New study

- Measurements are made in the yard
- Response of an EMS tool to the presence of the BHA component (in axial alignment) is recorded.
- Component length, offset distance and EMS Bz response are used to calculate pole strength.
- Component is presumed to be a simple dipole.

Interpretation

- Result represents how the survey device “sees” the source of axial interference – i.e. an “effective” pole strength

- Based on the direction of the EMS response, the sign of the up-hole pole can be assumed.

Results (up-hole pole)

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Sample:	108
Units:	µWb
Mean:	-44
Standard deviation:	229
Maximum:	545
Minimum:	-830
Total positive:	47
Total negative:	60

Notes

- Most components were field returns, pre R&M.
- All are from northern hemisphere operations, vast majority from North Sea.
- None are dumb iron (they are predominately RCLS steering units and motors).

Conclusions

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- Results contradict the assumption that axial interference is a bias error term;
- …but they might not be representative of all BHA components,
- …and they might not be representative of downhole pole strengths.
- More work is required?