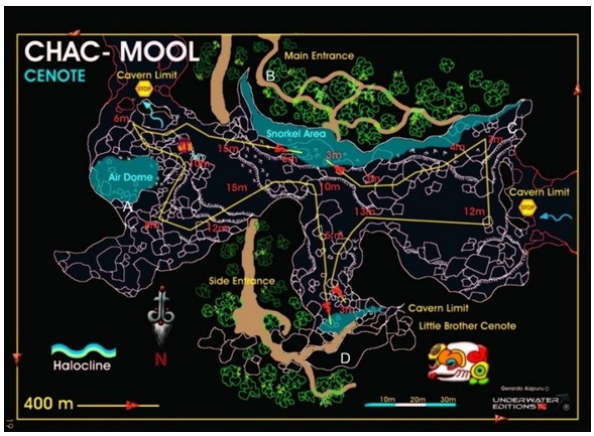
Reviewer 1 answers:

To improve manuscript. Authors indicate that there are previous woks in the area carried out by the Speleological Survey; It should be interesting to be able to compare the obtained data from geophysics and the available data from direct study.

We added some lines in the manuscript saying that The (x, y) locations was obtained from the scuba divers map. The depth (z) is inferred from our 3D resistivity model. We sign the inferred cave section as a rectangle, because we cannot see details. Where dot is red is because is not reported by the scuba divers map, but we see a similar pattern where a river crosses. This location is inferred.
The scuba diver map is for tourists and it was difficult to extract the information we needed, as you can see.



It should be of interest to include a geological map in order to evaluate the geological characteristics from the area, its context but also, if available, hidrogeological information at the regional-local scale previous to the geophysical analysis.

We added some words in the Study Area Chapter to say that limestones are everywhere and terrain is very flat.

Moreover it can be also of interest to include a geomorphological map about the surficial indicators of karst activity and some photographs from the study area. This photographs will permit the evaluation of the survey conditions but also the karst characteristics from the study area.

There is not surface manifestation about fractures or subduction. As you can see in the pictures. The profiles were taken over the clear way and we did not see any surface subduction.

There are not units in the representation from figure 4 (color scale), at figure 5 the scale color requires an inset (log 10 (r) means, r at logarithmic scale but it lacks units and the figure caption requires to be rewritten as I am not sure that I am able to understand what is described.

We corrected this, putting units on the plots.

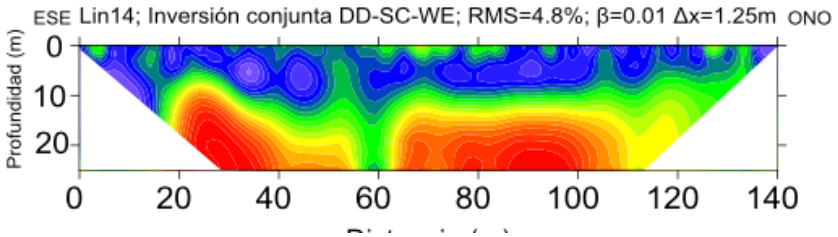
Information related to the referenced small sink- holes from the area (2.1 chapter) requires to be included in the geological preliminary map but also in the geophysical models to be compared with the geophysical data.

Profiles data were taken over flat paths on the jungle as you can see in the pictures. There were not small features over the ways to suspect about a sinking (we added a line in the manuscript about this). We also added some lines to the manuscript to emphasize that Geology is cretaceous limestones everywhere.

Also at chapter 2.1 there is not an evaluation of the expected values for bedrock and the way to choose or discuss the origin of obtained values. If the analyzed units are rocks it can be difficult that they are complete saturated, that it is the explanation for such data. This requires to be more detailed interpreted and discussed.

Here we show you a resistivity section very close to the chac-mool area. This was obtained by DC resistivity inversion of Dipolo-dipole, Schlumberger and Wenner data sets joint inversion in order to get a single resistivity model. Here we used a source-receiver separation of 5m. With this separation was possible to see the dry limestones close to the surface that we call it as *roof*. In x=60m there is a small sinking, meaning that a subterranean river is close and that collapse is possible. However, you cannot distinguish the resistivity change between the subterranean river and the bedrock. Even that here, we used a shorter source-receiver separation. We only see a green color disruption on the dry limestones and a disruption on the red color long body. We can not explain this since the geophysical point of view. Only salt water and shales can low the resistivity in the bedrock. That is why, we think that bedrock is in some way saturated of salty water that lows the resistivity. We have no other explanation. If you have one explanation, we will be very grateful.

In the EM inversion we do not recover the roof thickness sharply because the shortest source-receiver separation (10 m) was to large. The EM34 equipment has only separations of 10, 20 and 40 m.



At 2.1 authors describe how they interpret the presence of sinkholes in the area, however there is not reference to surficial-geomorphological data to be compare with or about the presence of sinkholes in the area to be compared with the geophysical data.

As you can see in the pictures, there are no surface evidences of sinking.

What criteria has been used to select the 160 ohm/m for the separation of units in the geophysical model? Do authors indicate that the "bottom topography of the lime- stone roof" but what they are referencing is "the topography of the limestone roof"?

We changed this in the manuscript to do not confuse. We explain that blue iso-surface represente the bottom of the dry limestones (700 to 1000 ohms-m). Red iso-surface represents the resistivity contact between fresh and salty water (could be the Halocline). This is valid just where data was taken (under the profiles locations). We can extrapolate or interpolate a little bid outside the profiles locations.

About the interpretation and description, roof cannot be thick, this is a contact, then it is needed to correct "the roof appears to be very thick", or "the roof is very thin". After in the same paragraph authors indicate that the, what I interpret, the thickness of the level is thick,

Yes, we agree. We did some modifications on the manuscript .

then the susceptibility to collapse is lower, does author have information about the fracturation nets from the unit? Not necessarily from the local area, but the state of the massive can be evaluated in a regional scale to know if stability can be related to the fracturation state of the unit if authors want to evaluate collapse susceptibility or hazard.

We have no surface evidences of sinking in the Chac-Mool area, but in the cross-section shown before, there is an area close to Chac-Mool where a small sinking is evident on surface.

At Figure 6. I suppose that this is a 3d view of the topography of the contact, but it is not clear to see it, Can authors include the isolines of topography, or two maps with the topography and by the other hand of the resistivity values?. In this sense, as previously pointed out, the selection of the resistivity values requires to be discussed in order to define if other values can be better to evaluate the 3D under- ground structure.

Surface topography is very flat and we emphasized that on the manuscript. Dry limestones should be very resistive (1000 ohms-m or more; blue color). Salty water should be very low-resistive (1 to 5 ohms-m; red color). Fresh water around 50 to 80 ohms-m (green color). There are not shales in this area. Only water content can justify the resistivity values.

In order to evaluate data from the area, where the water level is expected to be? are there any change related to the water salinity in the geophysical data?.

The water table was measured at 7 m depth where the sinkhole is open. This value is present in the manuscript.