Overall: handled a lot of information from a difficult region, reasonably well-organized and well-written. This reader got the sense of the suite of usual geophysical and hydrologic measurements applied with great effort to this catchment, with better outcomes east vs. west, but overall with mostly tentative initial steps toward a working hydrogeological model. Heroic efforts but mostly to identify what's missing? Provide an overall status / uncertainty of budget components: what works, what works elsewhere but not so well in this particular catchment, what key uncertainties remain, how one might address those, how users should regard this preliminary data product.

The 'separation' / assignment of data seems confusing at best, counter-productive at worst. Most of the data presented in tables (text and appendices) here should in fact reside in the data set itself. A large section, on GPS-RTK 'validation' of various DEMs detracts from their overall focus on hydrogeology and should move to an appendix (for list of DEMs and validation strategy) with actual data in a DEM folder in the repositories. Keep focus on the model and its data needs, put all necessary data in the TP or DANS repositories, put a description of GPS-RTK validation of various DEMs, of interest to some users but not directly related to hydrological parameters, in an appendix with data itself in the repository. Many tables (e.g. Table 6, others) in text report data already included in the repository; no need to duplicate here! No need to include Excel tables here of data already the repository. If you have data in the repository sorted by folder, refer directly to those folders?

Very strong reliance on standard geophysical and hydrological proprietary commercial software not helpful, perhaps even unacceptable. Replace one of the data tables (now included in repository data set) with a list of software: free open-access, proprietary, etc. Show open-access options or substitutes for commercial products where those exist. Provide unfamiliar users with a guide to what they could find easily or develop themselves, what licenses they may already have accompanying which instruments, and what they would need to purchase.

Section 3, Material and methods

Figure 2 - give reader, via text changes (bold, italic, font, etc.), an indication of strengths (low uncertainties) and weaknesses (high or unknown uncertainties) of the various inputs. E.g. from text that follows this reader gets the sense that 'aquifer geometry' remains highly uncertain, almost unknown, due to weaknesses of ERT, MRS, etc. Highlighted uncertainties or places for needed improvements denoted in this figure will set up discussions (now scattered among various results sections) about impact of future instrument or measurement improvements. Come back to this figure in conclusion? How close are authors to having a reasonably well-constrained hydrogeological model and with what reliability should readers regard these measurements? Elevations and lithology strong but conductivities and aquifer geometries weak? Or some different combination of relative strengths and weaknesses that the authors should convey?

Section 4.2, Altitude survey

Necessary, perhaps skillful, but overall a substantial diversion / distraction from the hydrogeological focus. Authors made the case for accurate elevation data, but entire section could be replaced in this text by this (slightly modified) short summary "ALOS RT1, which performed slightly better than other available DEM product across the whole study area and had a higher resolution than ALOS RT2, was the most suitable DEM to use in this study area. For details, see Appendix XX". Please define all acronyms (e.g. satellite names). Text here refers to Table 4 but relevant information also included earlier in Table 2? All of this, including tables and figures, should move to appendix. Convey relatively high reliability factor as a feature of Figure 2? One could retain the locations of GPS-RTK validation points as shown in

Figure 3 at the same time as removing text from main narrative to an appendix and data to a DEM folder at the repository.

Section 4.3, Soil Thickness

Thickness of weathered layers. e.g depth to bedrock from other studies minus surface soil depths from this study will give a difference equal to the second lower weathered layer? But these calculations will happen later, subsequent to data gathered and described here? With what uncertainty? Plus/minus 1m? 10m?

Section 4.4.1, Water table depth measurement

Needs revisions to improve content and references. If “Surfer” and “Ordinary Kriging” represent formal tools, we need to know source, citation, and open availability. This refers to the commercial software ‘Surfer’? Not available to most users. Text about linear variogram seems to come straight from GoldenSoftware website? Very standard tool, open access substitutes must exist?

Next paragraph induces confusion. Because people in the west use surface water, need/interest in ground water remains low and few wells drilled? As a consequence, few boreholes exist? These are boreholes numbered 32-34 in Figure 8? Because of rarity, authors decided to exclude these from interpolation. What interpolation? The ‘Surfer’ interpolation already mentioned? No details given. First mention of interpolation in this document. A good interpolation over a large area needs / uses every point, regardless of isolation? In this catchment, these points deleted for reasons of quality or for reasons of geographic isolation? First and only reference to a dam? Here authors assign lower water tables in 2019 vs 2018 to differences in dam storage, but in concluding sentence of the paragraph the authors mention different “control points” as well as different dam storage conditions. Need revision and clarity here!

Final short paragraph of this Section highly redundant. Remove it, or move it to Abstract?

Section 4.4.2, Aquifer tests

Here the authors accept / use data from isolated rare western stations. Because they do not apply a software interpolation? Authors provide and justify a range of hydraulic conductivities (e.g. ranged from 0.1. to 15.6 m per day) but data provided includes only geographic coordinates and raw data, not these derived conductivities. Users will need to make their own conversions? Better that authors describe their calculations and provide derived conductivities in addition to raw data, directly in the repository product?

Section 4.5.1 Magnetic susceptibility

Low values of magnetic susceptibility needed only to assure validity of subsequent ERT or MRS measurements. Provide only a brief sentence of assurance here and refer to text / figures in an appendix as well as data in NTPDC for those who want?

Section 4.5.2 ERT

RES2INDV software mentioned here (first mentioned in Section 3.5.2, ERT) represents another proprietary commercial software not available to most readers / users. Perhaps common in geophysical methods but authors need to describe open-access alternatives. Or, we need a list of proprietary software dependencies that covers the entire measurement suite?

“Half of the data missing in the filtering process”? What filtering process? Part of the proprietary RES2INDV processing? Are these data flagged? We get no information on data needed to meet various quality control criteria; did so much data at so many sites fail? How do these failures affect overall conclusions? Affects only ERT1? But periodic rainfall occurred at other stations as well?

Overall, ERT measurements seem useful to or necessary for MRS measurements but not useful or reliable in the absence of other depth-resolved lithology information, for example. Authors say “ERT has equivalence problems, i.e., non–uniqueness of inversion results.” Provide instead a short sentence assuring that ERT supports and allows valid MRS measurements but put ERT test in a separate Appendix? You already have ERT data in a repository?

Section 4.5.3 MRS

“at two near MRS sounding sites” - Authors mean at two ‘adjacent’ sites? Sufficient mention of ERT here, don’t need a separate section? Samovar V6.6 mentioned here represents open access software from IRIS instruments (e.g. described in Section 3.5.3) but a few sentences later in this section reader encounters Samovar V11.4? Different software version? Different instrument type? Because authors clearly assign interpretation differences to V6.6 vs V11.4, readers need to know source of those differences? How much “in situ” water is “missing”. 10%? 50%? Not surprising, but how does a reader find this information? “Un-determination”: what does this mean? Not resolved? Under-determined? Other instrumentation or lithological factors? We need a much different, much better discussion of sources and levels of uncertainty here; this reader found very little basis to accept any MRS data. Did MRS function effectively or not given these (supposed?, estimated?, measured?) aquifer depths. Not clear that MRS contributes valid information to hydrogeological model, e.g. more/better than borehole estimates. Authors do not provide information necessary to make that determination? By authors own admission, the best they / we can get from MRS remains amount of free water?

Section 4.5.4 TEM

Based again on a commercial proprietary software TEM-Researcher (e.g. mentioned in Section 3.5.4); can the authors explain or list open-access alternatives? In Figure 13 the linear red lines indicate the initial model with the connected red dots represent the interpolated values? At best, these represent preliminary data, e.g as the authors say “several additional measurements will be needed in the future”. Need explicit uncertainties here!

Section 6 Conclusion

Authors write “data in this paper can be used for future set up of a hydrogeological conceptual model and groundwater modeling which will be presented in follow up papers.” Good effort, no doubt, and thanks for an admirable effort to share, but reader never learns how close they got to a useful reliable groundwater model. What are their priorities for future efforts? Improve instruments / measurements in this catchment? Duplicate work in a second catchment? Focus on modeling rather than observations? How do they recommend that potential users consider or use these data? What do they consider strong or adequate? Where (everywhere?) do they recommend future improvements? Can we as users rely on their soil depths, their borehole pumping data, their “unconfined” aquifer conclusions? Authors give users very little basis for confidence in their efforts and their data.