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## Surveying reminders and issues

Check control files before leaving the bunkhouse:

Check your control point files before you leave the office-bunkhouse. The correct coordinate files will not be rounded to the nearest meter. Coordinates rounded to the nearest meter are from the handheld gps and are not intended to be used in the total station. You will definitely have large errors when conducting a revisit survey with the handheld gps coordinates.

Field issue: Errors surveying previously established benchmarks

There have been some issues arise with crews finding errors above MAE when surveying previously established Benchmarks (revisit surveys). The best way to proceed in this situation is to conduct a perfect survey of the existing benchmarks, tosbm, bosbm. The idea here is to have one perfect set of data to determine how to adjust previous data sets. This can be done in an assumed coordinate system. Does this mean do a resection? No. This means go back to the basics, occupy one benchmark and BS another, which is the most accurate way to begin a survey. Then find and survey all additional bm's available. This scenario is a means to actually measure the "line" between two benchmarks. Take good field notes. Create a JIRA issue to pass along all the information, all the survey files and field notes.

Furthermore, there are sites with bm's that have never been measured using this method (occupy a benchmark and BS another) since 2011 and therefore these 'lines' between benchmarks have never been measured. In the future a resection will not be a part of the workflow during the training modules at CHaMP camp. Resection training will only be available as an evening session during CHaMP camp.
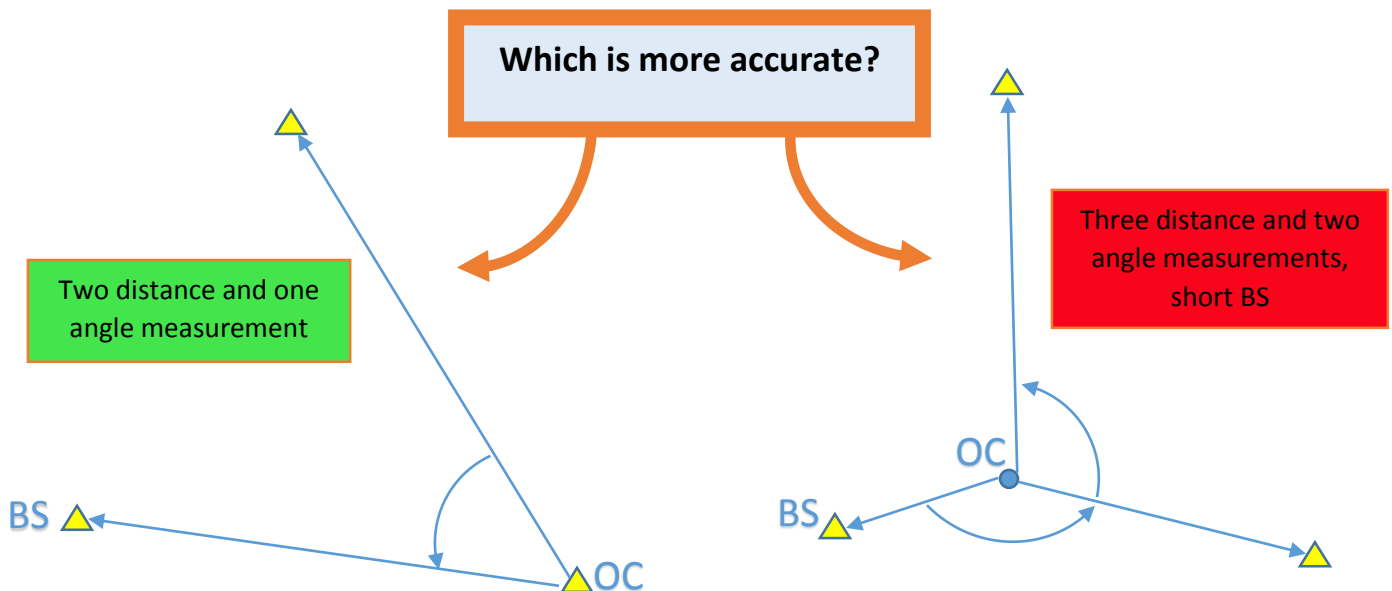
Field issue: Only able to locate one benchmark

Please conduct an exhaustive search to find another bm or cp. If only one bm is found there is no means to match the current survey with past surveys. Geomorphic change detection will not be possible. If this situation occurs, set new bm's in safe locations and proceed with the survey as a new site. Use an assumed coordinate system and gps the all the benchmarks, etc.

Post-Processing: Help me, Help you:

- Log any survey post processing issue to JIRA. Provide all relevant information possible by attaching it to the JIRA issue, including such items as Control files, TS files, Foresight files, survey gdb, and field notes.
    - A list of what should be provided for each instrument:
        - Nikon: Raw file, .job, .dxf, field notes, control file, survey_quality_report.html.
        - Topcon: Raw file, .mjf, .dxf, field notes, control file, survey_quality_report.html.

Be specific about the issue. For example,

- Don't say this," we shot in all the benchmarks we could find"
- Instead, say this, "we found and measured: bm1 MA #17, bm3 MA #26 and one old cp with no identifier MA #246". (MA = measured as) "We verified we were using -30 mm prism constant configuration on the tripods and -30 mm in the instrument and we checked the rod and instruments heights multiple times".

Programming Issue with Nikon TS:

Please refrain from processing any additional 2015 visits shot with a Nikon in the Toolbar at this time. We had one crew that experienced a problem importing Nikon total station data into the tool bar. To keep a long story, short: The toolbar calculates coordinates for each point based on information from a couple files. It appears that the program may be calculating some coordinates incorrectly when one specific sequence of events occurs during the field survey. We will address this issue soon with a new Toolbar release and will manage repair of previous visits shot with Nikons and processed with the 2014 or 2015 CHaMP Toolbar.

Nikon SurveyPro Prism Name Limit

During review of raw files it has been noticed that the prism name used in SurveyPro does have Limits. In some cases the Prism Name is too long for the "field" and thus the prism constant information is not visible.

You can't use: chi' chi' ROD-driquez as a prism name.

```
35   Note:                Date: 09-12-2015  Time: 11:35:35
39   Sd Shot:1-4          Ang R: 119°23'23.98000"
40   Sd Shot:1-5          Ang R: 124°07'40.35000"
41   Note:                Date: 09-12-2015  Time: 11:40:53
42   Note:                Foresight Target:chi` chi` ROD-driguez, HR:2.7 (2.7 + 0.0 Of
43   Note:                HR:2.7 (2.7 + 0.0 Offset)
44   HI/HR :              H Inst: 1.378
```

```
Note/Title:                                        [ Store  ]

chi` ROD-driguez, HR:2.7 (2.7 + 0.0 Offset), Prism Const.   [ Cancel ]
```

LOOK ABOVE: THERE IS NO PRISM CONSTANT IN THE FIELD. It should indicate -30mm

What are the maximum number of characters that can be used to Name the prism. The original name is "My Prism" so do not exceed the number of characters used originally; eight.