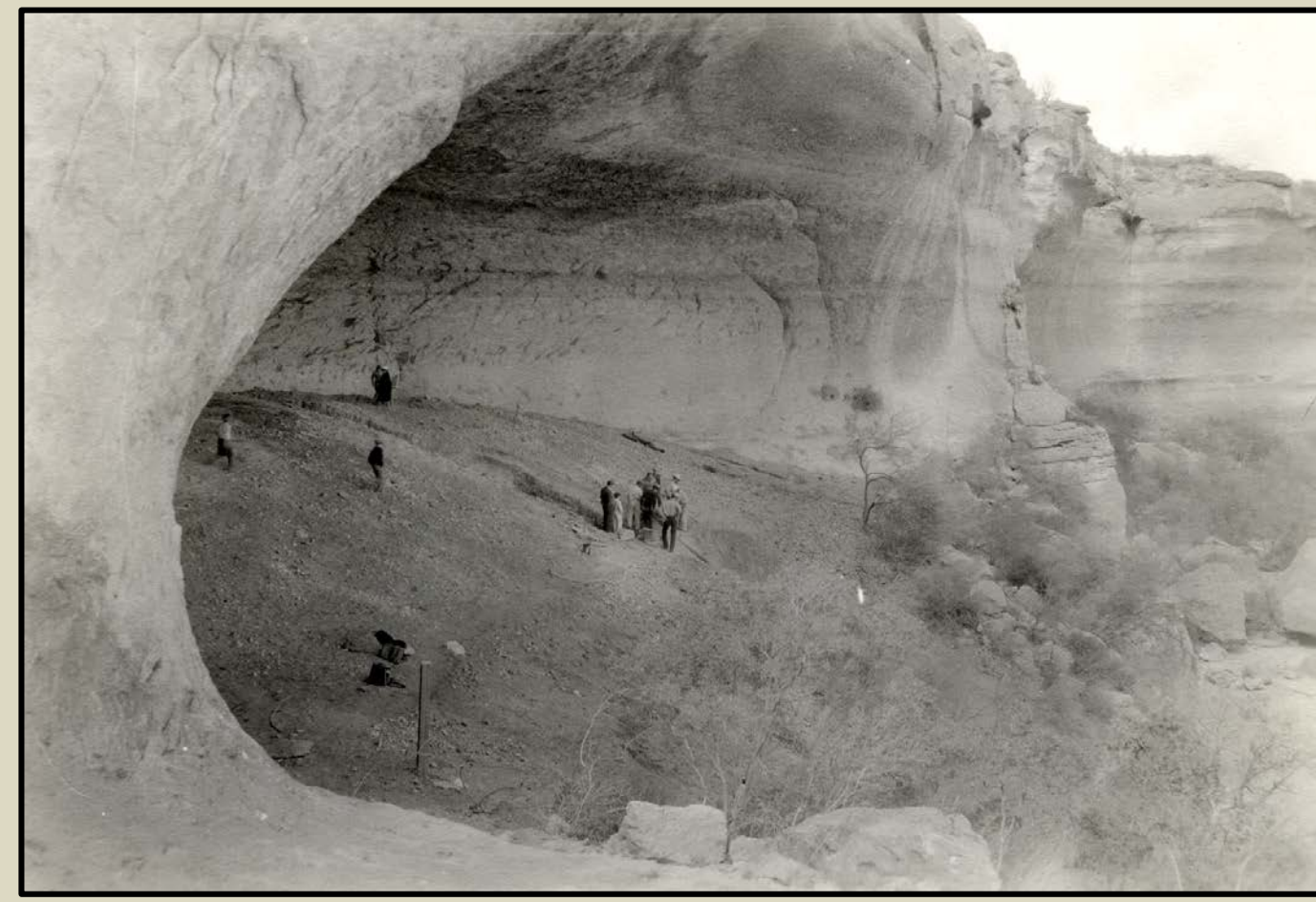
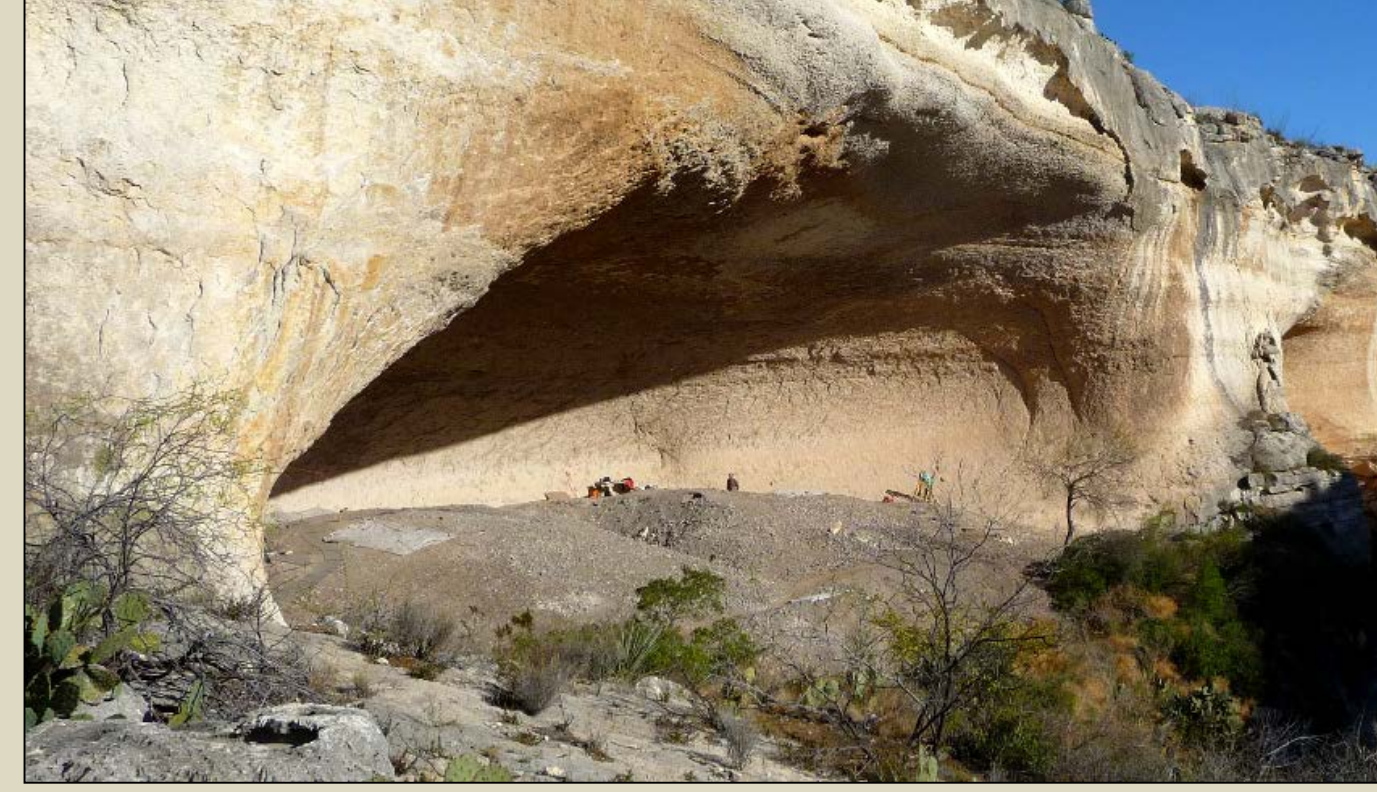


## Eagle Cave

Eagle Cave (41VV167) lies within Eagle Nest Canyon, a short box-canyon tributary of the Rio Grande, just downstream from Langtry, Texas. The canyon is owned and protected by the Jack Skiles family.

Eagle Cave is one of the largest rockshelters in the Lower Pecos Canyonlands, and has been scene of archaeological investigation beginning with Sayles and Kelley in 1932, the Witte Museum in 1935-1936, UT Austin in 1963, and now Texas State University. The legacy of the previous archaeology was a long, deep, minimally backfilled trench through the center of the shelter that continues to erode and destroy the extant intact deposits



Eagle Cave in Spring 2014 (top), and in 1935 (bottom – courtesy the Witte Museum).

The large central trench, as well as a smaller unit on the upstream end of the shelter, was left mostly open. Since the 1960s, the trench walls have slumped, collapsed, and gradually eroded by foot traffic, animal burrowing and wind, leaving a massive linear depression. In 2014 the Ancient Southwest Texas (ASWT) project returned to Eagle Cave with the ultimate conservation goal of backfilling all holes and stabilizing the site surface.



The 1930s trench begun by Sayles and Kelley and expanded upon by the Witte Museum (left) was about 6 feet wide. When the Amistad Salvage Project cleaned out the trench in 1963 (center) it was somewhat wider. Fifty years later the once vertical excavation walls have collapsed into massive depressions (right, circa 2003). Yellow arrows point to a unique spall.

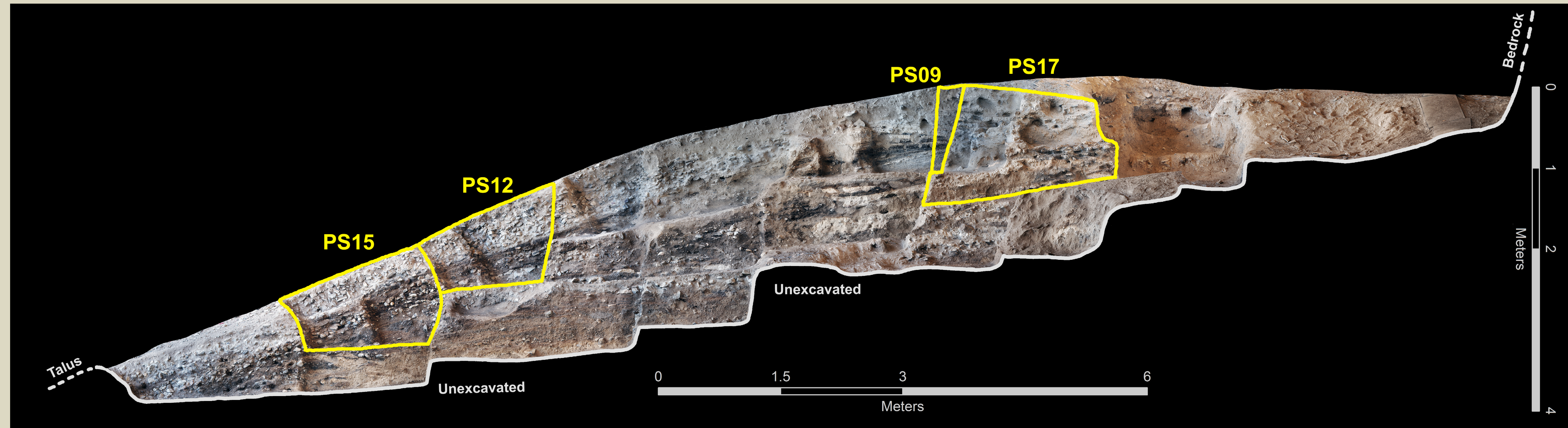
### South Wall of the Main Trench

Based on lessons learned in 2014, in 2015 we had the ambitious goal of exposing, documenting and sampling the entire south wall of the main trench. We cut back the slumped wall and exposed the largely intact stratigraphy to frame the microstratigraphic layering within the context of the larger structural patterning visible across the site. In order to maintain stability and provide access, we stepped our profiles vertically and maintain the “Low Impact, High Resolution” sampling strategy we adopted at the outset of our work.

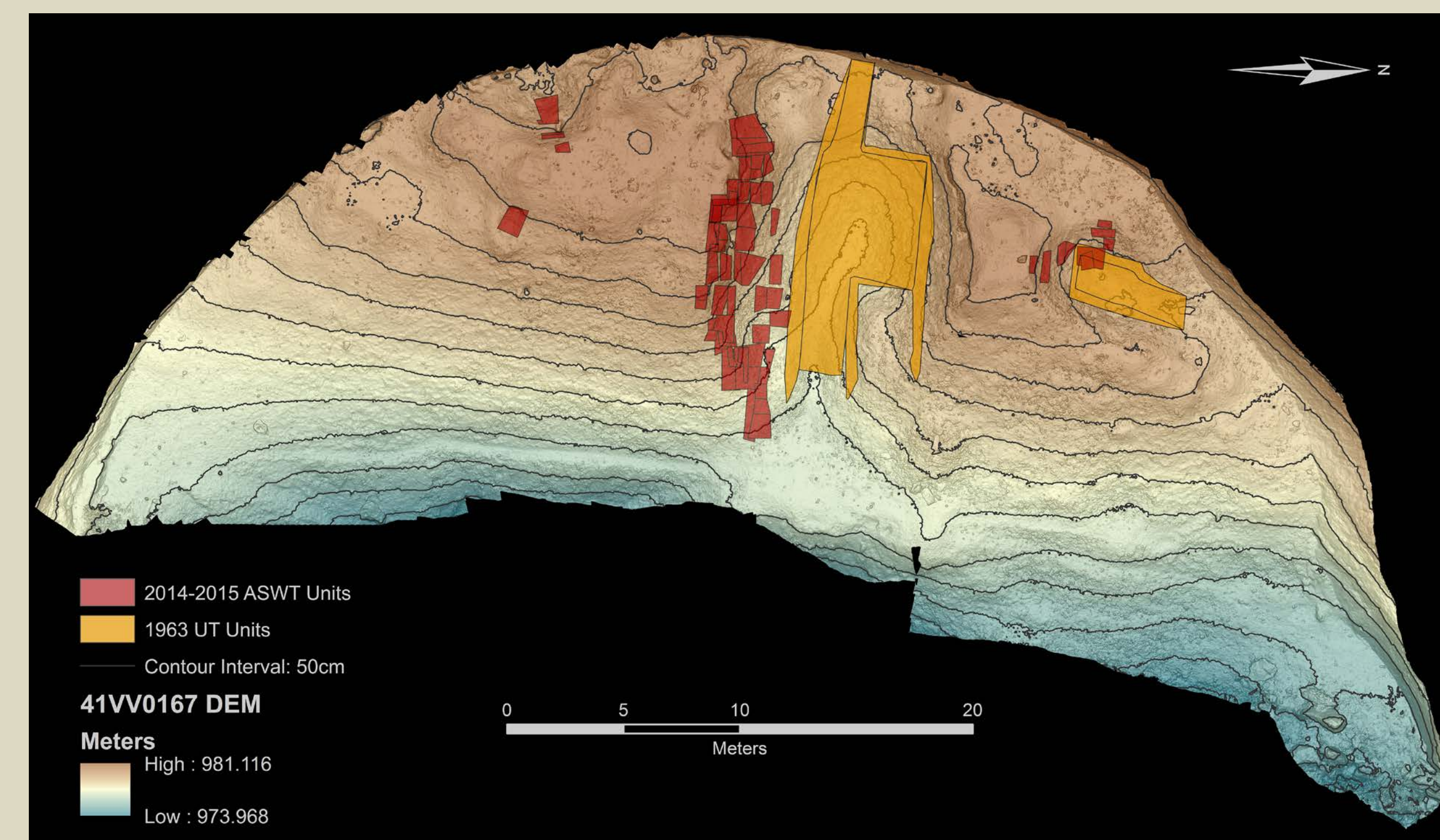


The 2015 field crew (from left) Emily McCuiston, Matt Larsen, Victoria Pagano, Charles Koenig, and Bryan Heisinger. This photo was taken on the last day of the 2015 field season

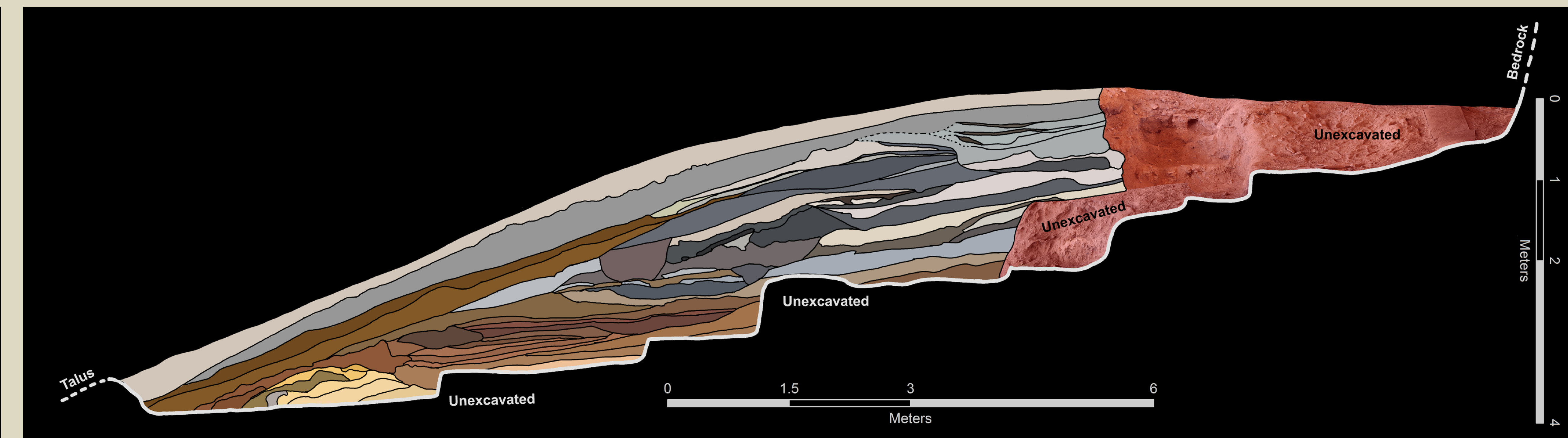
## South Wall of the Main Trench in Eagle Cave



South wall of the main trench in Eagle Cave at the end of the 2015 field season. The yellow outlines show the locations of only the profile sections discussed in greater detail in other posters. Overall, 16 profile sections have been defined and 11 sampled in this trench wall.



Plan map of Eagle Cave showing the ASWT units from 2014-2015 compared to the UT units from 1963.



Illustrated version of the south wall of the main trench in Eagle Cave. The stratigraphy is depicted as an interim interpretive graphic that does not exactly match the layers identified and described in the field.

### The 2015 Excavations

Our excavations focused on the south side of the main trench. Beginning at the top of the slumped trench wall, we removed disturbed fill and excavated small units to expose the intact stratigraphy. The cleaned profiles were given “Profile Section” designations, and the individual stratigraphic layers/interfaces, or “Strats,” were recorded for each section. Once strats were defined for each profile section, we began high-resolution sampling. We would lay out a sampling unit (e.g., 25-x-50 cm) along the profile section and excavate strat by strat, guided by the exposed stratigraphy. For every sampled strat we collected all the excavated matrix; back in the field lab we sieved this matrix through a 1/2” geologic sieve. The <1/2” material was split into several different samples, which will be used for future analyses (e.g., macrobotanical). In addition to the tightly provenienced matrix, in situ artifacts were shot in with the Total Data Station and collected individually.

As the excavations continued we stepped the excavation units and profiles as we went deeper. By stepping the trench we are not only stabilizing the delicate deposits, but also preserving the intact deposits for future research.

### Macrostratigraphic Patterns

We have recorded over 300 individual stratigraphic layers within Eagle Cave since 2014. Many of these strats are very thin (<3cm) “microstrats,” and do not extend across large areas of the site. However, as we continue to expose more of the trench profile we are able to assign many of these microstratigraphic to macrostratigraphic “zones” across the site. We have just begun the stratigraphic analysis, but at this point we have five major macrostrats: 1) upper ashy/FCR zone; 2) dense fiber/FCR zone towards the dripline; 3) heavily mixed charcoal/fiber/ash zone; 4) zone of red/brown attrition deposit; and 5) lowest zone of yellow attrition deposits & spalls.

Each of these macrostrats represents differences in activities or discard patterns relating to intervals of site use. One activity that links the upper three zones is earth oven cooking. Much of the content is debris from earth ovens (cut leaf bases of lechuguilla and sotol and FCR). We can follow what we infer are successive iterations of oven pit construction and use. It is only by creating large exposures that we are able to identify macrostrats and begin to understand how the hundreds of microstrats fit into the larger structural and behavioral patterns.



A variety of items recovered in situ from Eagle Cave (clockwise from top left): woven mat fragment, sandal, coprolite, dart point, painted pebble, lechuguilla central stem, two views of an antelope skull fragment, cordage, and a dart foreshaft.

### Plans for 2016

As the 2015 field season drew to a close, we knew we did not have the time to finish exposing, documenting, and sampling the entire south wall. In 2016 we will continue what we started in 2015, and finish exposing and sampling the profile. As we dig deeper, we are excavating deposits that have never been fully evaluated, and the data we will collect will be invaluable for understanding at least 9,000 years of hunter-gather use of Eagle Cave. We anticipate that our hundreds of samples will be analyzed for decades to come, much like those from the 1970s Texas A&M excavations at Hinds Cave.

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Three New 2016 Interns