



Correction to: Integration of Large-Scale Electrical Imaging into Geological Framework Development and Refinement

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The original version of this article unfortunately contained some oversights. The following text and revised figures, replacing Figure 10 and Figure 15 respectively, and revised Table SM1 have been presented by the authors.

The article “Integration of Large-scale Electrical Imaging into Geological Framework Development and Refinement” demonstrated a general workflow for integrating electrical resistivity tomography (ERT) into geological framework model (GFM) development. Large-scale (>30 km²) 2D ERT data was collected in two field campaigns at the Hanford Site (Washington State, USA). Field campaign #1 was between the 200 Areas on the Central Plateau and consisted of six 2D ERT transects, designated as Lines 1-6. One of these transects, Line 4, was shown to be inconsistent with the electrical structure and trends revealed in this area. In ongoing work following publication, it was found there was an error in the order in which the ERT files were read for Line 4. Specifically, Line 4 was a roll-along survey and the order in which the field technician collected the data was opposite to the order assumed in the ERT inversion. Therefore, the corrected ERT image is essentially a mirror image of what was originally reported; consequently, the corrected ERT image is now consistent with the other ERT images (e.g., structure and trends). A revised Figure 10 is shown below which reveals a continuous low bulk electrical conductivity (EC) channel-like feature trending northwest to southeast between the 200 Areas. Revised stratigraphic boundaries on Line 4 (Figure 10f) are shown as white-dashed lines. Since there are no wells for ground-truthing between the 200 Areas, these images provided a first line of evidence of stratigraphic structure.

The low bulk EC features for the two field campaigns were flagged for further investigation and reported. A revised Figure 15 with the corrected results for Line 4 is shown below. The changes are specific to where Line 4 is flagged for further investigation.

The original article can be found online at <https://doi.org/10.1007/s40710-022-00570-2>

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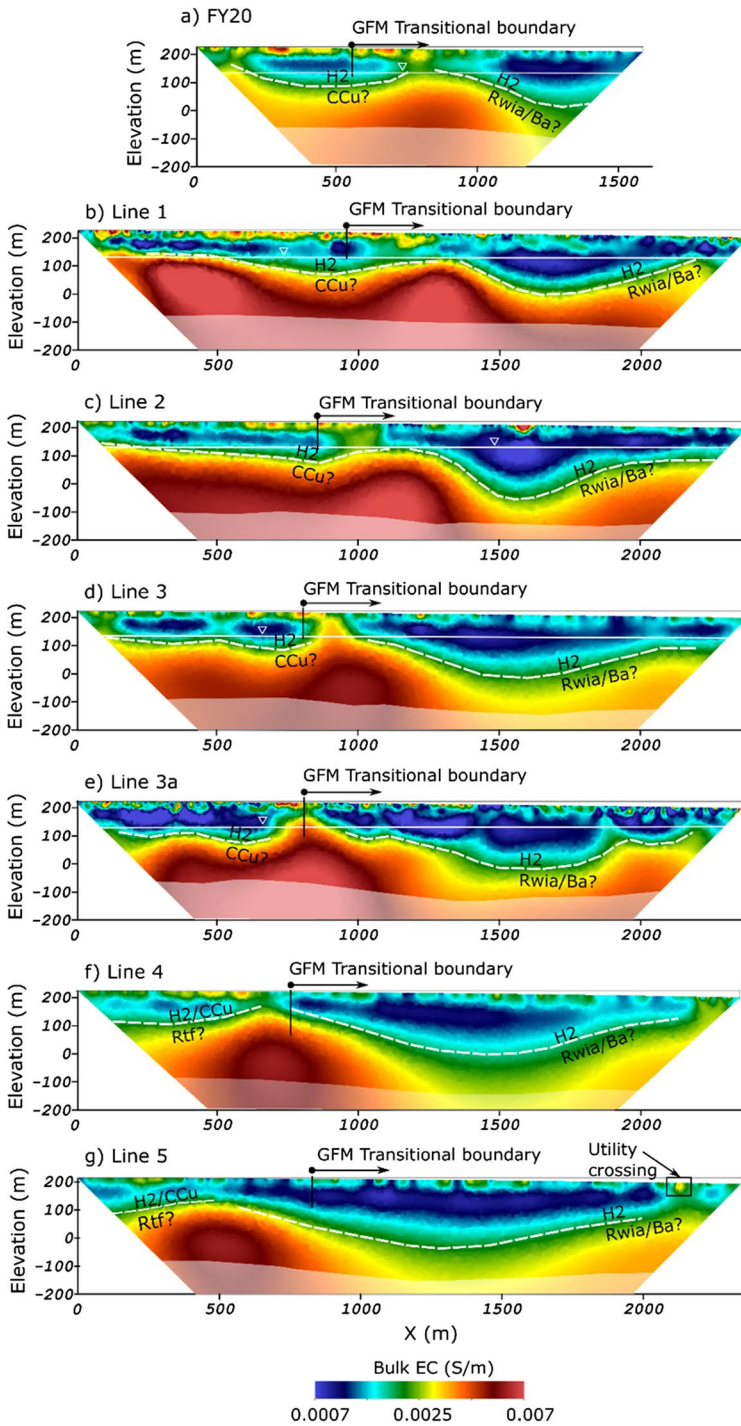


Fig. 10 Revised Figure 10 with a corrected f) ERT Line 4. ERT images for reprocessed FY20 line a) and Lines 1-5 b) through f) between the 200 Areas. White dashed lines represent inferred locations of stratigraphic boundaries

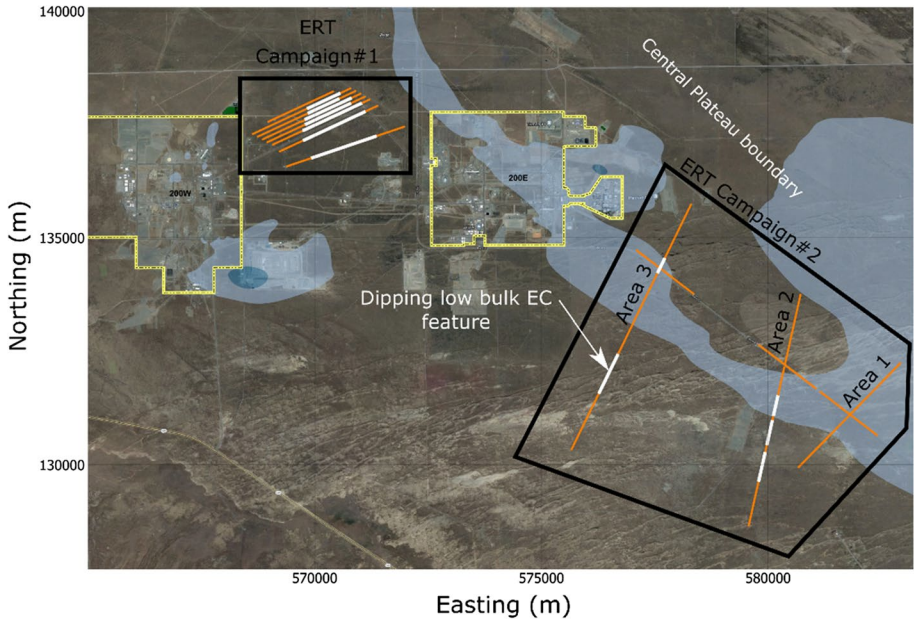


Fig. 15 Revised Figure 15 with corrections along Line 4 in ERT Campaign #1. Aerial view showing locations of low bulk EC features revealed in the ERT 2D images. The interpolated I-129 plume is shown as a shaded blue region

Table SM1 Number of field measurements from individual roll-along (R) surveys after filtering and the total number of measurements used in the ERT inversion. The total number of measurements for each R survey is 6500. The total number of measurements for Line 4 has been revised

Transect Designation	Total Electrodes	Number of measurements				
		R1	R2	R3	R4	Total
<i>Between 200 Areas</i>						
Line1	96	4358	5102	-	-	8325
Line2	96	4968	5275	-	-	9141
Line3	96	5167	5268	-	-	9232
Line3a	96	4157	4367	-	-	7697
Line4	95	5744	5421	-	-	9756
Line5	96	5482	5934	-	-	10107
Line6	110	5756	5881	-	-	11325
<i>600 Area</i>						
A1-SW	64	5455	-	-	-	5455
A1-NE	64	5636	-	-	-	5636
A1-P	64	5664	-	-	-	5664
A2-SW	144	5890	5618	5073	-	15159
A2-NE	64	5473	-	-	-	5473
A2-P	64	5376	-	-	-	5376

These corrections should not detract or substantially alter the findings of the work, which demonstrates how geophysical methods can play an important role in developing GFMs, filling the informational gap between boreholes or minimizing the locations of new boreholes. Continuing the investigation as originally recommended in Table 3 helped identify the ERT modeling error and led to a review of field procedures and reporting. Looking ahead, the refinement of the interpretation will use multiple geophysical methods to provide a more spatially extensive electrical structure between the 200 Areas.

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