

Geology and Geochemistry of Noachian Bedrock and Alteration Events, Meridiani Planum, Mars: MER Opportunity Observations - Supplementary Locator Maps

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This supplement includes locator images for targets discussed in the paper. Figures L01-L10 include locations of Pancam images, named targets, locations of some specific rock types and formal and informal geographic names.

Figures L12-L21 include locations for APXS targets from Table 1 identified by Sol and rock/soil type. Rock types are simplified from the text. The Shoemaker formation is broken into upper and lower. The latter includes lower-1 and lower-2 from Marathon Valley, and lower from Perseverance Valley. Shoemaker upper includes those from Cape Tribulation and the three members identified on Cape York. The Matijevic formation includes the matrix, spherule-rich and veneer targets. Basaltic rocks in Perseverance Valley includes those from inside and outside the fracture zone. Grasberg formation targets are shown for completeness. Composite soils are shown, but not the dark sand and bright soil.

Base map images taken from HiRISE-based mosaic of Endeavour crater (Parker et al., 2012). Rover track shown in white.

Reference:

Parker, T. J., Golombek, M. P., Calef, F. J., & Hare, T. M. (2012). High-resolution basemaps for localization, mission planning, and geologic mapping at Meridiani Planum and Gale crater. Paper presented at 43rd Lunar and Planetary Science Conference, Abstract #2535, Houston, TX, USA.

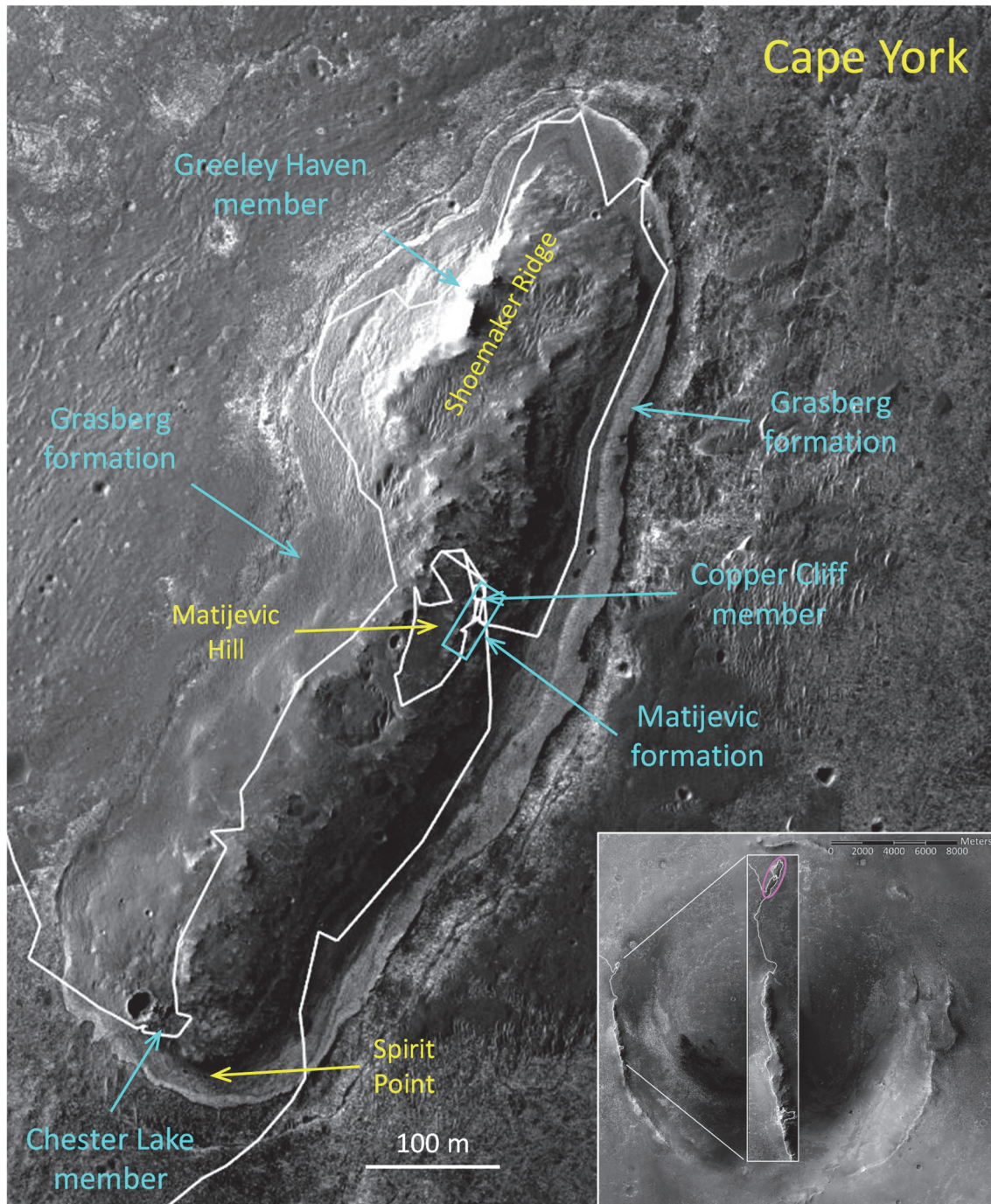


Figure L01. Locator image for Cape York features highlighting the appearance of the Grasberg formation as a surrounding bench, the general location of the Matijevic formation (box), and the locations where the Copper Cliff, Chester Lake and Greeley Haven members of the Shoemaker formation were defined. Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset).

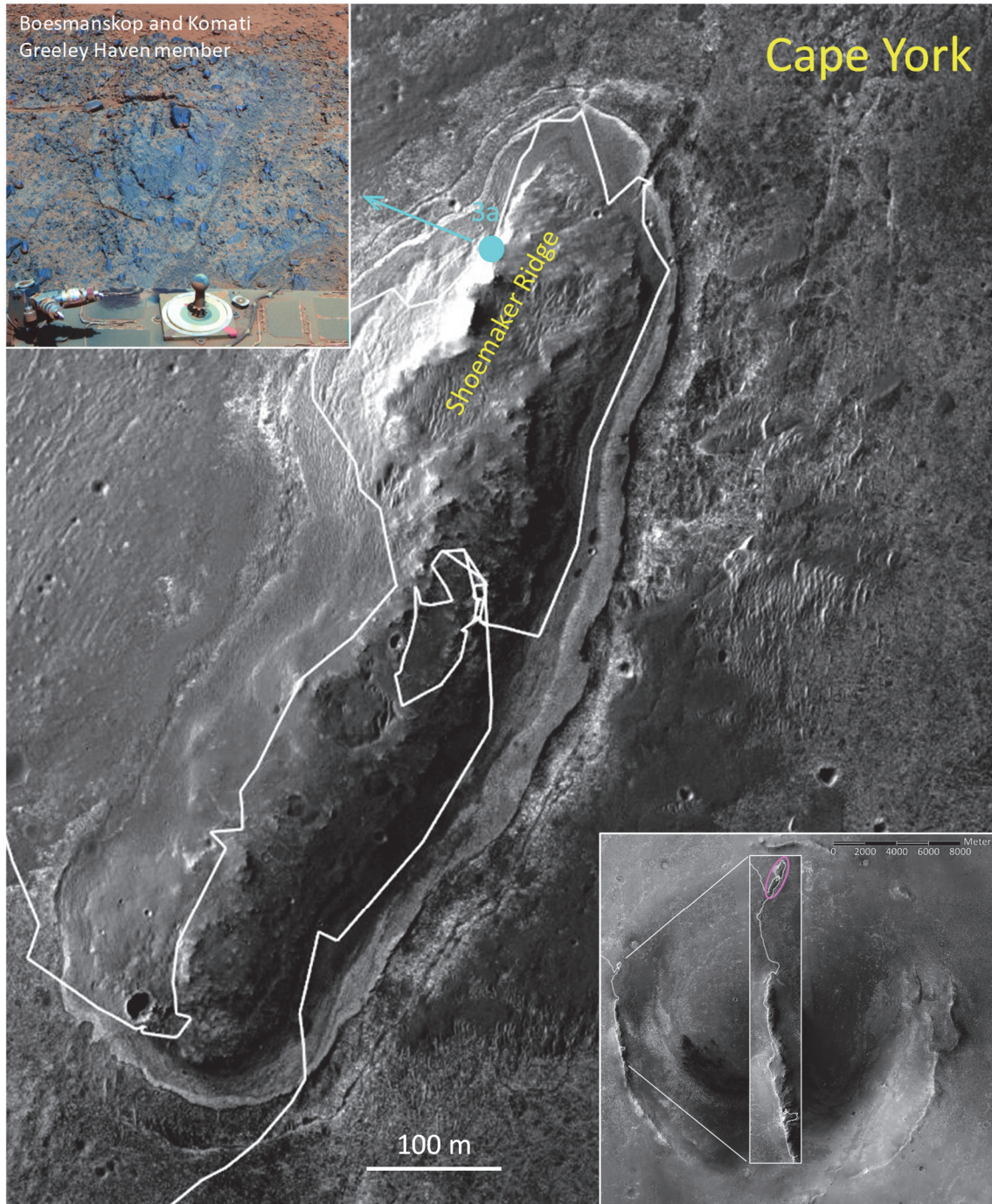


Figure L02. Locator image for Cape York showing the location of Fig. 3a (inset, upper left) from the paper. Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset, lower right).

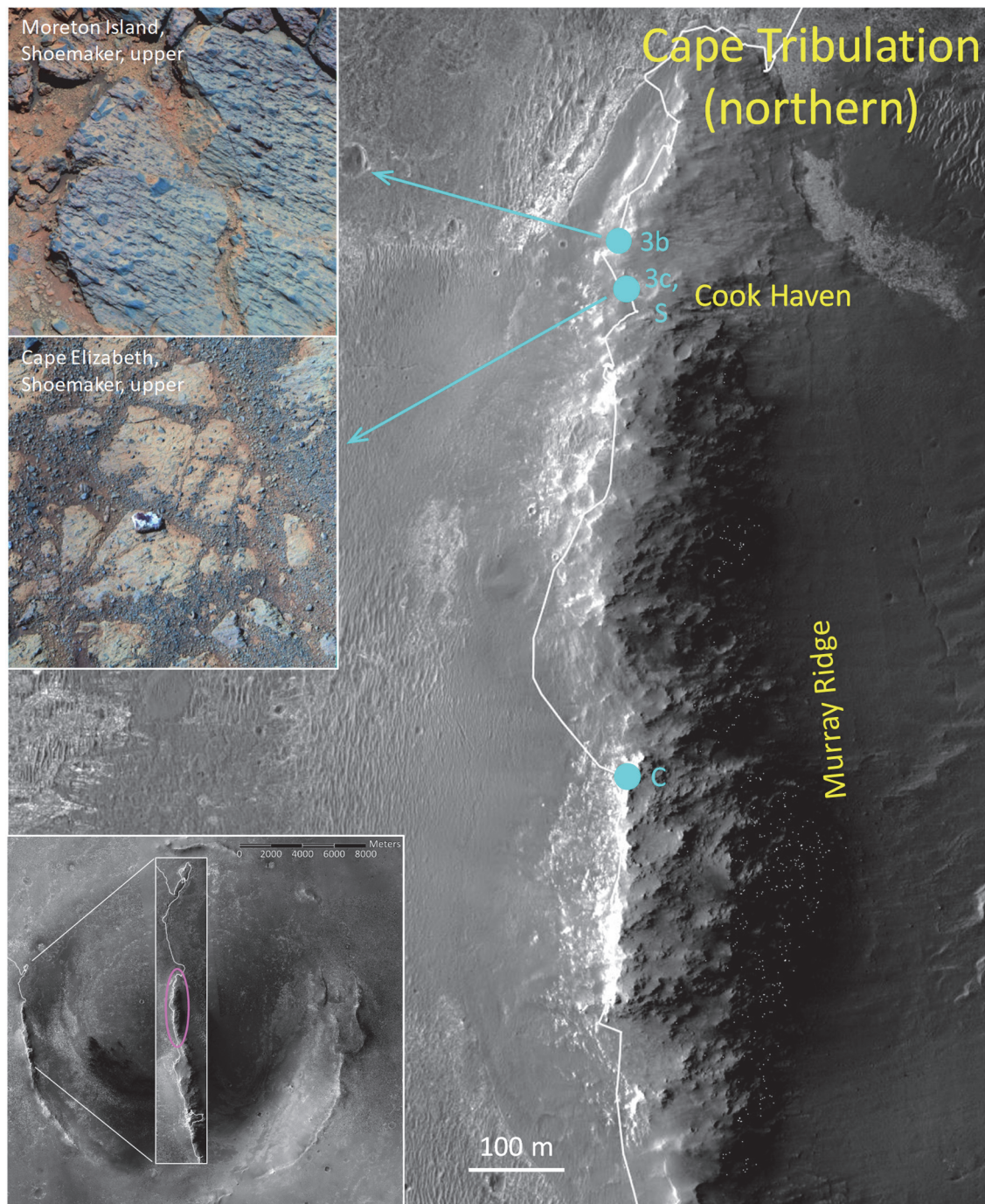


Figure L03. Locator image for the Murray Ridge region on Cape Tribulation showing the locations of Figs. 3b (inset, upper left) and 3c (inset, center left) from the paper. Also shown are locations of upper Shoemaker targets Sledge Island (S) at Cook Haven and Sarcobatus Clast 2 (C). Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset, lower left).

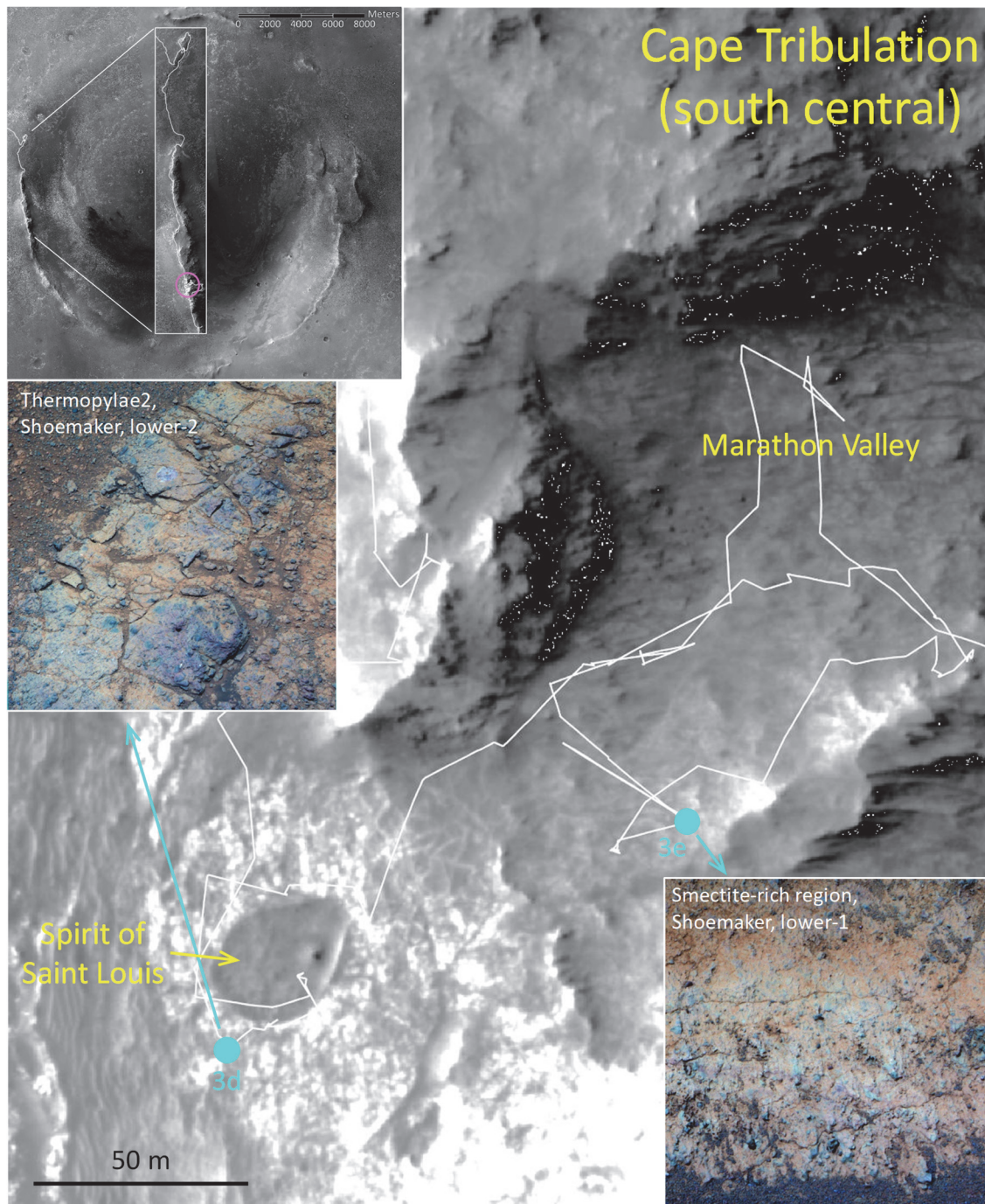


Figure L04. Locator image for the Marathon Valley region on Cape Tribulation showing the locations of Figs. 3d (inset, center left) and 3e (inset, lower right) from the paper. Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset, upper left).

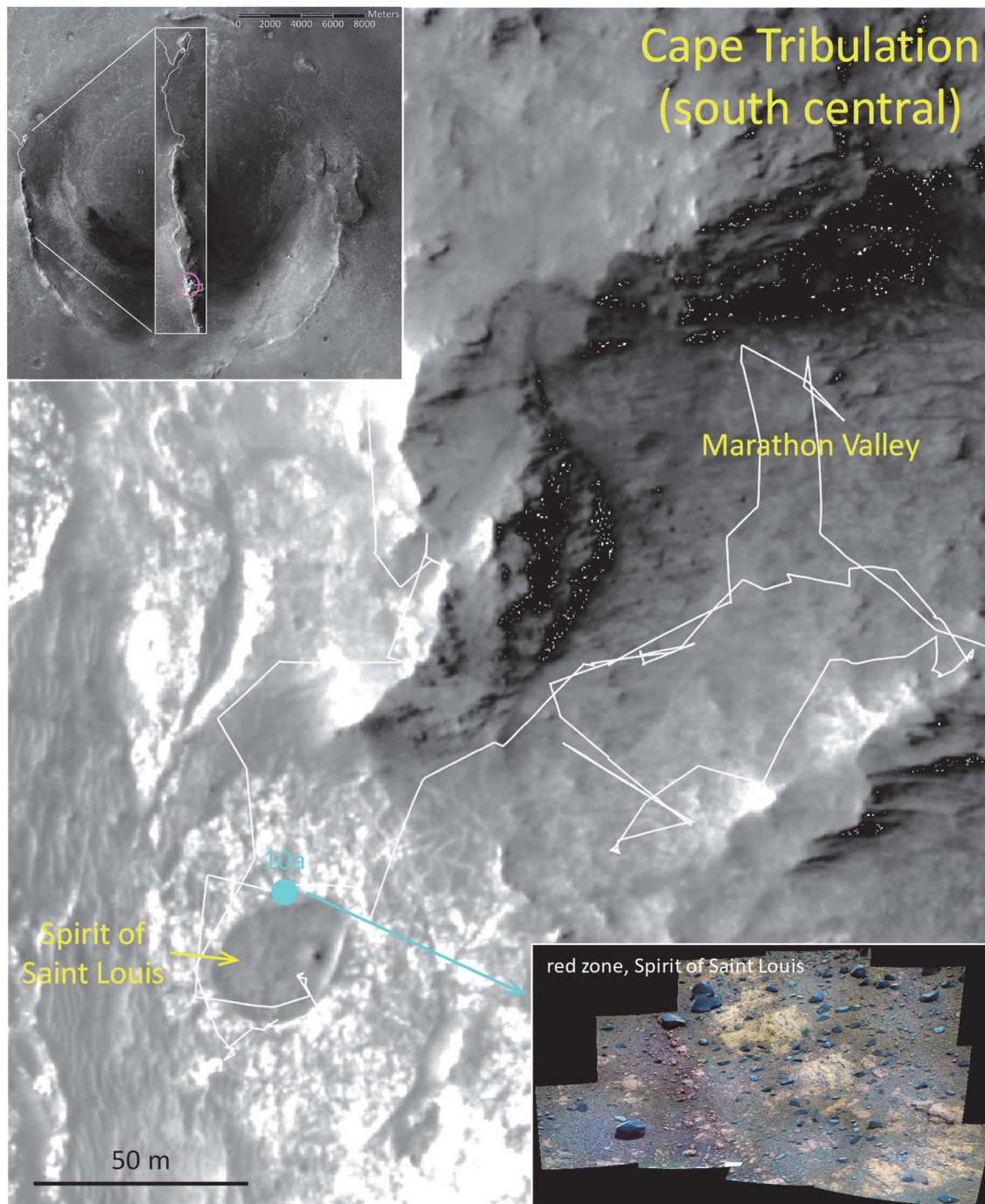


Figure L05. Locator image for the Marathon Valley region on Cape Tribulation showing the locations of Fig. 10A (inset, lower left) from the paper. Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset, upper left).

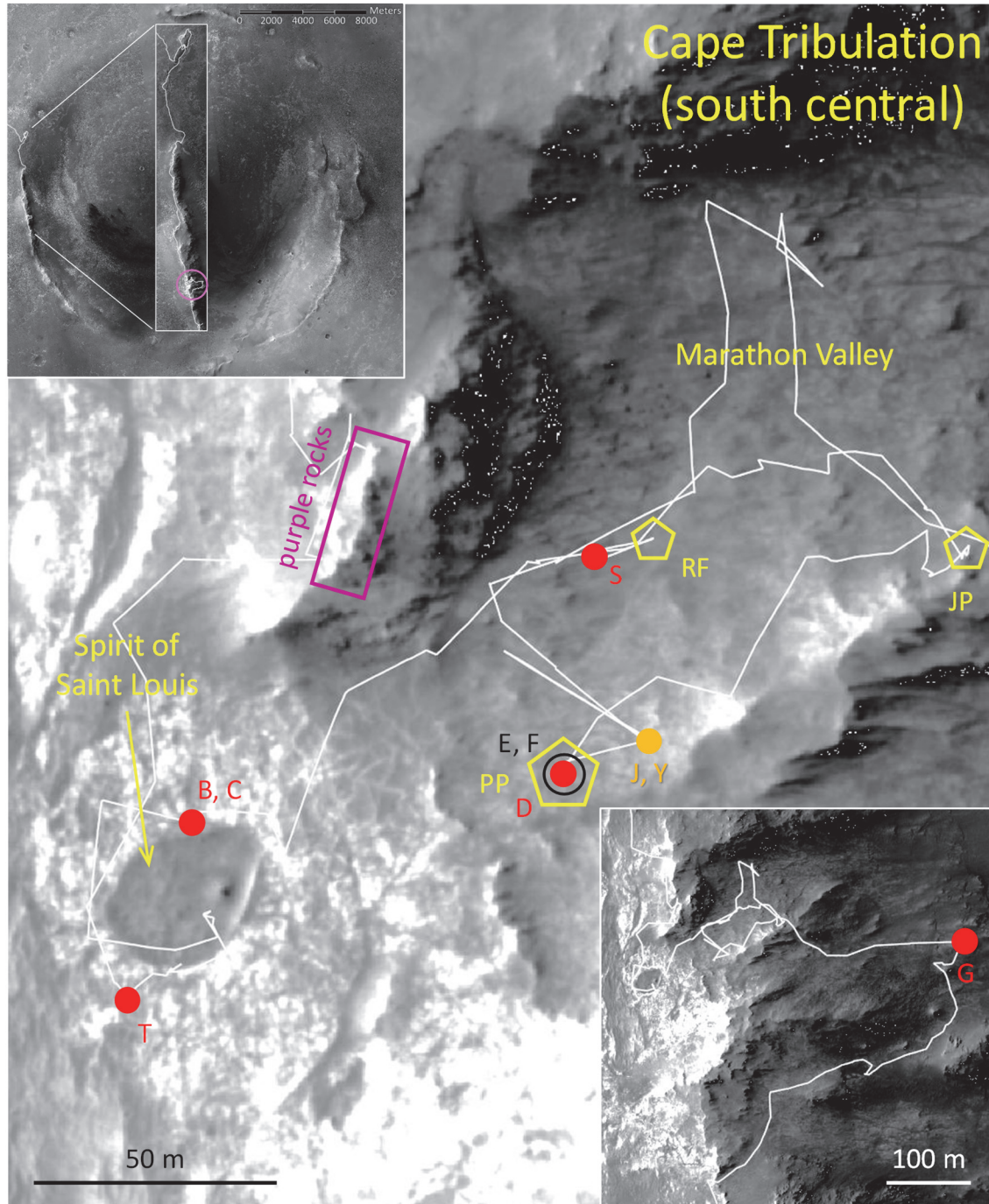


Figure L06. Locator image for the Marathon Valley region on Cape Tribulation showing the locations of red-zone group targets (red spots), the brushed and abraded target sets (yellow pentagons), sulfate-altered soil (black circle), purple rocks (box) and targets from the smectite region (gold spot). Abbreviations: B – Private William Bratton; C – Private Pierre Cruzatte; D – George Drouillard; G – Gasconade; S – Private Silas Goodrich; T – Thermopylae2; JP – Private John Potts; PP – Pierre Pinaut; RF – Private Robert Frazer; E – E Cann; F – Private Joseph Field; J – Jean Baptiste Deschamps; Y – York. Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset, upper left).

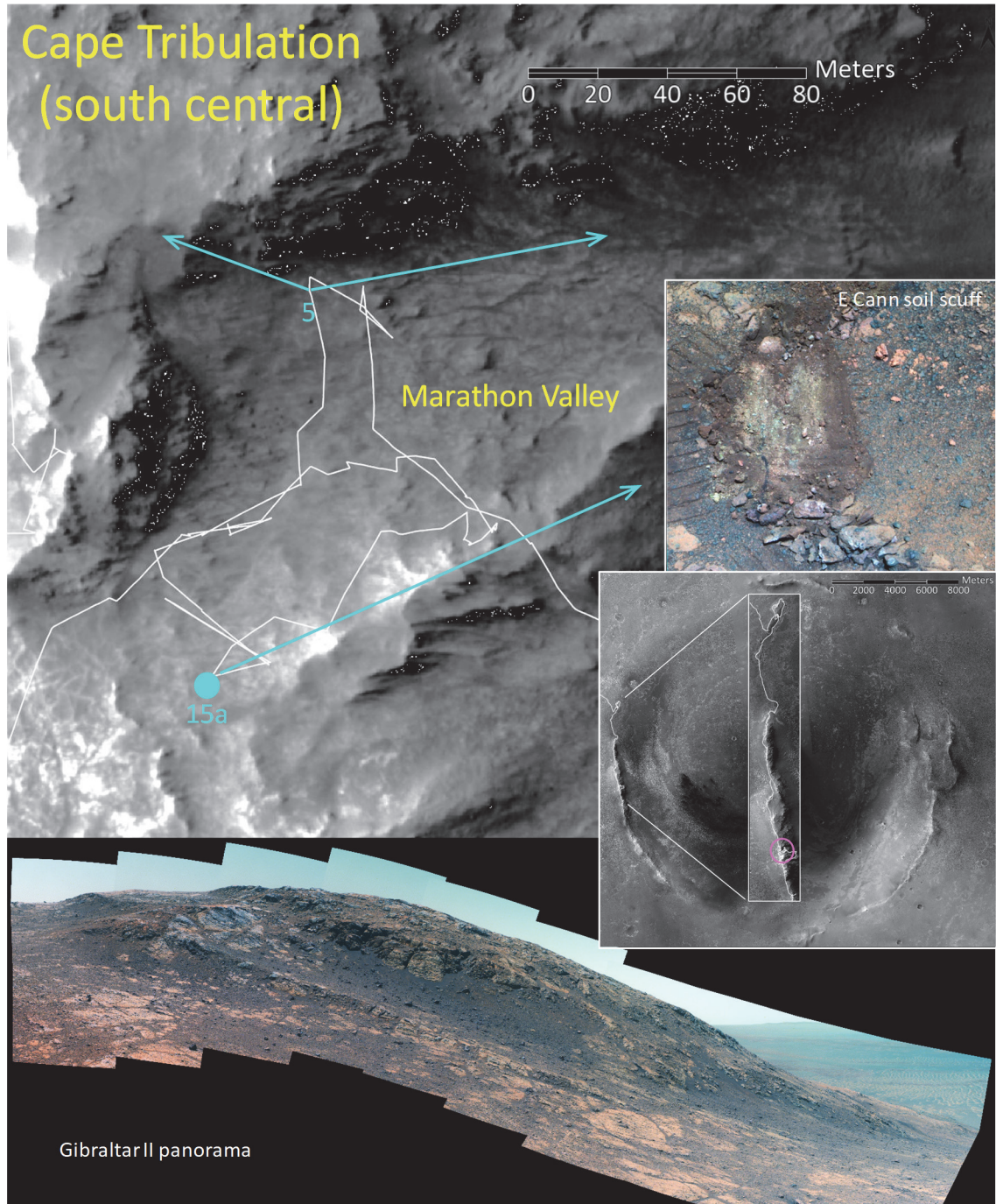


Figure L07. Locator image for the Marathon Valley region on Cape Tribulation showing the approximate view of the Gibraltar II panorama shown in Fig. 5 (below), and 15a (inset, right, upper) from the paper. Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset, right, lower).

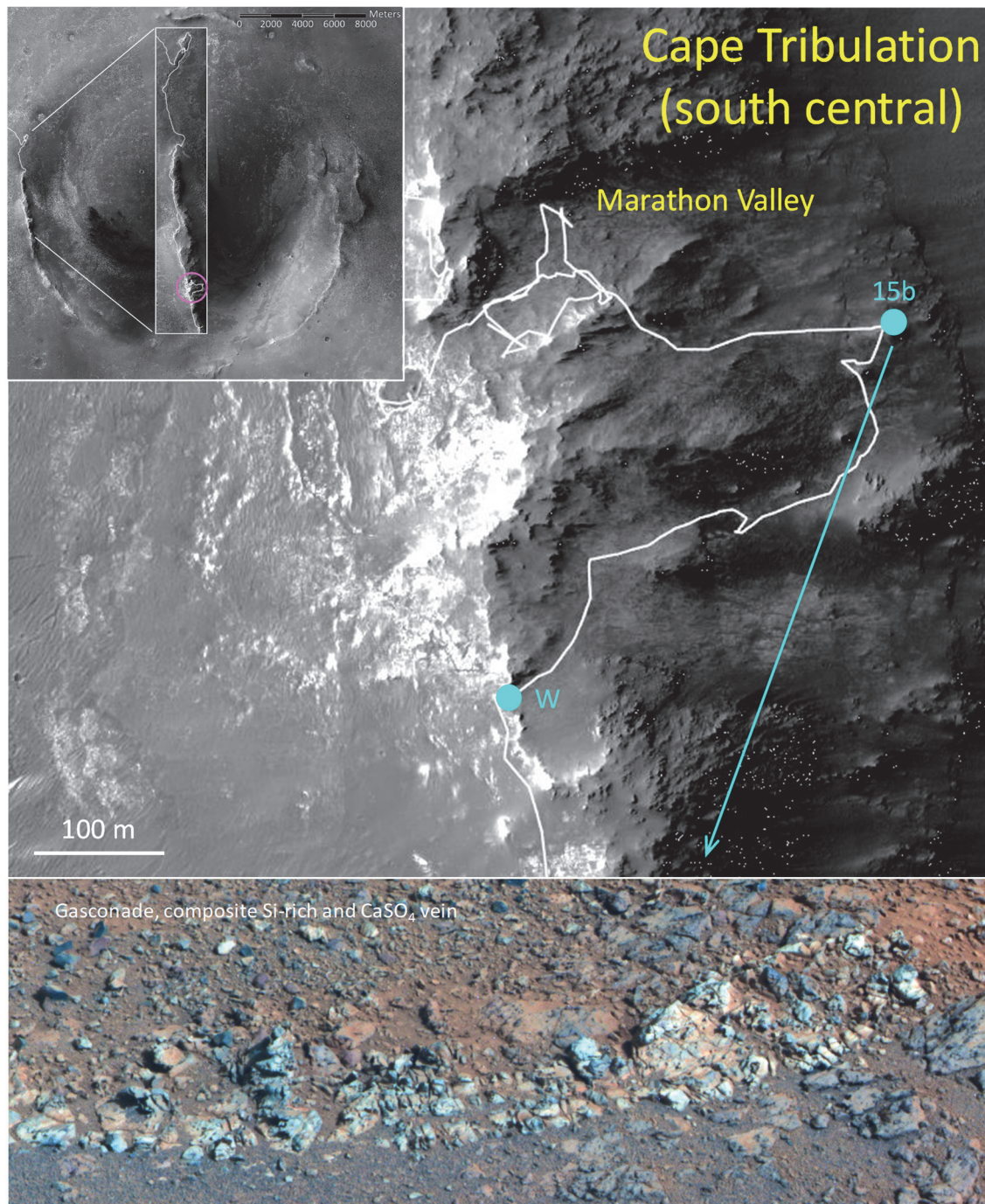


Figure L08. Locator image for the Marathon Valley region on Cape Tribulation showing the location of Fig. 15b (bottom) on Spirit Mound from the paper and the Waverly upper Shoemaker target (cyan spot). Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset, upper left).

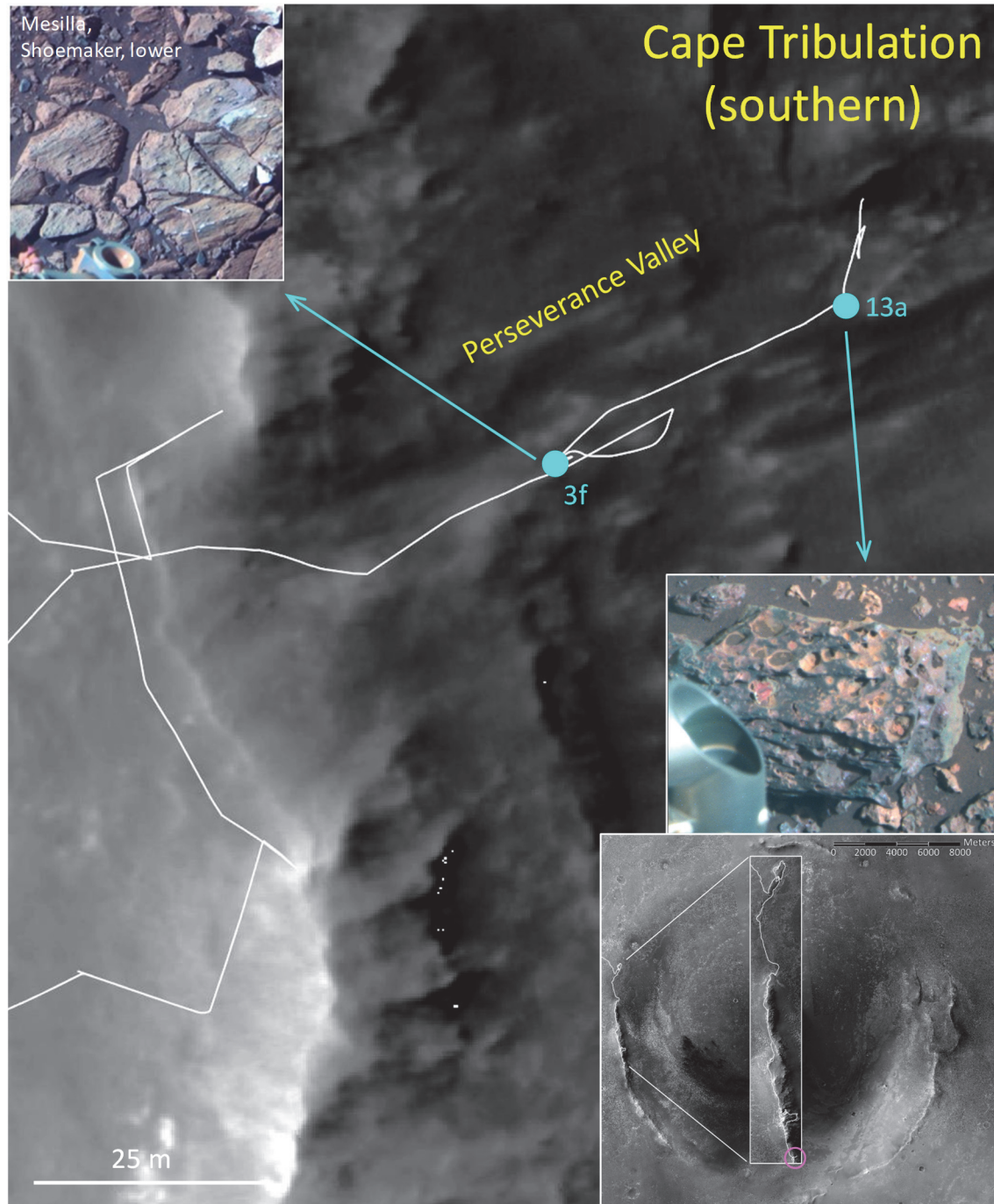


Figure L09. Locator image for the Perseverance Valley region on Cape Tribulation showing the locations of Fig. 3f (inset, upper left) and 13a (inset, center right) from the paper. Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset, lower right).

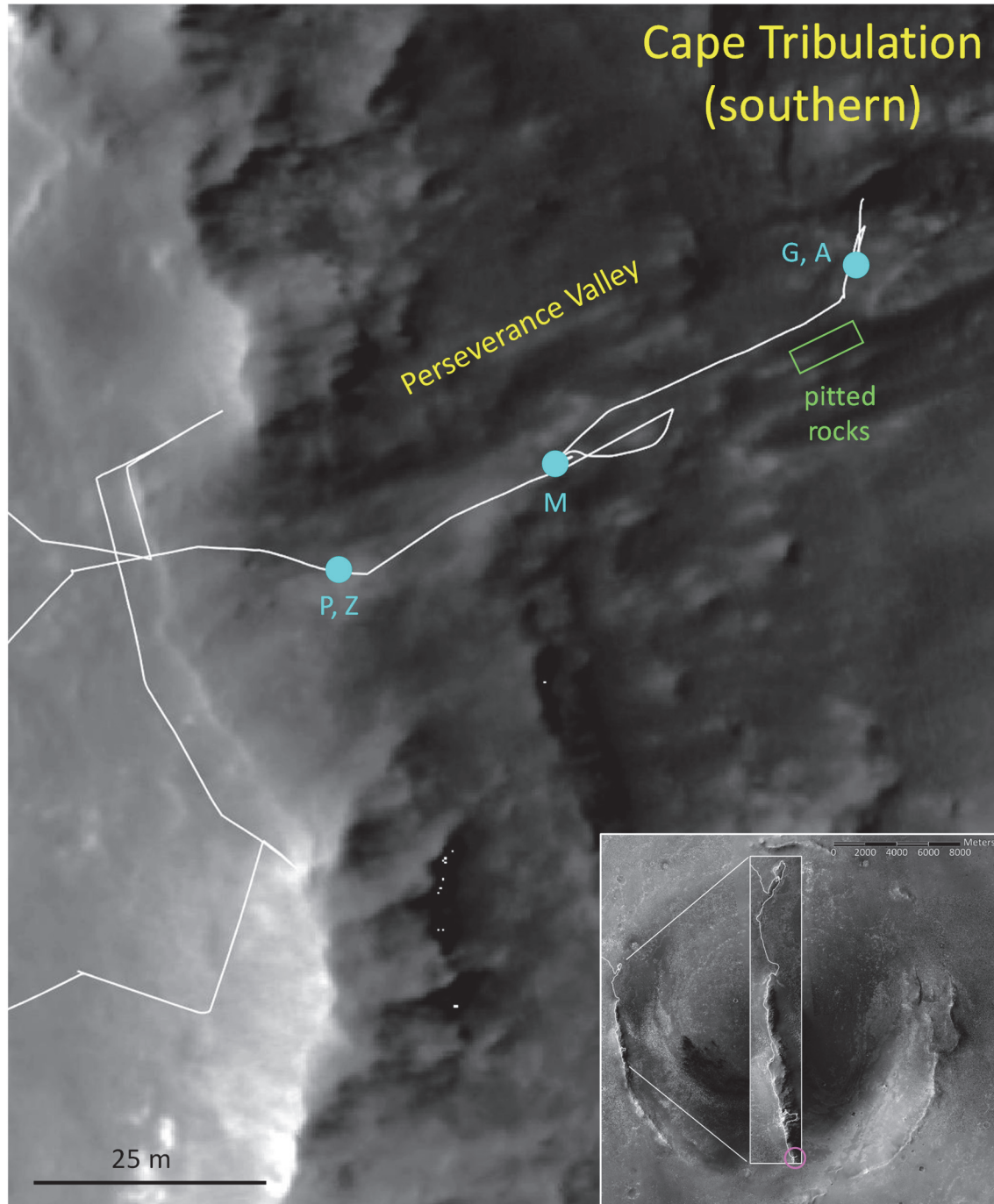


Figure L10. Locator image for the Perseverance Valley region on Cape Tribulation showing the locations of targets mentioned in the paper (cyan spots) and the area of the pitted rocks Allende, Nazas and Tomé (box). Abbreviations: P – Parral; Z – Zacatecas; M – Mesilla; A – Aguas Calientes; G – Guanajuato. Rover track shown in white. Images from HiRISE-based mosaic of Endeavour Crater (inset, lower right).



Legend for Figs. L11-L21

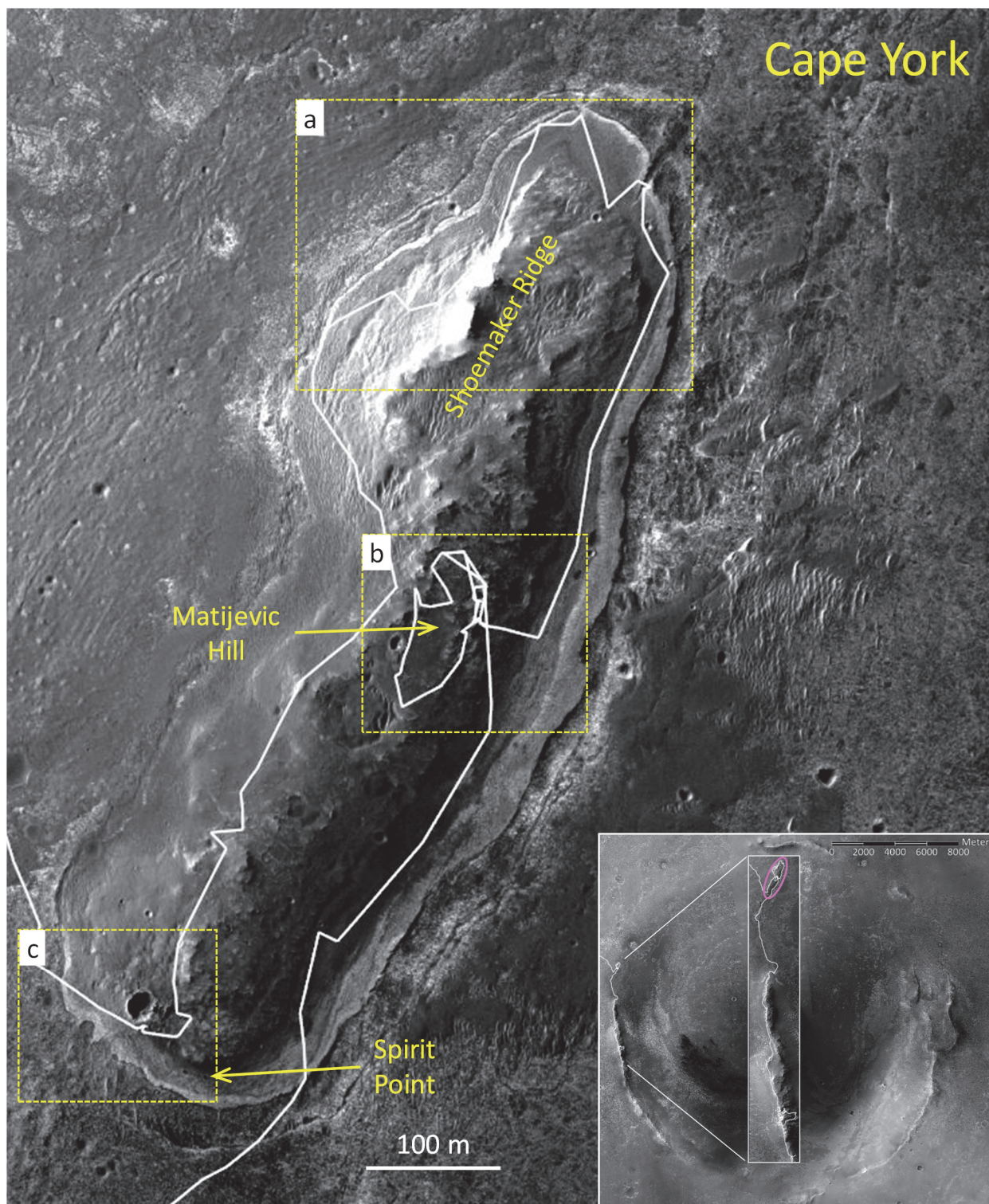


Figure L11. Locator image for the APXS targets identified by Sol and type; see legend on page 12.

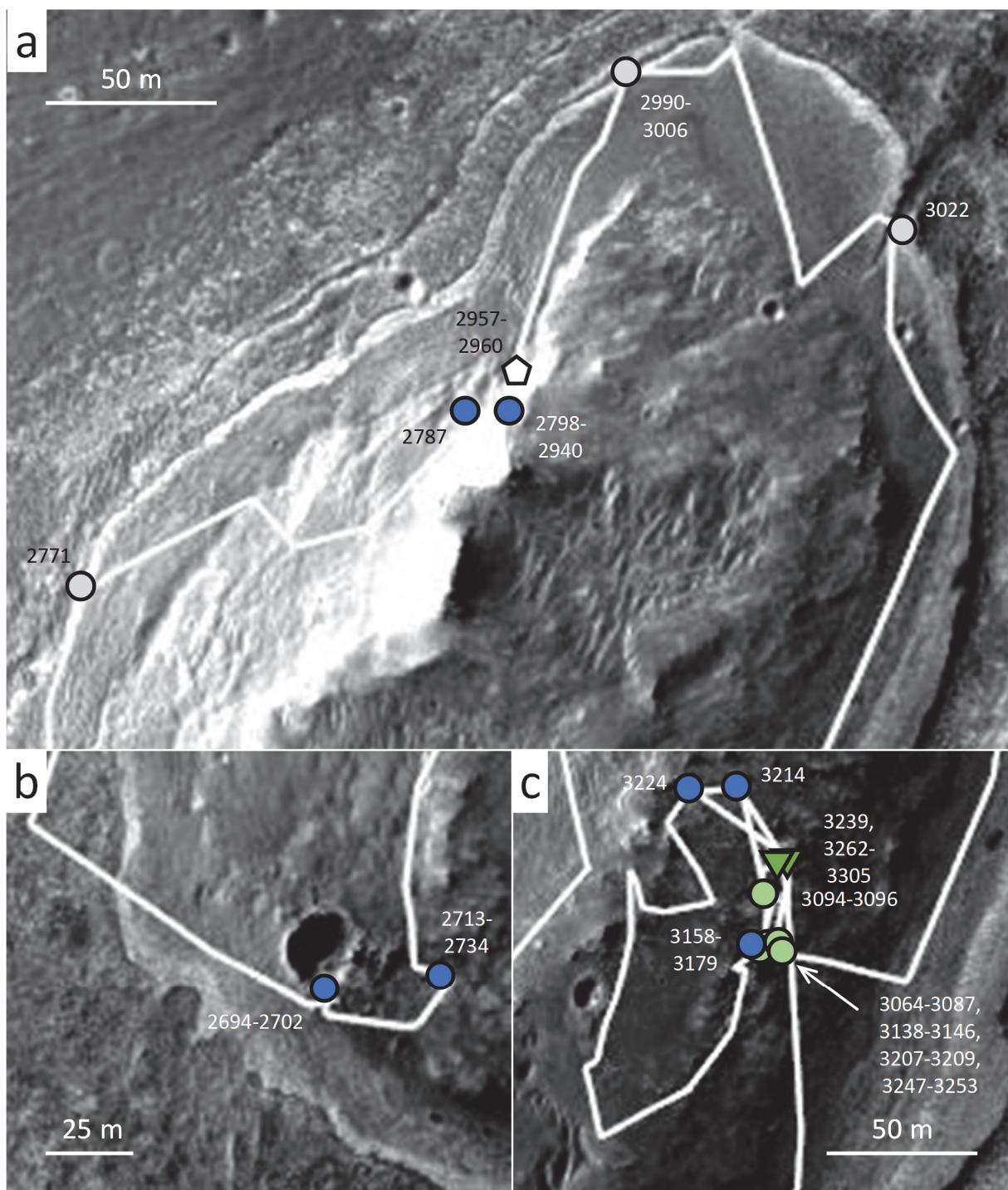


Figure L12. Locator image for the APXS targets identified by Sol and type; see legend on page 12.



Figure L13. Locator image for the APXS targets identified by Sol and type; see legend on page 12.

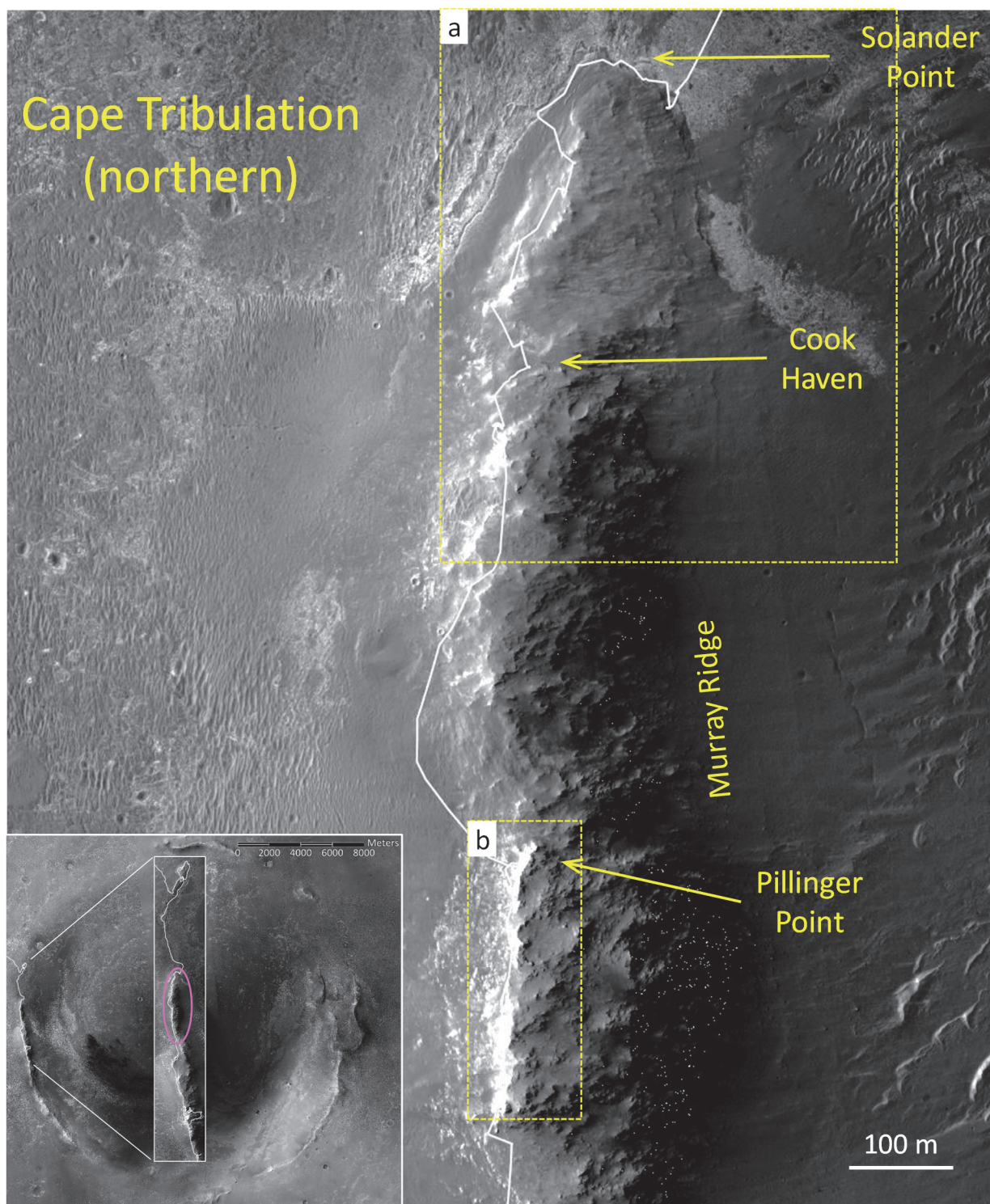


Figure L14. Locator image for the APXS targets identified by Sol and type; see legend on page 12.

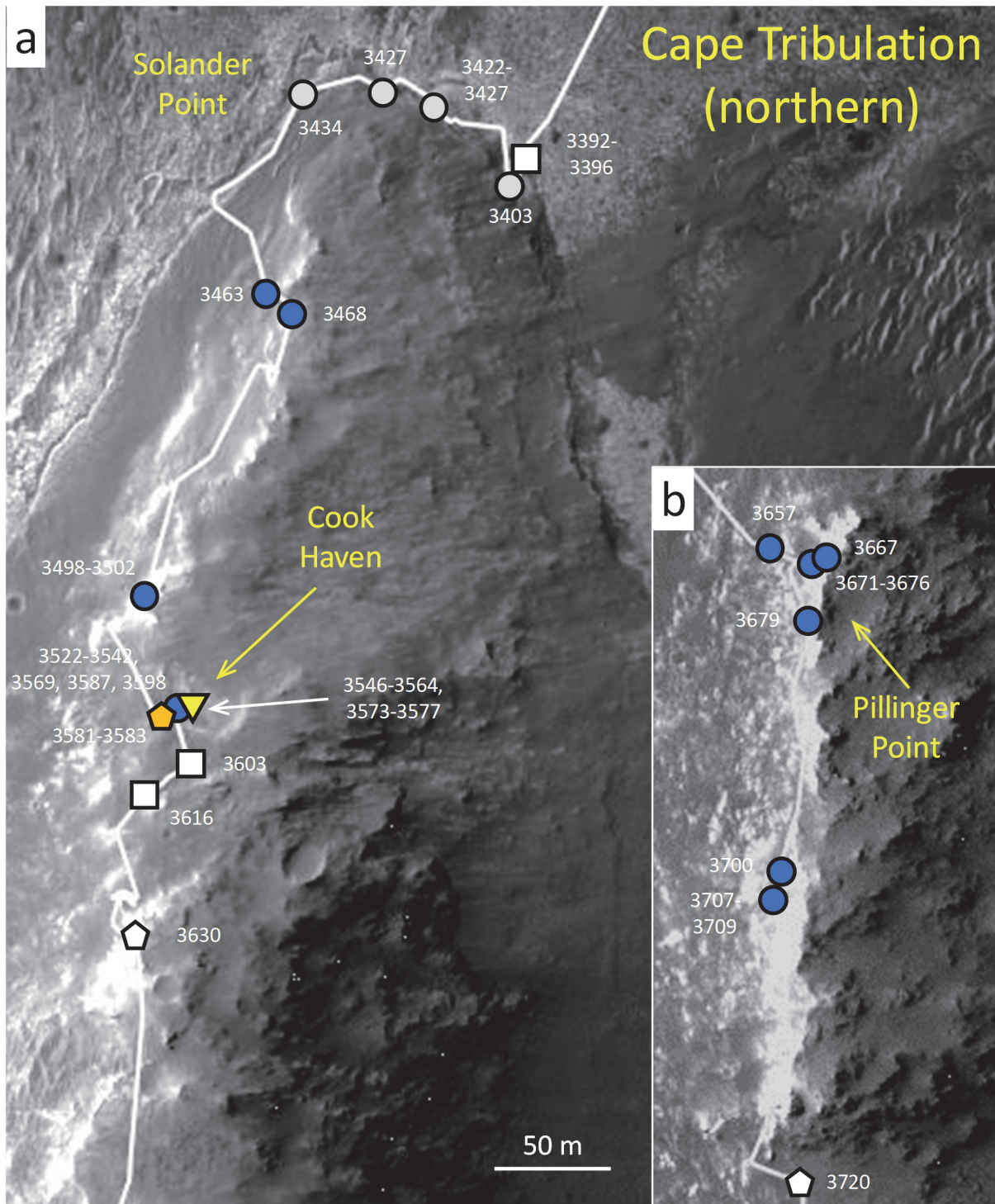


Figure L15. Locator image for the APXS targets identified by Sol and type; see legend on page 12.

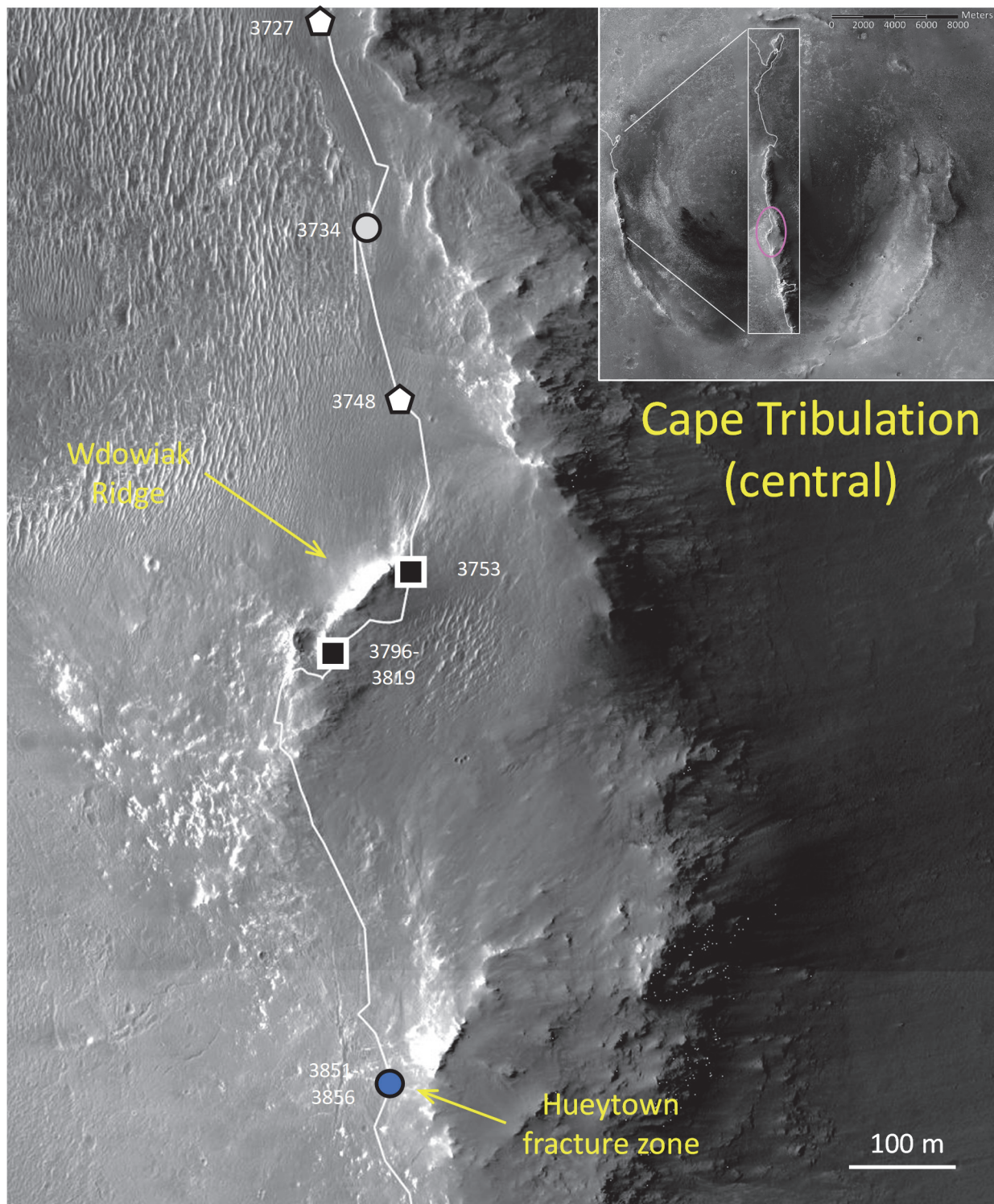


Figure L16. Locator image for the APXS targets identified by Sol and type; see legend on page 12.

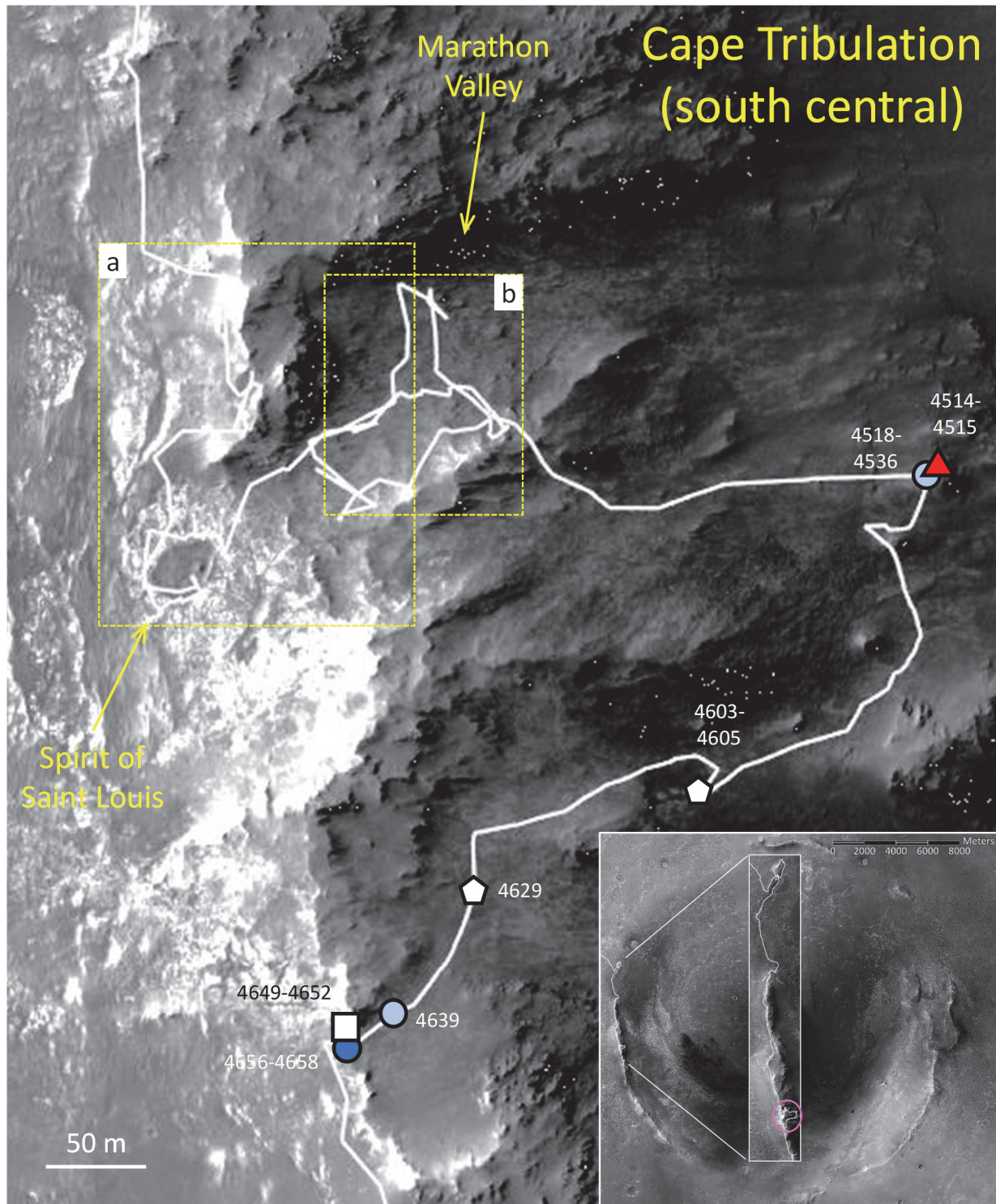


Figure L17. Locator image for the APXS targets identified by Sol and type; see legend on page 12.

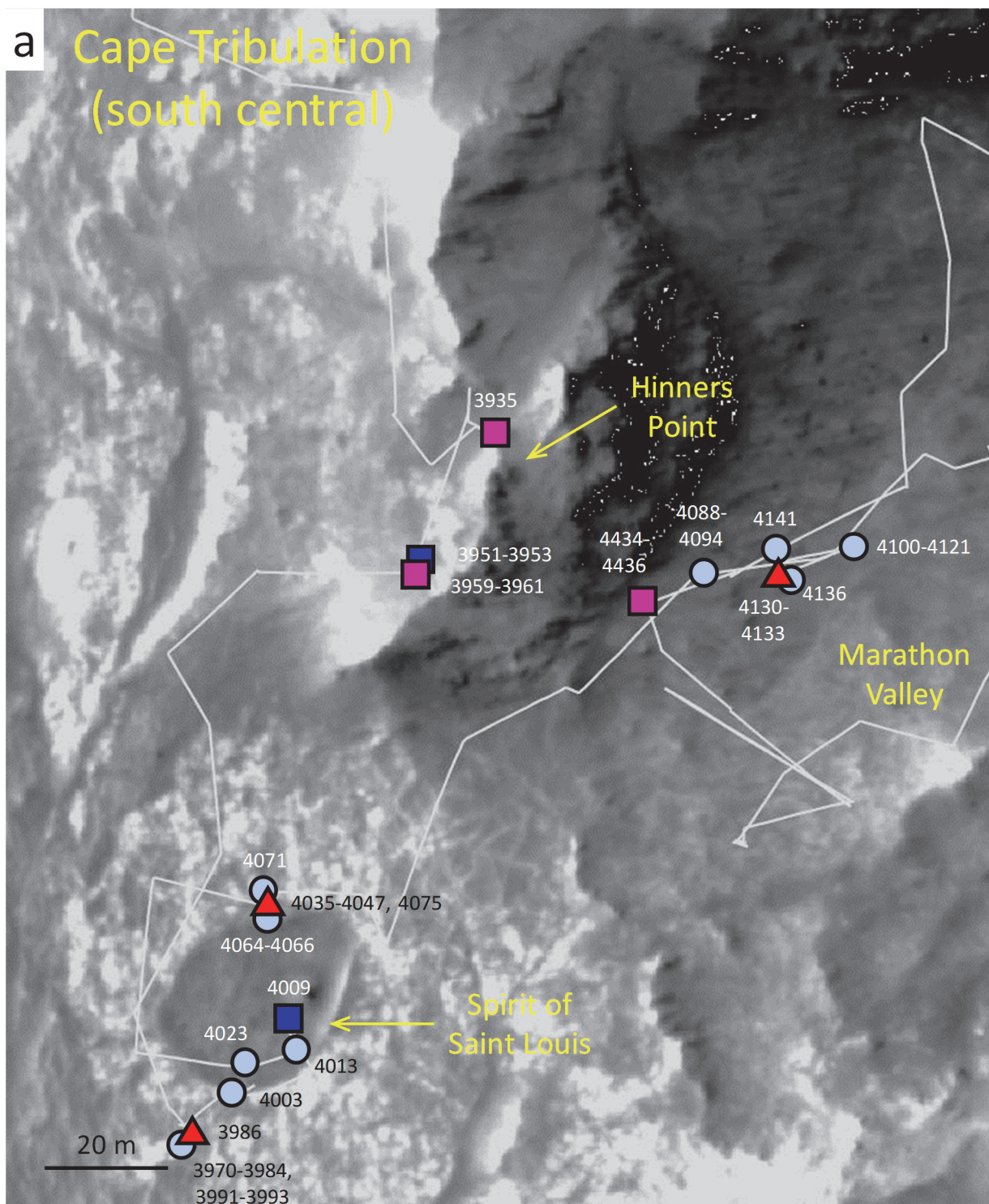


Figure L18. Locator image for the APXS targets identified by Sol and type; see legend on page 12.

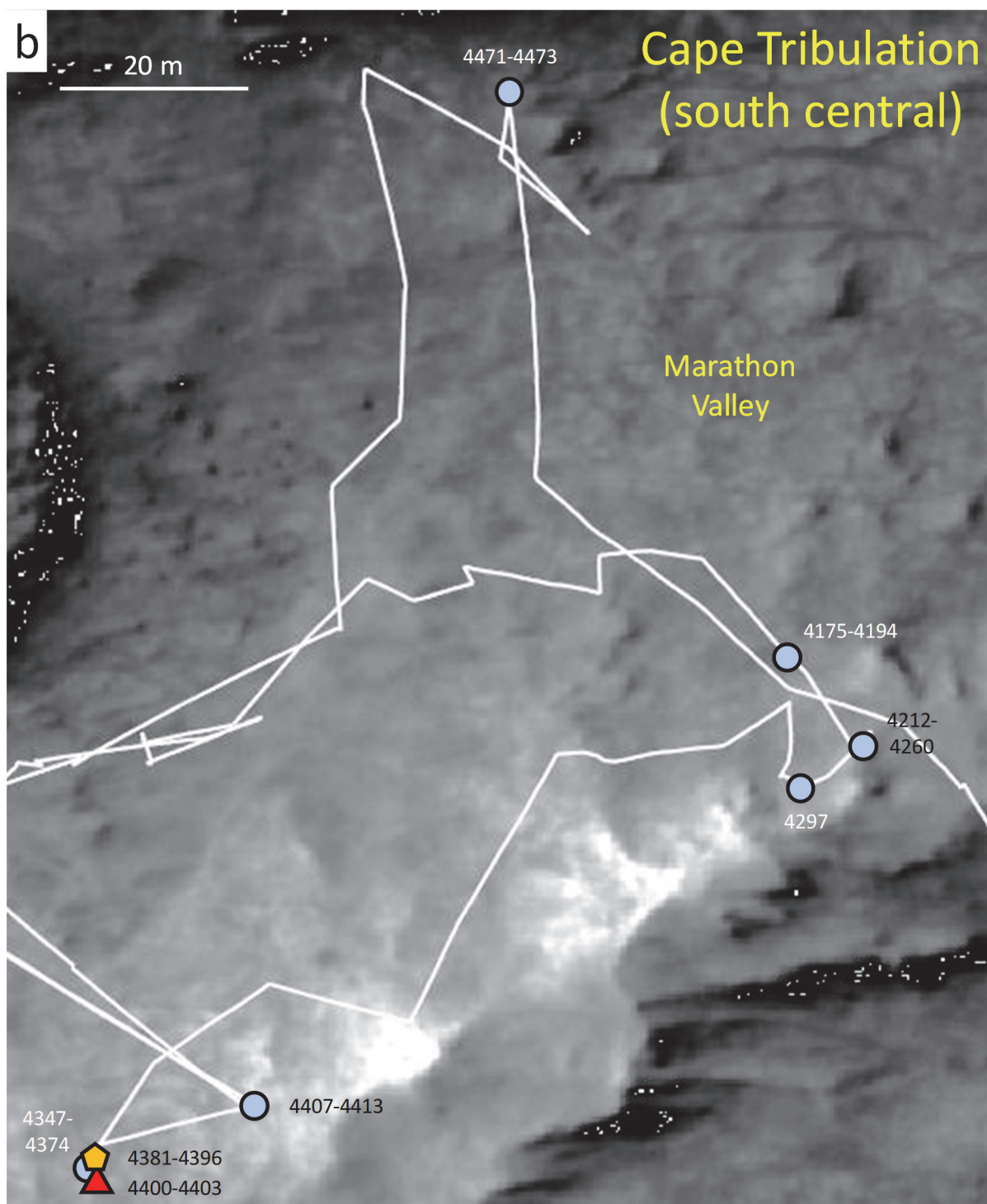


Figure L19. Locator image for the APXS targets identified by Sol and type; see legend on page 12.

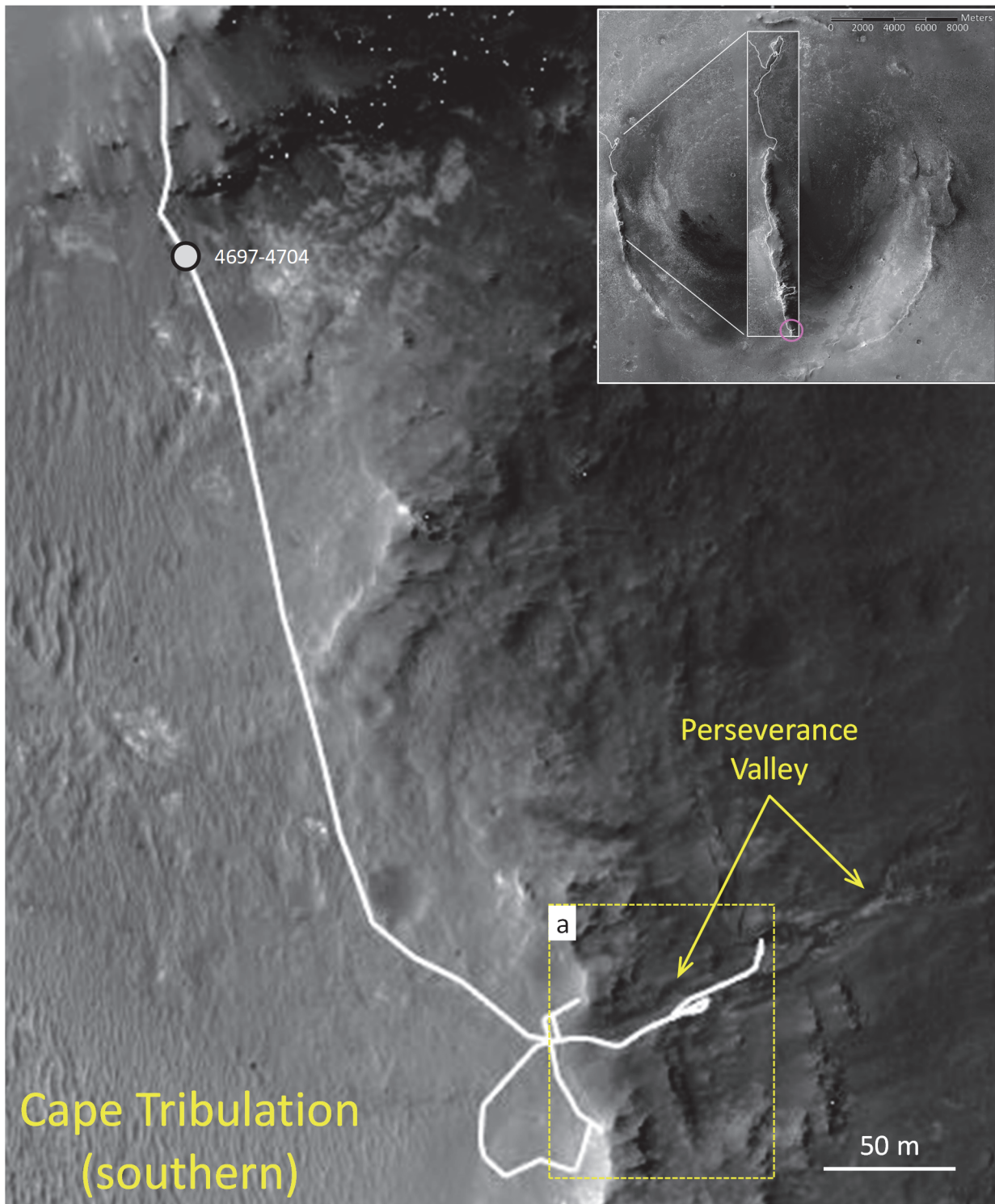


Figure L20. Locator image for the APXS targets identified by Sol and type; see legend on page 12.

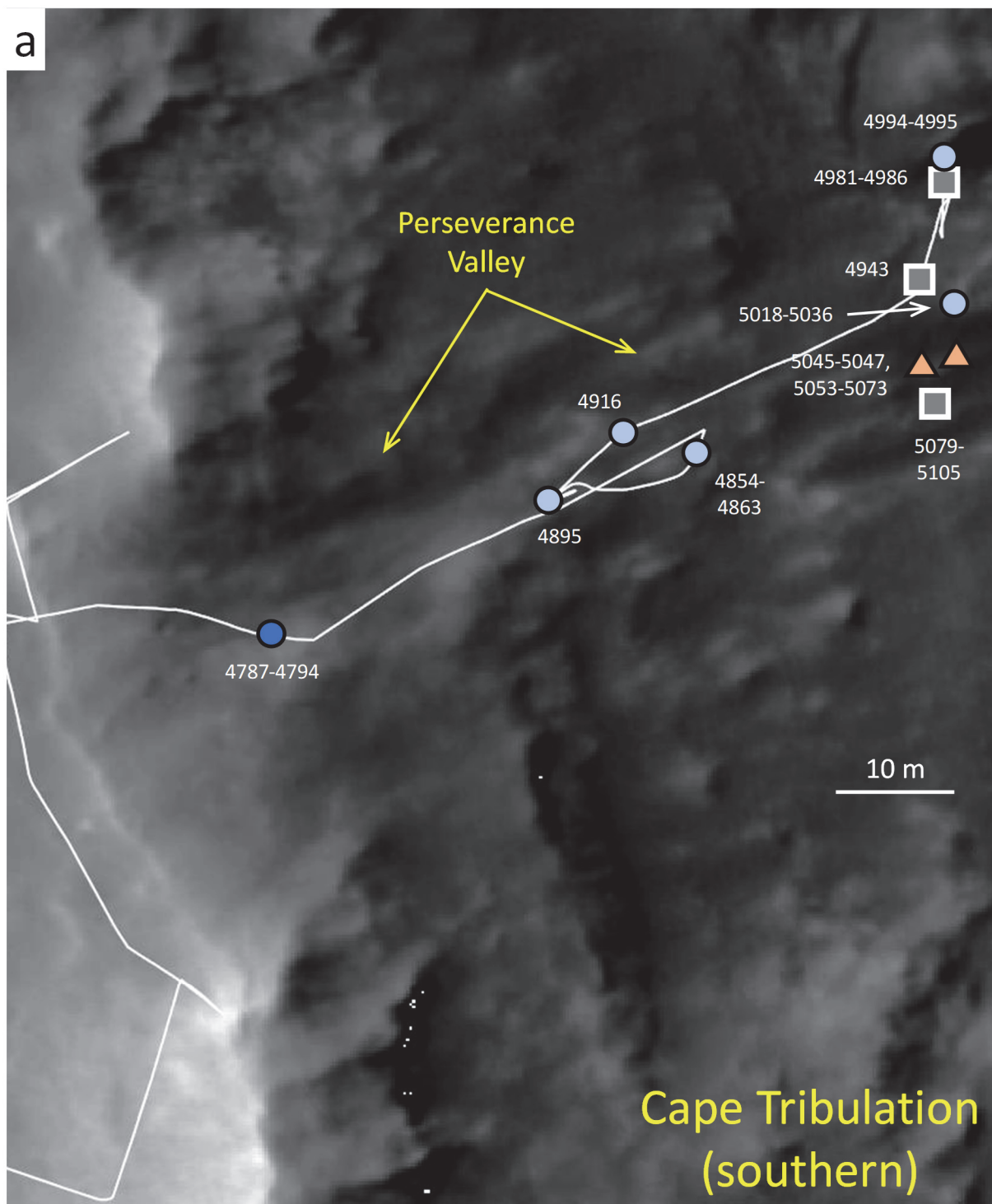


Figure L21. Locator image for the APXS targets identified by Sol and type; see legend on page 12.