

O R O G E N

Celts

Epithermal target beneath a steam-heated cap in the walker lane

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Project Summary

- Untested advanced argillic alteration cell with possible epithermal mineralization at depth
- Analogous to AngloGold Ashanti's recent Silicon discovery- 4.2 million ounces of gold in current global resource
- Alteration indicative of steam-heating, implying a boiling zone and possible shallow gold-silver mineralization hidden below the surface



Photo of advanced argillic alteration in the rhyolite dome at Celts. Photo looking towards the northeast. 3

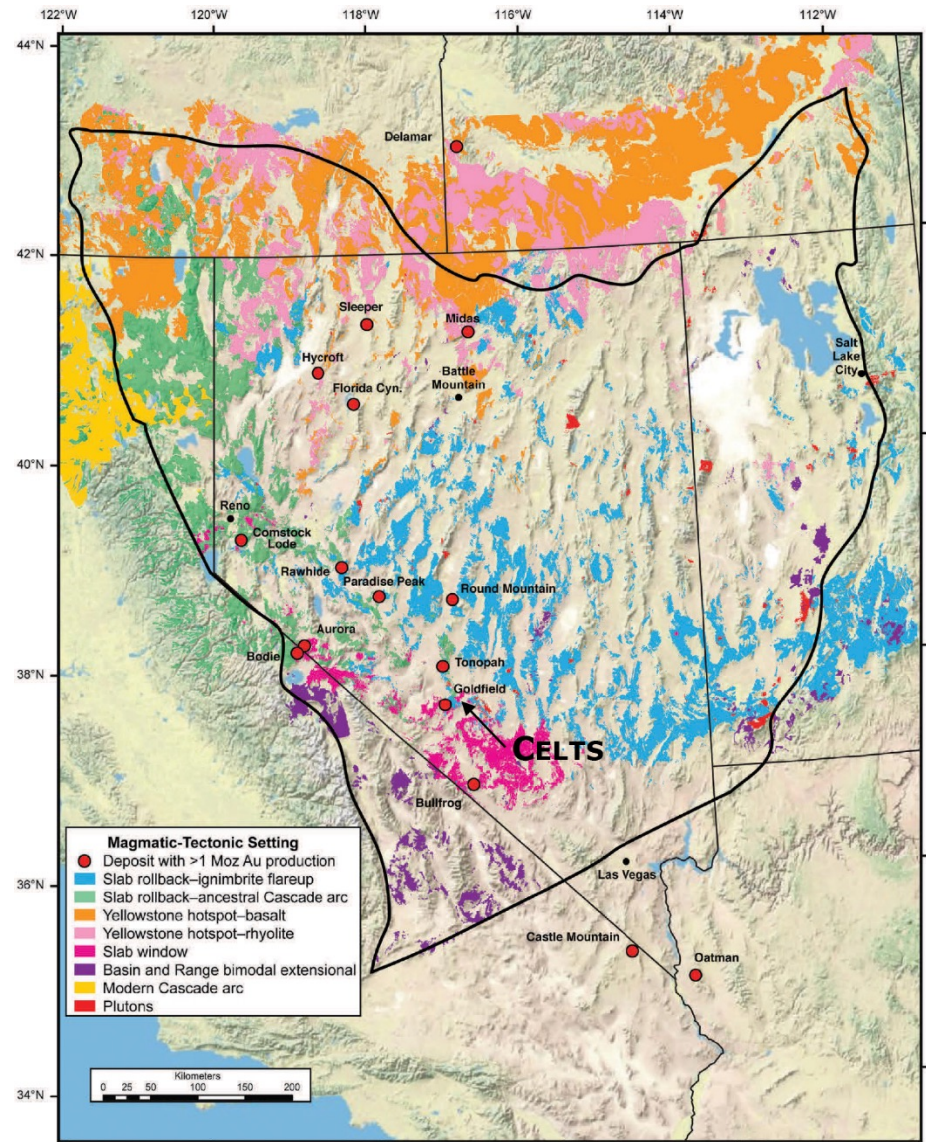
Location

- 67 claims located on BLM ground covering 5.6 km² (560 Ha)
- Project is 13 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
- Easily accessible on dirt roads from Highway 95



Regional Geology

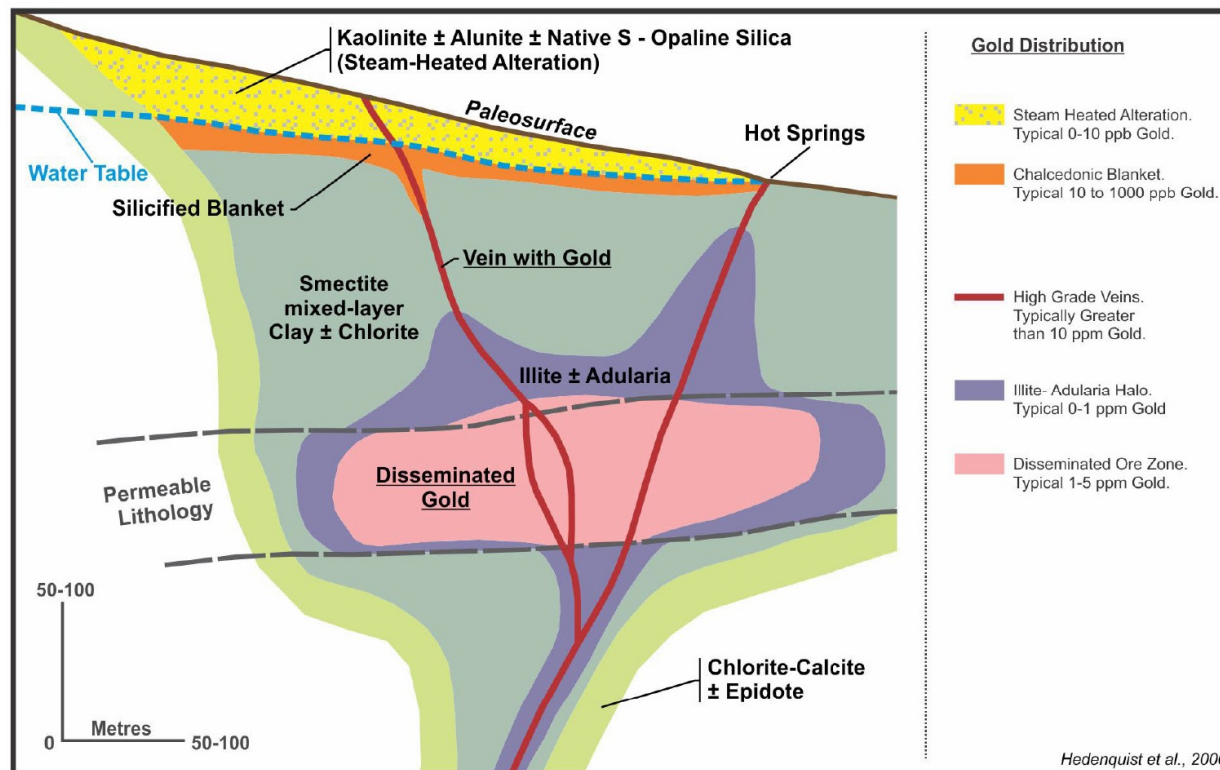
- Located in the Walker Lane trend, a 100 kilometre wide northwest oriented structural corridor containing many Tertiary epithermal gold deposits
- Includes several mines with over one million ounces of gold production
- Deposits are related to extensive Cenozoic magmatism
- Low-sulfidation systems linked to slab rollback, the ancestral Cascade arc, and slab window magmatism



Adapted from Henry and John, 2020

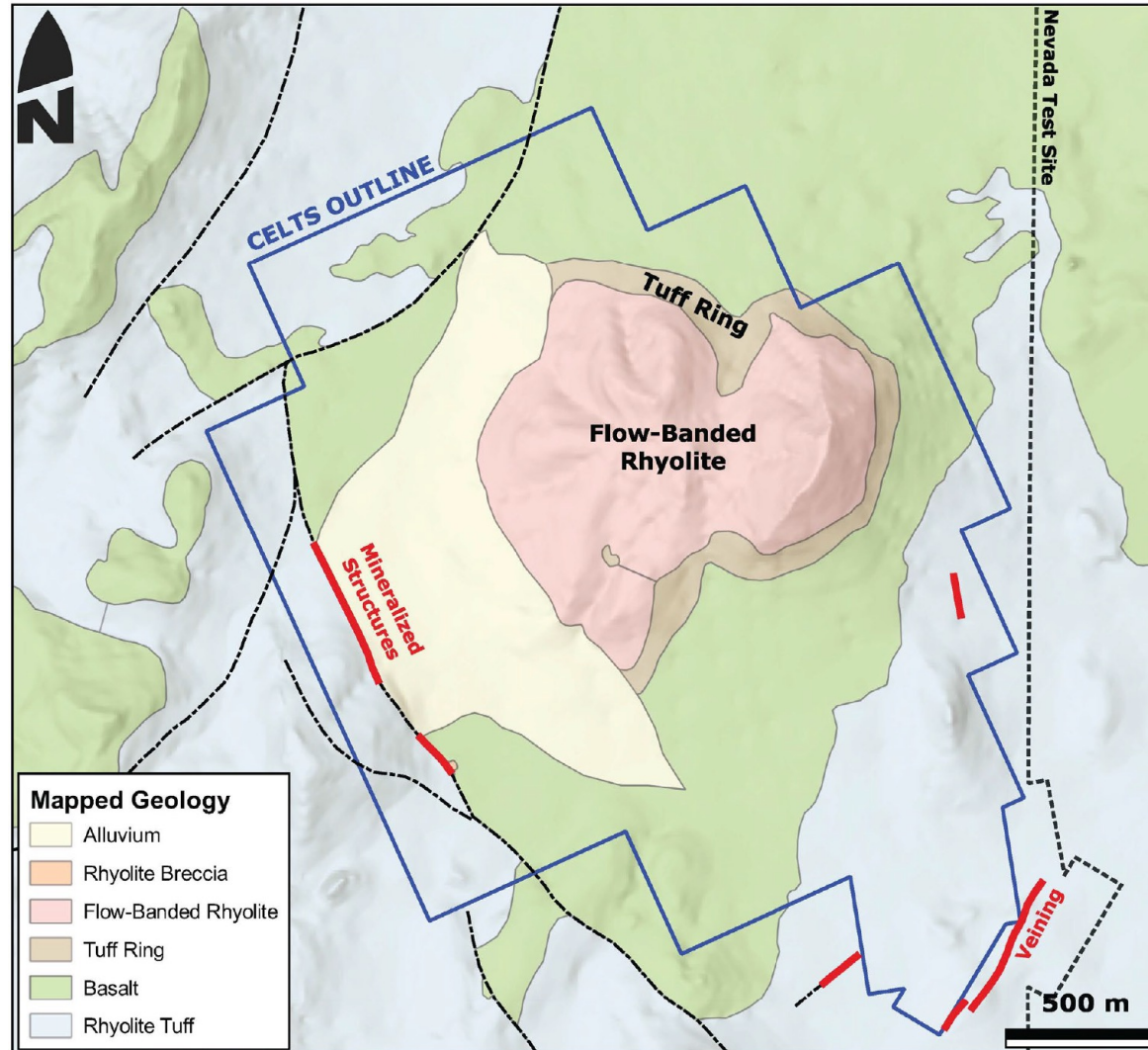
Exploration Methodology

- Advanced argillic alteration forms in multiple environments, some prospective for gold and some not
- Orogen has spent the last 8 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



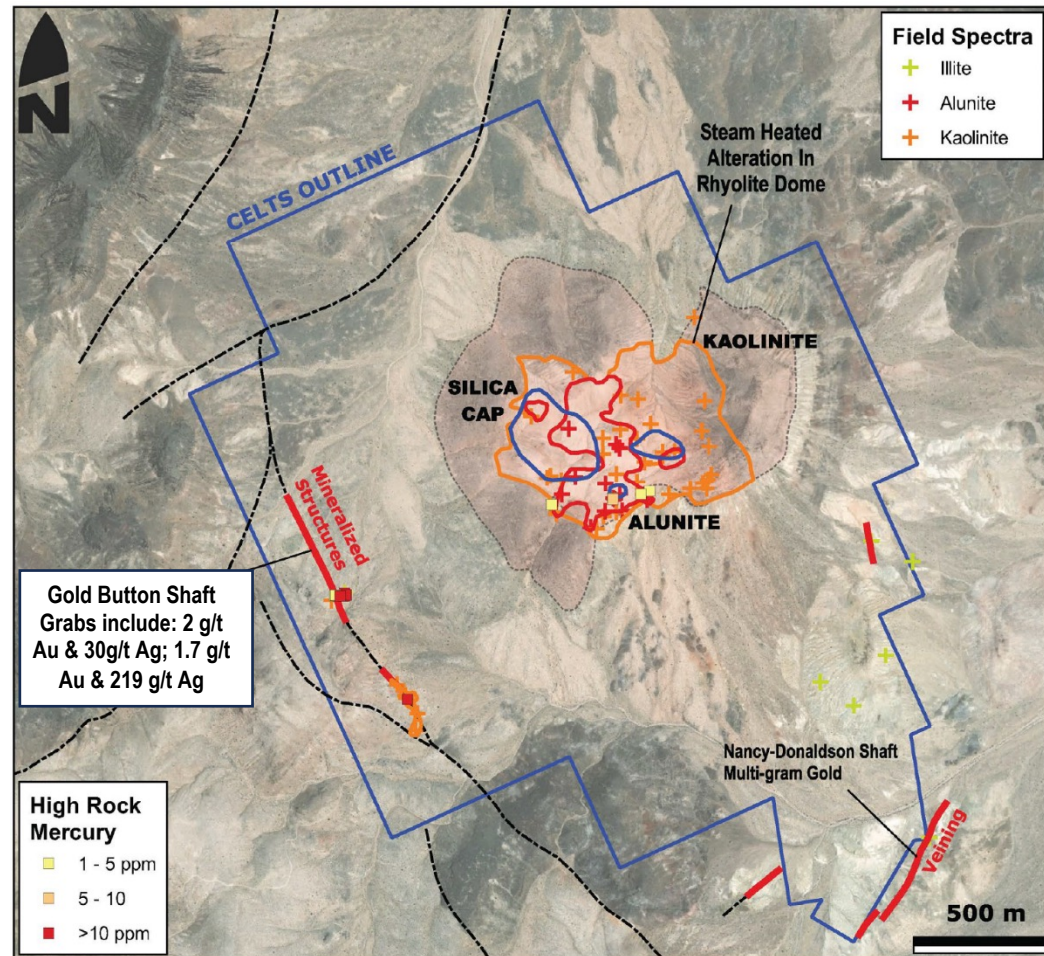
Celts Geologic Overview

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



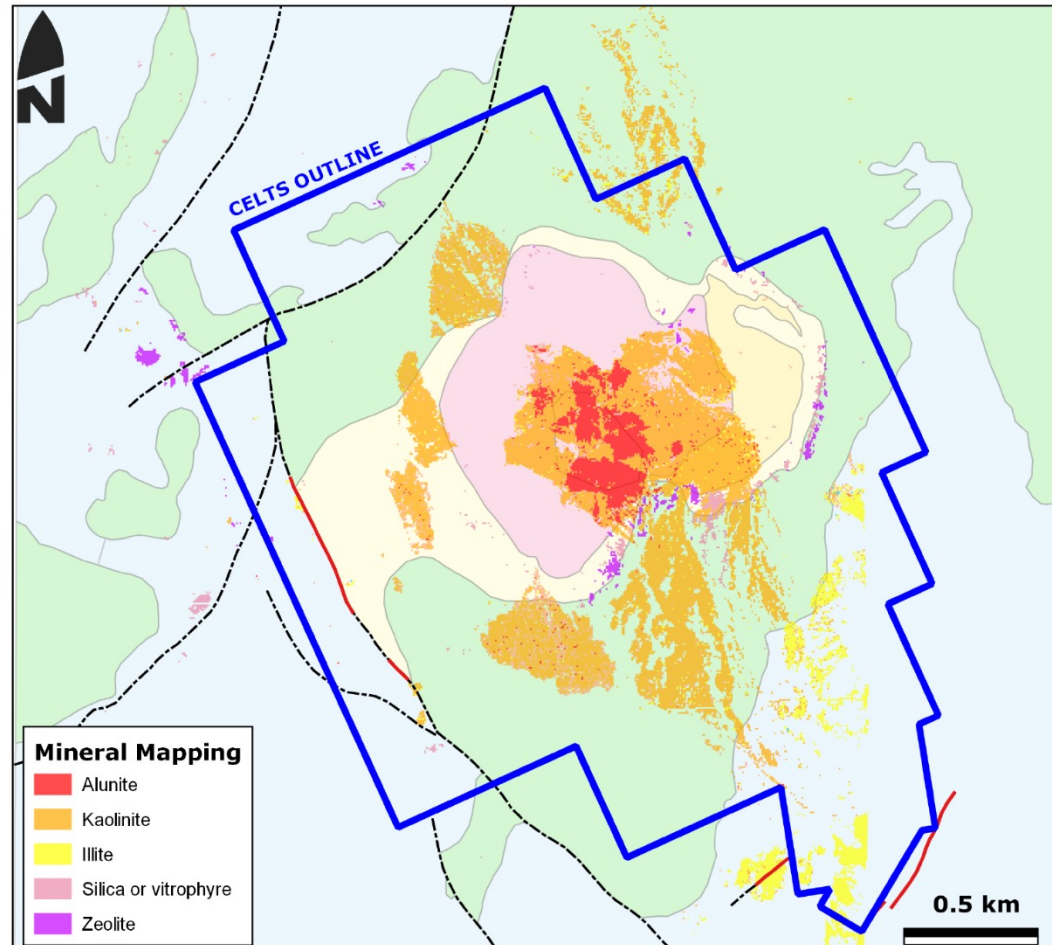
Celts Alteration

- Advanced argillic alteration is focused within the central portion of the dome and constitutes a potential steam-heated alteration cell
- Over 800 m diameter ASTER and Hymap anomaly that corresponds to alunite and kaolinite alteration
- Corroborated by field infrared spectra
- Zones of fine-grained silica flooding
- Alunite is fine-grained end-member K-alunite, and is associated with fine-grained kaolinite and opaline to chalcedonic silica
- Alteration intensity within the dome vectors toward the south



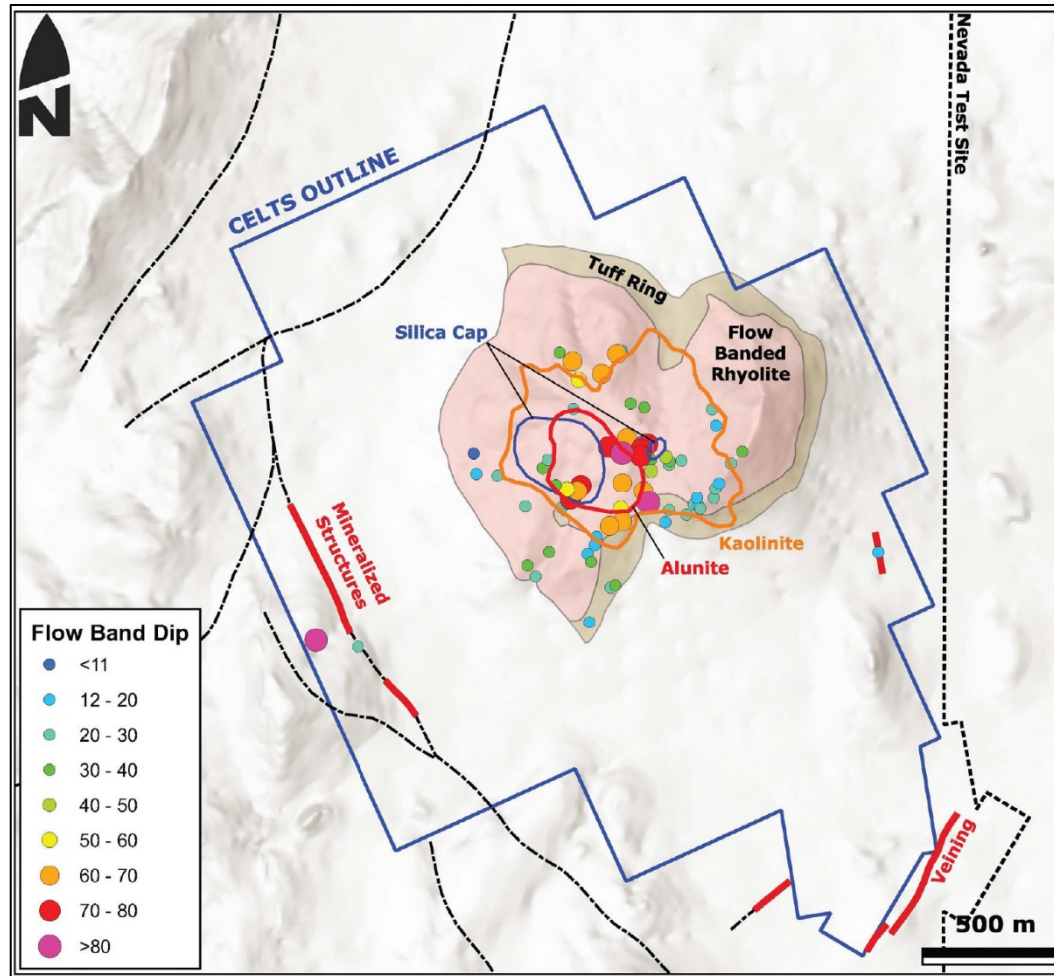
Celts Alteration

- Hymap Mineral Classification mapping identifies large 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



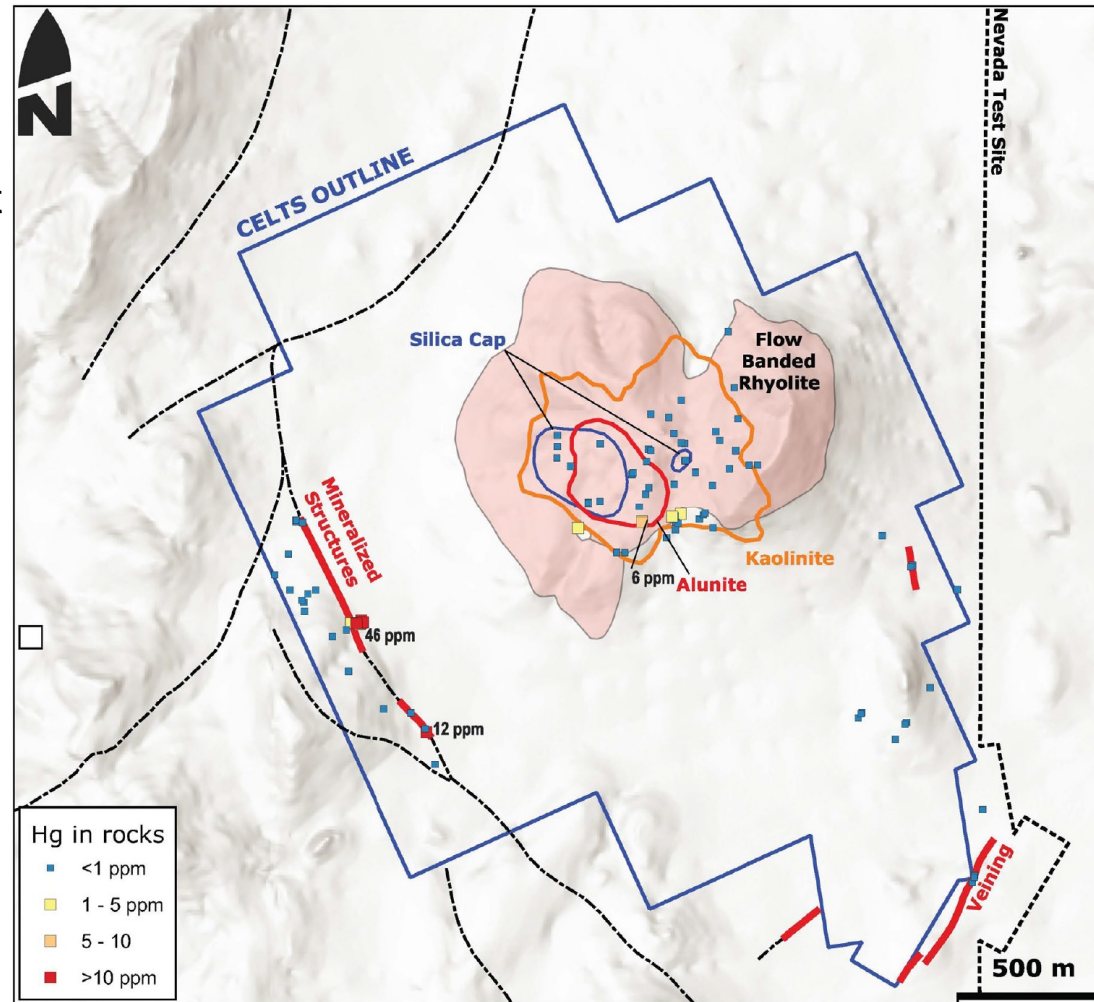
Celts Alteration

- Flow-banding is subvertical in the core of the dome and flares outward on the margins
- Hydrothermal alteration has followed subvertical flow-bands in the rhyolite and high-angle fractures
- The steam-heated cell may overlie a boiling zone comprising the untested core of the low sulfidation-style gold mineralization
- Together, the central steam cap and peripheral gold-bearing mineralized structures define an eight square-kilometre district-scale play



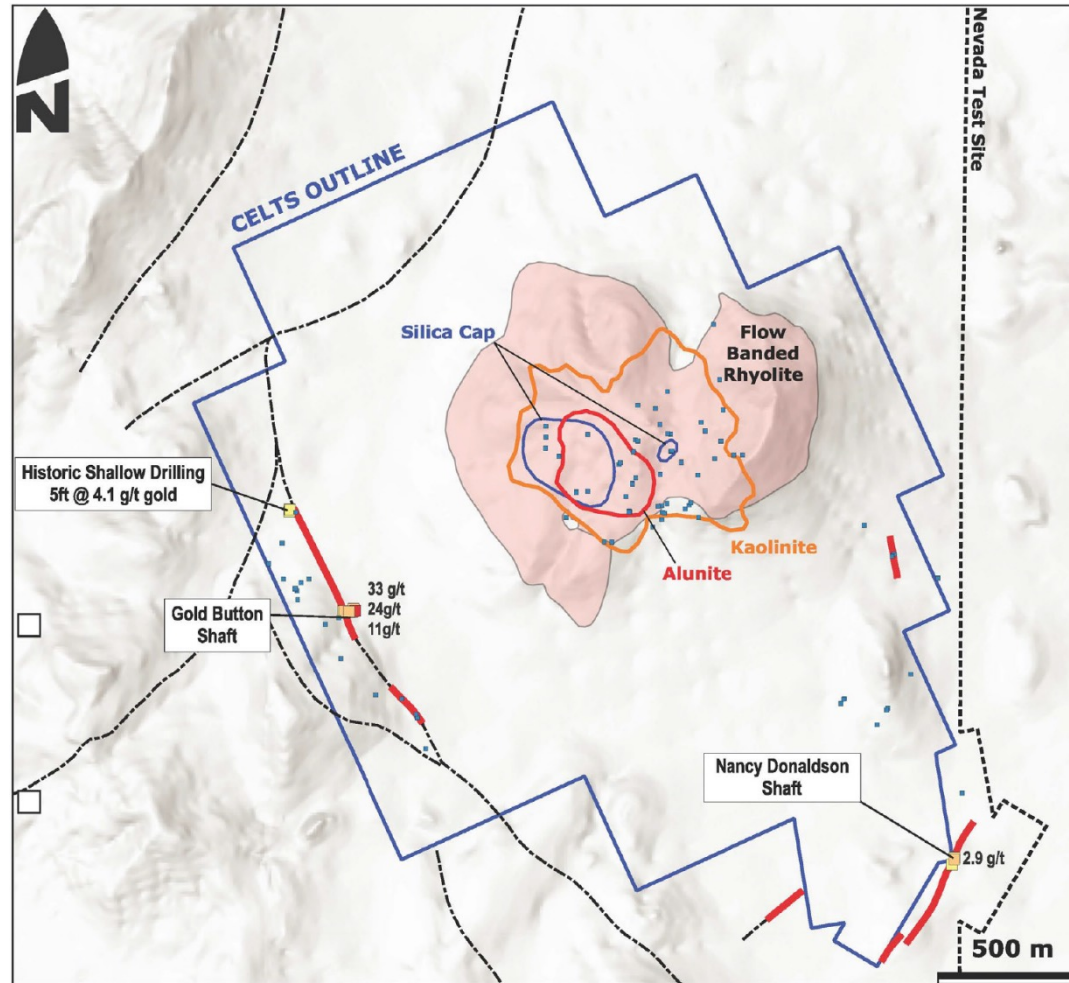
Celts Geochemistry - Mercury

- Anomalous mercury consistent with shallow level of exposure in a hydrothermal system
- Vectors toward the south and west (with consistent values of > 300 ppb and up to 6 ppm mercury on the dome margin)
- Historical gold showings at the Gold Button shaft, where post mineral fault motion has uplifted mineralization, include values of up to 33 g/t Au and 46 ppm Mercury
- Potential at depth beneath the altered dome



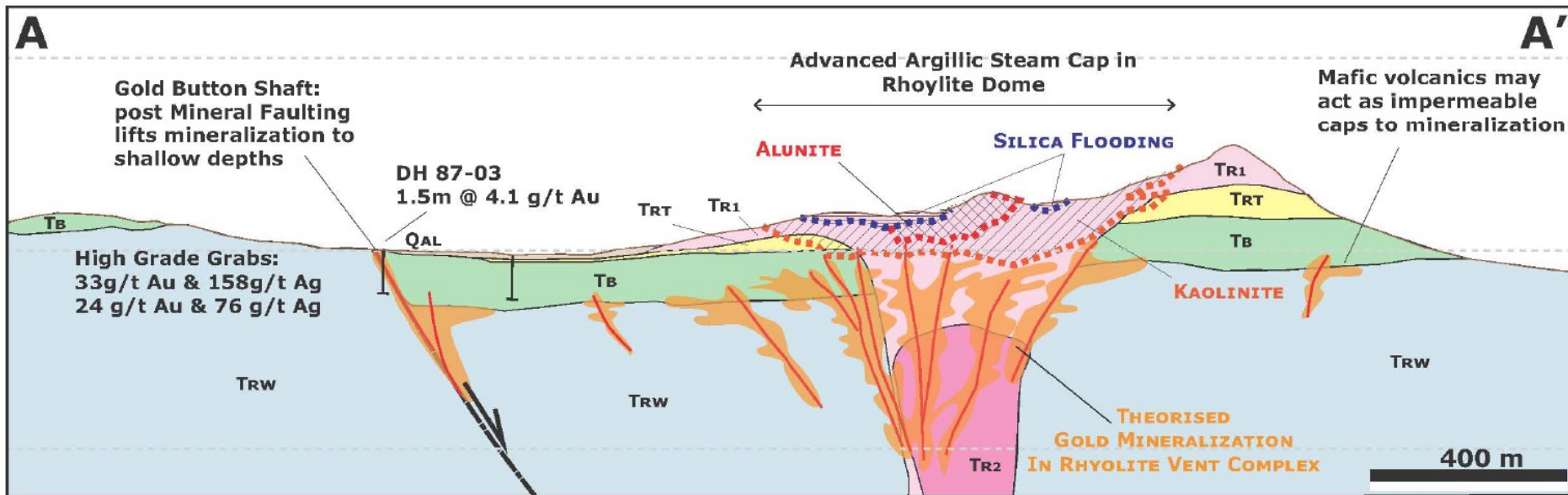
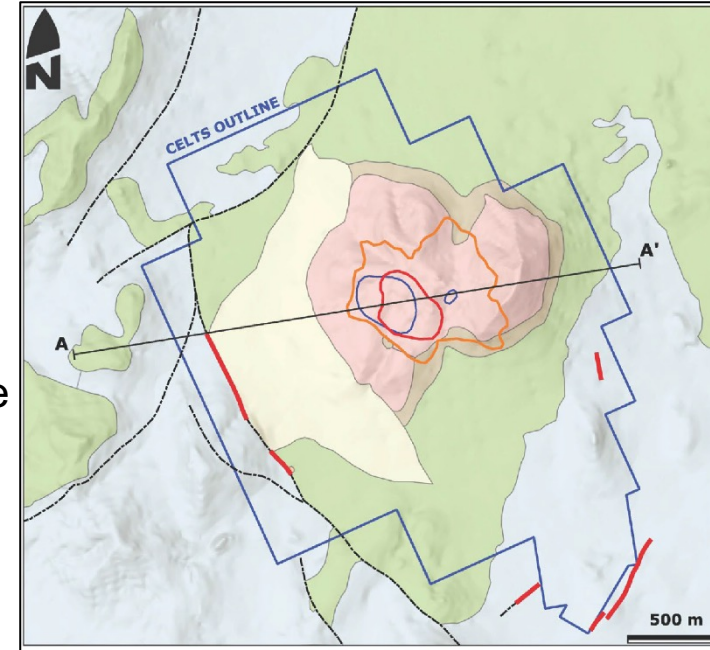
Celts Geochemistry - Gold

- 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

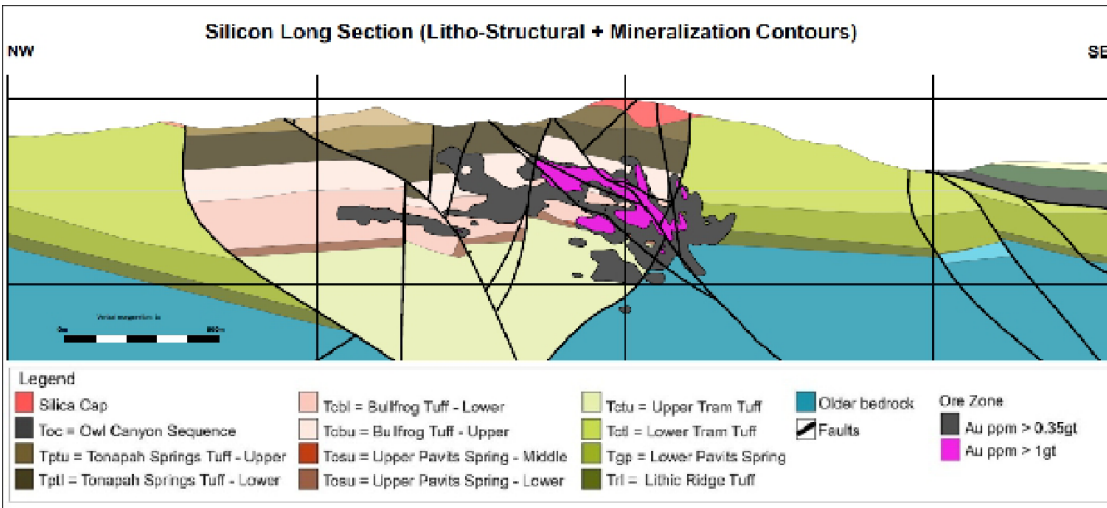
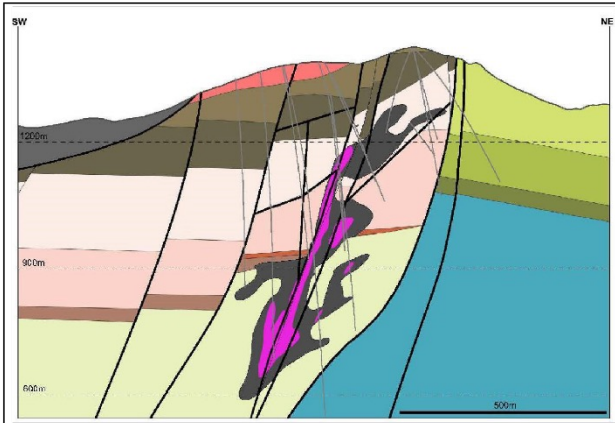
- Low sulfidation-style gold mineralization beneath the steam-heated rhyolite dome
- Model supported by peripheral gold occurrences at surface
- Orogen envisions upward-flaring gold zones at depth beneath the advanced argillic alteration, similar to those observed in many classical dome-hosted epithermal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



Silicon Analog

The Celts property shares multiple similarities with the recent Silicon discovery (Global resource of 4.2 million ounces of oxide gold)

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 (age of Celts alteration unknown; post-dates Goldfield district)



Figures from: https://thevault.exchange/?get_group_doc=143/1648652867-AGA-Silicon-maidenMineralResourceannouncementandSAMRECTable1.pdf

Opportunity

- Untested advanced argillic alteration cell on BLM land with possible low sulfidation epithermal mineralization at depth
- Peripheral multi-gram gold with classic low sulfidation 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 Anglo'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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