0800 0012

Lewis B. Gustafson
3520 San Mateo Ave.
Reno, NV 89509
(702) 329 1936

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Harold F. Bonham
Nev. Bur. Mines & Geol.
University of Nevada, Reno
Reno, NV 89557

RE: Dating of porphyry dike at Stonehouse

Dear Hal:

In 1988 we did some mapping and drilling on Freeport's Stonehouse property as part of a JV agreement. This property comprises the west half of section 12, T34N, R42E and is marked by the prominent Lone Tree Hill just west of the Stonehouse interchange of I-80 near Valmy in Humboldt County.

The rocks are Valmy quartzites and biotitic siltstones, cut by a series of crackle and intrusive breccias and a few porphyry dikes. The siliceous intrusive breccias, shown on the attached 1:6000 reconnaissance map, are relatively early and partially controlled by still poorly defined faulting. Narrow sulfide (limonite) matrix breccia dikes carry the best gold values and were followed by the old workings. Late clastic breccias - poorly developed pebble breccias, and altered porphyries are post-mineral and occupy the same structures. A large volume of rock contains disseminated and veinlet pyrite, locally reaching 10 to 15%, with locally visible molybdenite (> 200ppm Mo), As, Sb and Hg are very anomalous, but unfortunately Au grades are very spotty and mostly very low.

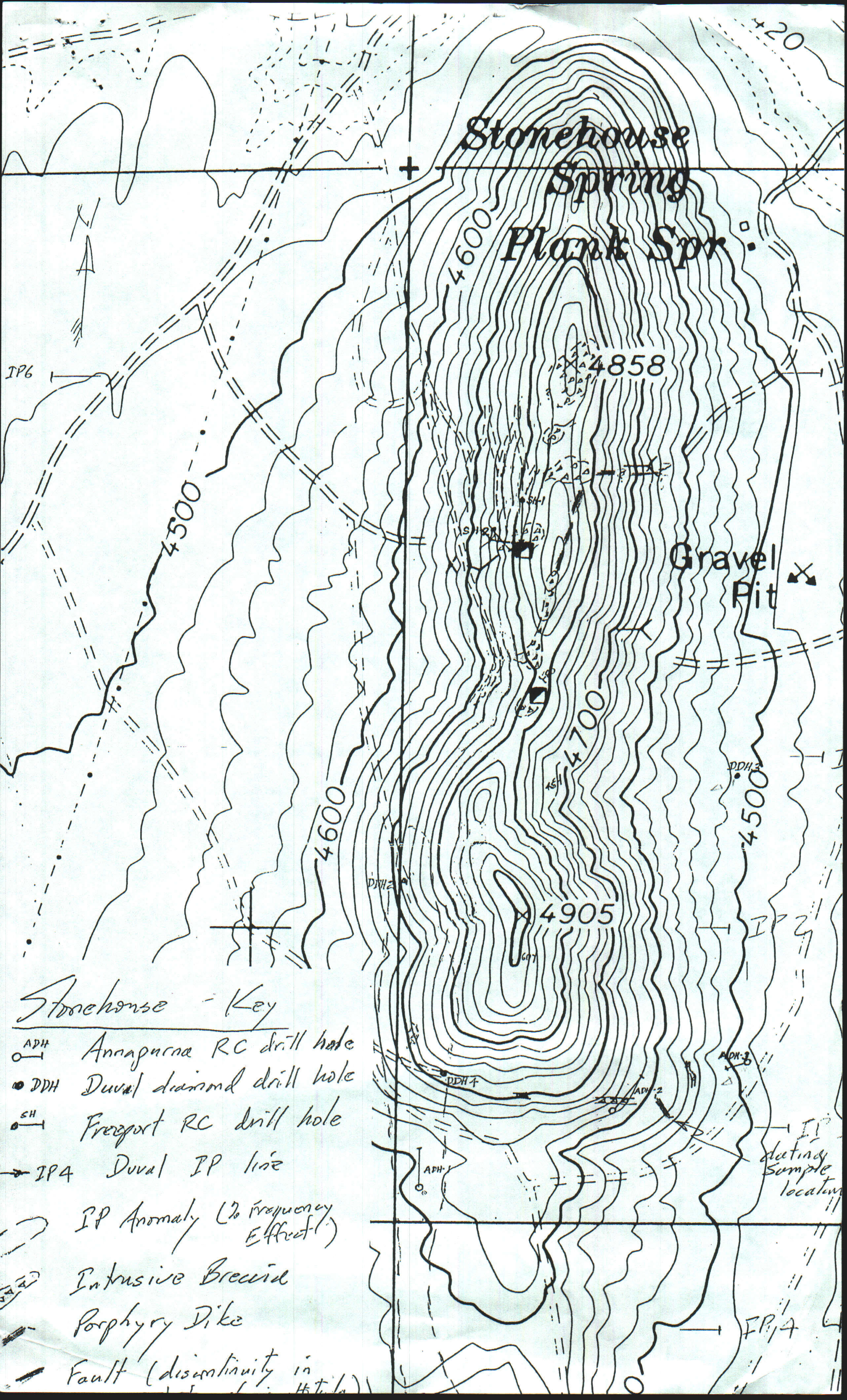
This is clearly somewhere on top of some kind of a porphyry Mo-Cu system and is in close proximity to the Marigold deposits and the Battle Mt. District. More ore bodies are going to be found around here before the district is done, but it was too expensive a proposition on too small a piece of ground for us. However, I would love to understand better whether this is another 38my system or closer in age to Buckingham. The accompanying sample could help with the answer. It is from the dike

occupying the NW-trending fracture set at the SE corner of the hill, at the junction of E-W and N-S trending breccias. Unlike most dikes on the hill, it has quite fresh biotite and hornblende which look datable in hand specimen. If your USGS colleagues could do the dating, I would be very pleased to join you in a very brief publication of the results.

With best regards,

Sincerely,

Lew


Stonehouse Spring
Plank Spr.
4600
4858
4500
Gravel Pit
4700
4600
4500
4905
IP6
IP2
IP4
DDH3
DDH2
DDH4
ADH-1
ADH-2
ADH-3
SH-1
dating sample location
Stonehouse - Key
ADH Annapurna RC drill hole
DDH Duval diamond drill hole
SH Freeport RC drill hole
IP4 Duval IP line
IP Anomaly (% frequency Effect)
Intrusive Breccia
Porphyry Dike
Fault (discontinuity in

Stonehouse Spring

Plank Spr.

Gravel Pit

4442

4420

4600

4858

4500

4700

4905

IP6

IP7

IP2

IP3

IP4

IP5

SH-1

SH-2

DDH-3

DDH-2

DDH-4

DDH-5

ADH-1

ADH-2

ADH-3

dating sample location

Stonehouse - Key

- ADH — Annapurna RC drill hole
- DDH — Duval diamond drill hole
- SH — Freeport RC drill hole
- IP4 — Duval IP line
- IP Anomaly (% frequency Effect)
- Intrusive Breccia
- Porphyry Dike
- Fault (discontinuity in stratigraphy & attitude)