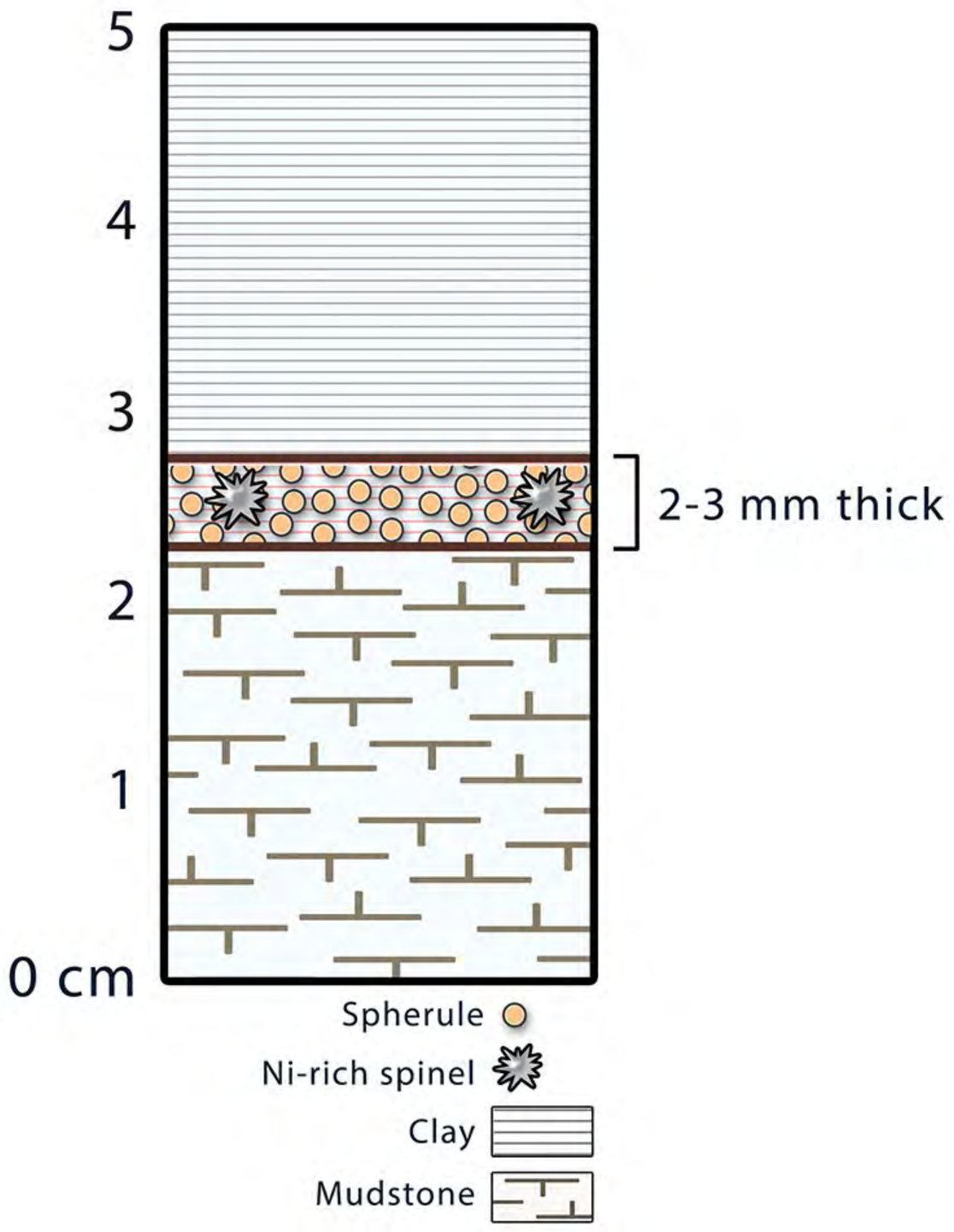
Finding the Crater

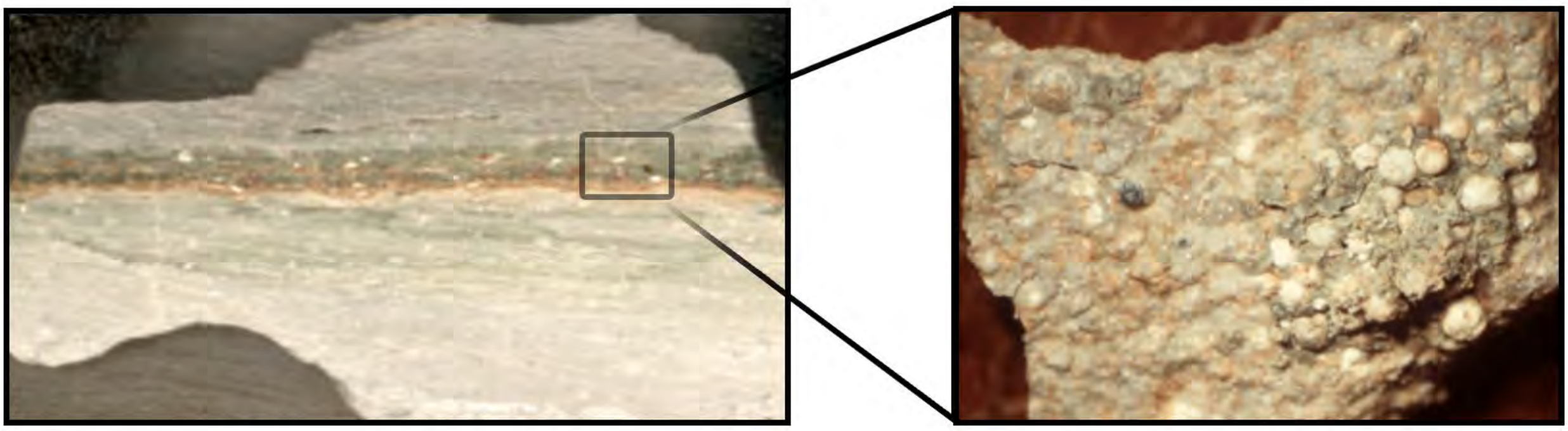
38.5° N
0.4° W

At this site, the K-T ejecta layer is 2 to 3 mm thick.

It consists almost entirely of tiny spherules.

The iridium concentration is 24.4 ppb.





Spherules in the ejecta layer

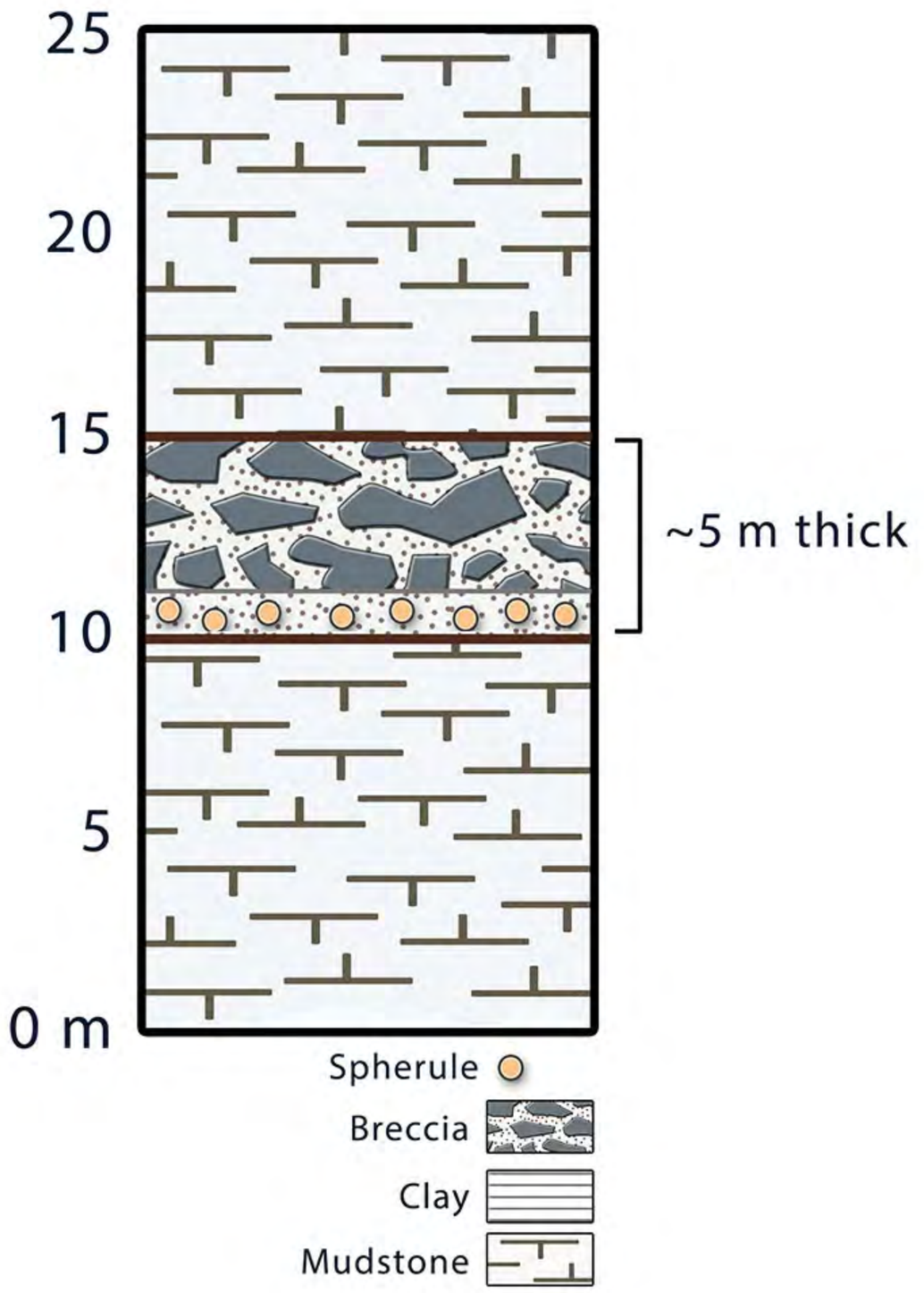
(Photos courtesy of Jan Smit, VU University Amsterdam.)

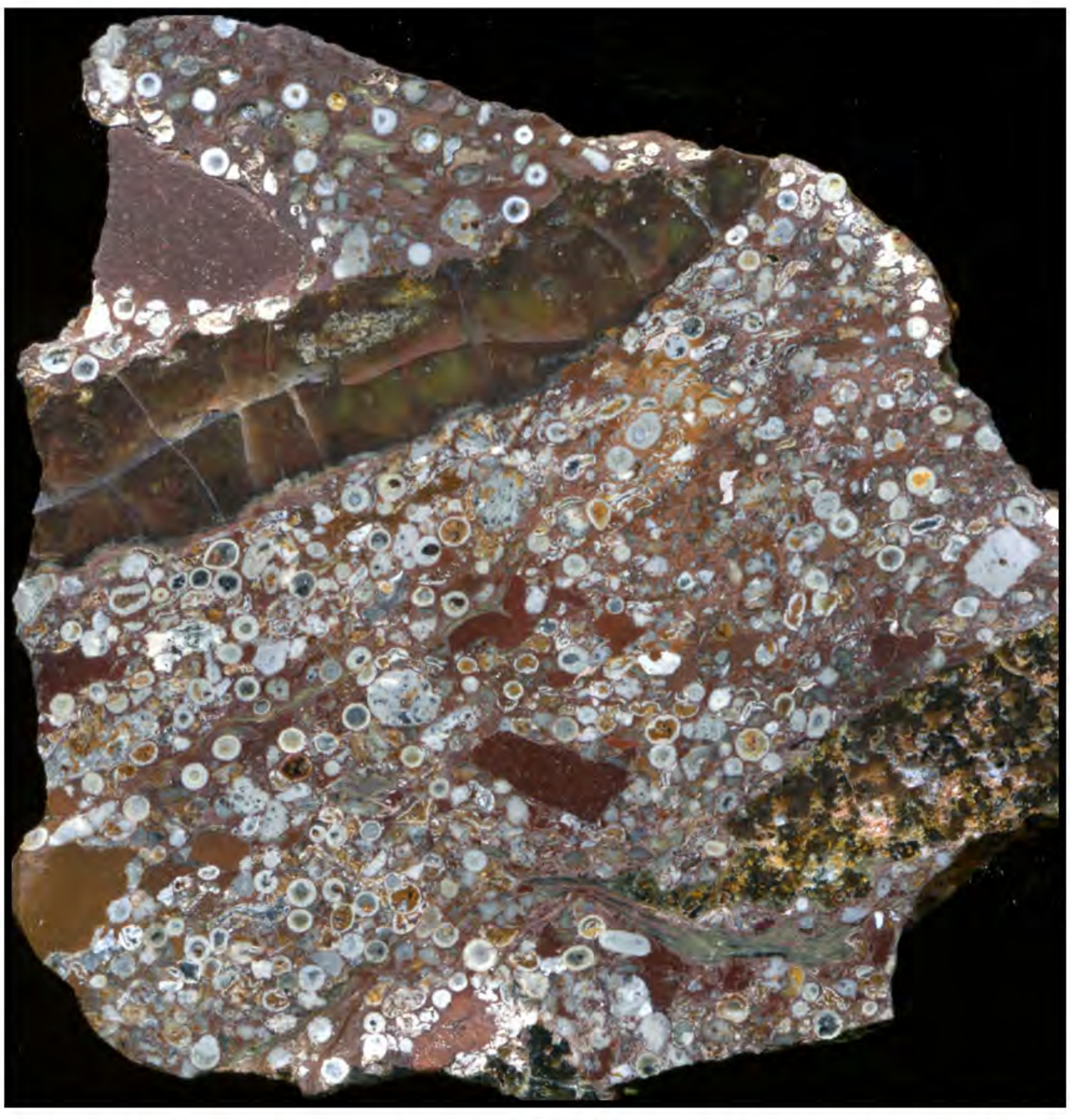
Finding the Crater

33° N
87° W

The evidence at this site comes from a core drilled into the rock across the road from an abandoned building that used to be owned by the Antioch Church.

The ejecta deposit here is about 5 meters thick and contains spherules and impact "breccia," which is a deposit of broken-up rock.





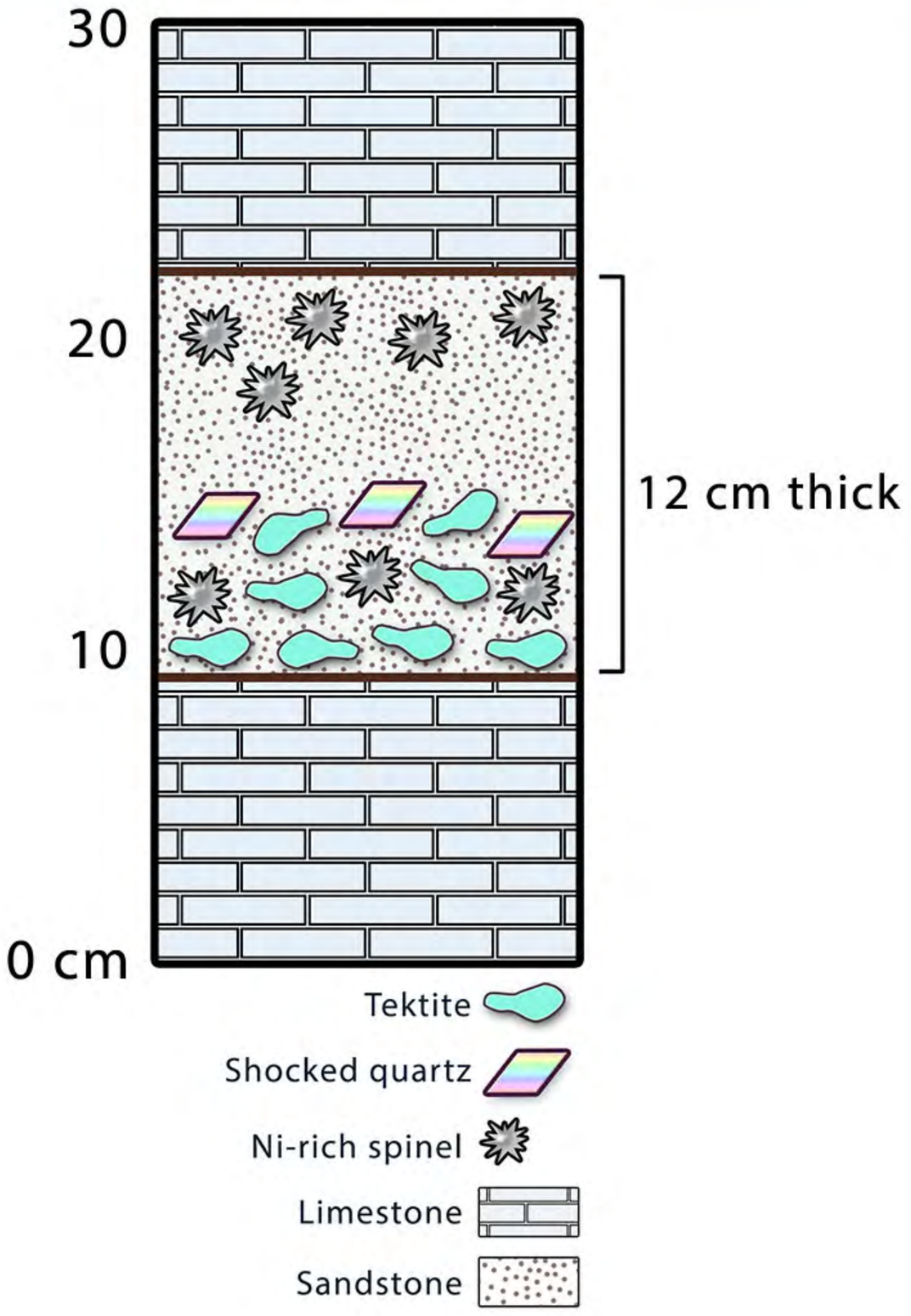
The K-T event deposit contains spherules

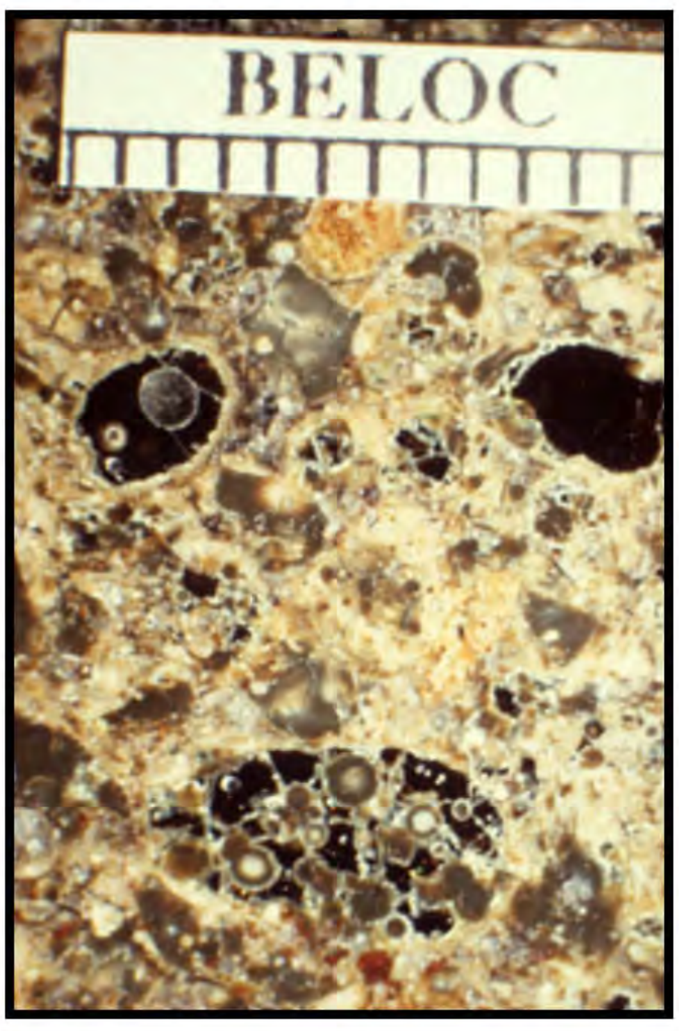
(Photo courtesy of Bruce Simonson, Oberlin College.)

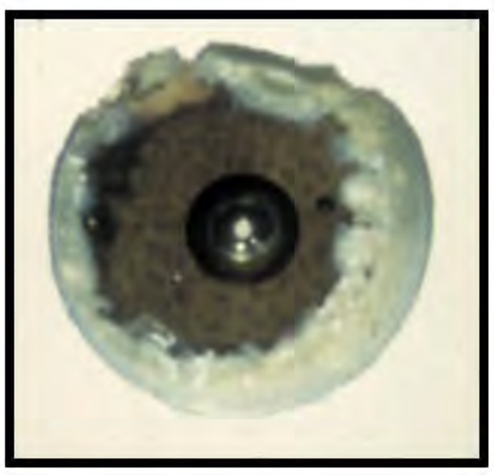
Finding the Crater

18° N
72° W

The ejecta layer at this site is about 12 cm thick, and it contains large shocked quartz grains, iridium, Ni-rich spinels, and tektites.







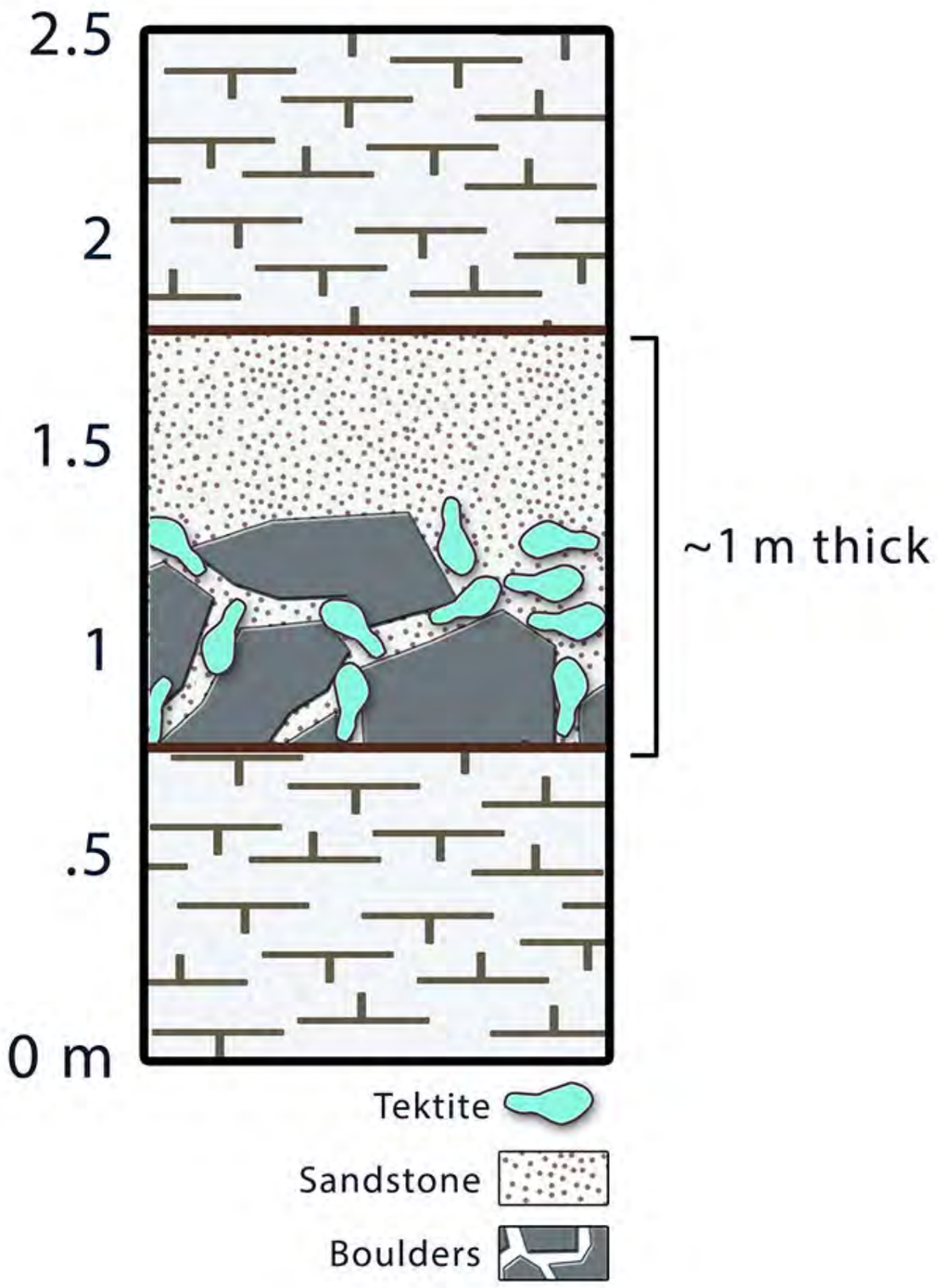
Pictures of tektites found at this site

(Photos courtesy of Jan Smit, VU University Amsterdam.)

Finding the Crater

31.5° N
97° W

At this site, you will find Cretaceous "mudstone" just below the K-T boundary. Scientists believe the mudstone, which is uniformly dark gray, was deposited in water 50-100 meters deep. At this depth, the water would have been calm with fine particles of mud slowly settling and forming layers that hardened over many thousands of years. The deposits change dramatically at the K-T boundary. Here, the K-T event deposit is close to 1 meter thick and consists of tektites and big chunks of rocks, including boulders.



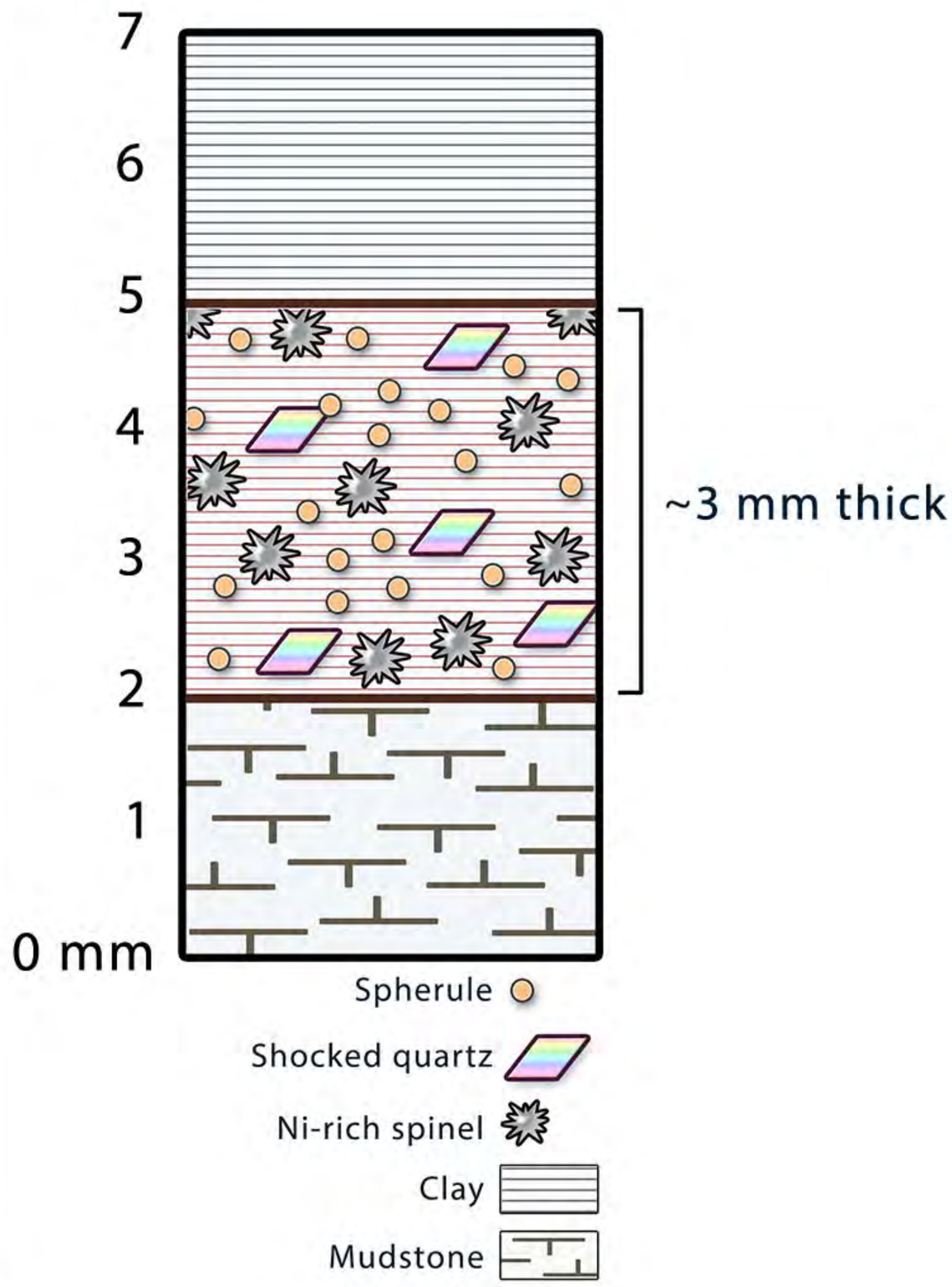
K-T event deposits at this site

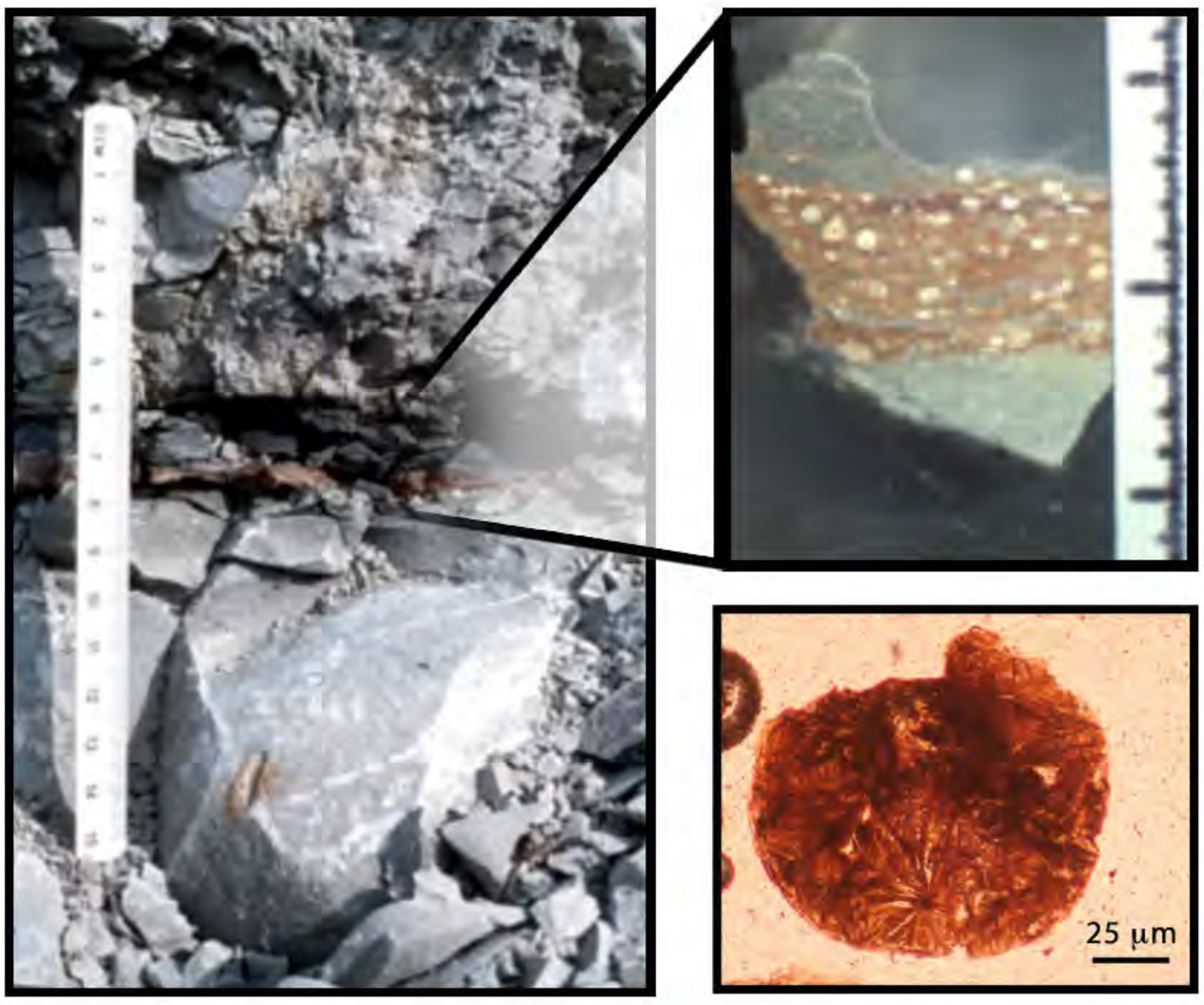
(Photos courtesy of Peter Schulte, Universität Erlangen-Nürnberg.)

Finding the Crater

38° N
1° W

At this site, the K-T ejecta layer is less than 3 mm thick. The clay appears as a dark, reddish layer. The ejecta consists of spherules, small shocked quartz grains, and Ni-rich spinels. The iridium concentration is one of the highest among all K-T sites: 56 ppb.





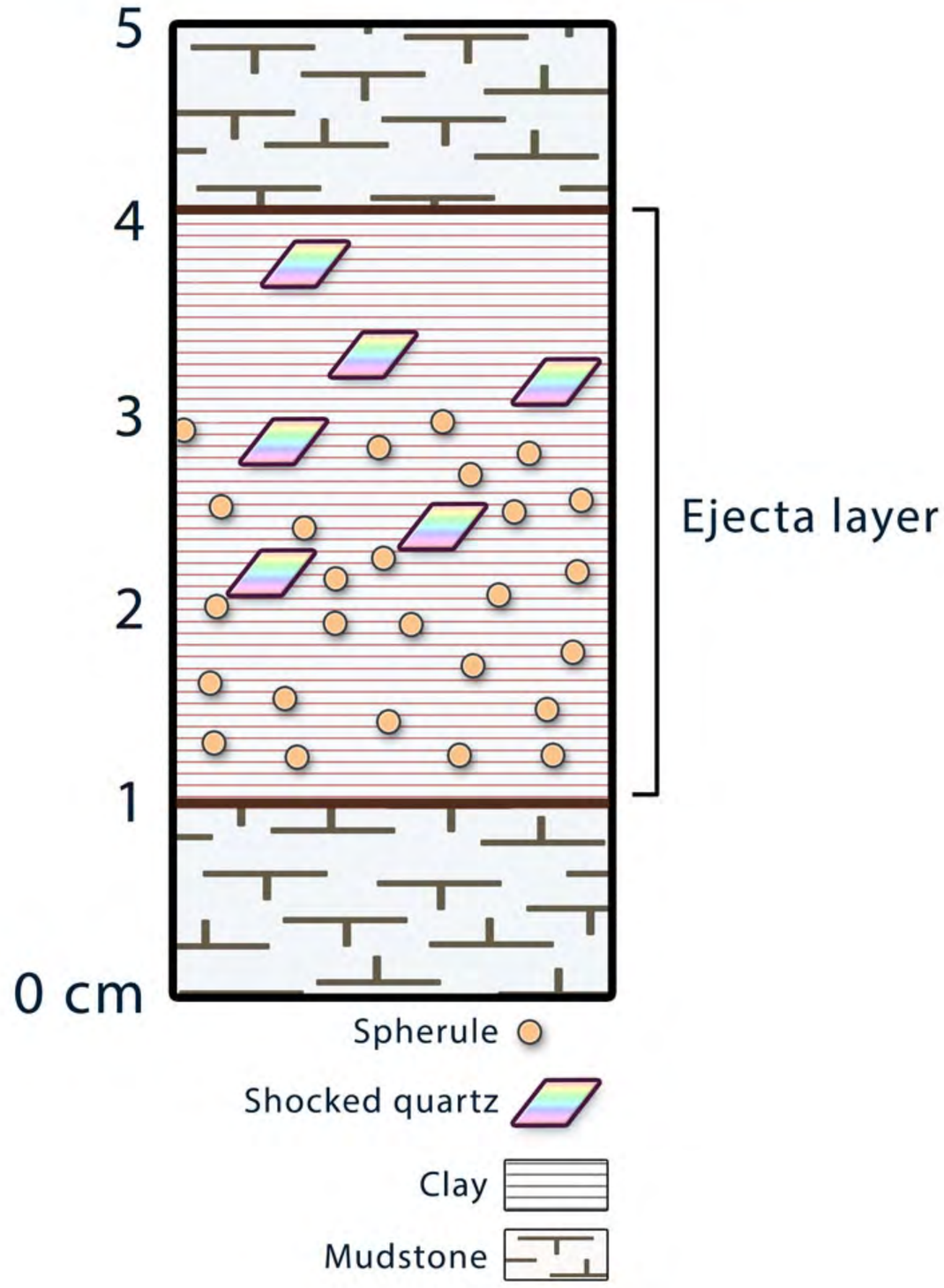
The clay layer contains spherules. Some appear white, while others have been stained red by iron oxides.

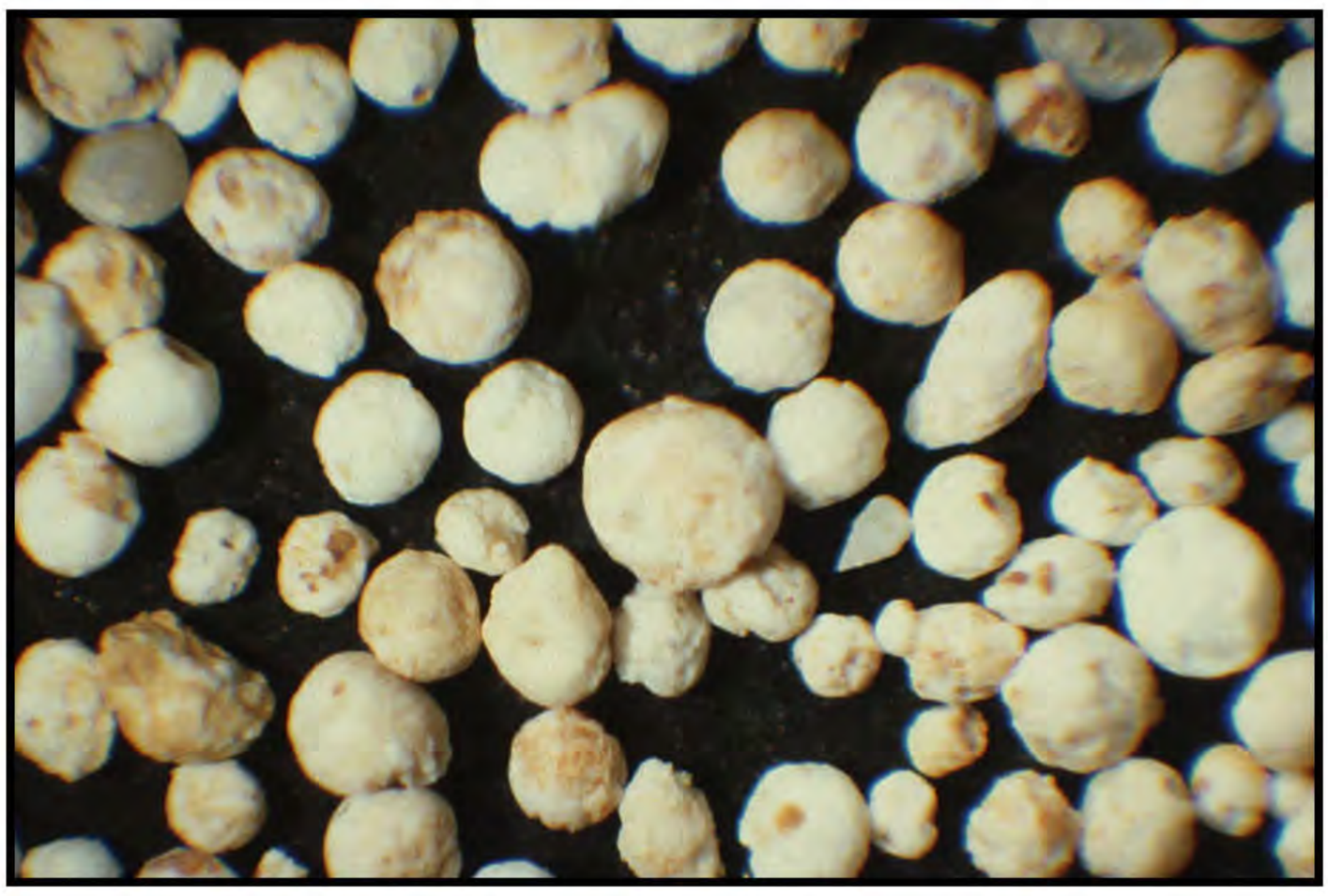
(Photos courtesy of Jan Smit, VU University Amsterdam.)

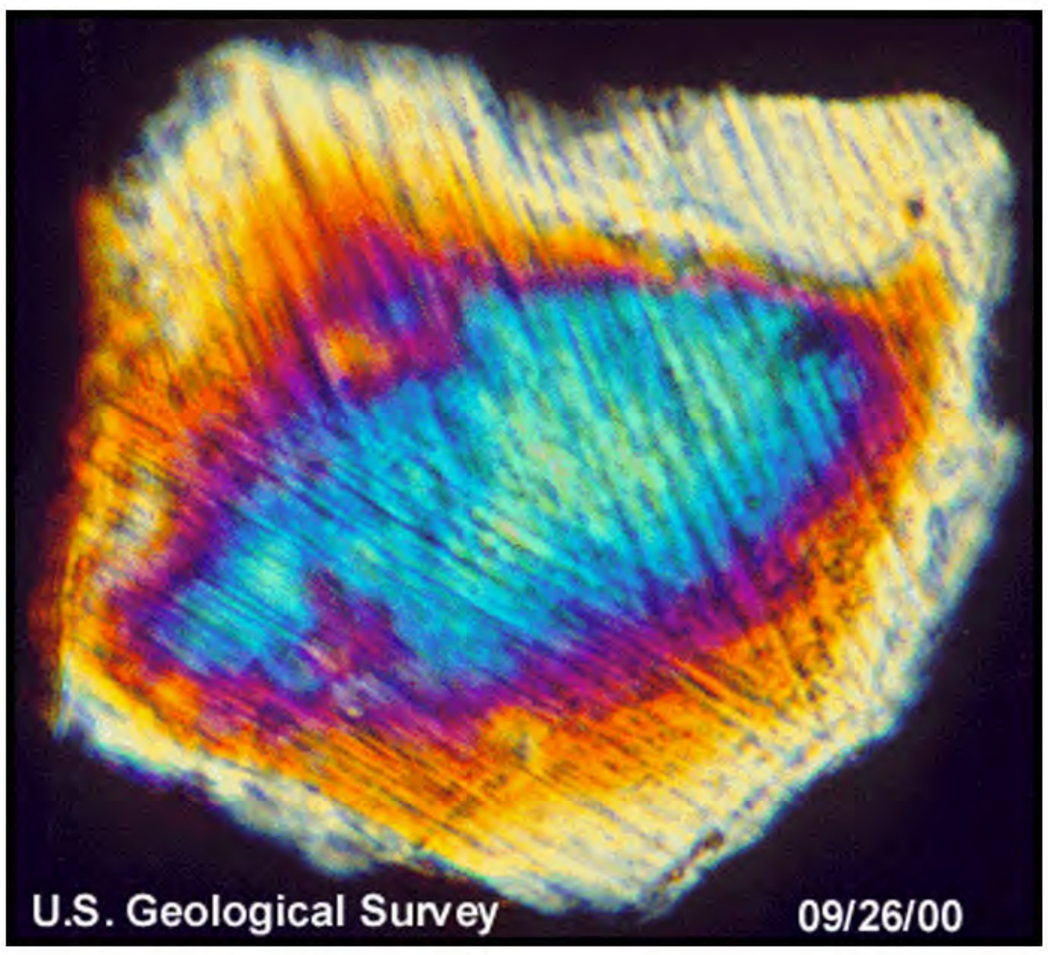
Finding the Crater

43° N
104° W

There are different types of impact evidence at this location. Spherules and shocked-quartz grains are abundant in the K-T ejecta layer. Iridium concentration is high, peaking at about 20.8 ppb.







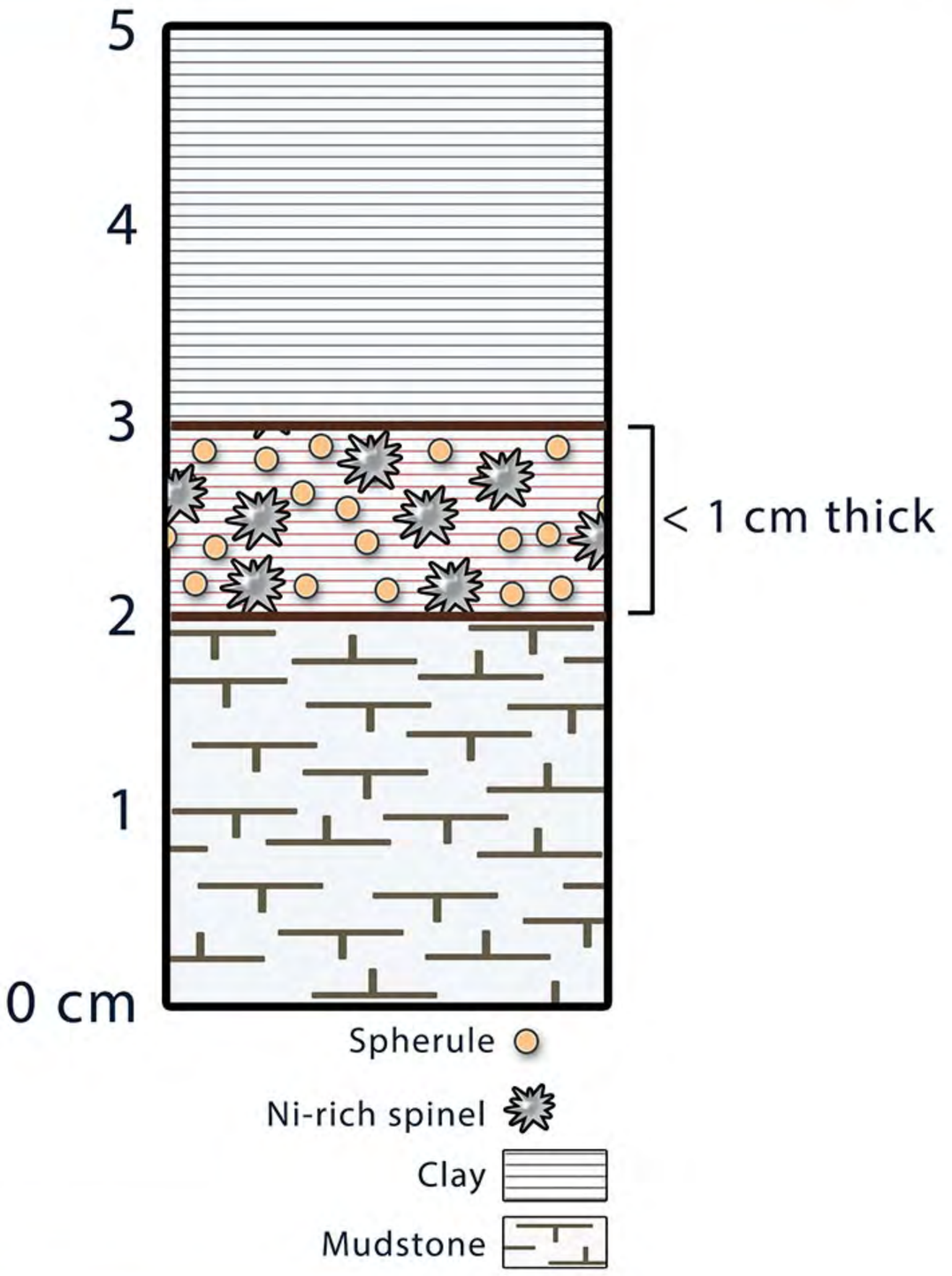
Examples of spherules (left) and shocked quartz (right)

(Photos courtesy of Jan Smit, VU University Amsterdam and United States Geological Survey (USGS).)

Finding the Crater

36° N
8° E

At this location, the K-T ejecta layer is less than 1 cm thick and contains small spherules and Ni-rich spinels. Iridium concentration is about 18 ppb.



The site of the K-T boundary (designated by the red line)

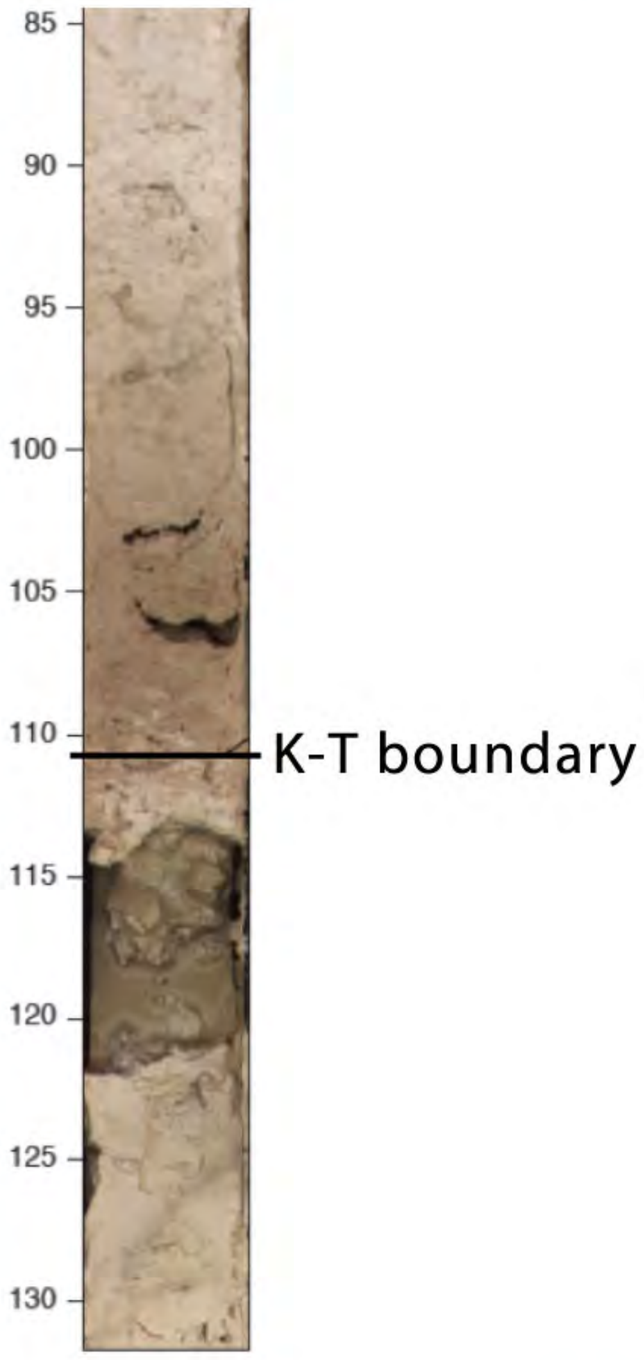
(Photo courtesy of Jan Smit, VU University Amsterdam.)

Finding the Crater

32° N
158° E

This site provides evidence from a deep sea core. The total length of the cored section is about 260 meters and was recovered at almost 2.5 kilometers underwater.

Here the K-T layer is only a few millimeters thick.



One of the ships used in the Ocean Drilling Program

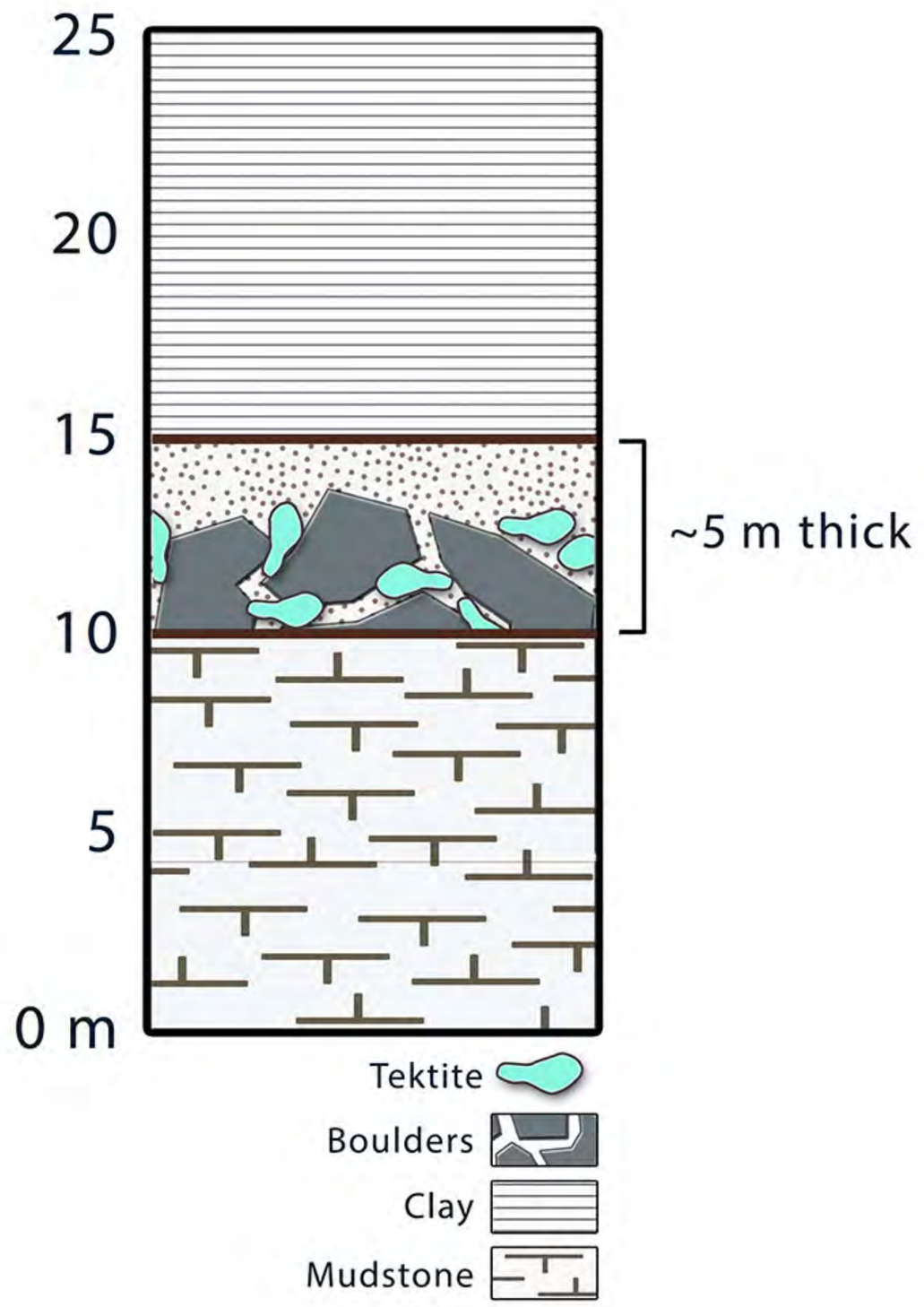
Obtaining a deep sea core

(Photos courtesy of Brian Huber, Smithsonian Institution and William Crawford, Integrated Ocean Drilling Program.)

Finding the Crater

26° N
100° W

In Cretaceous times, this location was a coastal environment. The K-T event layer is about 5 meters thick and contains tektites and large chunks of rocks.



What the site looks like today

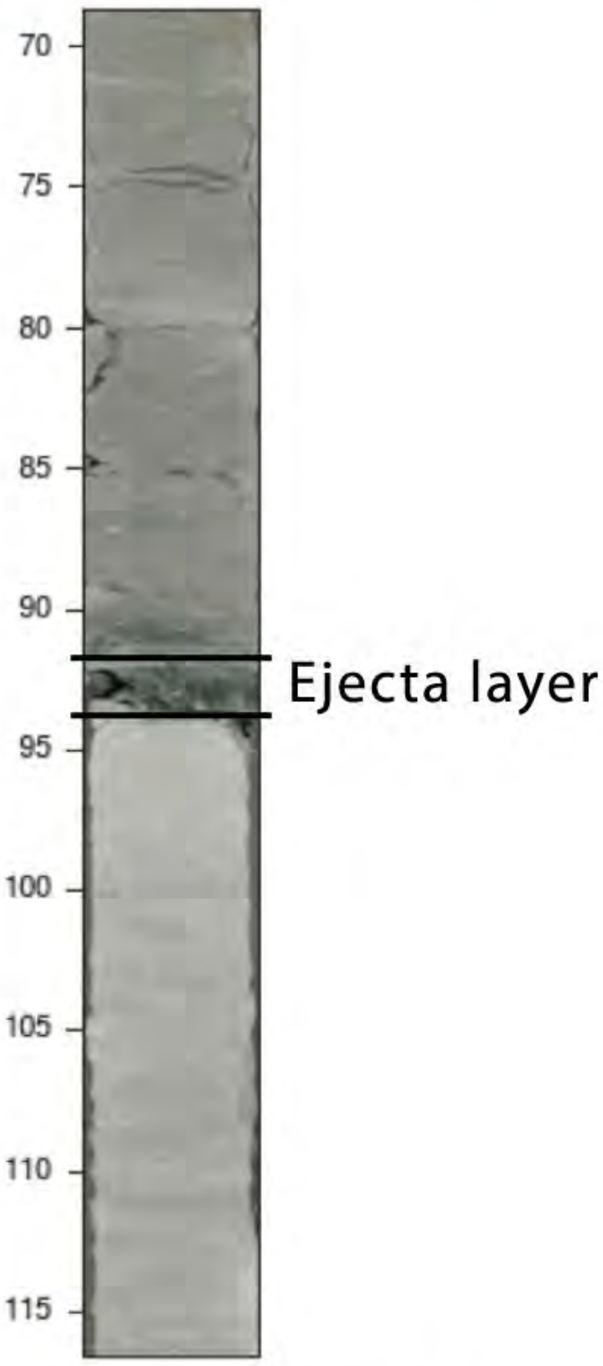
A close-up look at the ejecta layer

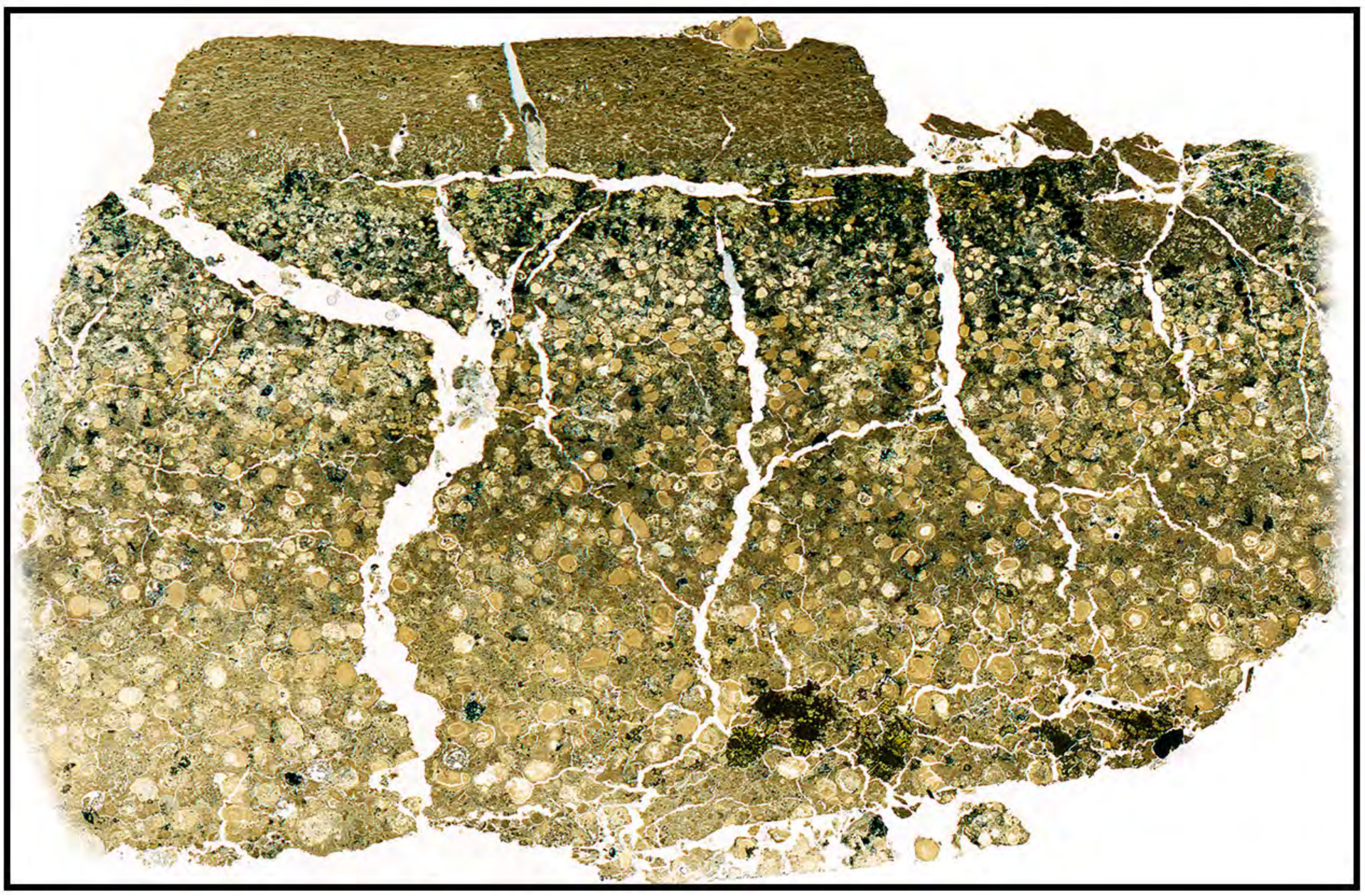
(Photos courtesy of Peter Schulte, Universität Erlangen-Nürnberg.)

Finding the Crater

9° N
54° W

This site is located about 2,549 meters below sea level, about 380 km north of Suriname. The K-T ejecta layer at this site is about 2 cm thick and contains spherules and shocked quartz. Maximum iridium concentration is 1.5 ppb.





A close up look at the ejecta layer

(Photos courtesy of Brian Huber, Smithsonian Institution and Peter Schulte, Universität Erlangen-Nürnberg.)