

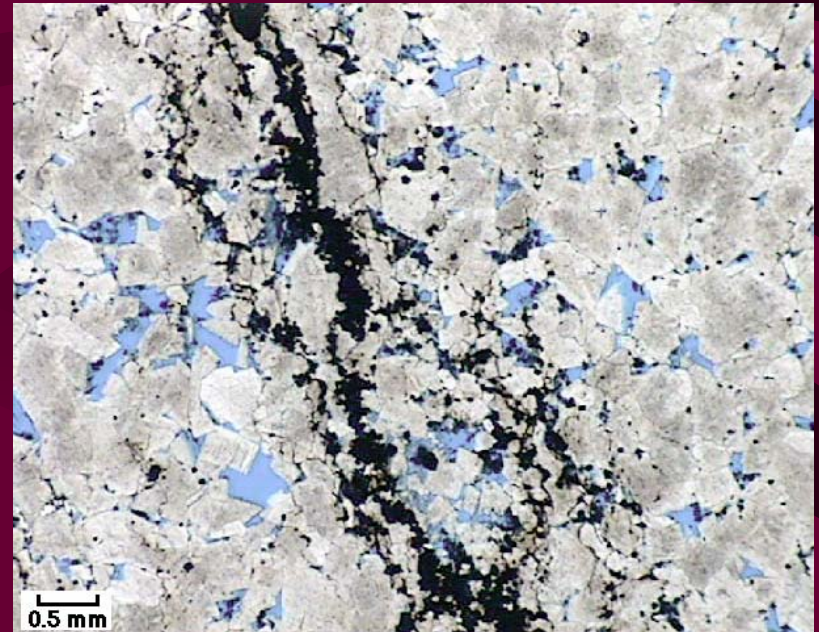
**PETROGRAPHY OF
TRENTON/BLACK RIVER
CARBONATE RESERVOIRS,
APPALACHIAN BASIN**

PETROGRAPHY - PURPOSE

- Enhance field studies and core descriptions:
 - Identification of constituent grains
 - Detailed classification of reservoir rocks
 - Interpretation of depositional environments
- Diagenesis
 - Timing of significant diagenetic events (i.e., cementation or secondary porosity development relative to the emplacement of hydrocarbons)

PETROGRAPHY - PURPOSE

- Frame of reference for geochemical studies
 - Dolomitization processes:
 - Stable isotopes
 - Fluid inclusions
 - $^{87}\text{Sr}/^{86}\text{Sr}$
 - Trace elements
 - Source rock studies



CORE AND OUTCROP SAMPLING PROGRESS AS OF JUNE, 2004





OH3372/1843.4 ft.

FRACTURED
DOLOSTONE

OH3372/1823 ft.

FRACTURED
DOLOSTONE



DOLOMITIZED, BIOTURBATED MUDSTONE AND WACKESTONE



OH3372/1837.6 ft.



OH3372/1860 ft.

**DOLOMITIZED,
BIOTURBATED
MUDSTONE AND
WACKESTONE**



OH3372/1840 ft.

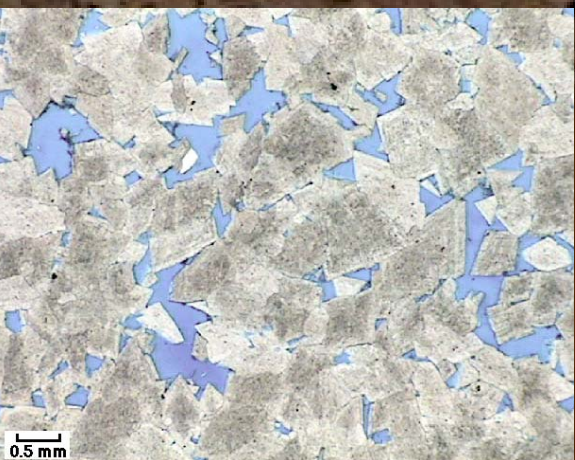


OH3479/1337.8 ft

HYDROTHERMAL
DOLOSTONE



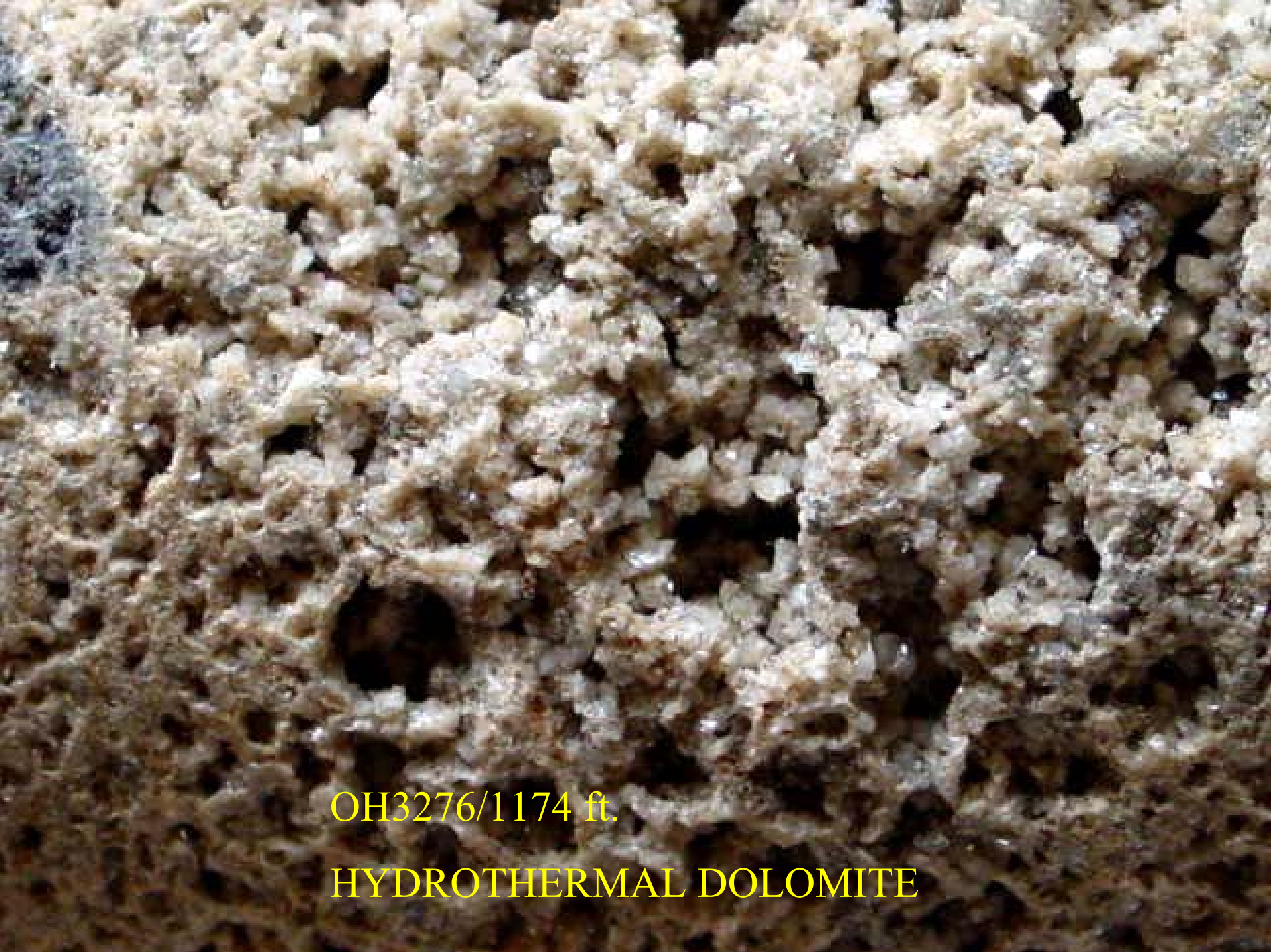
OH3276/1174 ft.
HYDROTHERMAL
DOLOMITE



0.5 mm

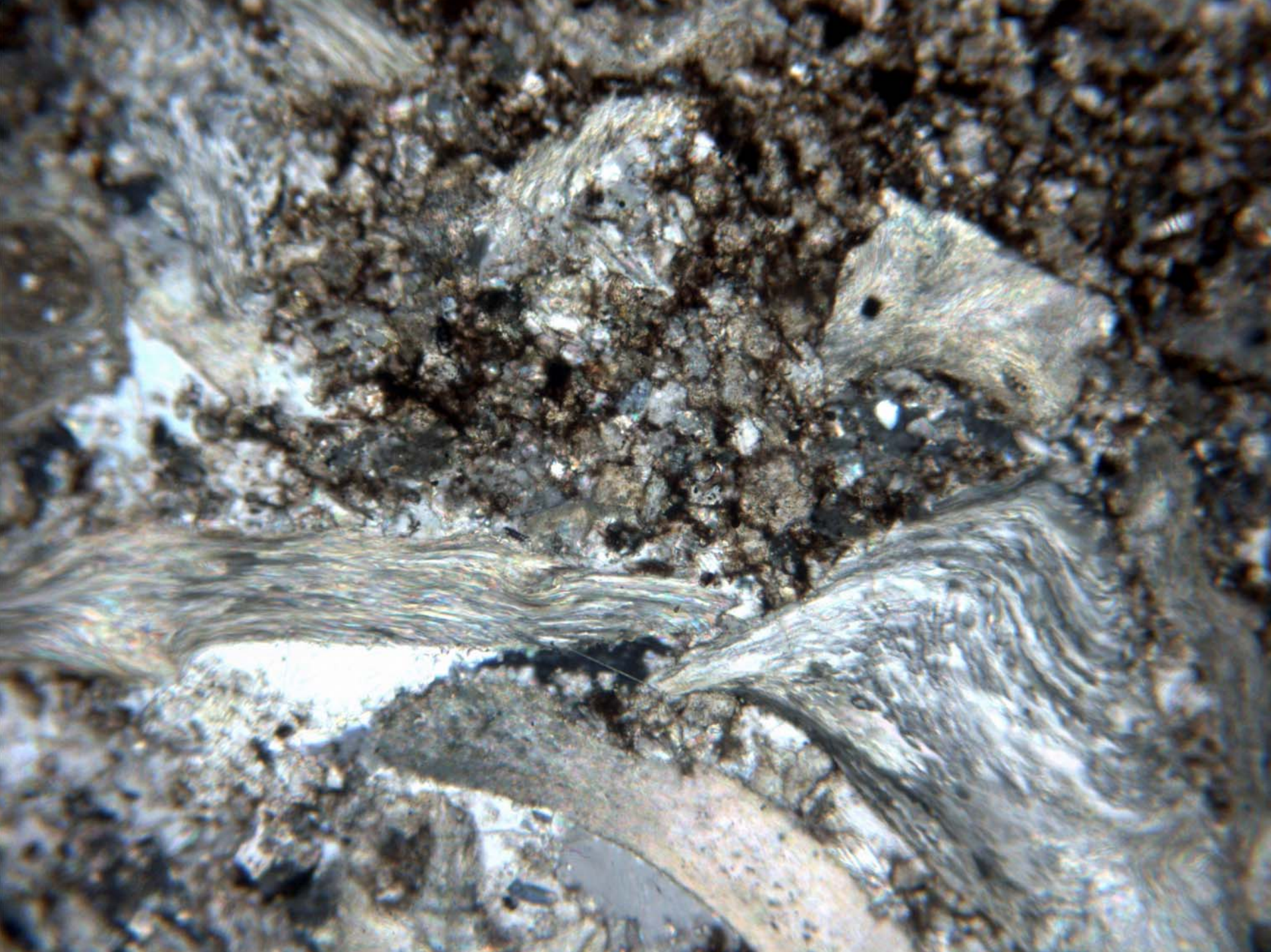


1500

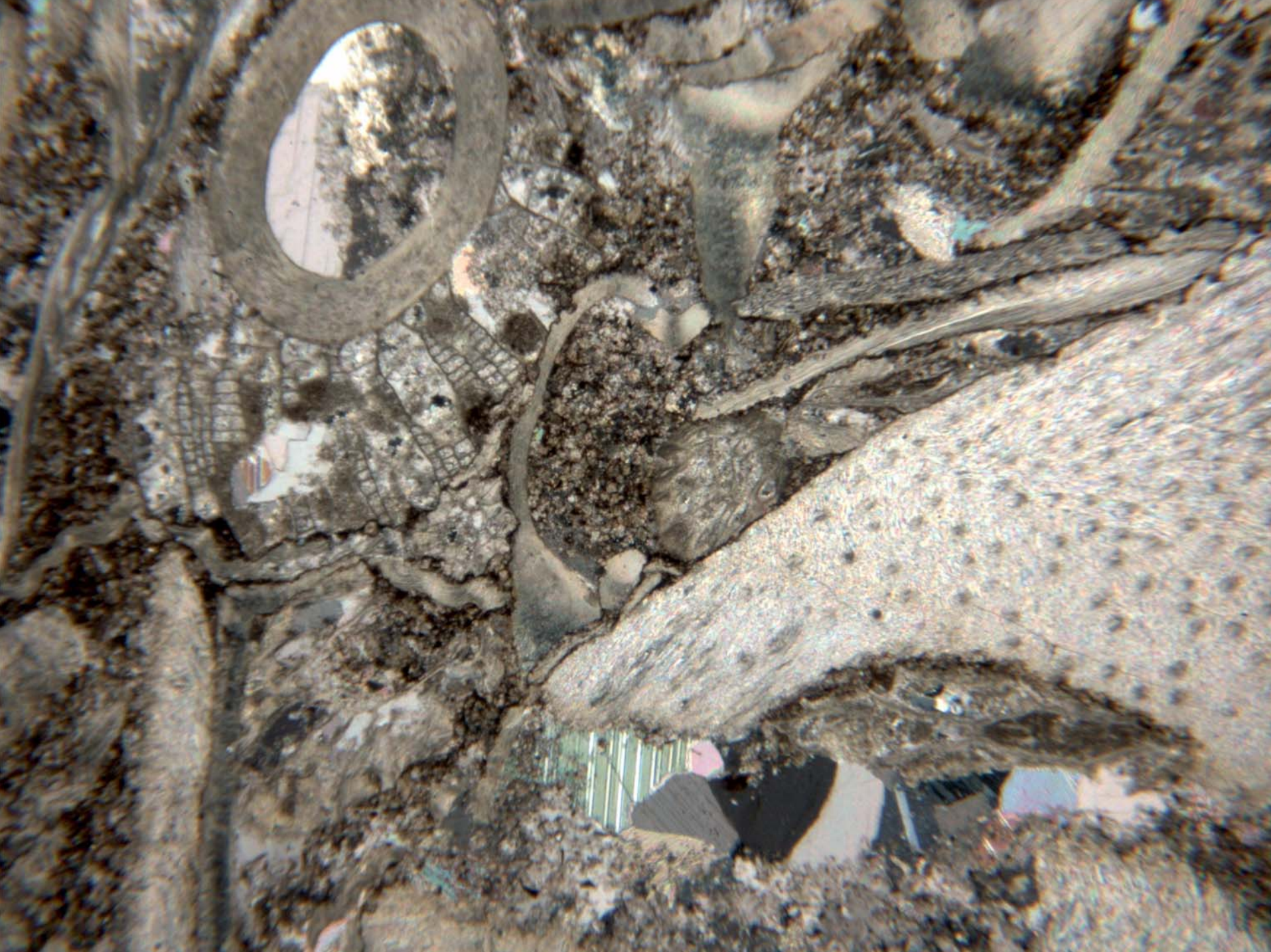


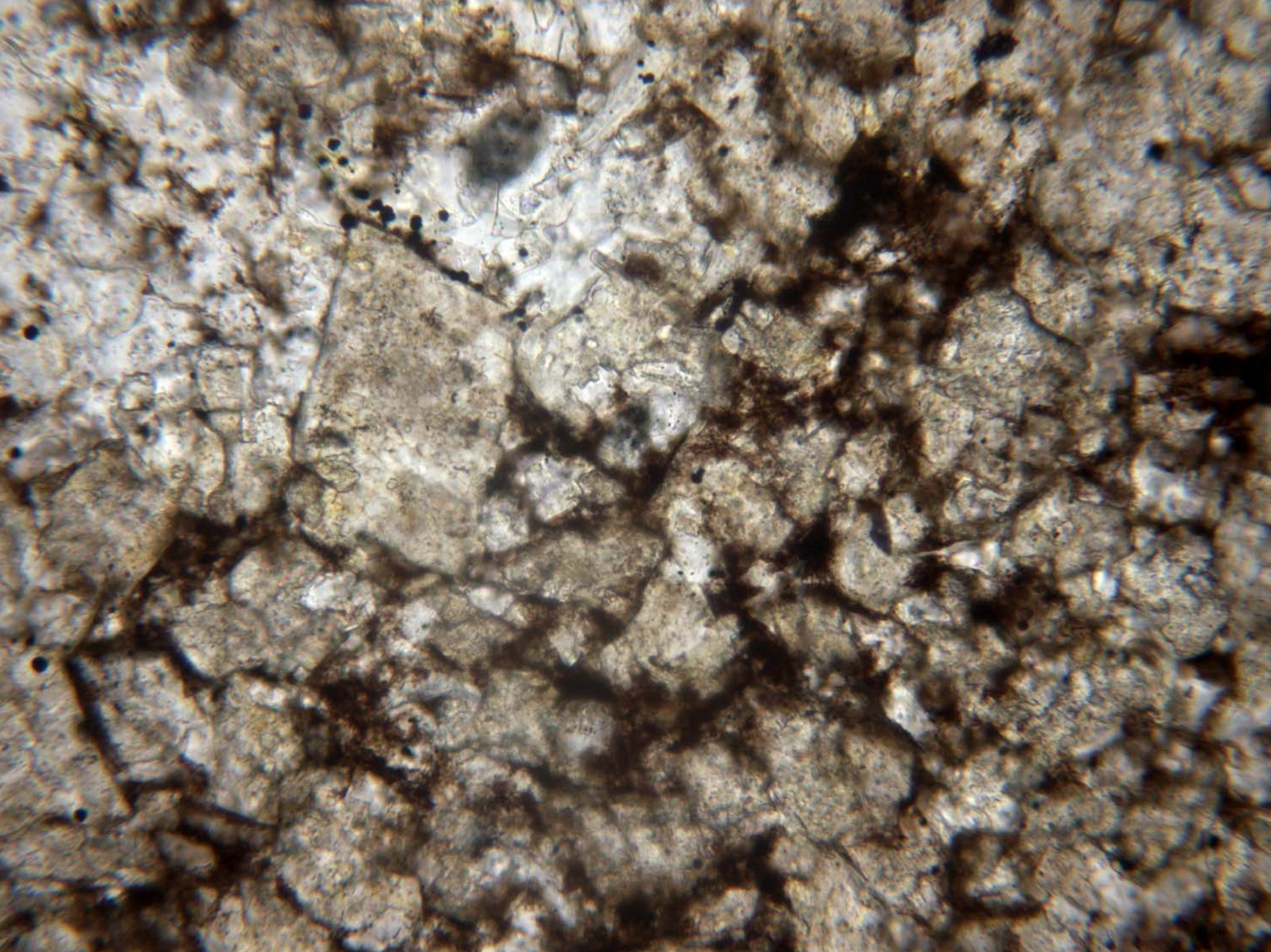
OH3276/1174 ft.

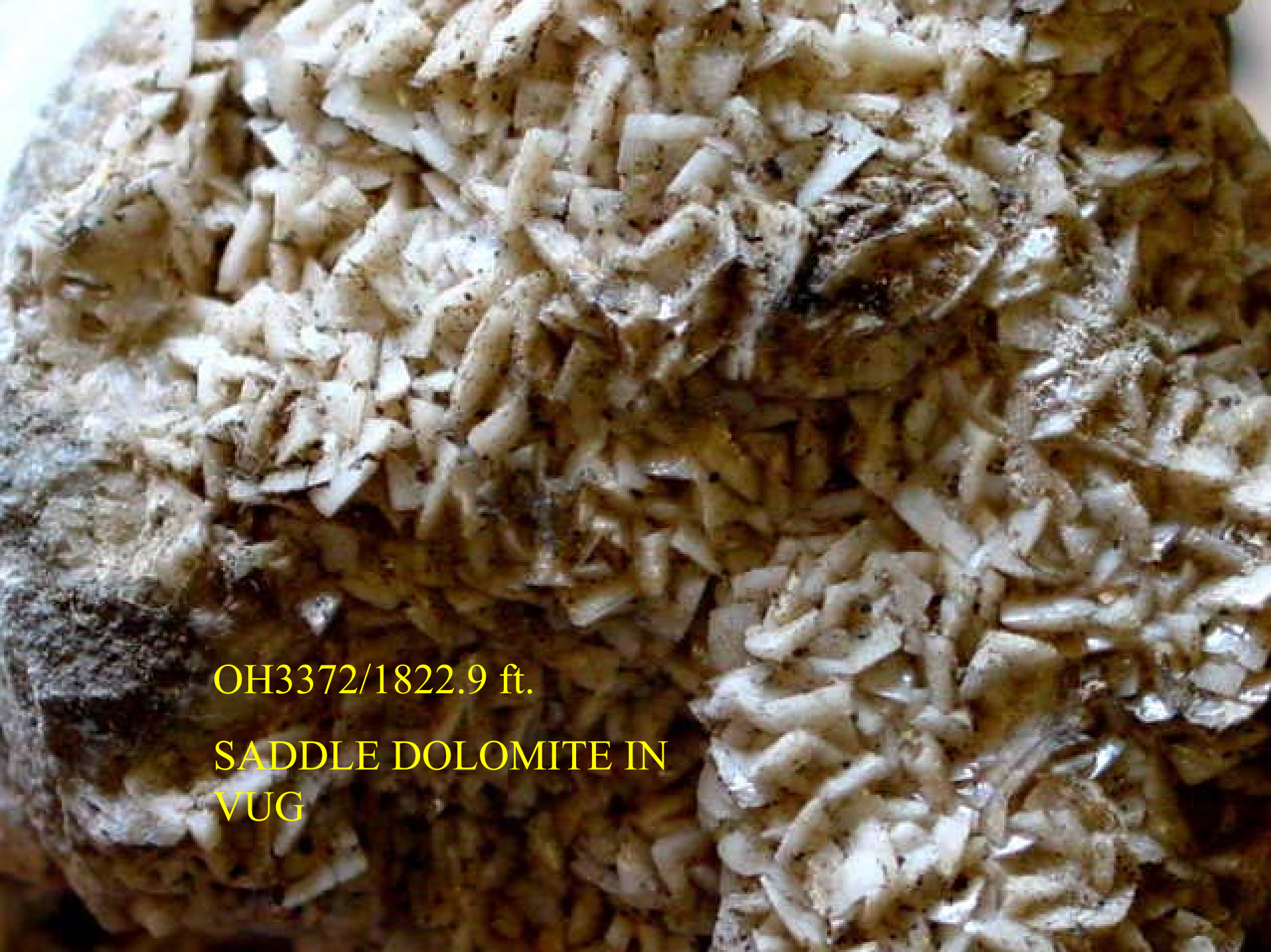
HYDROTHERMAL DOLOMITE











OH3372/1822.9 ft.

SADDLE DOLOMITE IN
VUG

A microscopic image showing a large, central, light-colored dolomite crystal with a distinct saddle-shaped morphology. The crystal is surrounded by a matrix of smaller, darker, reddish-brown dolomite crystals. The central crystal has a complex, multi-faceted structure with sharp edges and a central indentation. The surrounding matrix consists of smaller, more irregularly shaped crystals. The overall appearance is that of a well-developed, saddle-shaped dolomite crystal in a matrix.

SADDLE
DOLOMITE

