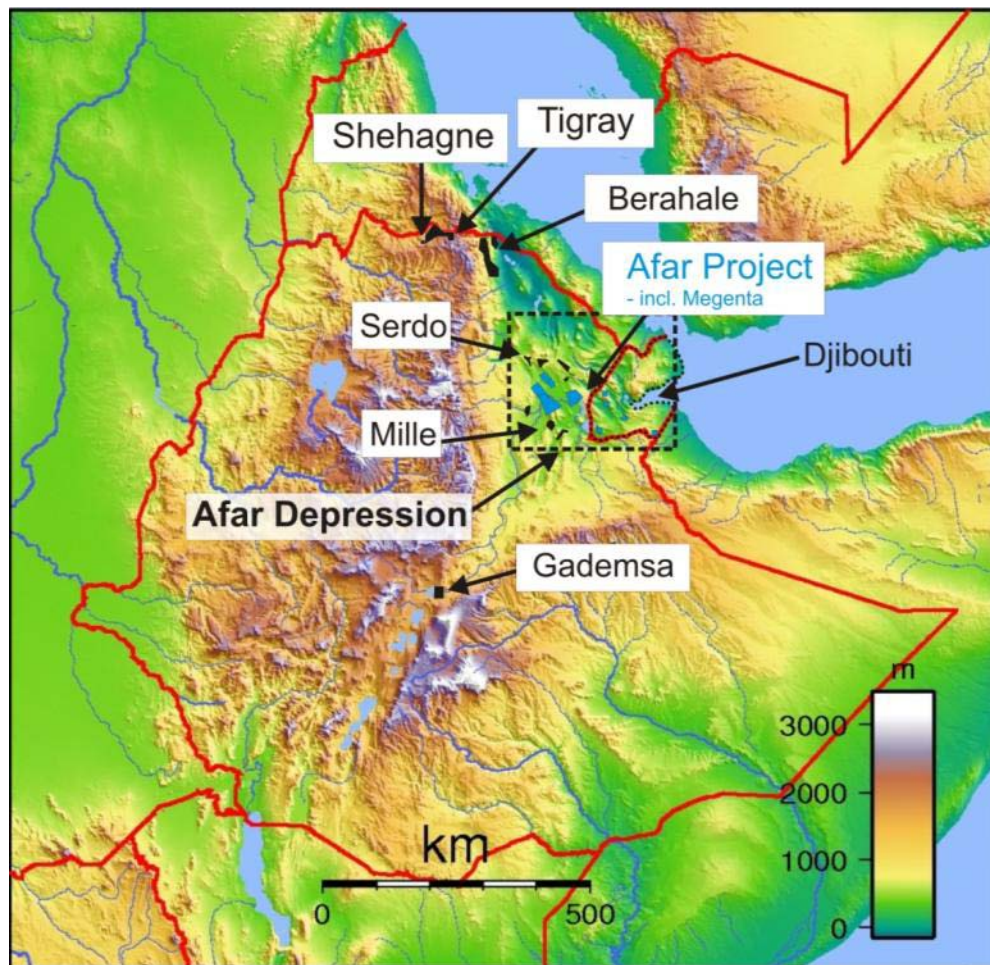


# **A NEW EPITHERMAL GOLD DISCOVERY: MEGENTA, TENDAHO, AFAR DEPRESSION**



**David J. Hall**  
**Executive Director East Africa**



After Corti, 2009

## Ethiopia & Djibouti

- + Favourable geology  
Arabian-Nubian Shield
- + Under-explored
- + Stable, mining-friendly regimes
  
- + Royalties: 8% gold, 5% base metals
- + 35% corporate tax
- + Exploration costs off-set against tax
- + Expl. lic. 3yrs, extendable for 2yrs



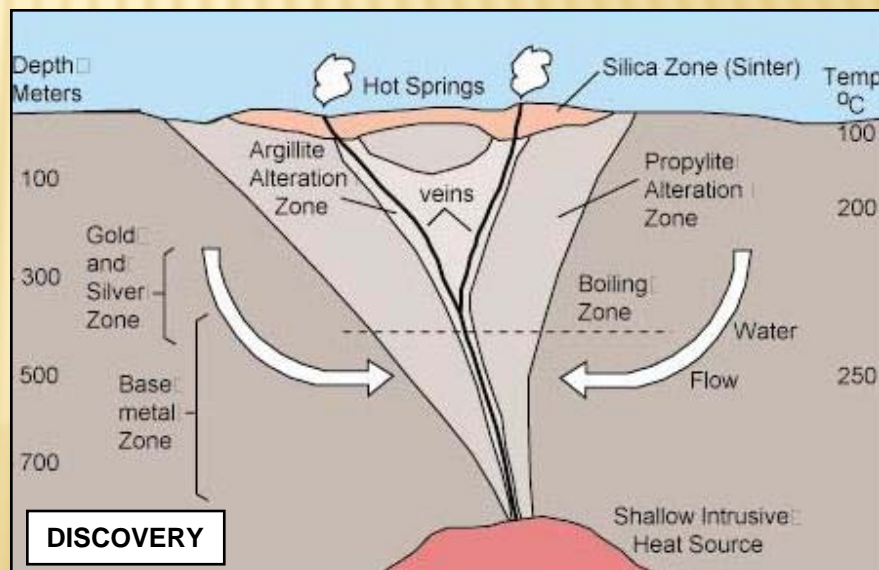
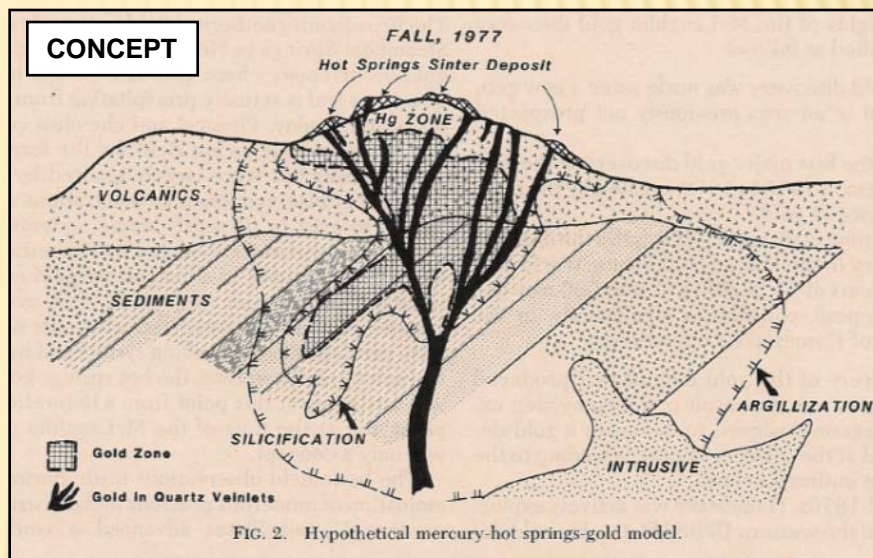
# CONCEPT

## Ingredients

1. Hot spring association & Hg enrichment
2. Bimodality
3. Well-plumbed system
4. Hydrothermal fluids
5. Extensional environment

## Results

- a. Sinter & steam-heated horizons
- b. Felsic intrusives and mafic extrusives
- c. Coalesced veins
- d. Discrete zoned alteration & brecciation
- e. Rifting, normal faulting, strike-slip dilation, & deep crustal fractures





# THE AFAR DEPRESSION – CONCEPT TO DISCOVERY

- ❑ Concept of epithermal gold in the EA Rift with Dr. R.H. Sillitoe\*
- ❑ Reviewed ground Kenya-Ethiopia; several field visits
- ❑ MER initially targeted in Ethiopia
- ❑ Alteration reported in Afar
- ❑ Remote sensing, targeting, ground-truthing
- ❑ Discovery of high level low sulphidation gold system at Megenta in Tendaho graben

\*Rifting, Bimodal Volcanism, and Bonanza Gold Veins, R.H.Sillitoe, SEG Newsletter 2002, January



CONCEPT



DISCOVERY



# MEGENTA – A LOW-SULPHIDATION SYSTEM

- Discovered in October 2009
- Field follow-up of hot spring occurrences from geothermal mapping
- Recorded gold from chips analysed from geothermal drilling
- Surface expression described in structural paper in 1995 but epithermal mineralisation not recognised



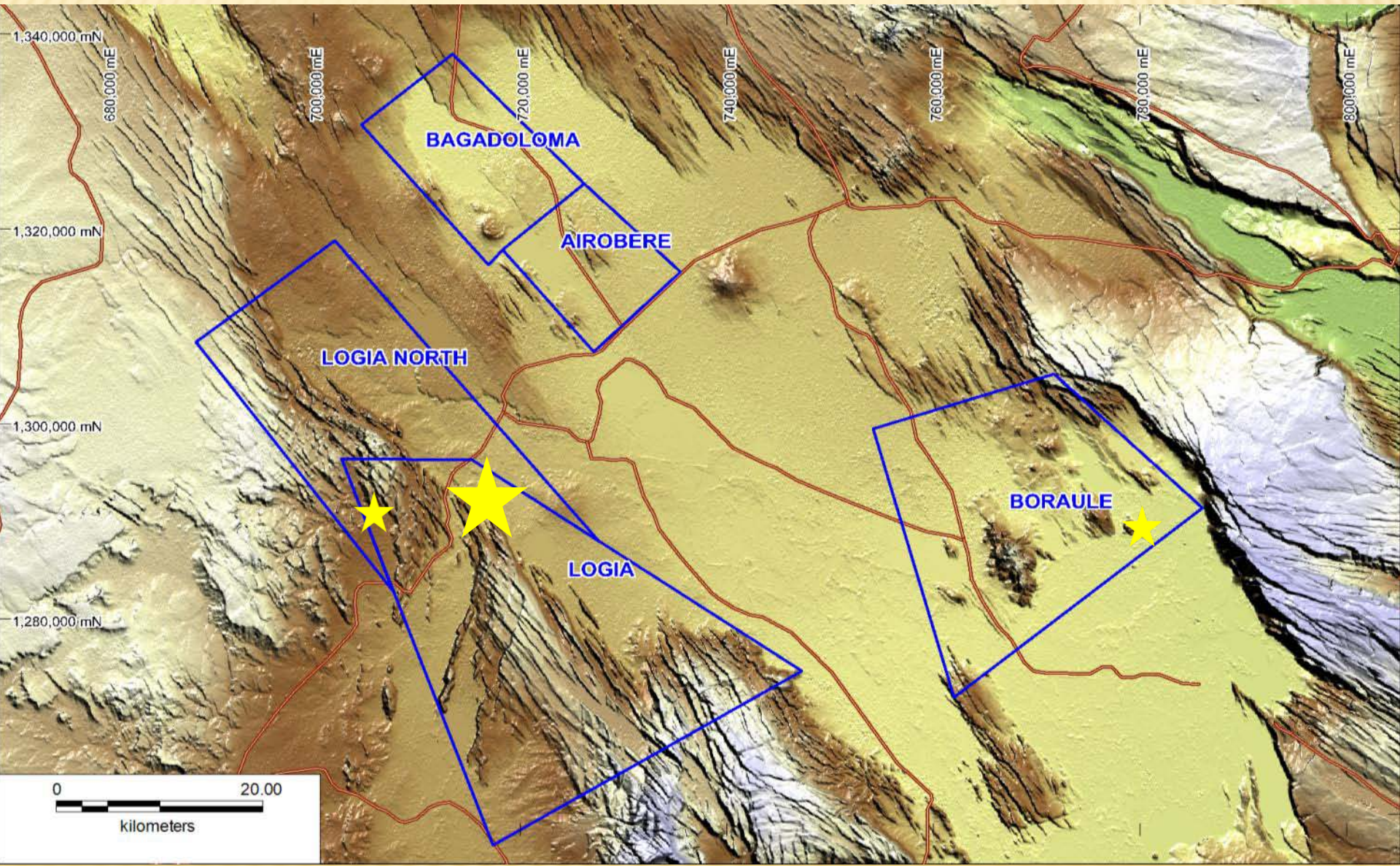
Chalcedonic silica ribs



Chalcedony



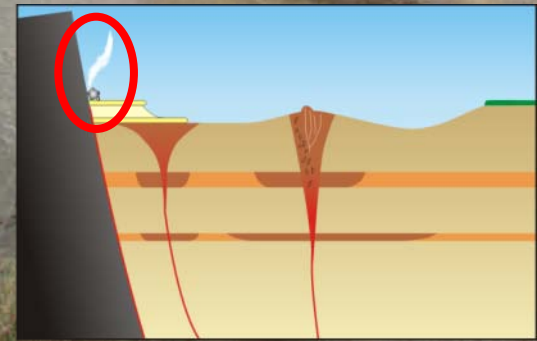
# TENDAHO DISTRICT EXCLUSIVE EXPLORATION LICENCES



**Stratoid Series Basalts**

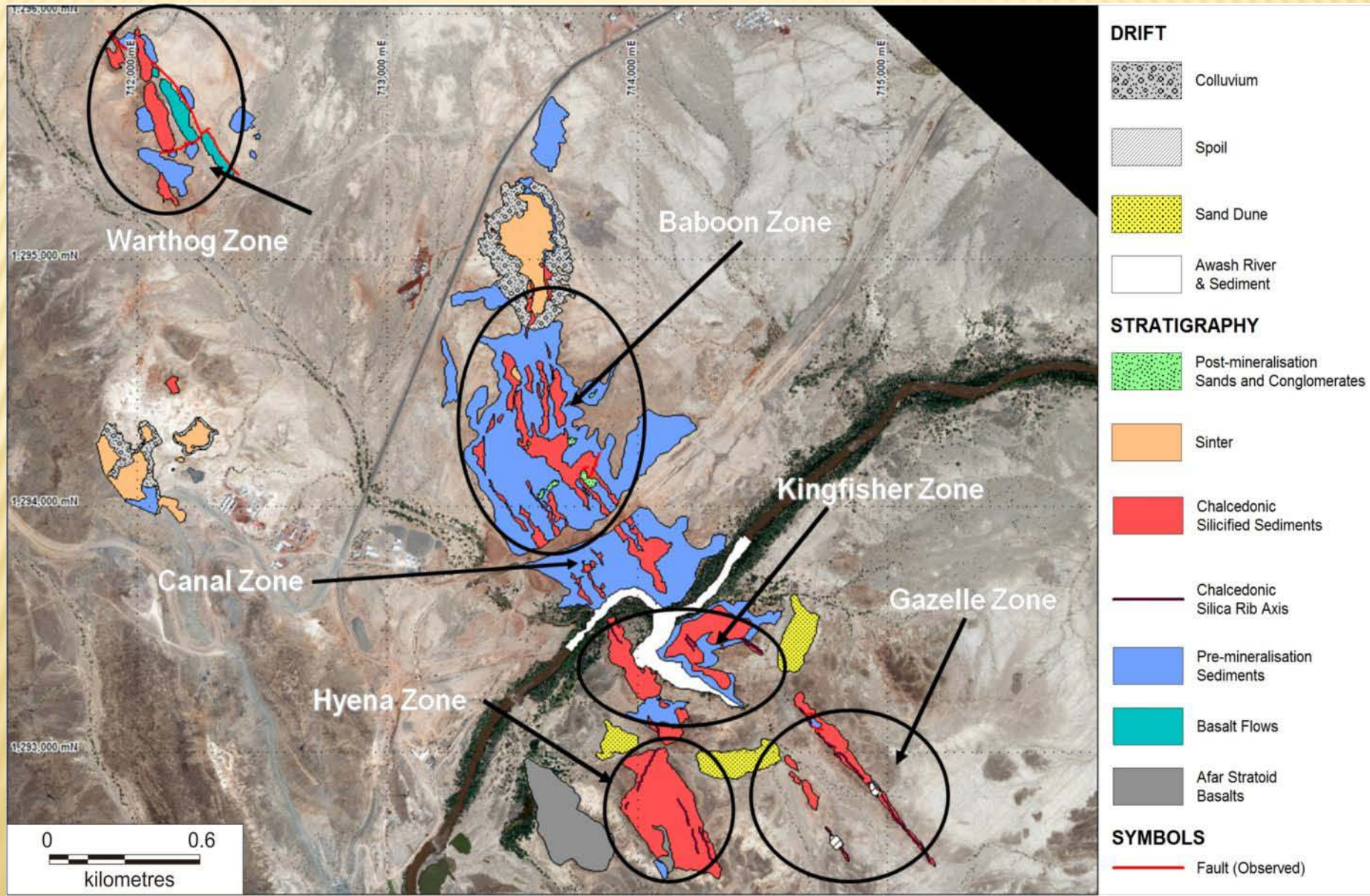
**Opaline sinter**

**Preserved  
plant material**





# GEOLOGY







# ***MEGENTA***

## **HYENA ZONE**

### **ONE OF SILICIFIED STRUCTURES WITH HYDROTHERMAL BRECCIA UP TO 16.75 g/t Au**

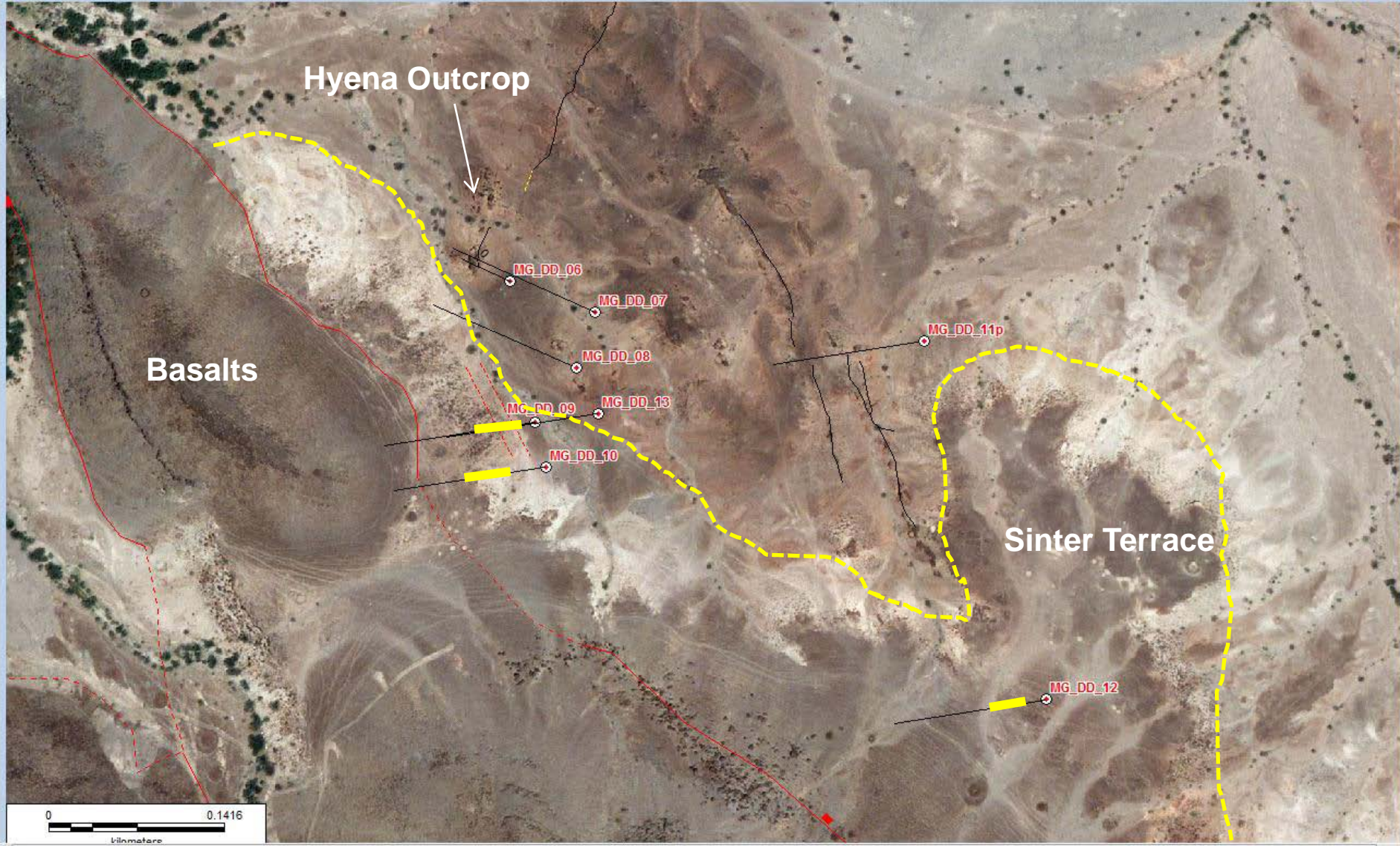


Channel-chip sampling results:

- + 139 (34%)  $\geq 0.1$  g/t Au
- + 33 (8%)  $\geq 0.5$  g/t Au
- + 9 (4.6%)  $< 5$  ppb Au detection limit



megenta\_collars\_JUN10,...,TendahoQB\_2006\_60cm\_Col Map





# Drill Results

- + 3,000 m drill programme confirms Megenta as large new gold system – priority target >3 km long. Key intersections to date include:
  - + MG-DD-12 – 3.25 m @ 4.49 g/t Au incl. 0.70 m @ 19.5 g/t (63.45 m >0.5 g/t Au)
  - + MG-DD-10 – 43.20m @ 0.67 g/t Au incl. 0.30 m @ 8.27 g/t Au, 2.9 m @ 3.56 g/t Au
  - + MG-DH-09 – 44.30 m @ 0.54 g/t Au incl. 1 m @ 2.57 g/t Au, 2.1 m @ 1.67 g/t Au
  - + MG-DH-08 – 0.35 m @ 4.74 g/t
  - + MG-DH-07 – 22.80 m @ 0.23 g/t Au incl. 0.5 m @ 3.24 g/t Au



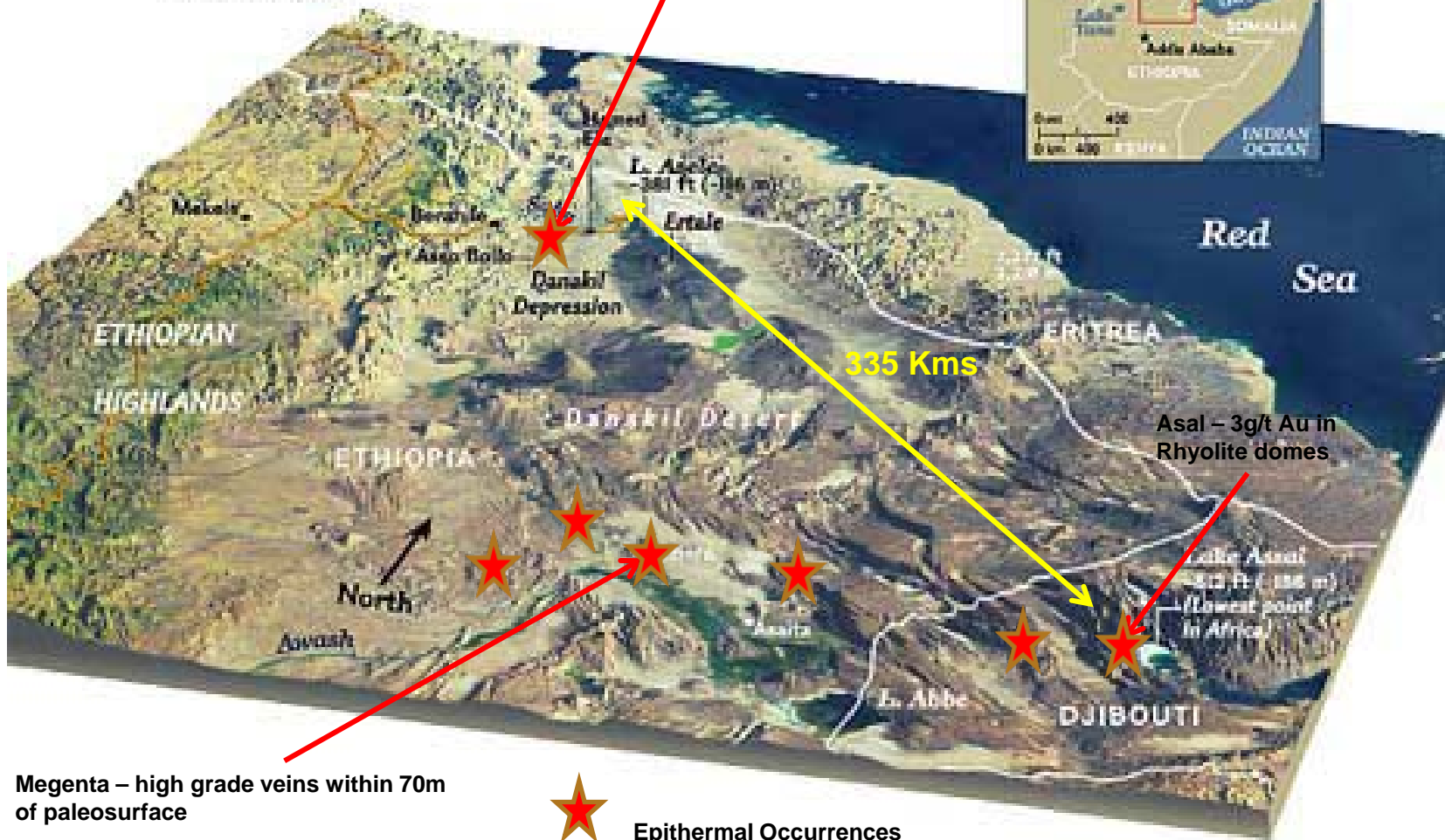
- + Drilling yet to intersect main boiling zone and peak gold deposition
- + Follow-up drilling programme including deeper holes being reviewed with TA, plus exploration of other exciting gold targets



# The New Afar Epithermal Province

Scale varies in this perspective.  
Distance from Lake Asal to Lake  
Abbe is 310 miles (500 kilometers).  
BASE SOURCE: MOORE  
COLLECTED AND REPRODUCED BY THE  
UNIVERSITY OF TEXAS AT DALLAS  
NATIONAL GEOGRAPHIC MAPS

Blackrock +15 kms outcropping  
Epithermal veins with bonanza  
grades



Megenta - high grade veins within 70m  
of paleosurface



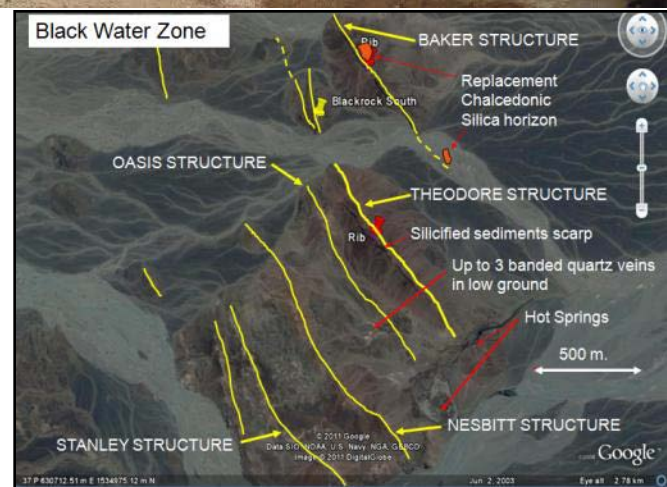
Epithermal Occurrences



# Blackrock

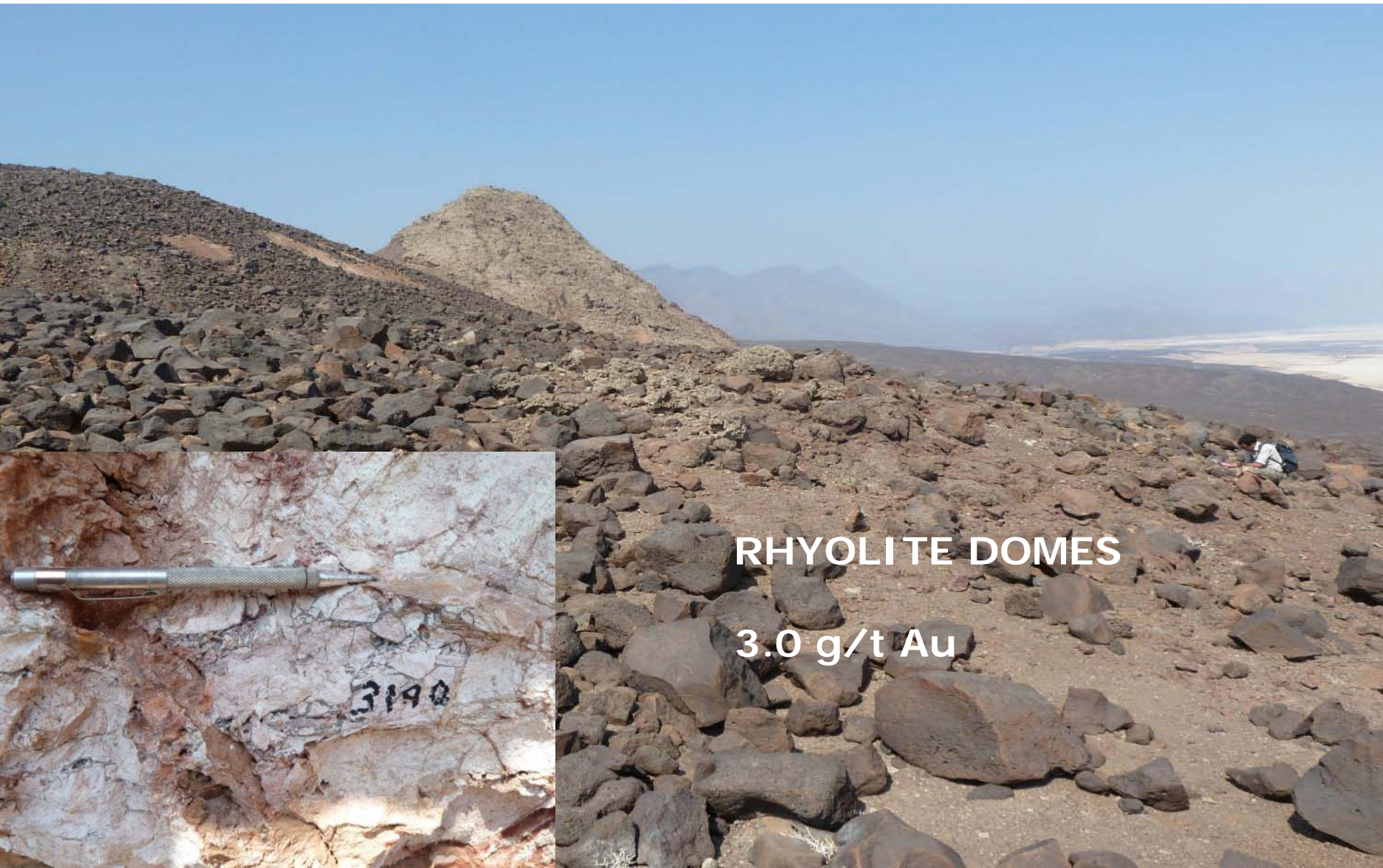


**POTENTIAL MAJOR DISCOVERY  
DRILLING UNDERWAY  
OVER 15 kms OF OUTCROPPING  
VEINS TO TEST.**





## *THE EPITHERMAL PLAY EXPANDS.....ASAL, DJIBOUTI*



**RHYOLITE DOMES**

**3.0 g/t Au**



**THANK YOU!**

