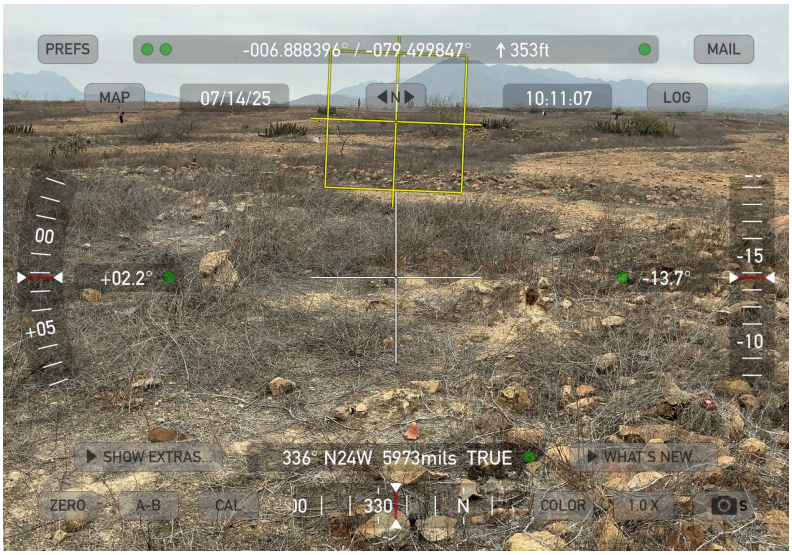
PIAGN 2025 Season Excavation Process

Pedestrian Survey

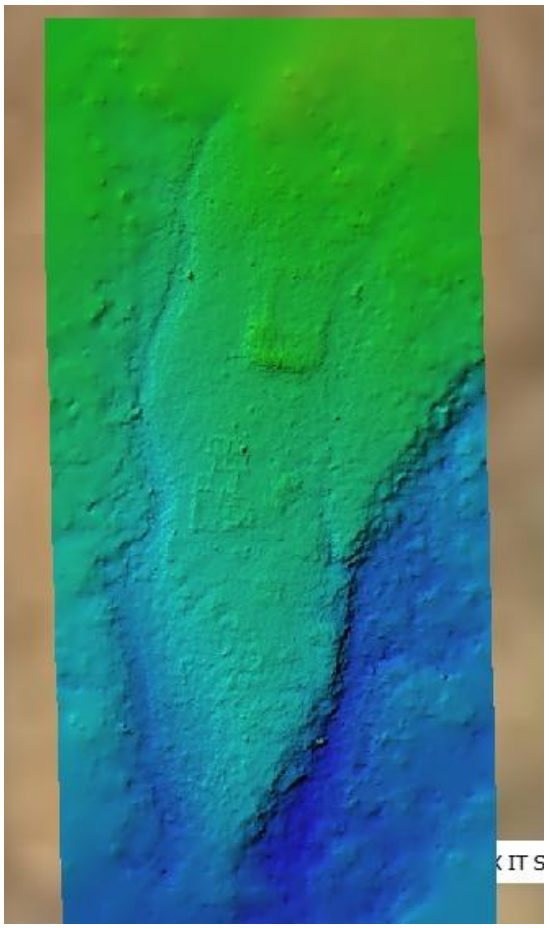
This is the very first look at a site before even marking out where you are planning to dig. The goal is to get an idea of where surface features are located, document surface artifacts, and orient yourself and your team within a site.

The traditional method for a pedestrian survey uses transect lines. Team members will line up about three or four meters apart along the edge of the site or area you are focusing on. Slowly, the team will walk the length of the site, each member walking within their own track and maintaining the even distance between them and their teammates. Each member is to scan the ground for any surface artifacts or features and record them properly. For our team, this included a photograph/photographs including a handheld scale, a GPS reading, and a 3D model. For GPS readings, we used an app called Theodolite. For 3D models we used an app called Scaniverse. All photos, coordinates, and models were uploaded into collective drives, labeled by date.



Our ability to record our site was greatly enhanced through the use of a DJI Phantom 4 drone. We could take video and photo footage which could then be compiled into 3D models in software like Agisoft Metashape. We made an initial DEM (Digital Elevation Model) of the site using overlapping drone photos, making architectural complexes visible.

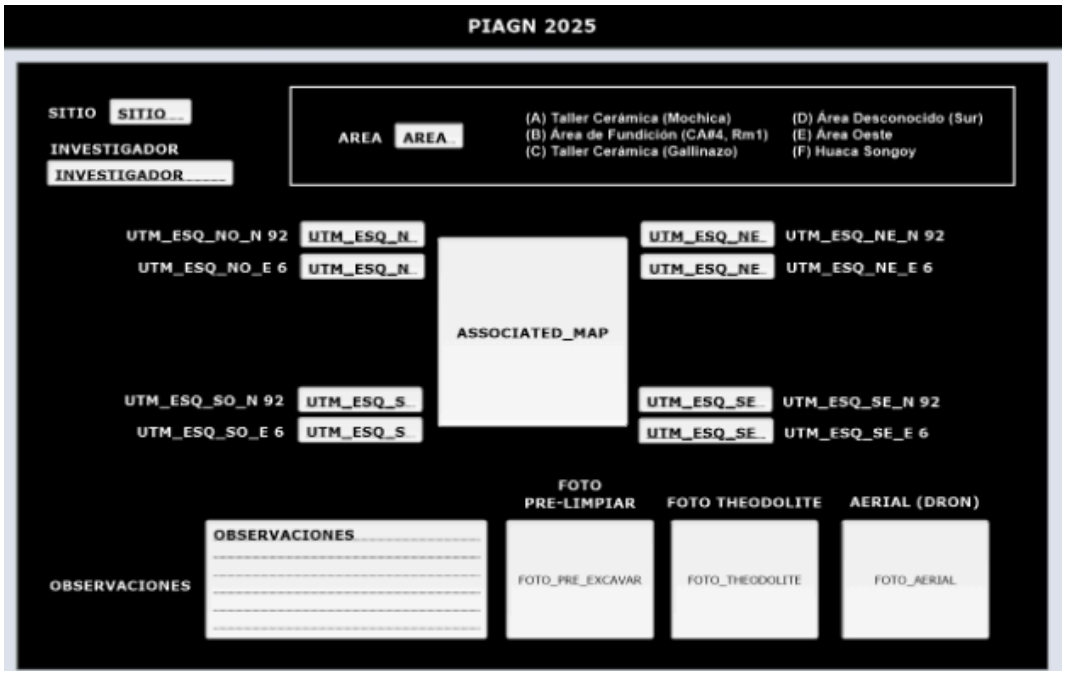
Initial DEM —>



Unit Marking/Superficial Layer

Units are generally determined by what you want to know about a site, preexisting knowledge about a site, and what you gathered from your pedestrian survey. From previous years, we knew that Cojal likely had a forge site somewhere. We also knew where complex architecture was located from our surveys and drone footage, suggesting domestic areas or ceramic production platforms. Four units were virtually mapped as guesses of where it would be most productive to excavate. For some, we shifted the corner coordinates slightly to incorporate interesting architecture or terrain changes we wanted to explore. Each unit was marked out with wooden stakes and string, with coordinates taken at each corner and mapped with corresponding cardinal directions. Elevation was also measured for each corner of the units, to record the initial height of the terrain before we began excavating.

The superficial layer is the surface of a unit after it has been cleaned of any later vegetation and smaller rocks. Often, the contexts for these layers are mixed with modern developments and shifting before you reach the clearer chronological contexts in deeper layers. We recorded it by taking 3D models with Scaniverse and labeled any surface artifacts we found. Throughout the survey and excavation process, we also used a specially made application in File Maker Pro to record our units and their layers and features with plenty of pictures.



File Maker Pro application on the “Area” tab

Excavating in Layers

Taking down levels within a unit depends on predetermined measurements or when a team notices texture or color changes in soil. Most projects aim to take down fill by ten centimeter increments. This is almost never a completely straightforward process. You will have rock walls, animal burrows, and looter holes that will prevent you from obtaining a perfect level measurement. Of course, the priority should be placed upon recording everything you find in common layers to preserve the chronological context. Staying diligent in making maps of features and labeling artifacts in the same layers can really help to keep up the integrity of your work.

Artifact Recording and Bagging

For every artifact that we decided to collect, we placed it either in its own bag or in a bag with other common artifacts, such as ceramics. All bags were kept together by layer throughout the work day. Each bag was given a label in the field that included the following information:

Date:	Material Type:
Project: (PIAGN 2025)	Quantity:
Area/Unit:	Weight:
Layer:	Bag Number:
Associated Features:	Artifact ID:
Responsible Signature:	Site: (Cojal)

Coordinates:
Each bag is also documented within the File Maker Pro application back at the lab. The information on the labels are added electronically to the database and include a picture of all artifacts in the bag laid out neatly with a scale and the label visible. Some bags may not have been properly labeled or may have been missing information when they were labeled in the field. We remedy this in the lab, where we have additional opportunities to weigh, count, and re-bag artifacts as needed.

Backfill
Backfill should be the very last thing you do in a unit. Before the total workout party that is Backfill Day, it is imperative that you ensure that all necessary information has been properly recorded from a unit. Often, we will look for sterile soil, layers of earth that bear no more evidence of human occupancy. We make sure that we have all bags, features, and artifacts properly recorded in File Maker Pro. Once we are sure that everything is set, backfilling can begin.
As we excavated, we kept all dirt and rocks we shoveled out in large piles next to the units for easy access. Backfilling is simply shoveling all of that dirt back into the unit, making sure the dirt is evenly distributed so that all parts are covered. This closing activity is best done with as many crew members as you can wrangle, and with a little music!