mineral assemblage, texture, morphology and associated geochemistry




- Advanced argillic alteration produced by steam heating vectors towards boiling zones and possible low-sulfidation mineralization at depth

Steam Heated Alteration
typically 0 to 10 ppb gold

Chalcedonic Blanket
typically 10 to 100 ppb gold

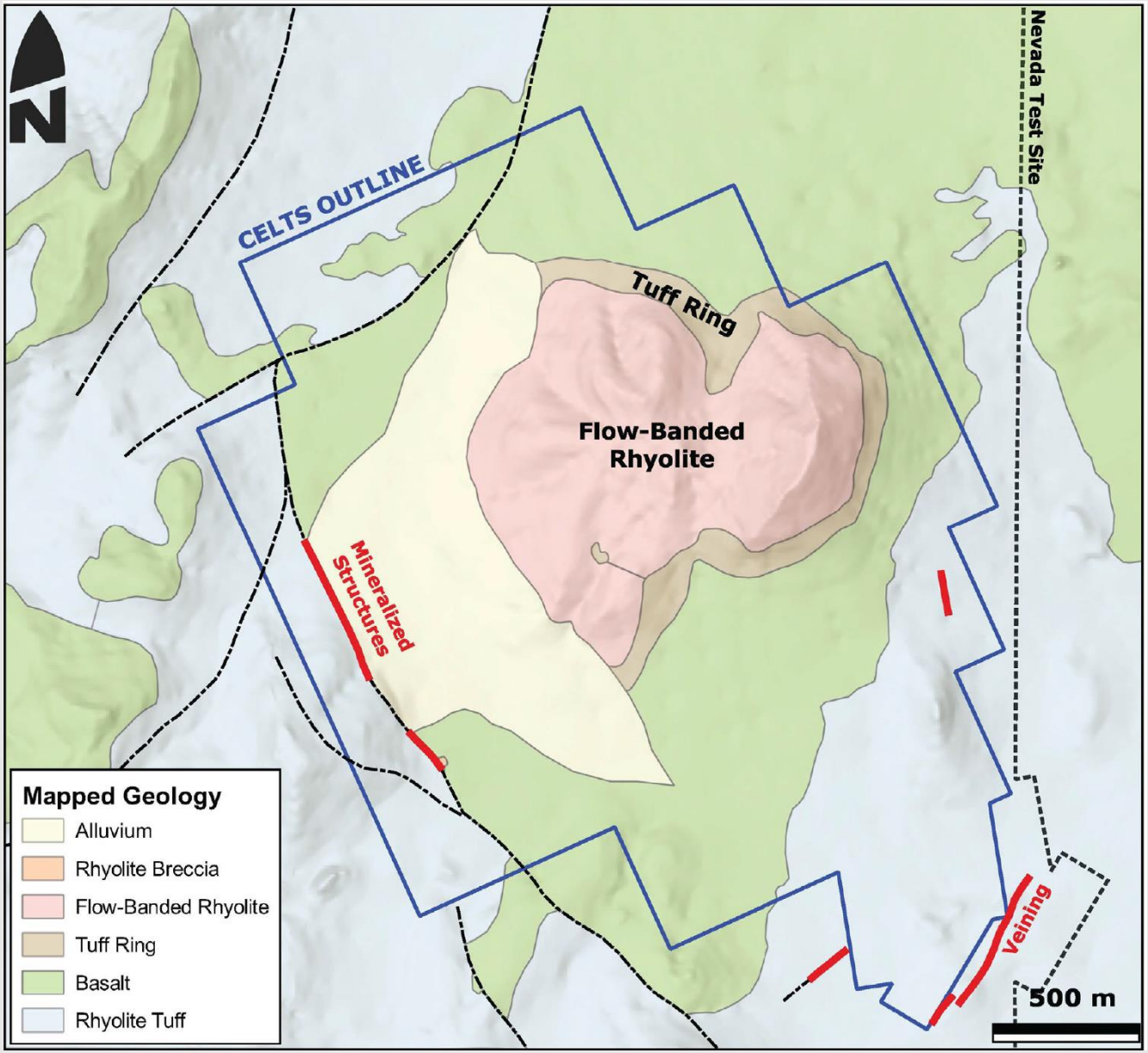
High-Grade Veins
typically >10 ppm gold

Illite-Adularia Halo
typically 0-1 ppm gold

Disseminated Ore Zone
typically 1-5 ppm gold

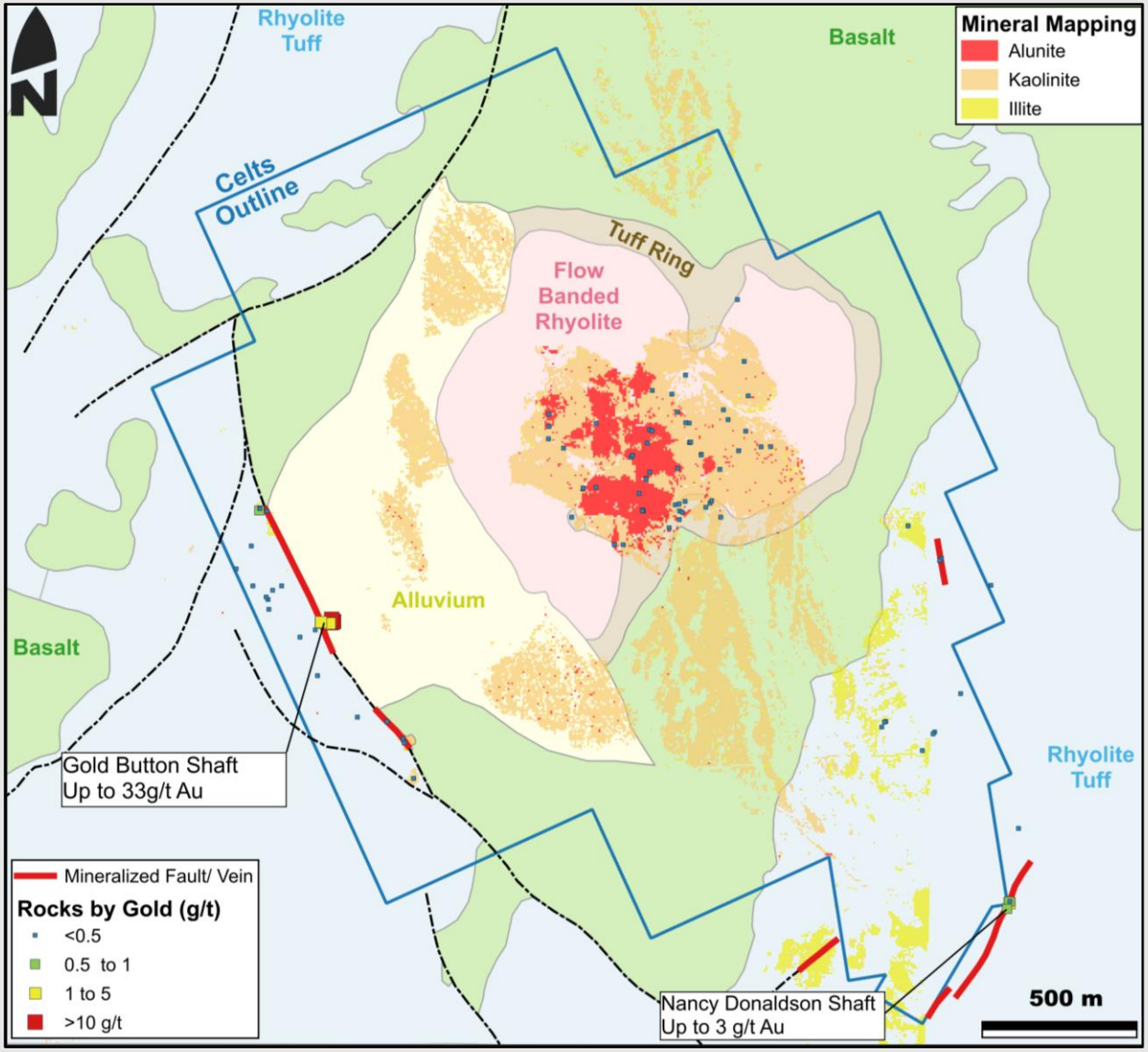
# Celts Geologic Overview

- A central, Tertiary rhyolite dome intrudes older basalts and rhyolites
- Shallow level of erosion confirmed by presence of marginal tuff ring
- Low sulfidation-style quartz vein textures with multi-gram gold values are peripheral to the alteration cell



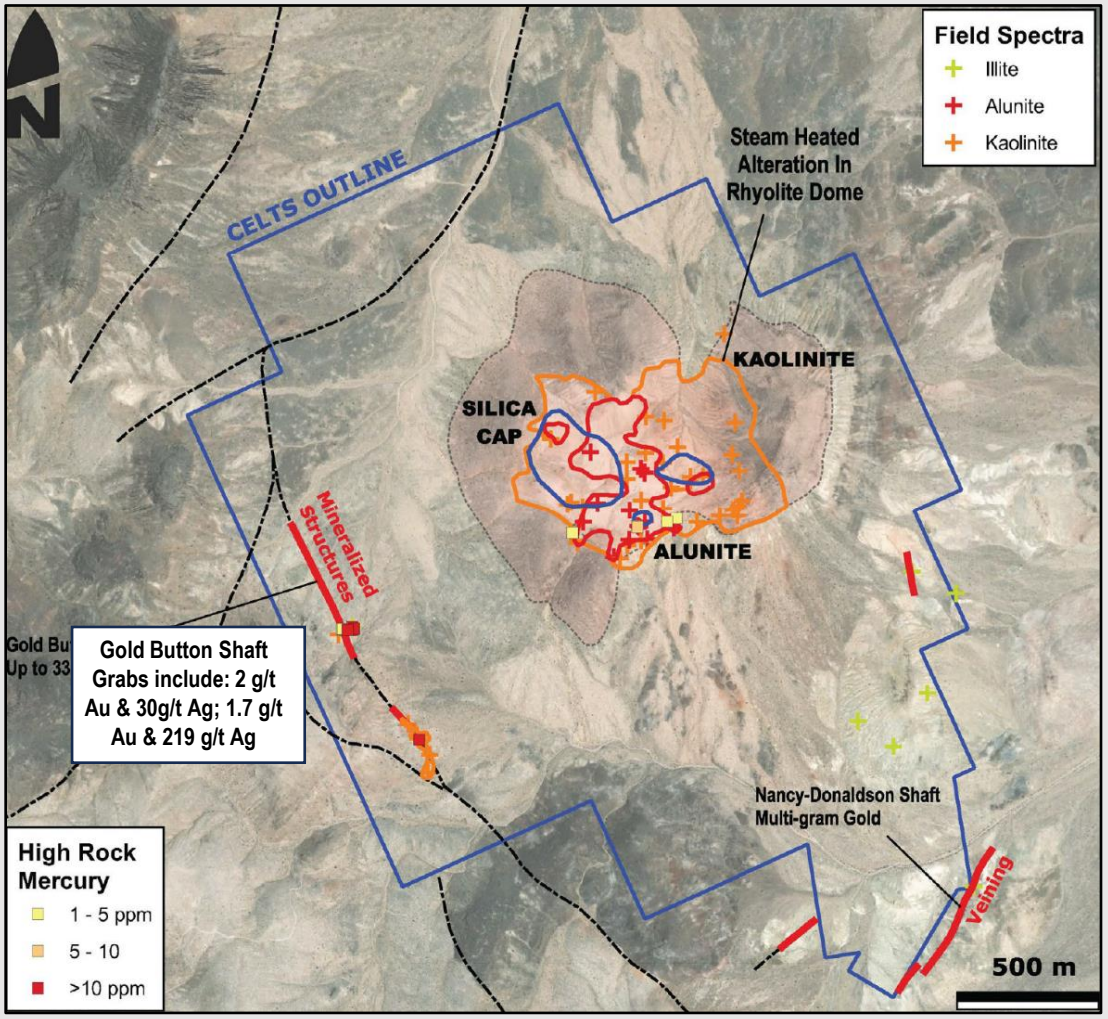
# Celts Alteration

- Hymap Mineral Classification mapping identifies 800 metre diameter alunite and kaolinite cell developed on rhyolite dome
- Alluvial cones of kaolinite occur below the central rhyolite dome complex
- Peripheral illite associated with gold occurrences limited to felsic tuffs underlying central basalts
- Potential gold-bearing illitic alteration may continue beneath the basalt and transcend into adularia beneath the central vent complex



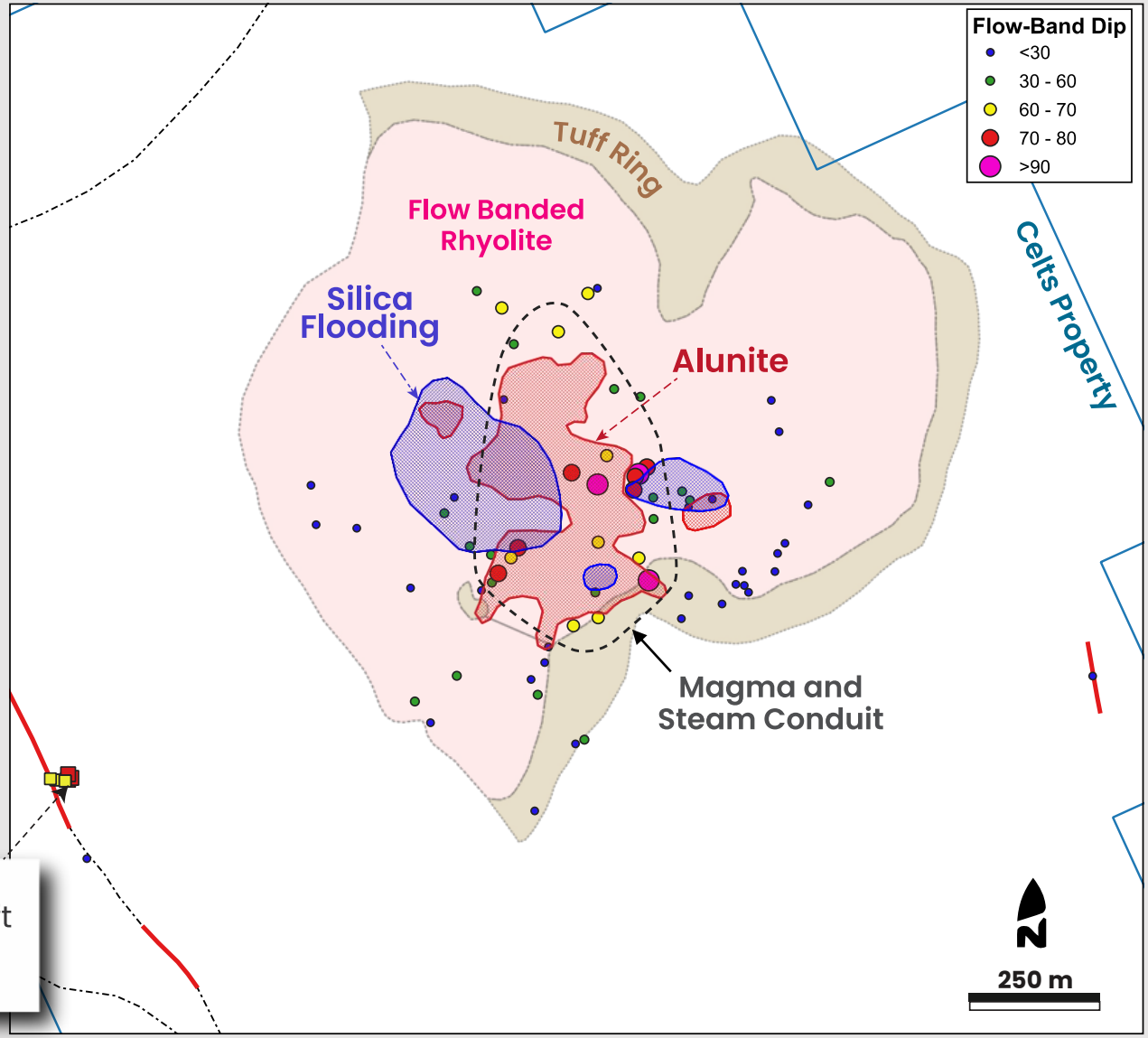
# Celts Alteration

- Corroborated by field infrared spectra and constitutes a potential steam-heated alteration
- Zones of fine-grained silica flooding
- Alunite is fine-grained end-member potassium-alunite, and is associated with fine-grained kaolinite and opaline to chalcedonic silica
- Alteration intensity within the dome vectors toward the south



# Celts Alteration

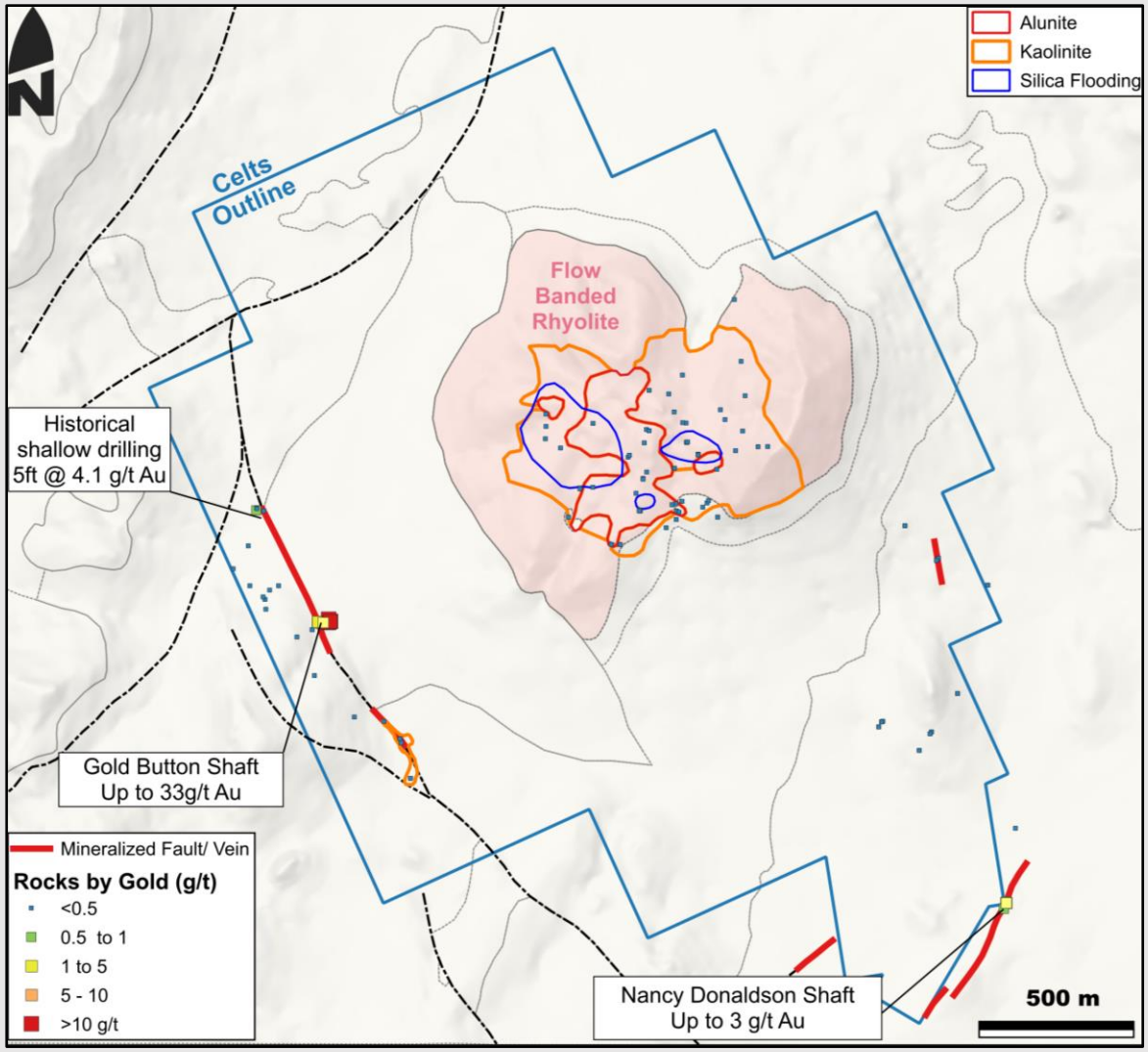
- Flow-banding in the rhyolite dome steepens towards a central north-south corridor
- Likely the magmatic vent during dome formation
- Correlate with strongest alunite indicating this corridor was a conduit for steam release from boiling fluids
- Principal structural target for drilling
- Together, the central steam cap and peripheral gold-bearing mineralized structures define four square-kilometre district-scale play




Gold Button Shaft
up to 33g/t Aug

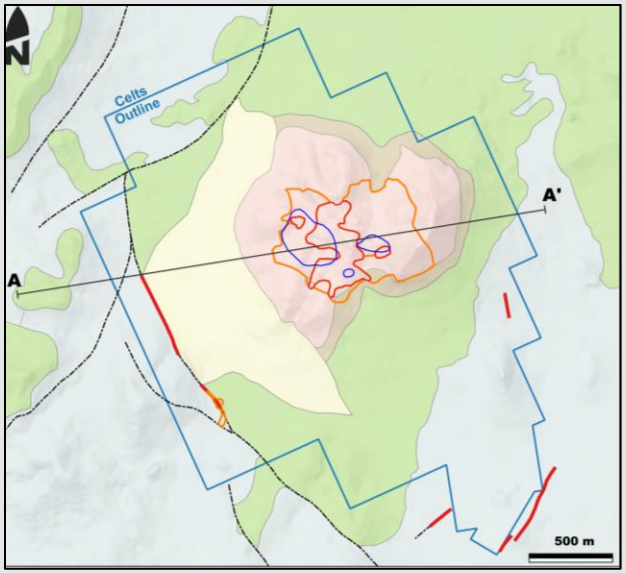
# Celts Geochemistry - Gold

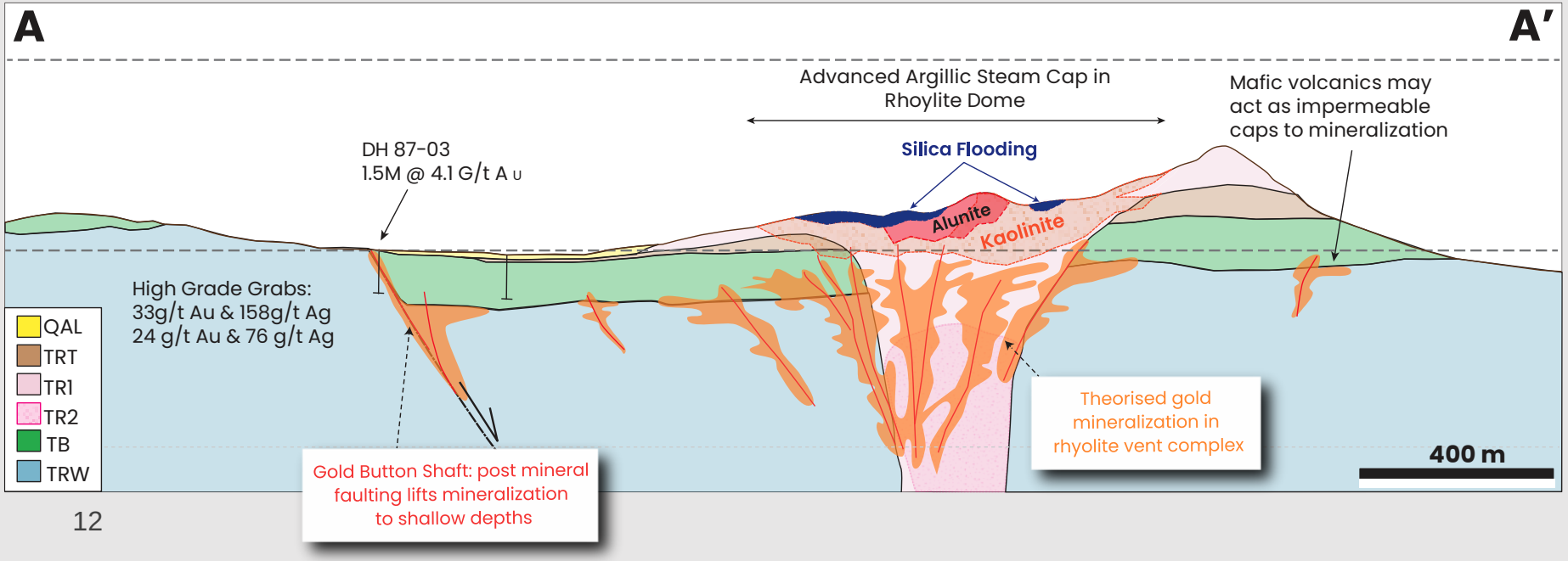
- Anomalous gold in peripheral veins at low elevation (up to 33 g/t gold) confirms presence of metal-bearing hydrothermal system at depth
- Gold-bearing zones are associated with clay assemblages which are indicative of uppermost levels of boiling in a hydrothermal system
- Historic drilling at the Gold Button shaft returned 4.1 ppm gold over 5 feet in shallow drill-hole northwest of the shaft



# Target Concept

- Low sulphidation-style gold mineralization beneath the steam-heated rhyolite dome
- Model supported by peripheral gold occurrences at surface
- Orogen envisions upward-flaring gold zones at depth beneath the advanced argillic alteration, similar to those observed in many classical dome-hosted epithermal deposits
- Mafic volcanics may act as impermeable cap to mineralizing fluids

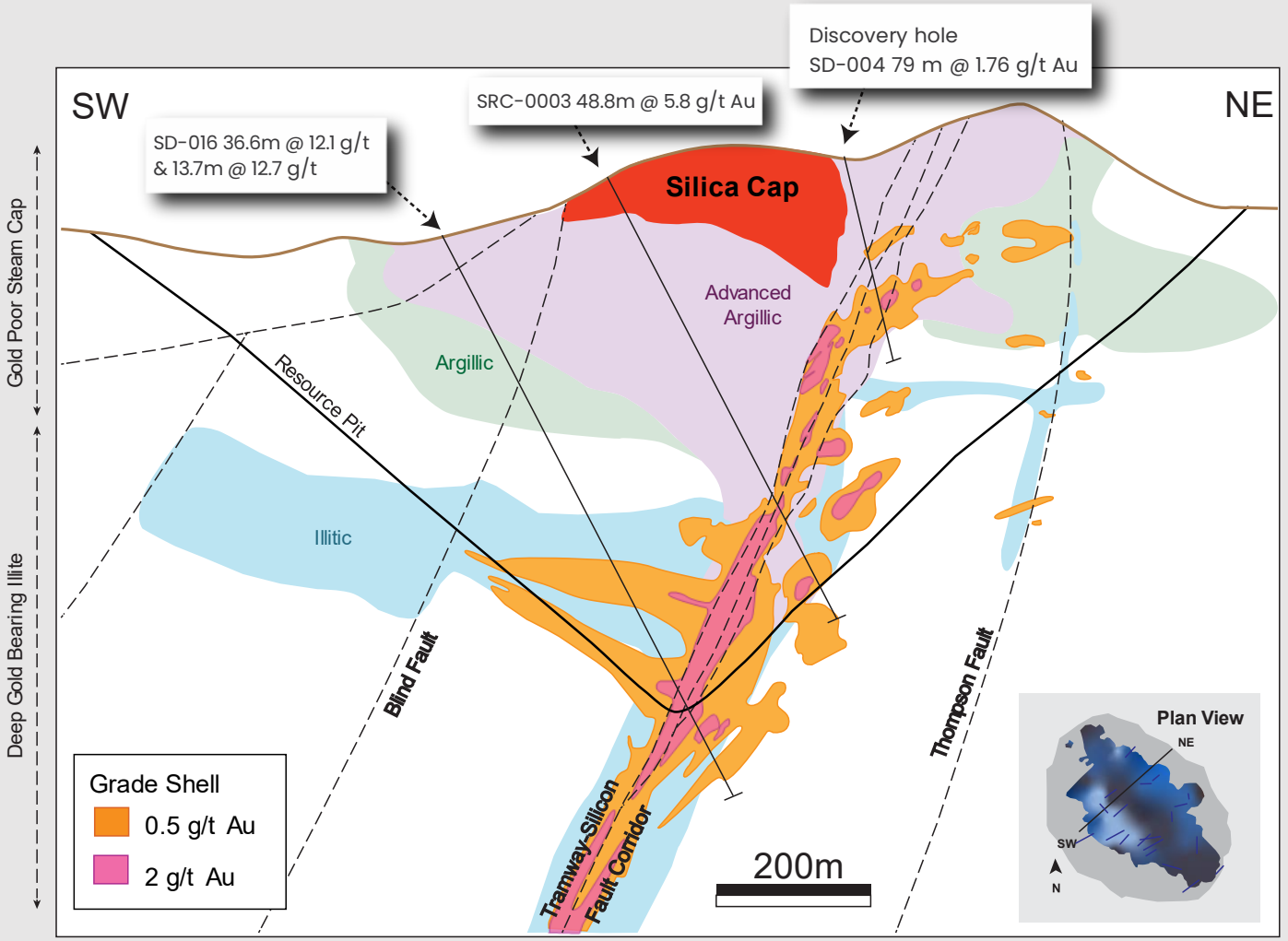


# Silicon Analog

Celts shares multiple similarities with AngloGold Ashanti's recent Silicon discovery (Global resource of 4.2 million ounces of oxide gold[1])

1. A strongly developed, gold-poor steam heated alteration cell that may overlie a boiling zone
2. Anomalous mercury
3. Possible association with slab window magmatism




*Drill hole locations are approximate and schematic.*

# Opportunity

- Untested advanced argillic alteration cell on BLM land with possible low sulphidation epithermal mineralization at depth
- Peripheral multi-gram gold with classic low sulphidation vein textures
- Attractive location immediately next door to the high-grade, historic Goldfield district
- Clear and unencumbered pathway forward from fieldwork to geophysical surveys to drill testing
- Analog to AngloGold Ashanti's recent discovery at Silicon: Inferred resource of 4.2 millions ounces of oxide gold
- Generated by the same technical team that identified Silicon

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