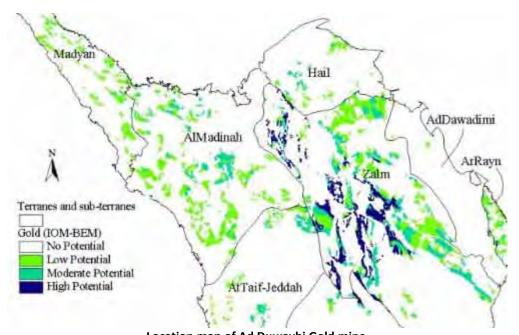
# Ad Duwayhi Gold Deposit

#### Location:

The Ad Duwayhi Gold Deposit, located in the east central part of the Arabian shield, it is the newest Gold discovery in Saudi Arabia. Exploration to date has identified a Gold resource of greater than **1.82** million ounces (Moz) with significant potential for expansion.

Ma'aden has drilled out most of the deposit on 25m centers and, on the basis of that work, Snowden Mining Industry Consultants has estimated a resource of 13.58Mt @ 4.2 g/t Au for 1.82 Million ounces as measured and indicated.



Location map of Ad Duwayhi Gold mine

#### Mineralization

Various tectonic events have contributed to the mineralization of this district, resulting in more than 45 occurrences. They created the pathways for mineralized-fluid circulation and for the emplacement of intrusions that further activated such fluid circulation and made a magmatic Ag-Sn-W-Mo-Bi contribution.

About 20 of these occurrences lie on, or close to, extensional horse tail shaped structures related to the Ruwah Fault, or are associated with small intrusions as at Ad Duwayah.

Four Gold prospects were studied in detail, the Ad Duwayhi Gold Porphyry with reserves of **11** Tons of Gold (J. Doebbrich, A. Siddiqui, 1999).

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## **Exploration perspectives**

Several Gold prospects require additional work, in particular geochemistry on pit or shallow auger and RC drilling samples to look below the Eolian Sand, and resistivity, in order to increase the reserves of this very promising district.

## The Nickel rich parts of the Gabbro Intrusion of Jabal Jedair should be reanalyzed for PGE.

Mineralization styles, in the following general para-genetic sequence, include:

- (1) Quartz Molybdenite veins in and near the Granite stock,
- (2) Low Grade Gold bearing Quartz Vein Breccia in and along the margins of the Granite stock,
- (3) Gold bearing stockwork and sheeted Quartz Veins, and
- (4) Massive to banded Gold rich tabular Quartz Veins.

The Gold bearing stockwork, sheeted, and tabular veins are generally spatially associated with square quartz porphyry dikes and more distal to the granite stock.

Mineralized zones at Ad Duwayhi are characterized by Low Sulphide and Base Metal content and Gold / Silver ratios of approximately 6/1.

Gold shows no significant correlation with other metals, except Lead (Pb) and moderate correlation with Silver (Ag).



Core Logging at Ad Duwayhi Drilling Site

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## **Radiometric Dating**

Re-Os dating of Molybdenite from a Quartz Molybdenite vein and a tabular Quartz Vein with co-genetic Gold produced robust ages of (655.6), (2.7) and (649.9), (2.3) Ma, respectively, documenting that Gold mineralization and crystallization of Granite and square quartz porphyry were, within uncertainty, coeval events.

This age correlation combined with Granite textural features, the presence of unidirectional solidification textures in Granite and square Quartz Porphyry, and the nature and time-space distribution of mineralization styles, all indicate that mineralization evolved in and near the interface between a crystallizing magma and the surrounding rocks and, thus, is consistent with an intrusion related genesis.

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