

APPENDIX D

THREE DIMENSIONAL VISUALIZATION FIGURES

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INTRODUCTION TO 3-D IMAGES OF BGOU CONTAMINATION

The Adobe Acrobat files of Appendix D present 3-D images of subsurface soil contamination at the BGOU SWMUs. These images portray subsurface contaminant distribution from the following four perspectives:

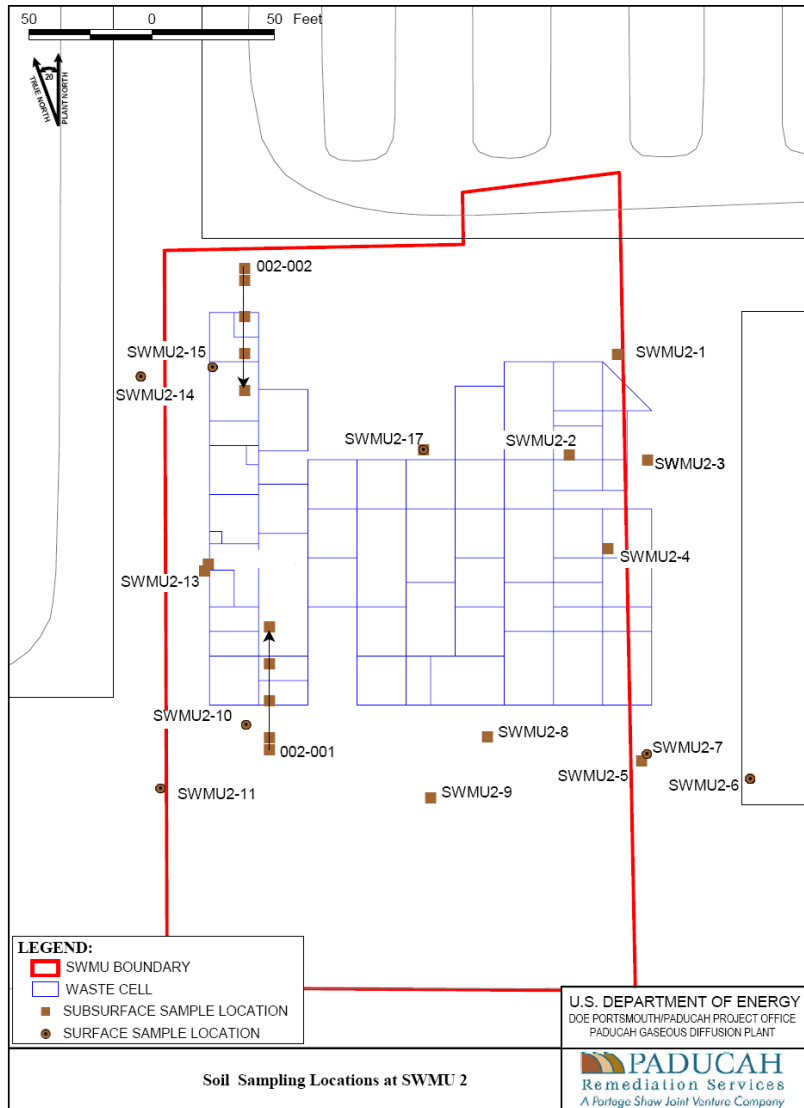
- 1) viewing cross sections of the SWMU from the East
- 2) viewing cross sections of the SWMU from the South
- 3) viewing cross sections of the SWMU from the North, and
- 4) viewing cross sections of the SWMU from the west

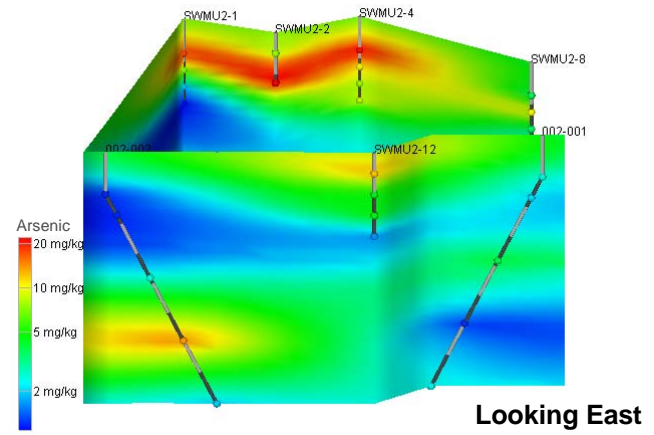
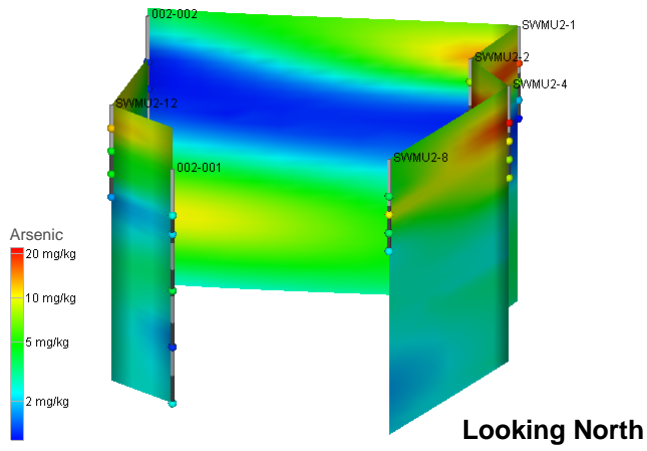
The files allow for easy identification of the relative location of highest and lowest contaminant levels and the density of sample points. Samples are portrayed as spheres. The images illustrate the range of contaminant levels as the color gradient applied to the spheres and cross-section panels.

Title blocks on each figure document the applicable depth interval and vertical exaggeration. Most of the images represent the depth interval 0 to 60 ft below ground surface. In some cases, only shallow depths were sampled and the images are restricted to the depth of the samples. The figures commonly employ a vertical exaggeration of 2X. Other vertical exaggerations are used, where needed, to aid in viewing the extent of contamination.

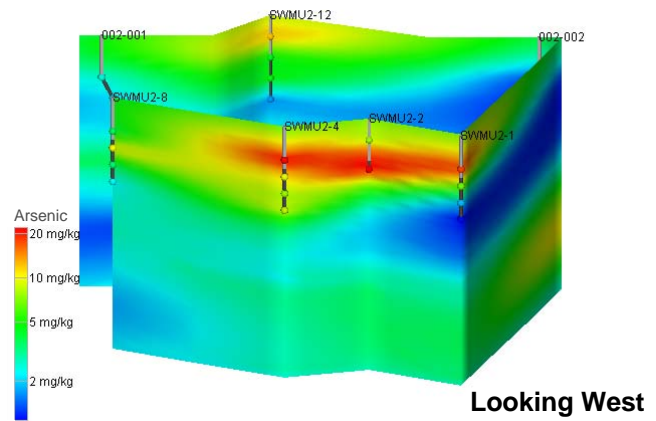
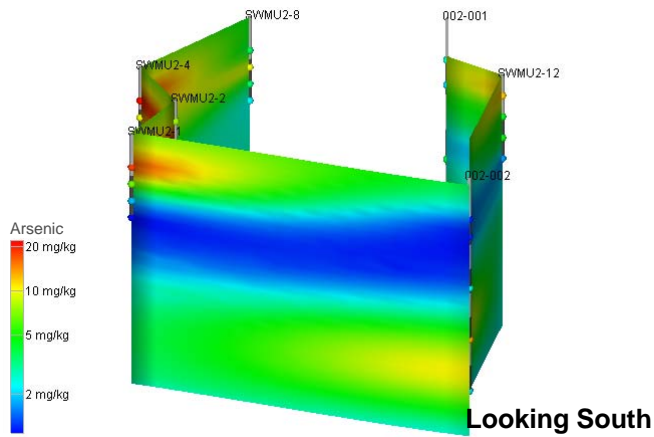
These images address only those contaminants that were detected at multiple depths at a SWMU. Note that the images portray the laboratory reporting limit when a contaminant was not detected to remain conservative while providing the greatest sample density for trending the data. Therefore, the viewer is cautioned that high laboratory reporting levels appear as “false positives” on the 3-D images. The final interpretation of contaminant distribution at a SWMU must include a review of the BGOU database (Appendix C) to identify “false positives.”

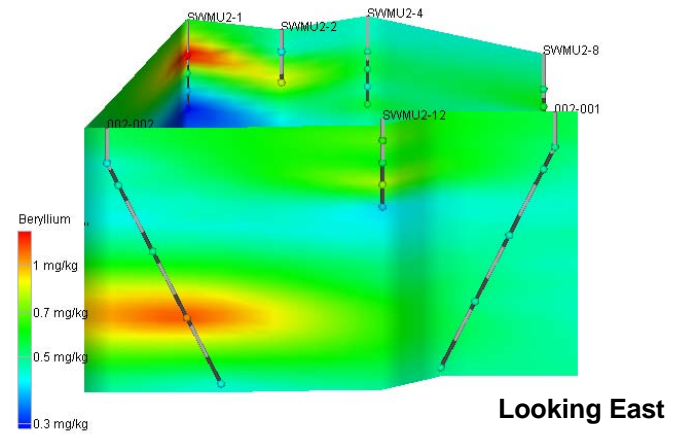
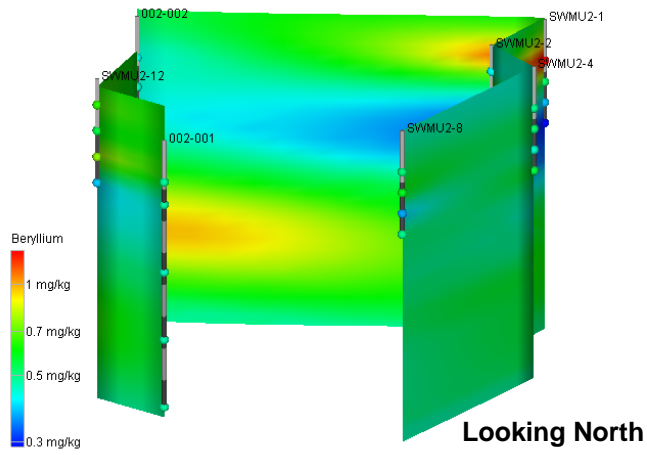
The 3-D images were produced using Mining Visualization System, Version 9.0, by the C Tech Development Corporation. All interpolation and extrapolation of the contaminant levels is based on default values for krigging parameters provided with the software.



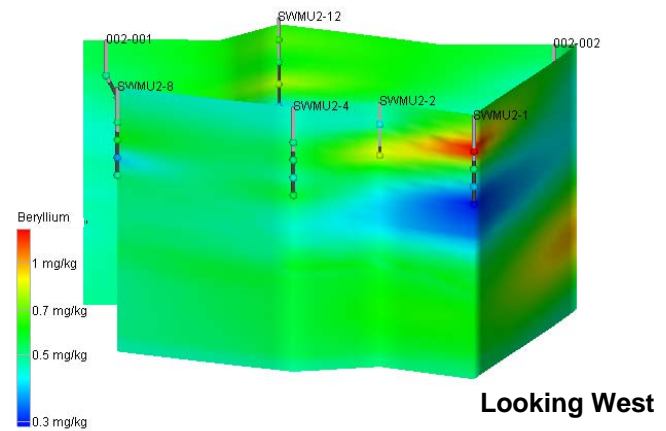
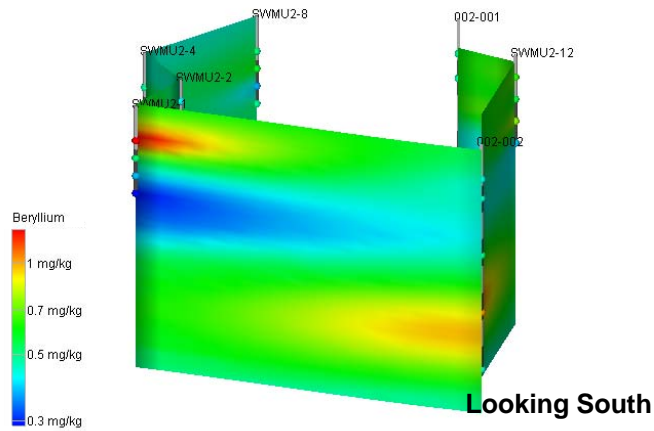


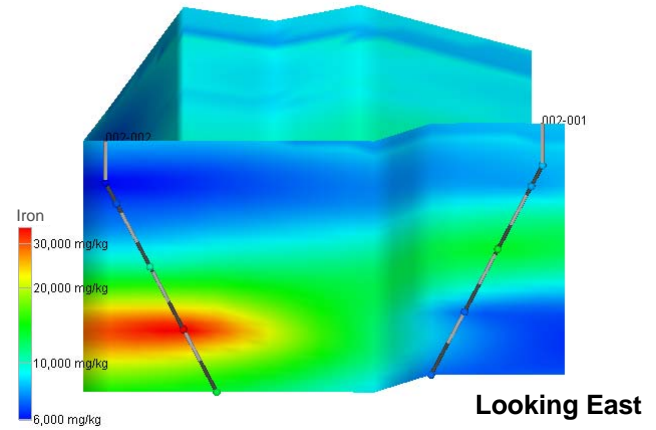
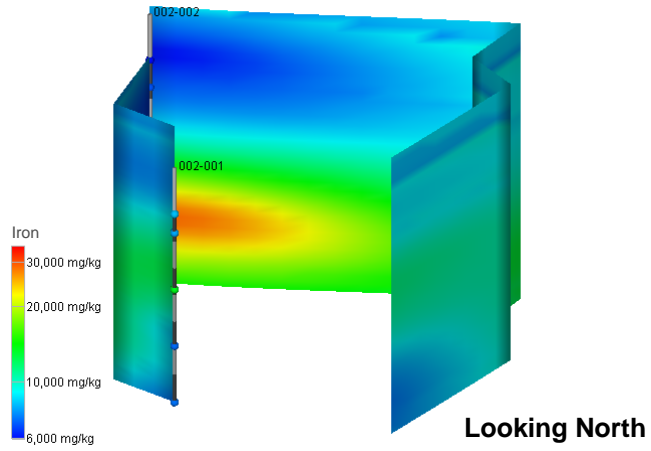
SWMU 2 Arsenic: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



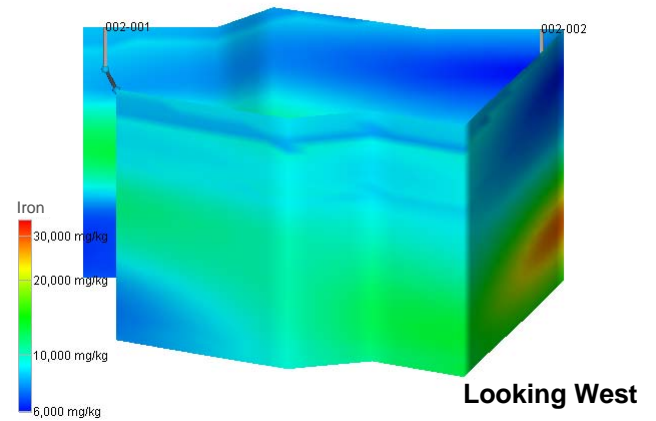
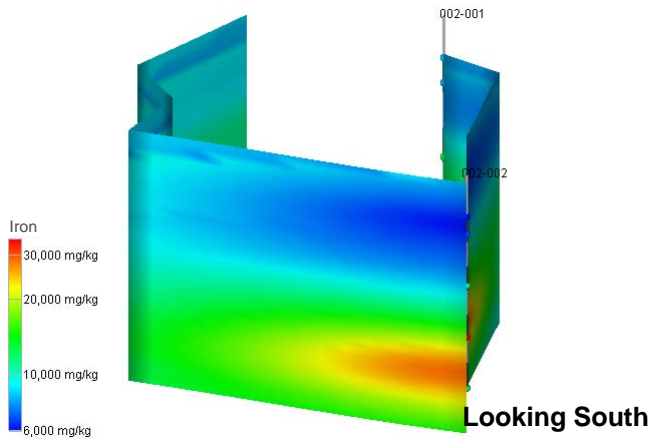


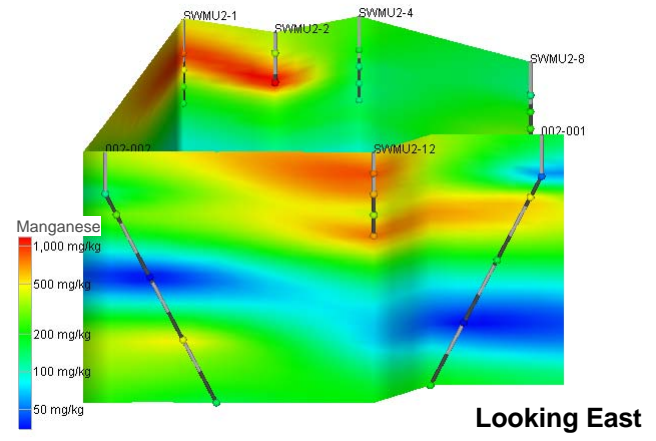
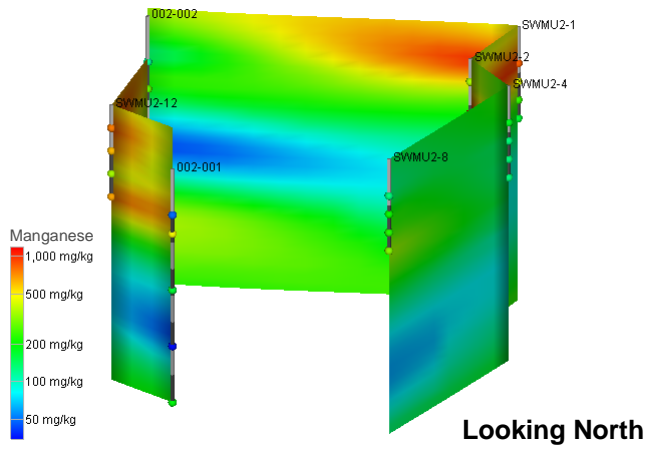
SWMU 2 Beryllium: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



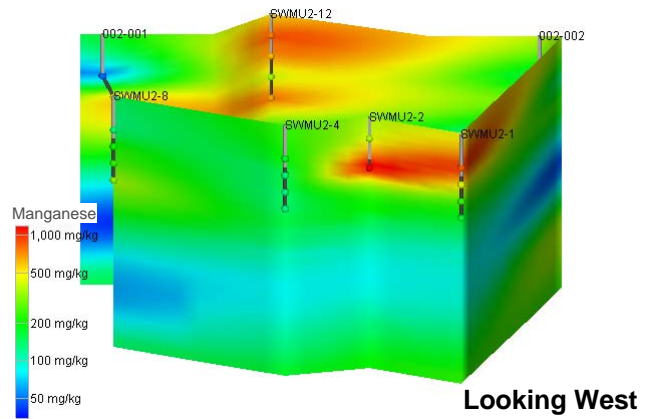
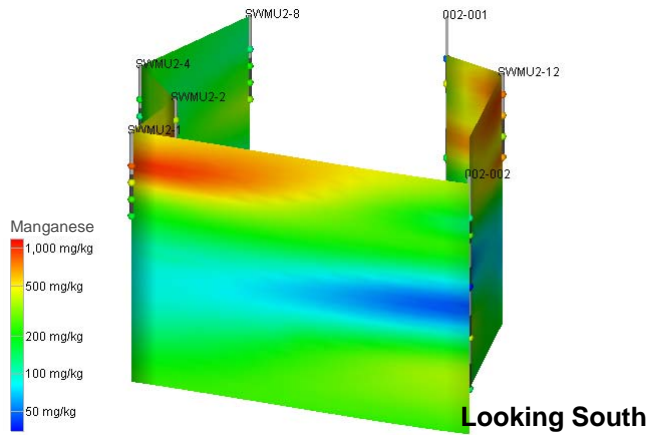


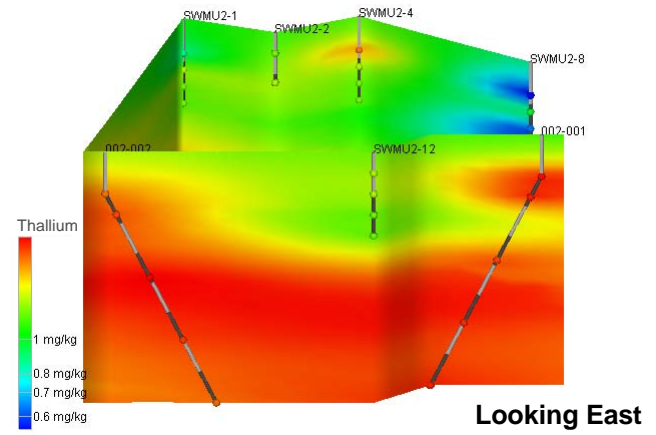
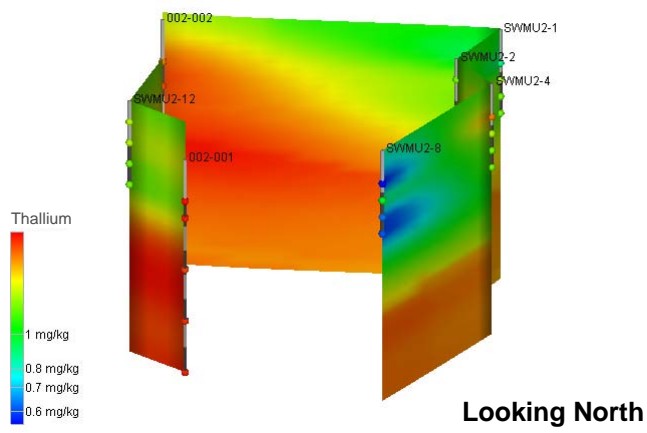
SWMU 2 Iron: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



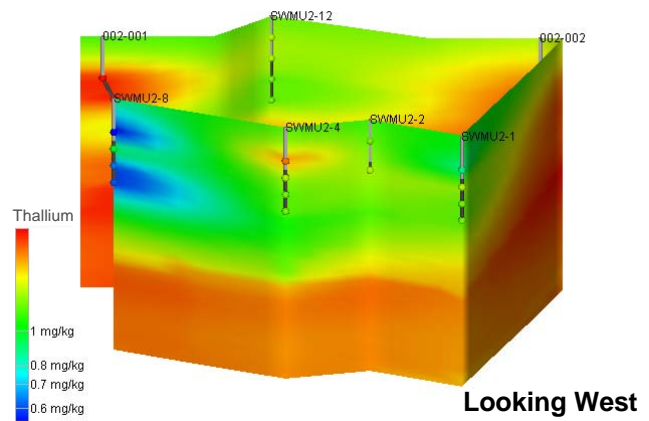
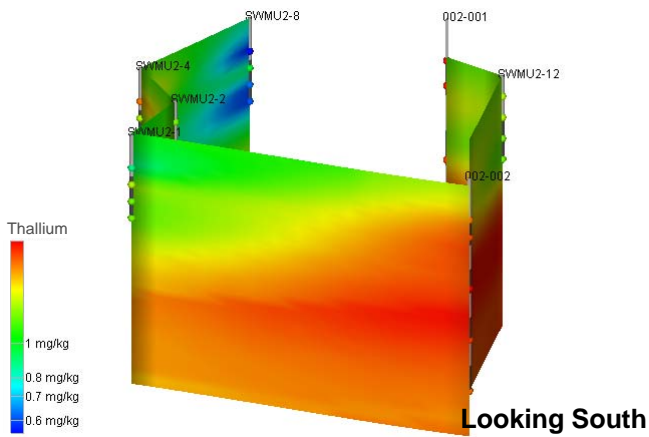


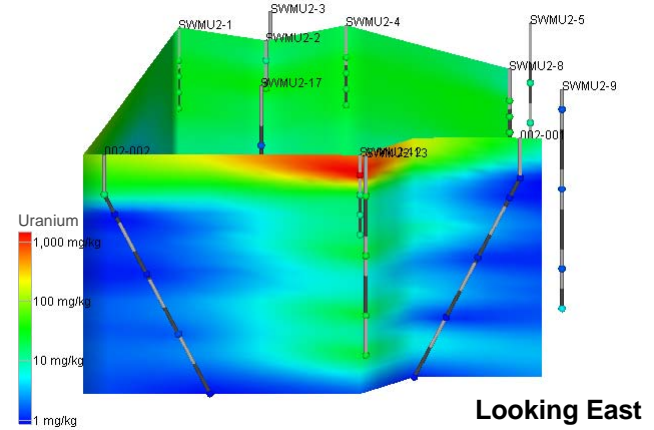
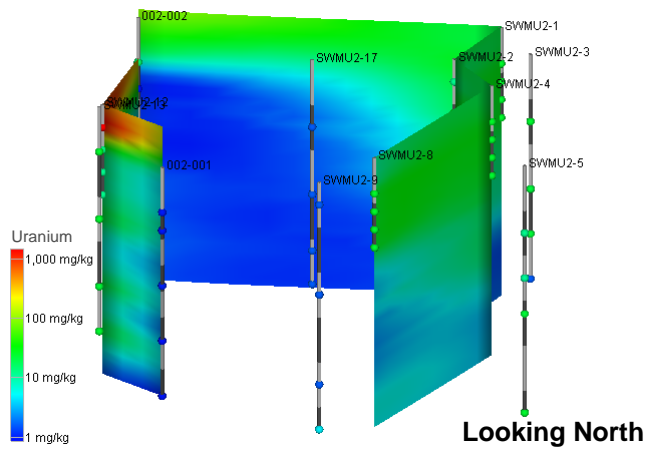
SWMU 2 Manganese: 0 – 60 ft bgs (Vertical Exaggeration = 2)



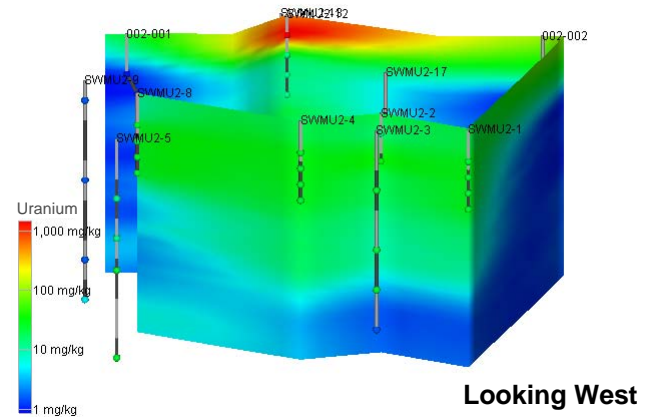
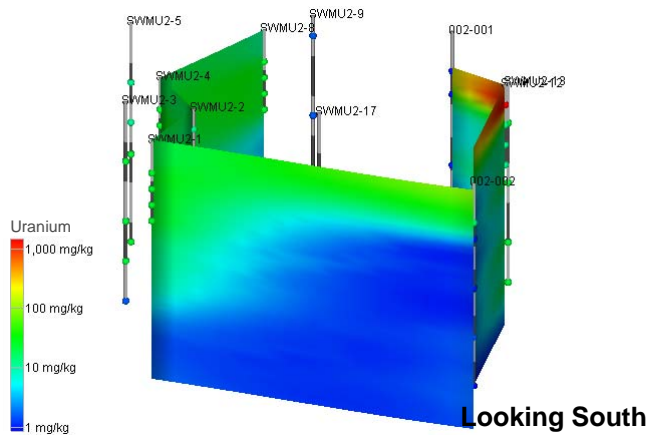


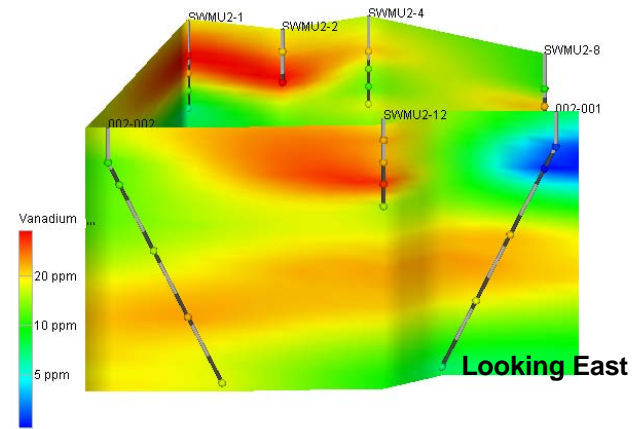
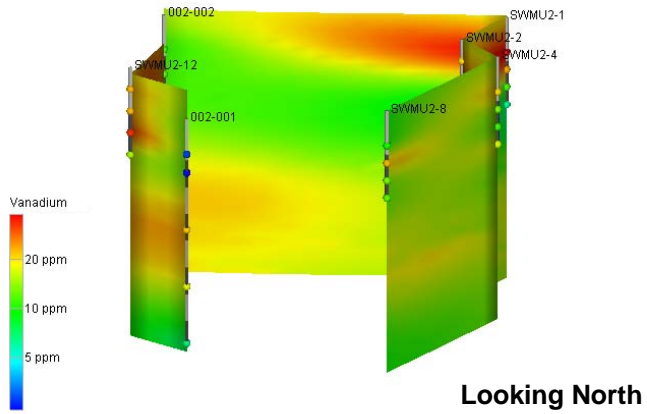
SWMU 2 Thallium: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



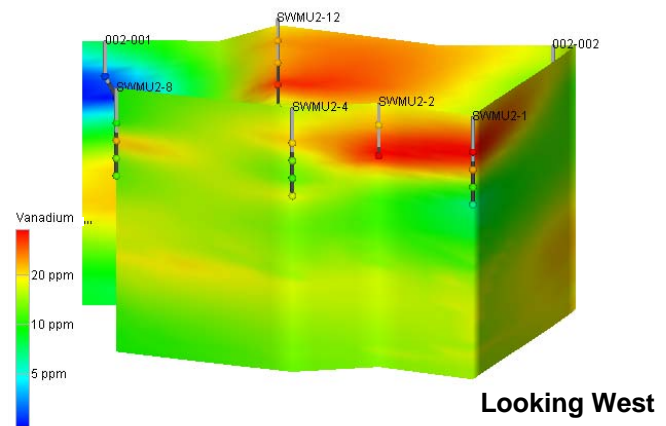
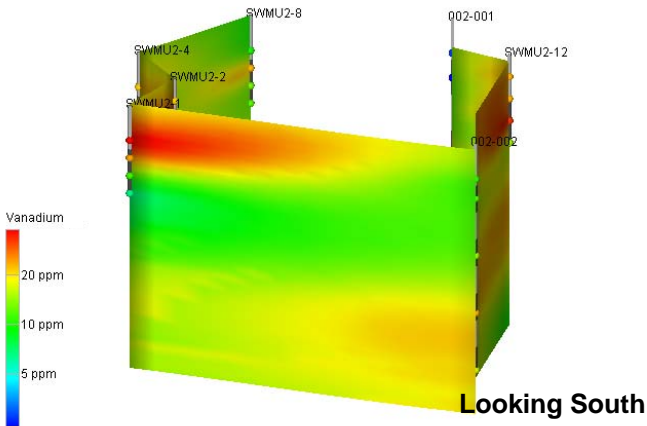


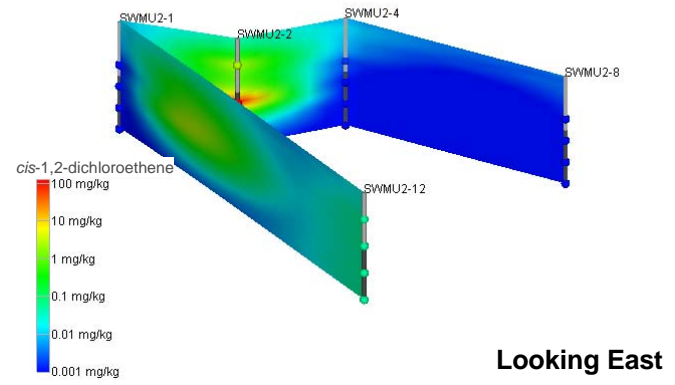
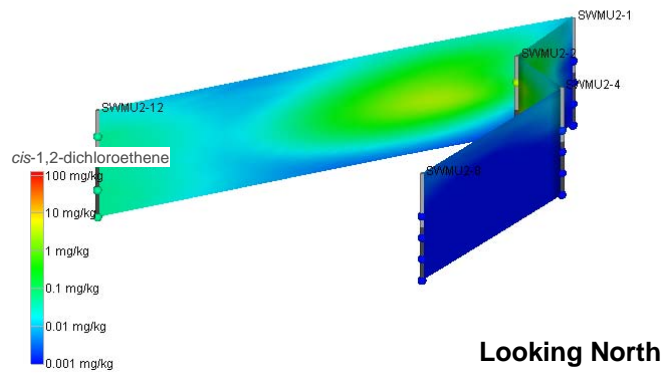
SWMU 2 Uranium: 0 – 60 ft bgs (Vertical Exaggeration = 2)



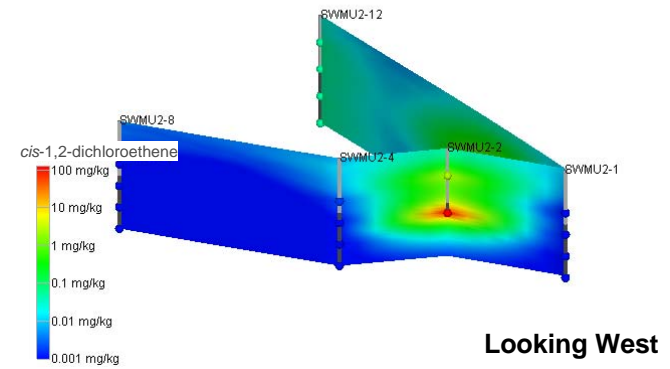
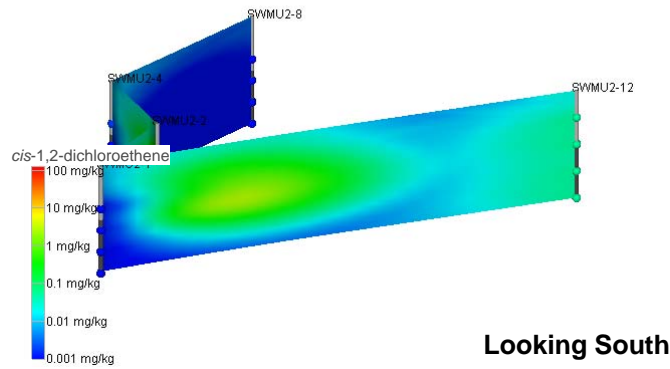


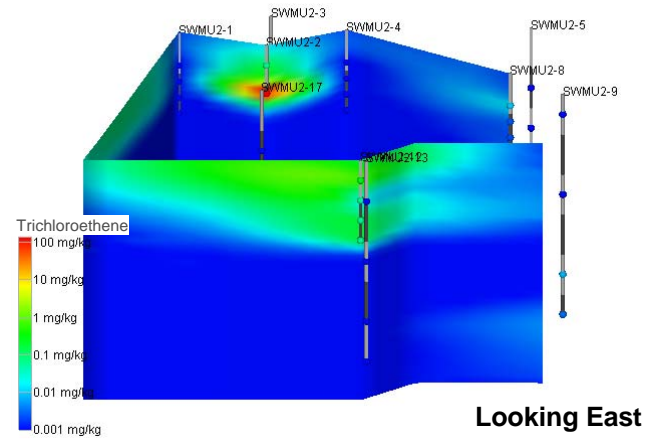
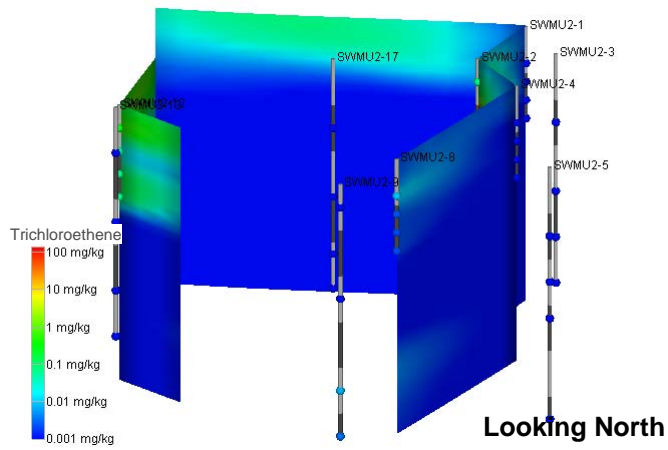
SWMU 2 Vanadium: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



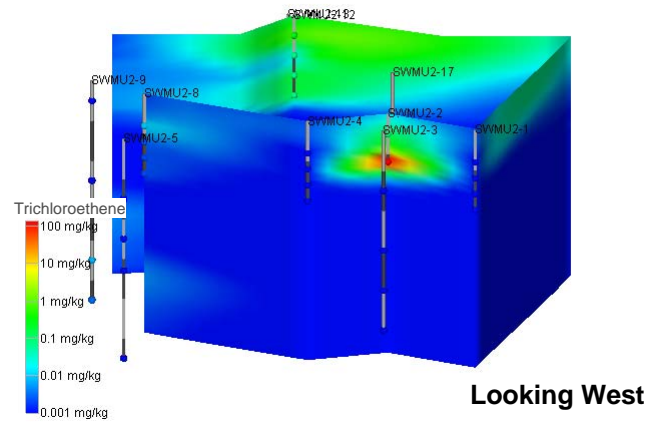
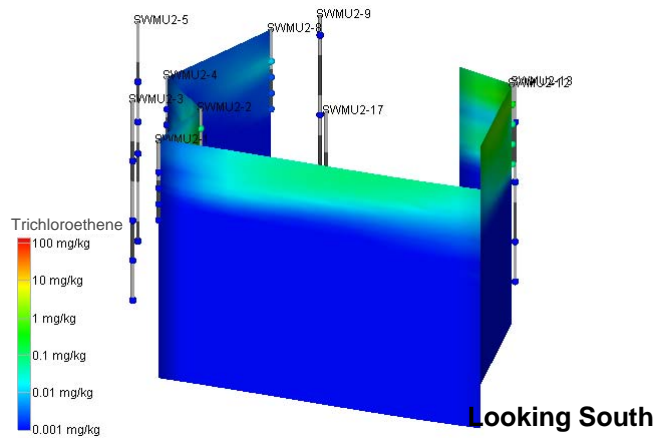


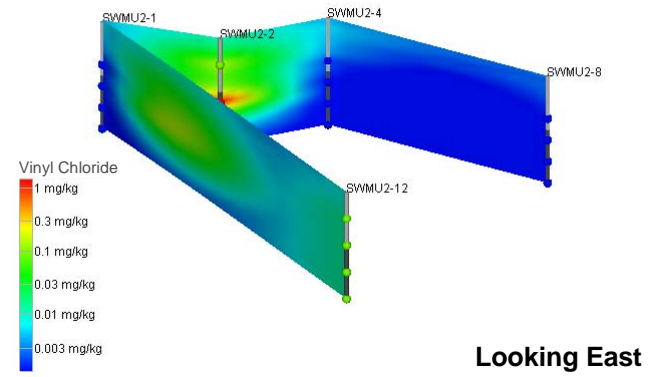
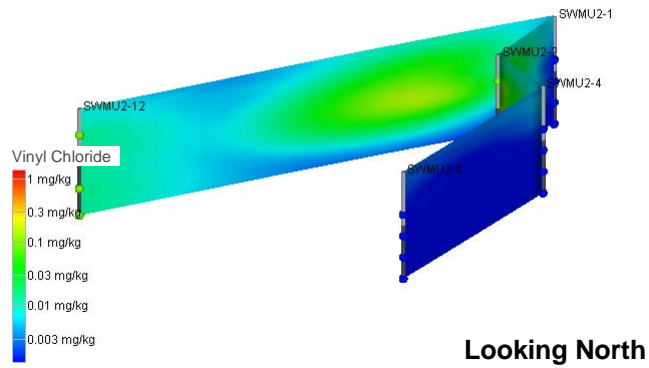
SWMU 2 *cis*-1,2-DCE: 0 – 20 ft bgs
(Vertical Exaggeration = 2)



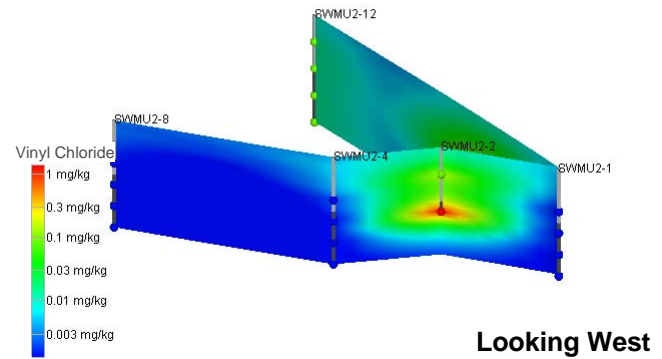
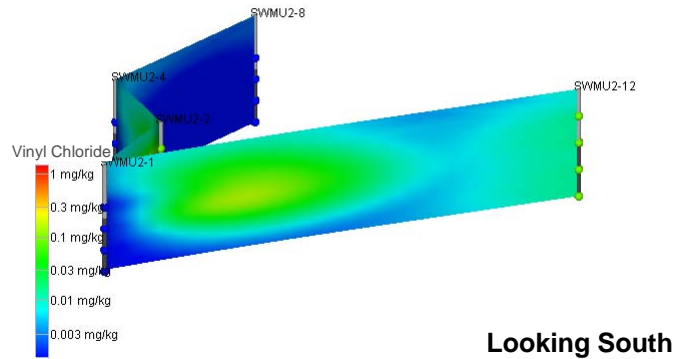


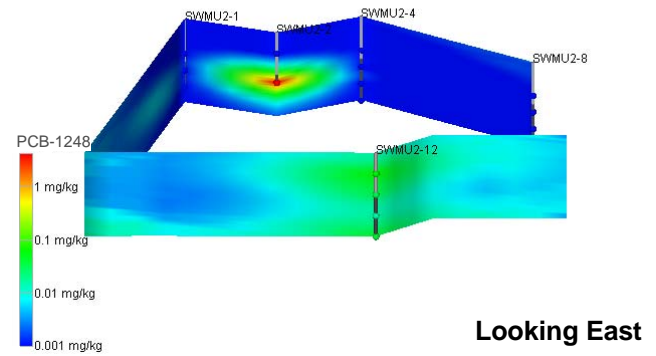
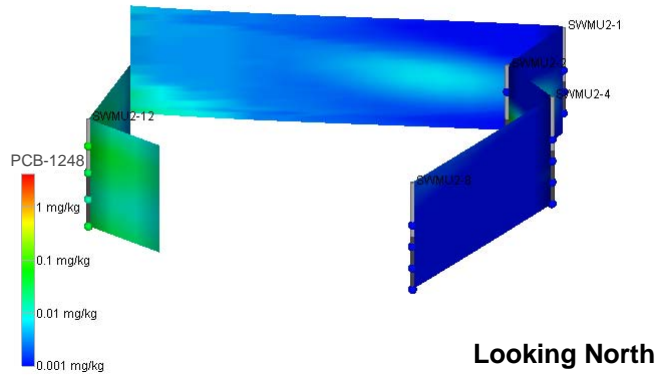
SWMU 2 TCE: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



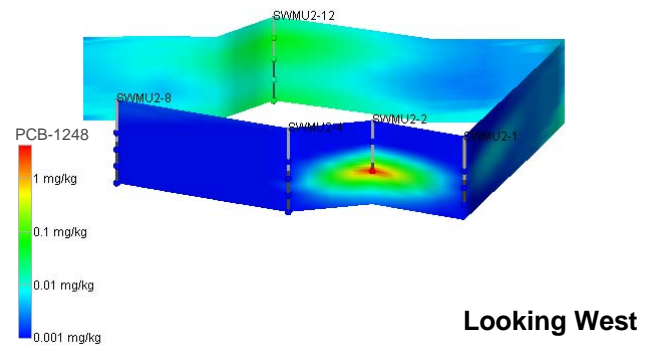
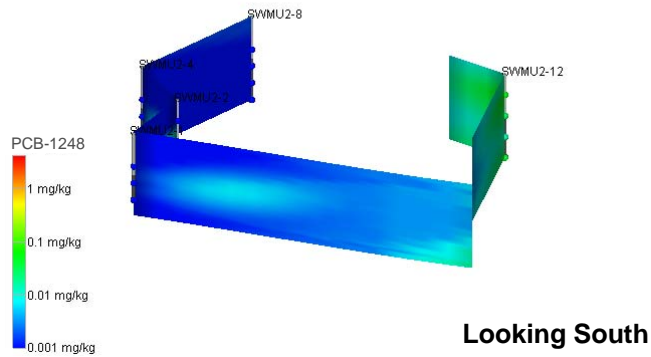


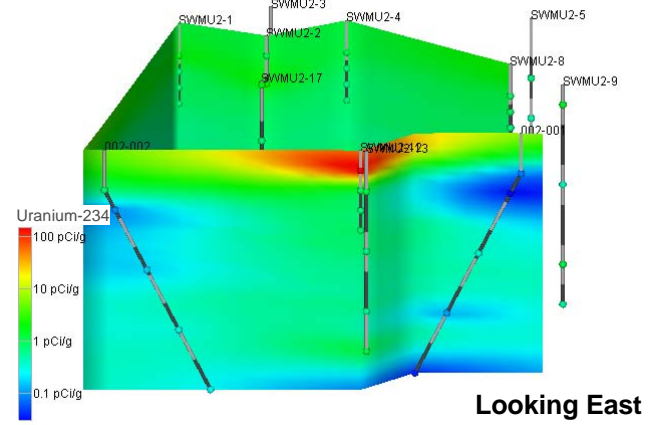
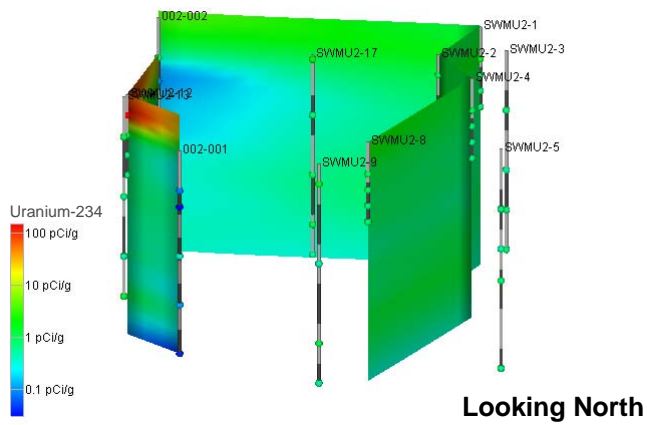
SWMU 2 Vinyl chloride: 0 – 20 ft bgs (Vertical Exaggeration = 2)



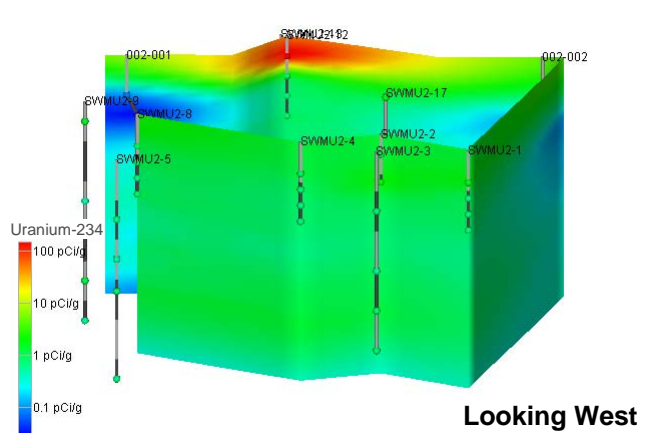
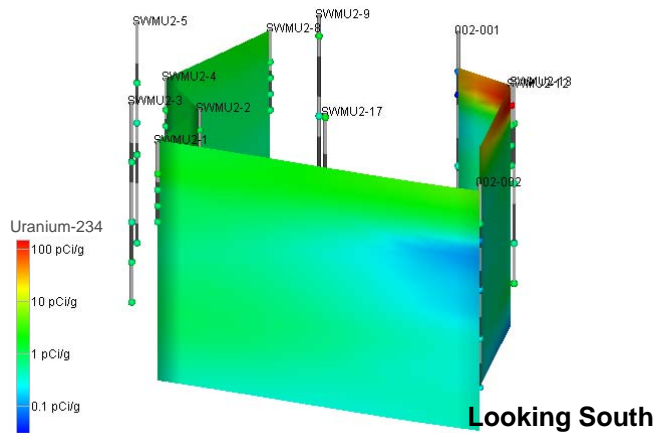


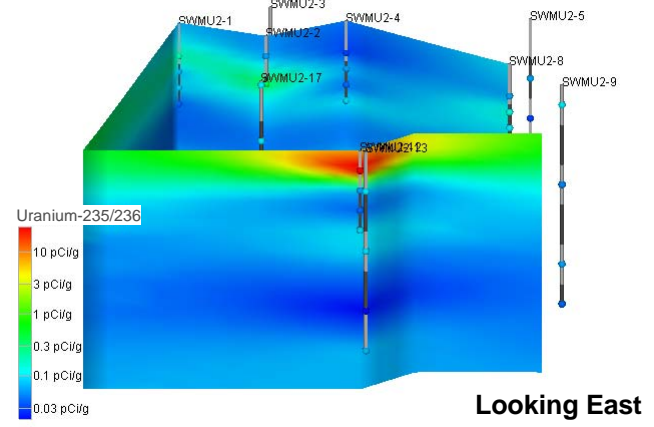
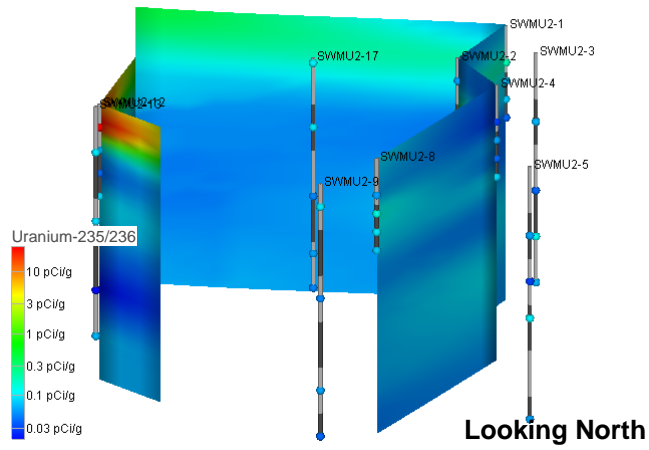
SWMU 2 PCB-1248: 0 – 20 ft bgs
(Vertical Exaggeration = 2)



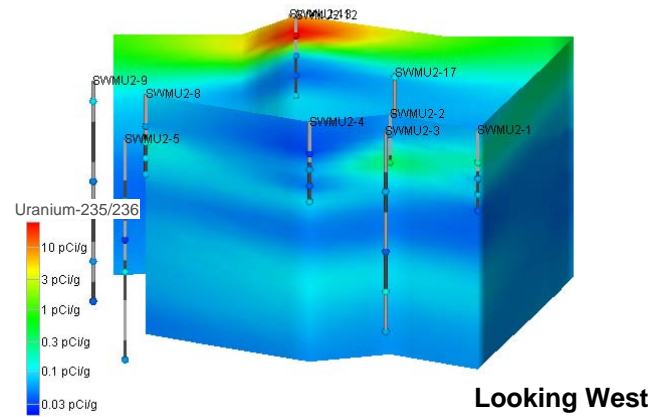
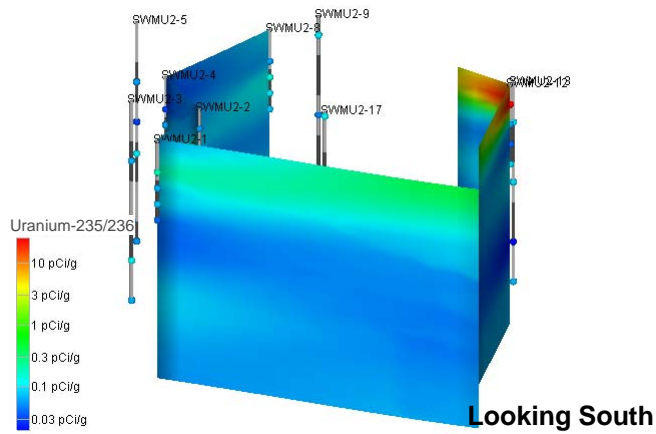


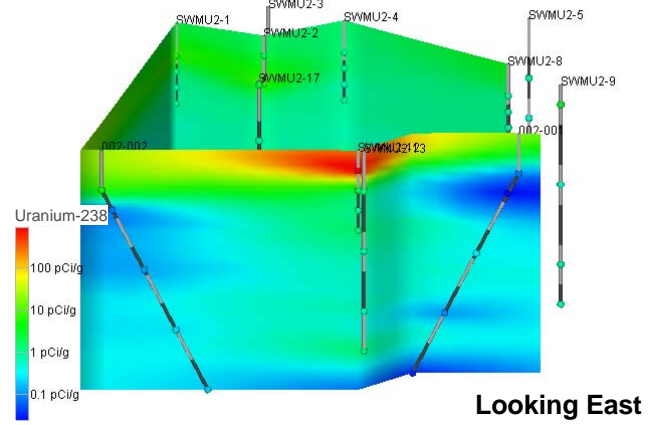
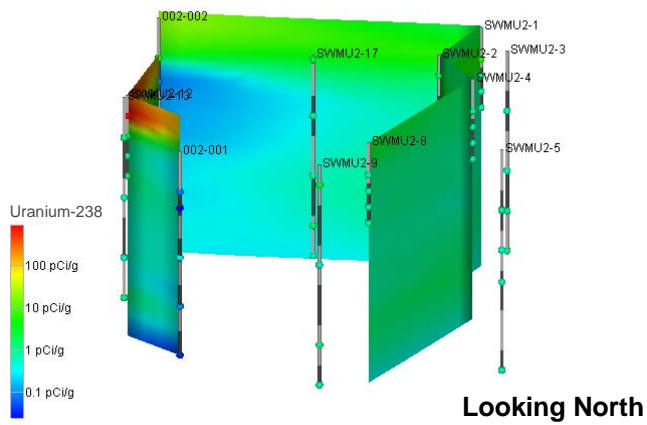
SWMU 2 ^{234}U : 0 – 60 ft bgs
(Vertical Exaggeration = 2)



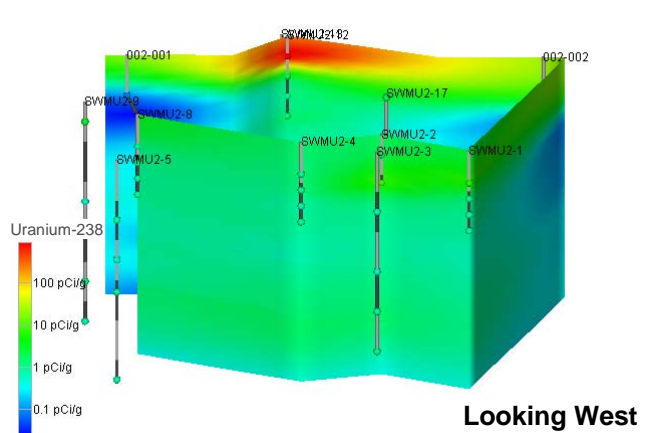
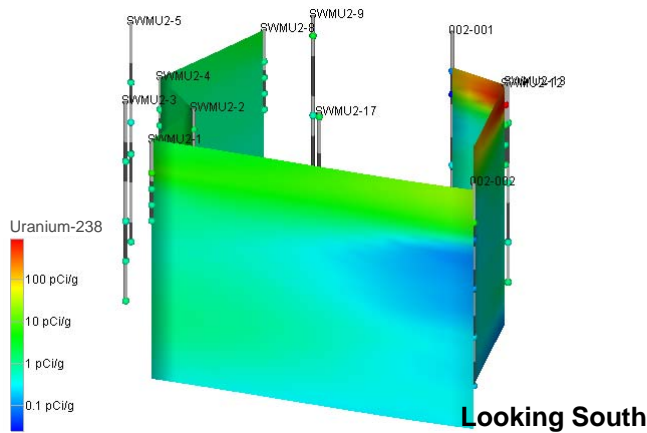


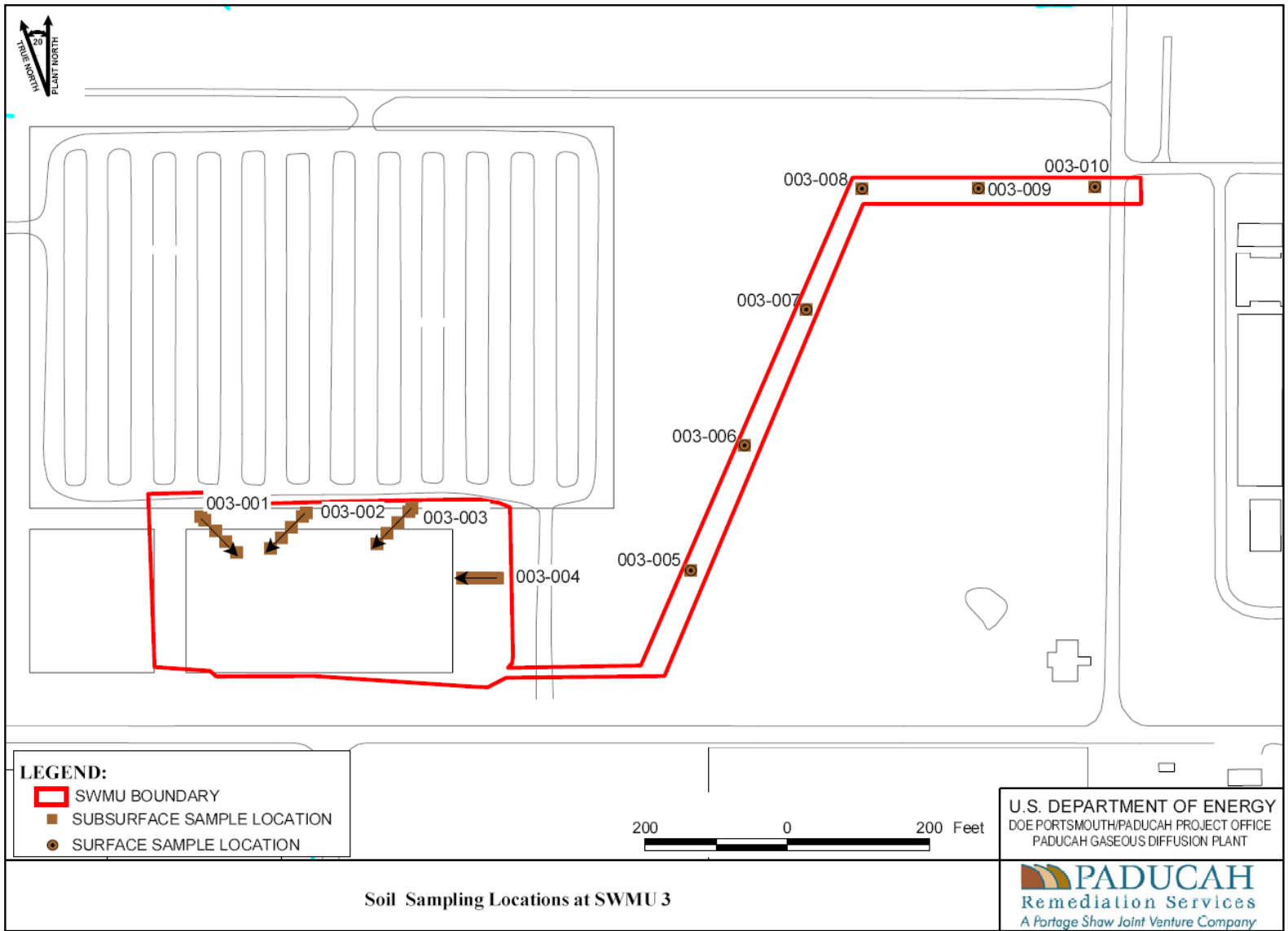
SWMU 2 ^{235/236}U: 0 – 60 ft bgs
(Vertical Exaggeration = 2)

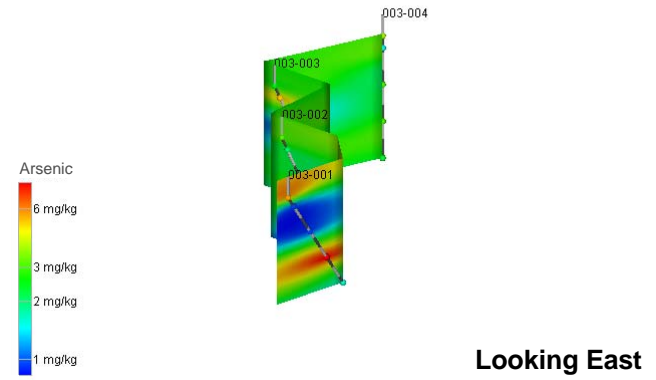
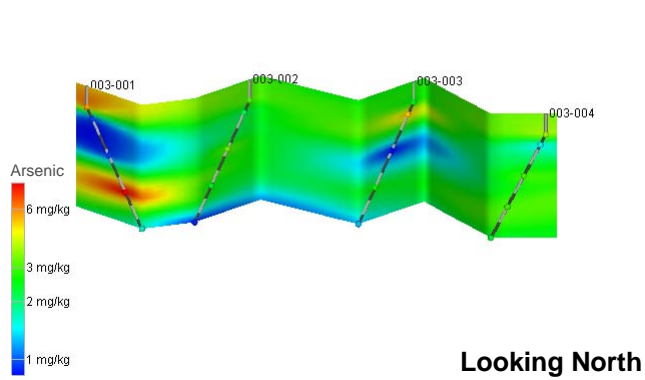




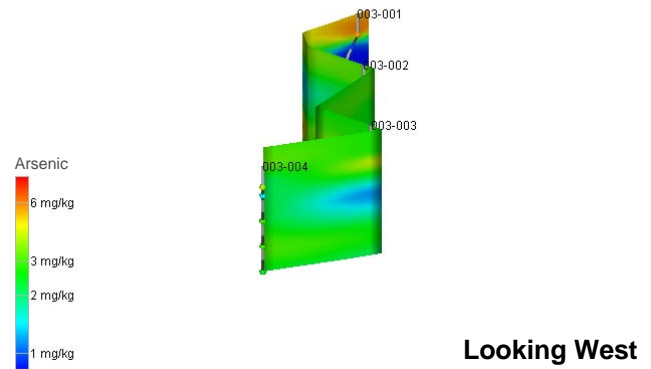
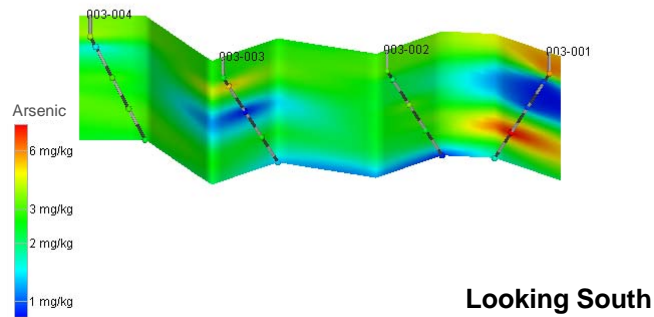
SWMU 2 ²³⁸U: 0 – 60 ft bgs
(Vertical Exaggeration = 2)

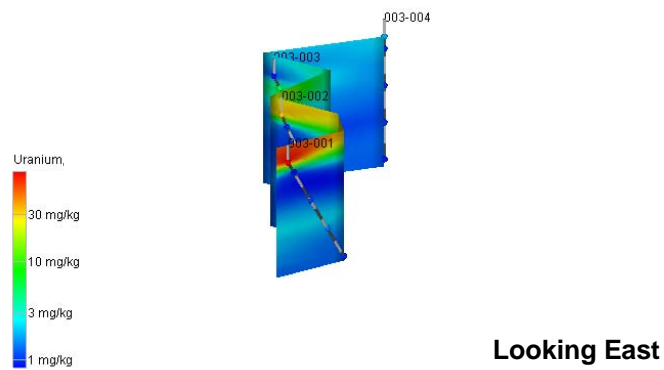
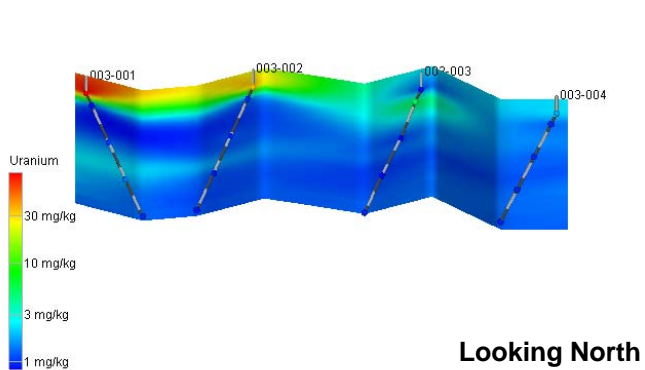




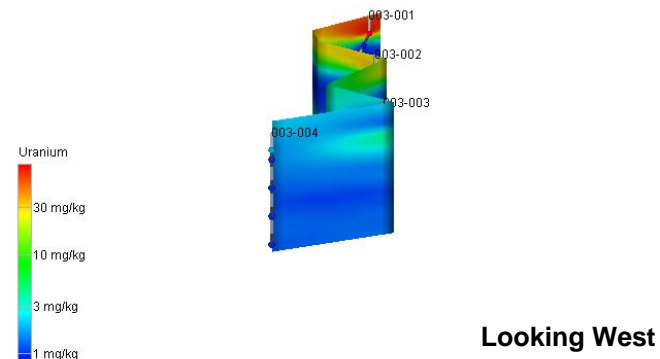
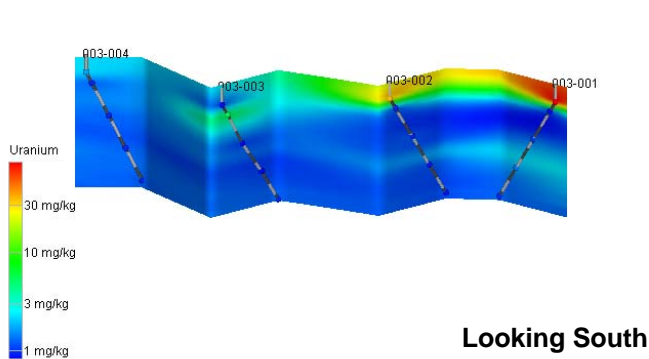


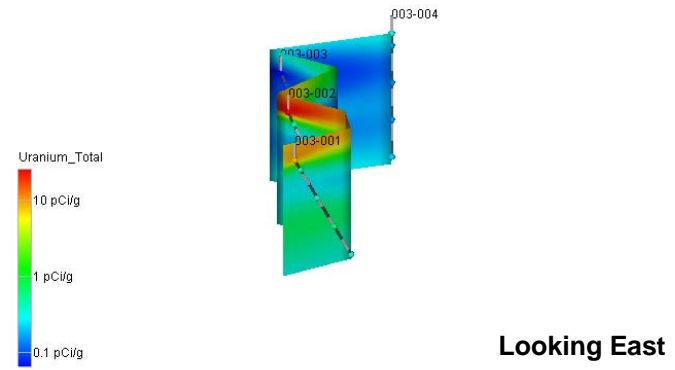
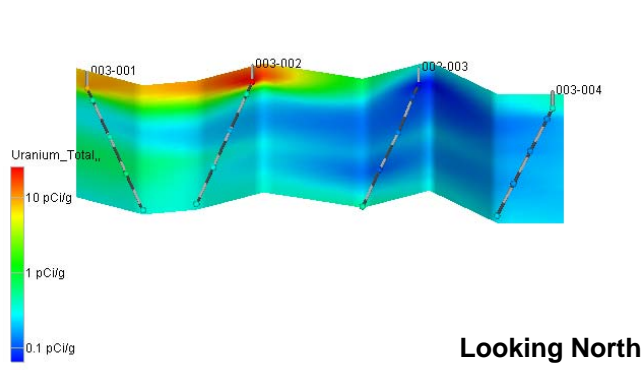
SWMU 3, C-404 Arsenic: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



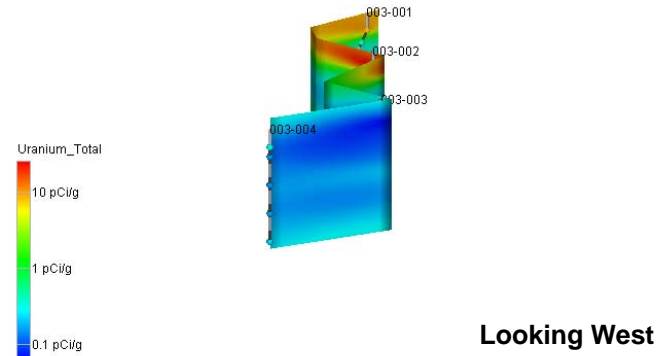
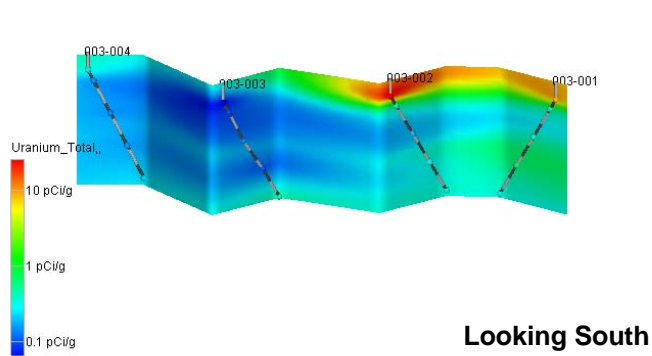


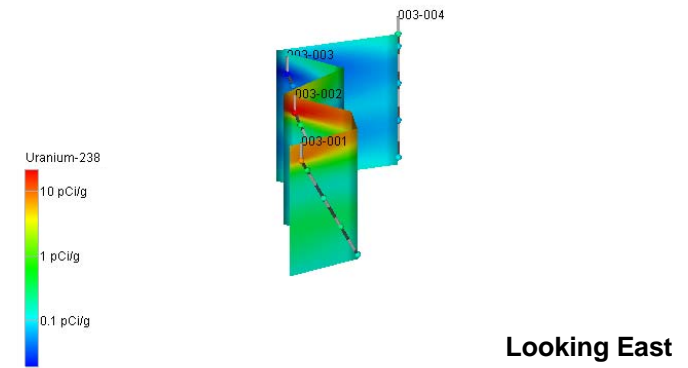
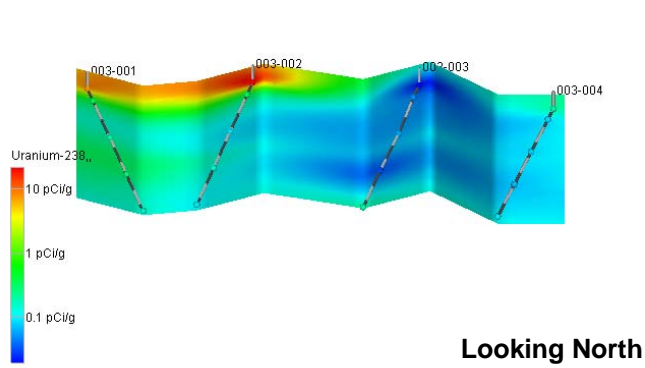
SWMU 3, C-404 Uranium: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



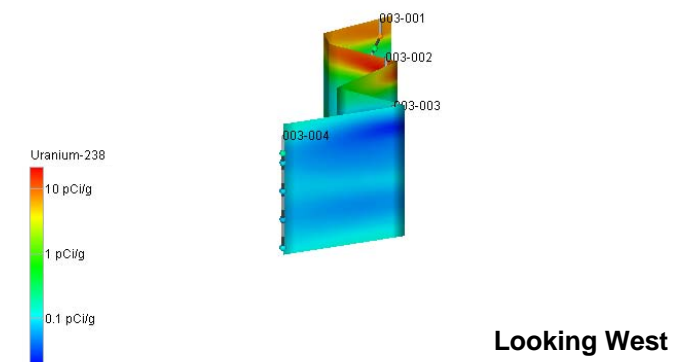
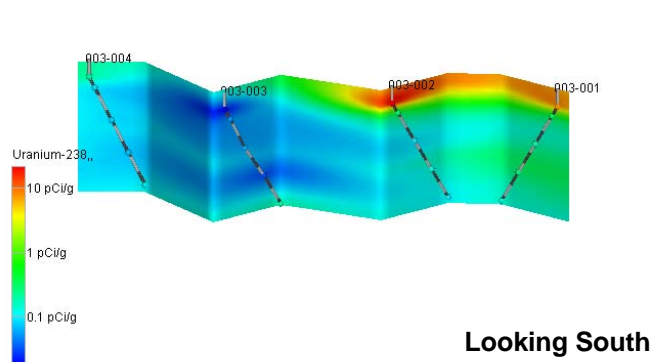


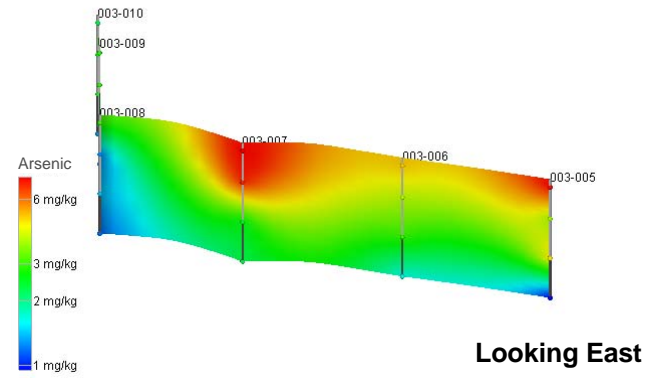
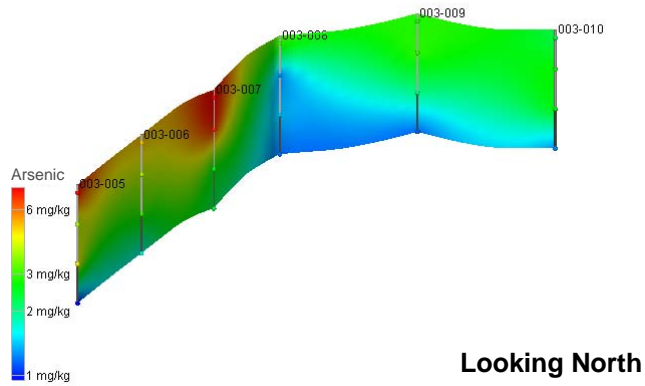
SWMU 3, C-404 Uranium, Total: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



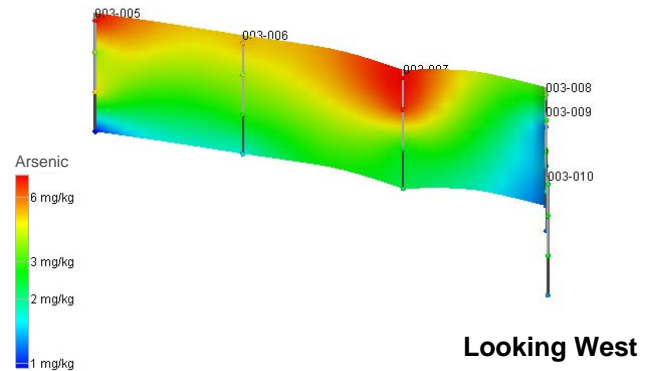
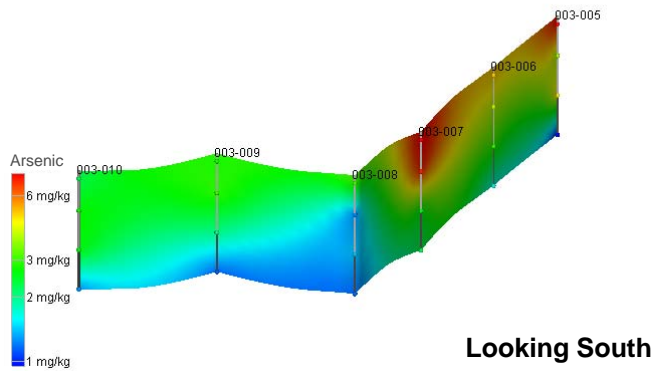


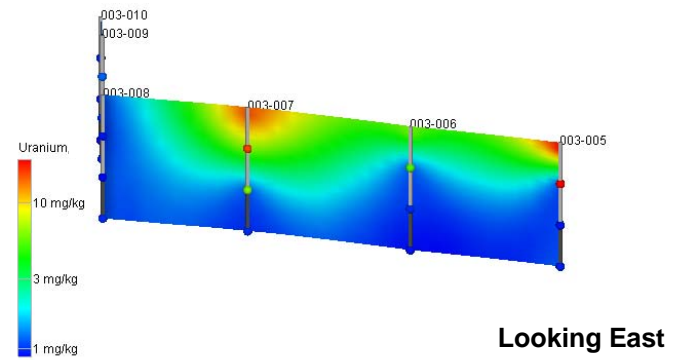
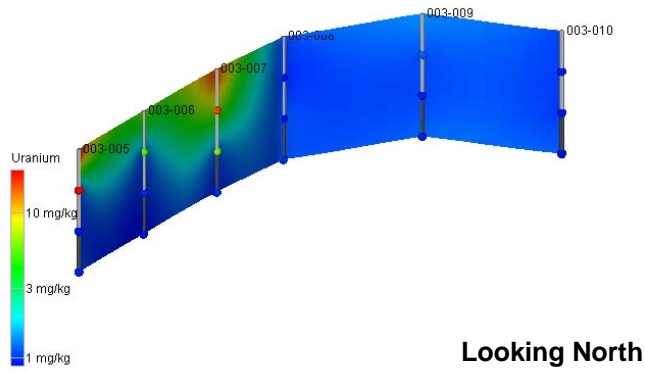
SWMU 3, C-404 ²³⁸Uranium: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



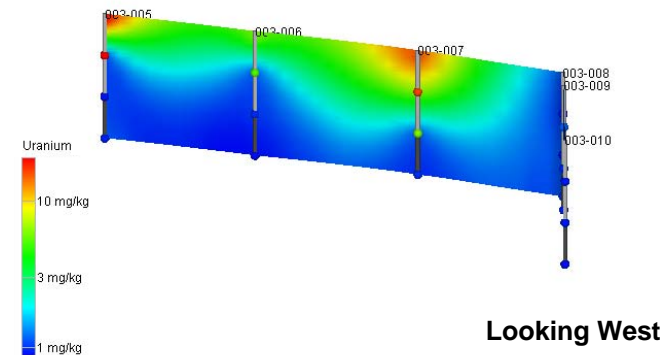
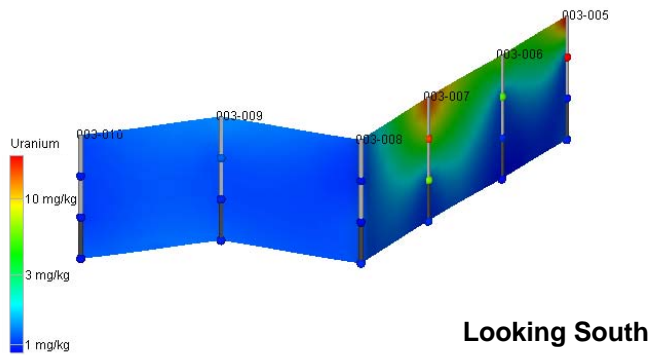


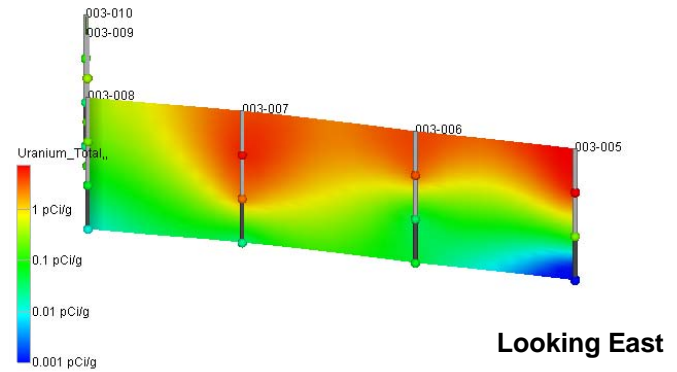
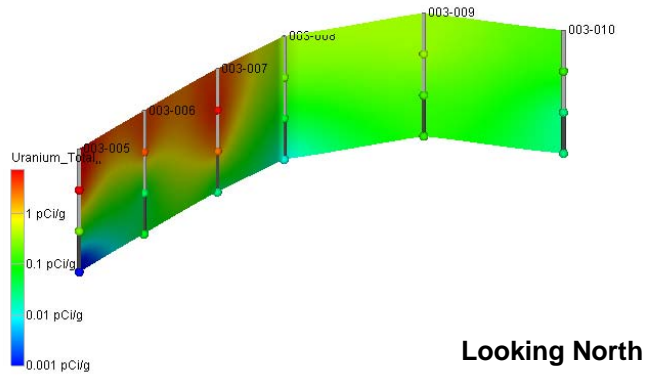
SWMU 3, East Ditch Arsenic: 0 – 15 ft bgs
(Vertical Exaggeration = 10)



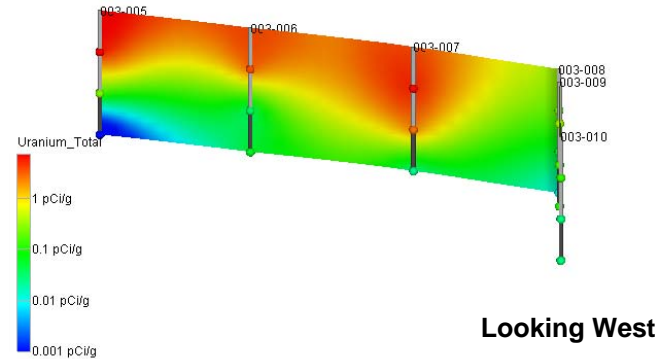
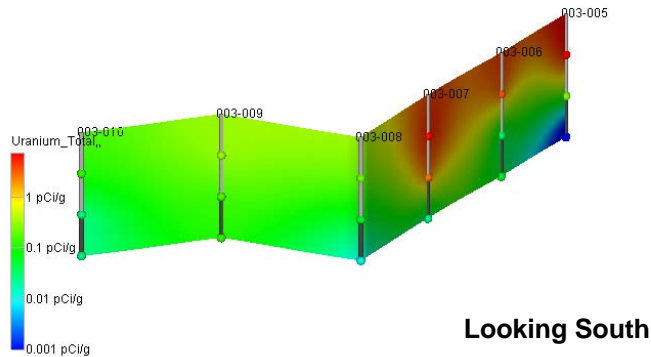


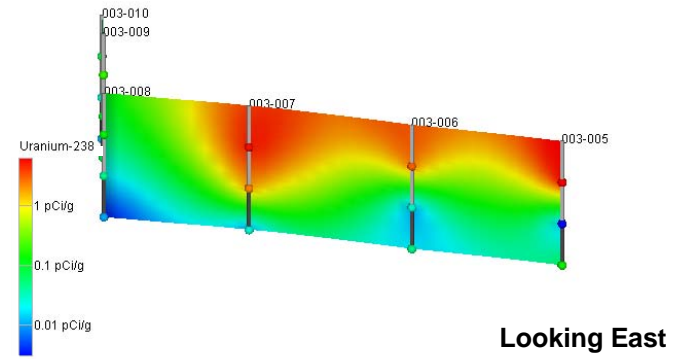
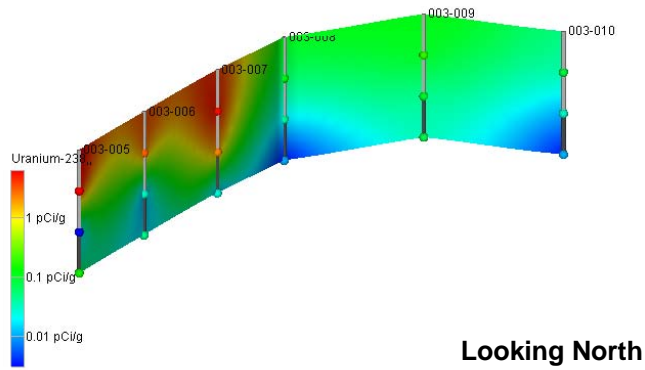
SWMU 3, East Ditch Uranium: 0 – 60 ft bgs
(Vertical Exaggeration = 10)



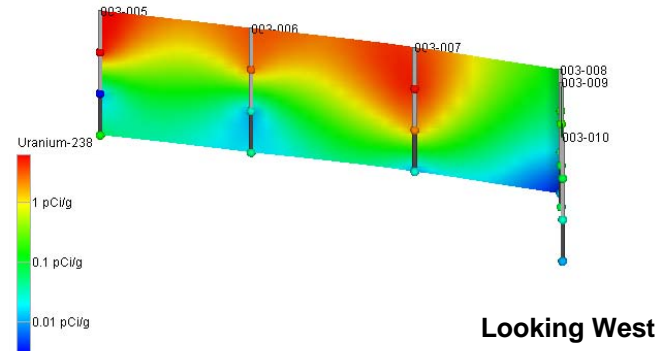
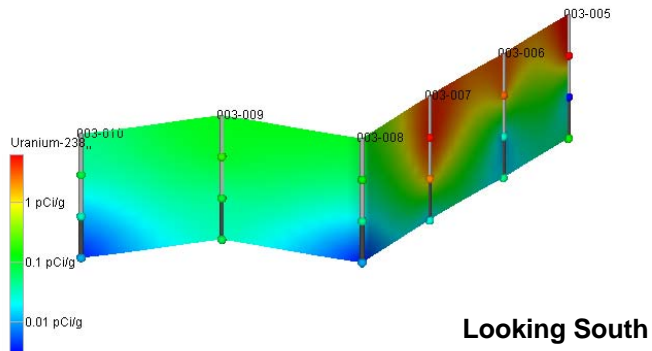


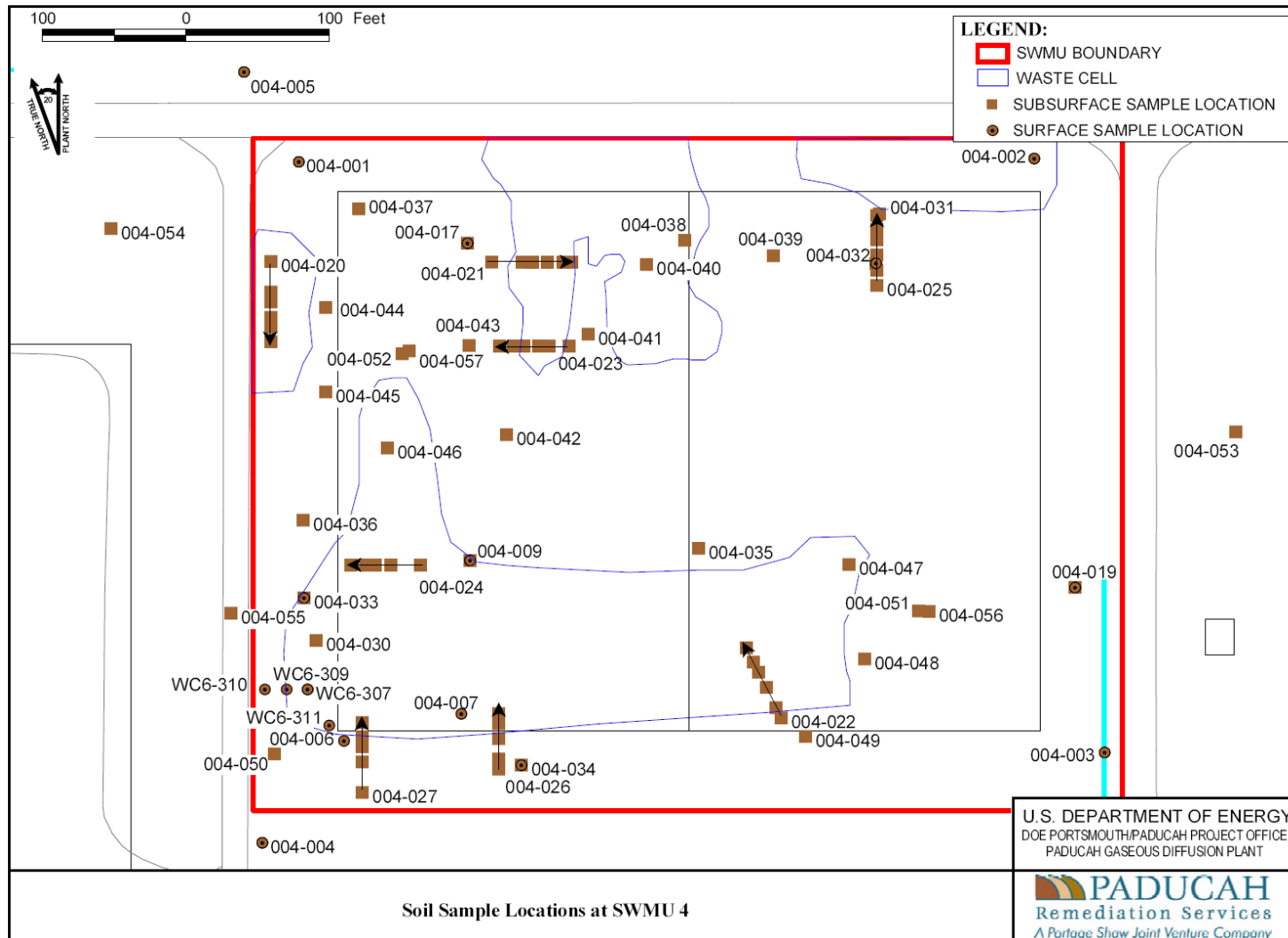
SWMU 3, East Ditch Uranium, Total: 0 – 60 ft bgs (Vertical Exaggeration = 10)

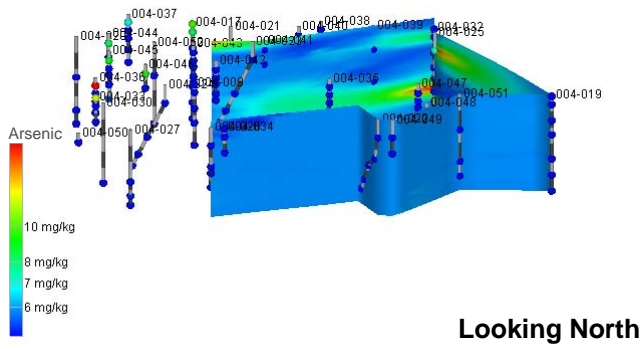




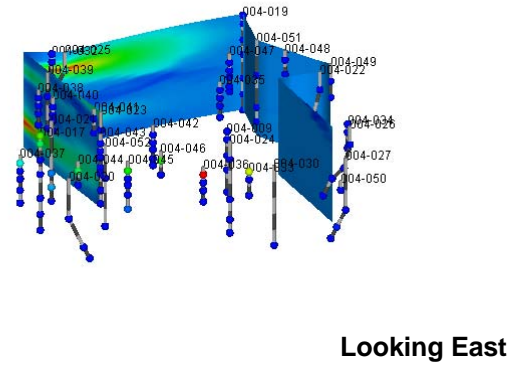
SWMU 3, East Ditch ²³⁸Uranium: 0 – 60 ft bgs
(Vertical Exaggeration = 10)





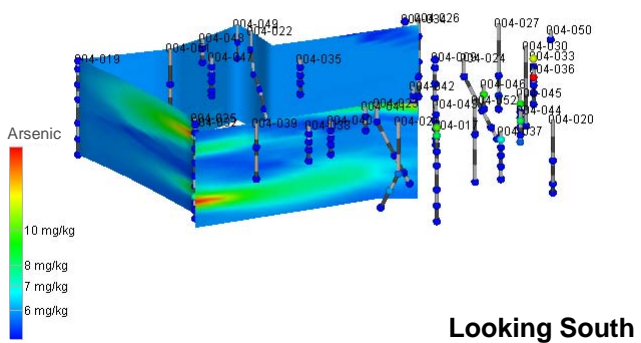


Looking North

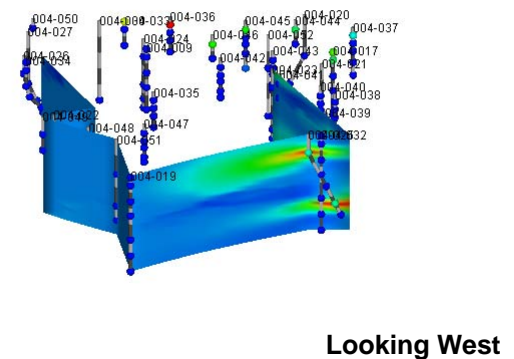


Looking East

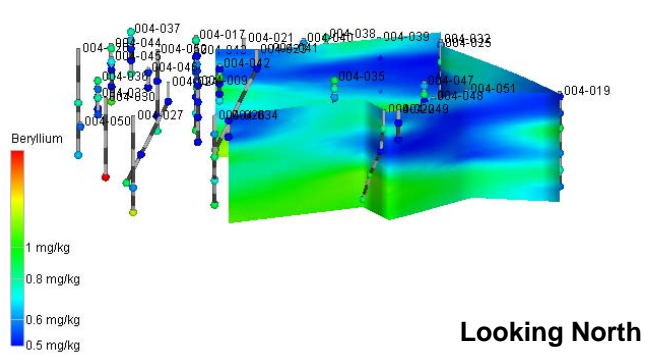
SWMU 4 Arsenic: 0 – 60 ft bgs (Vertical Exaggeration = 2)



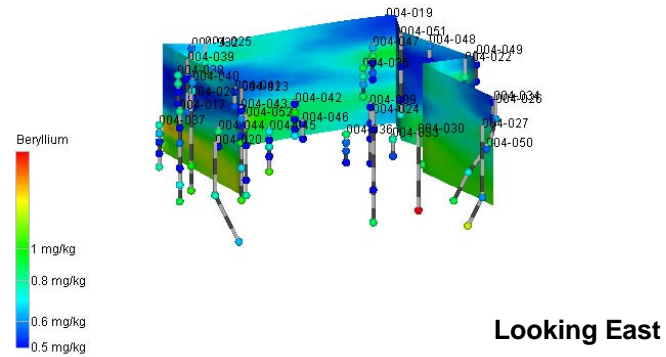
Looking South



Looking West

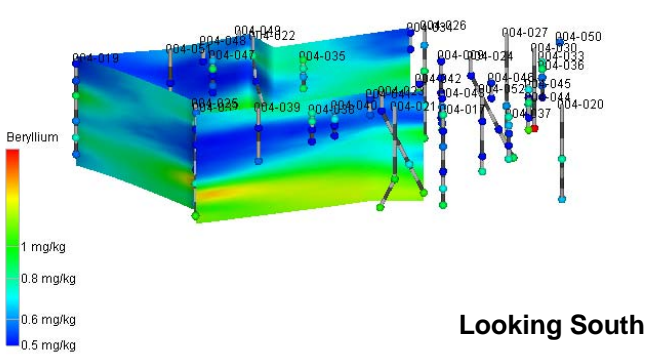


Looking North

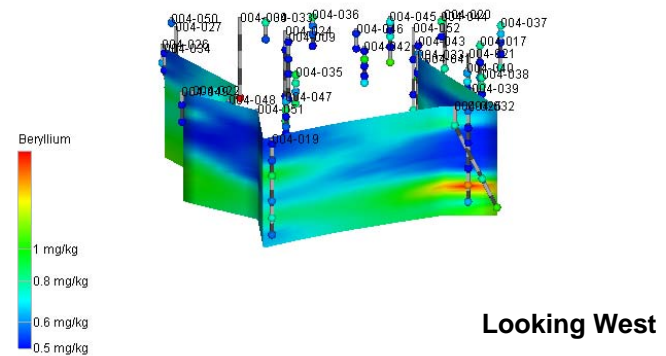


Looking East

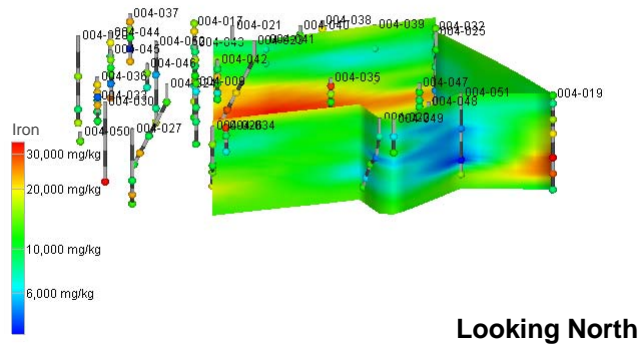
SWMU 4 Beryllium: 0 – 60 ft bgs (Vertical Exaggeration = 2)



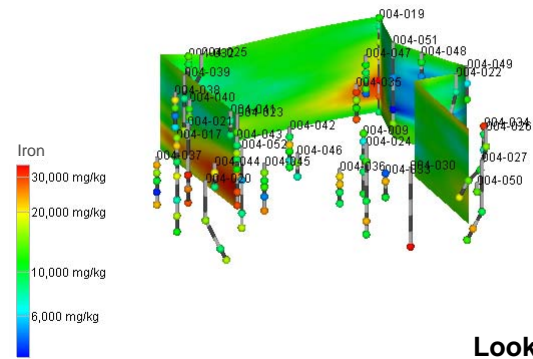
Looking South



Looking West

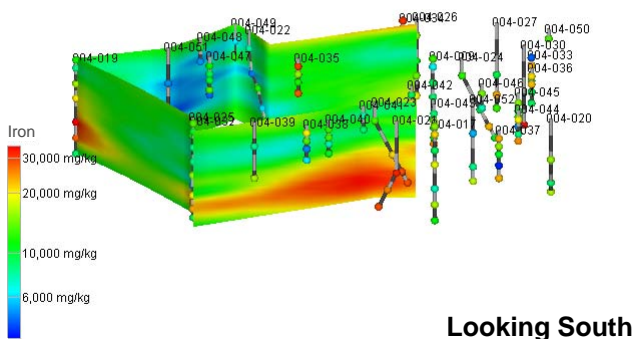


Looking North

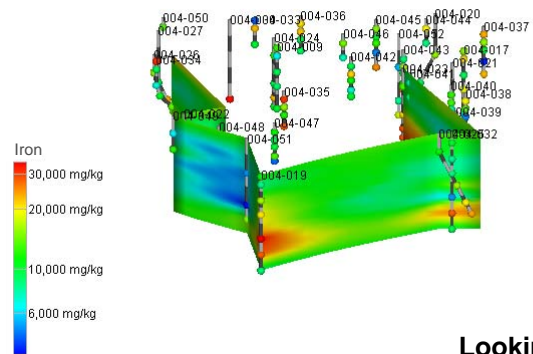


Looking East

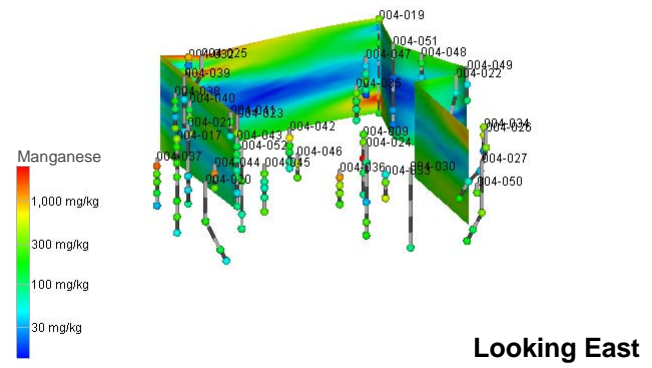
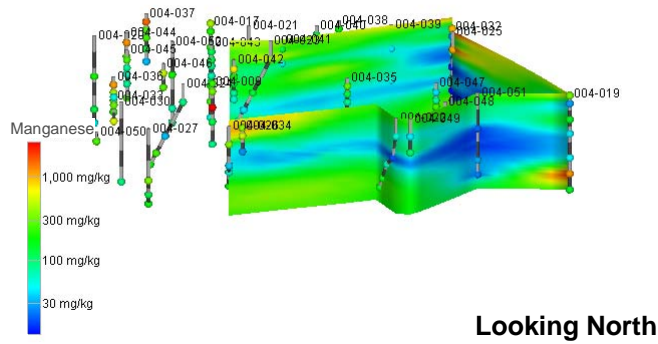
SWMU 4 Iron: 0 – 60 ft bgs (Vertical Exaggeration = 2)



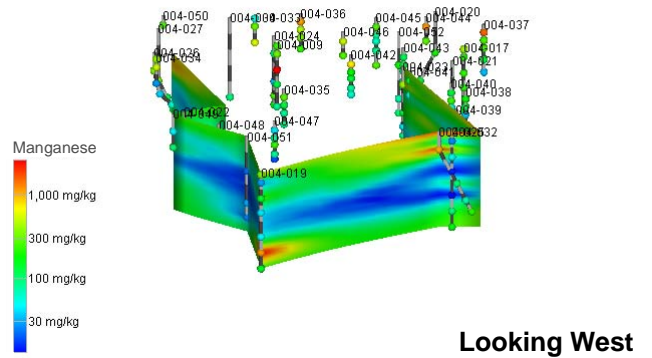
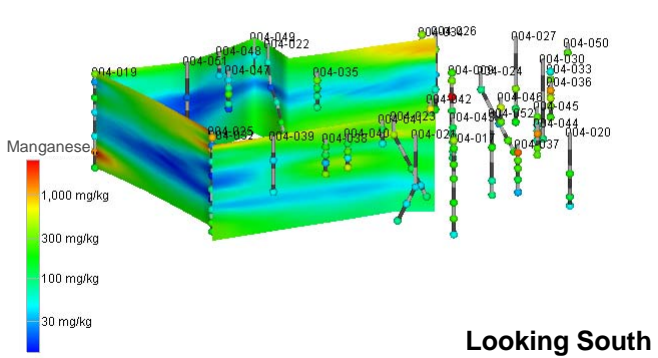
Looking South

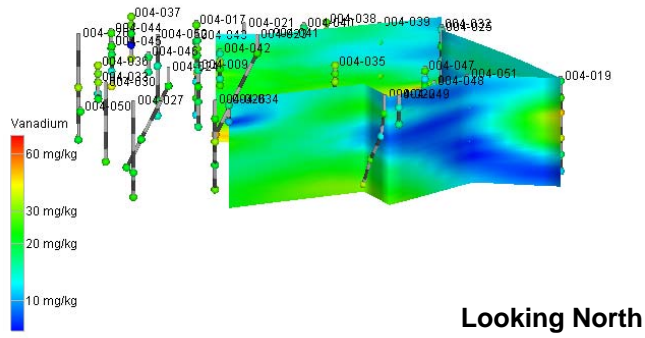


Looking West

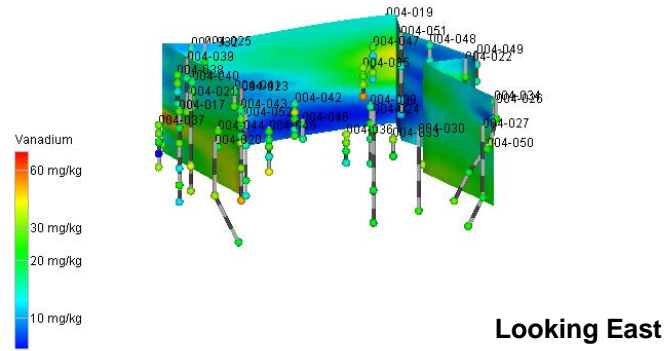


SWMU 4 Manganese: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



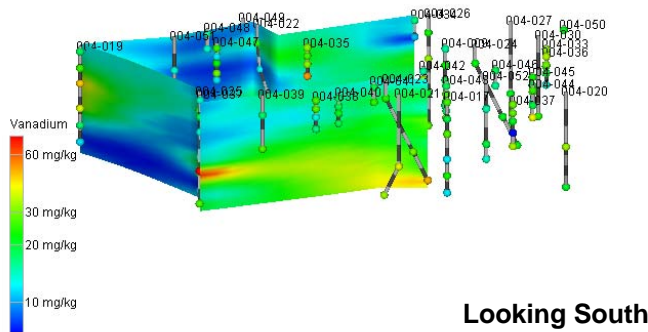


Looking North

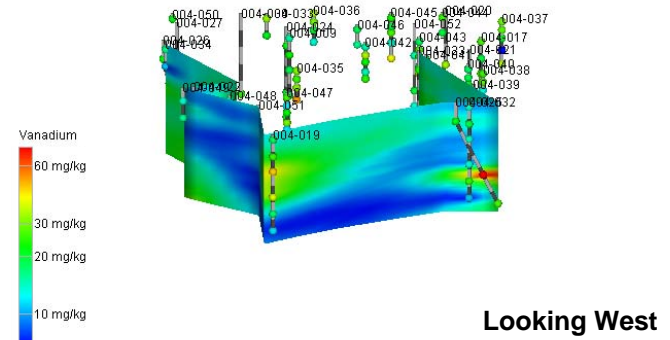


Looking East

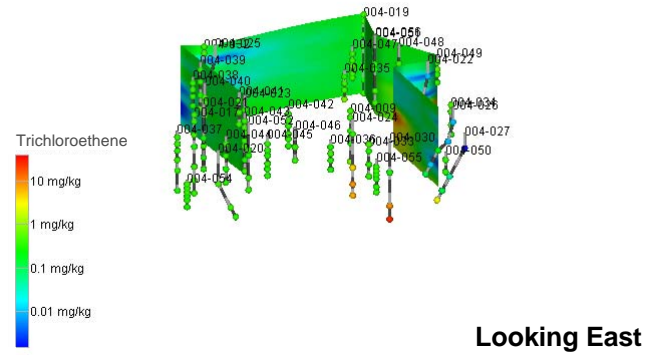
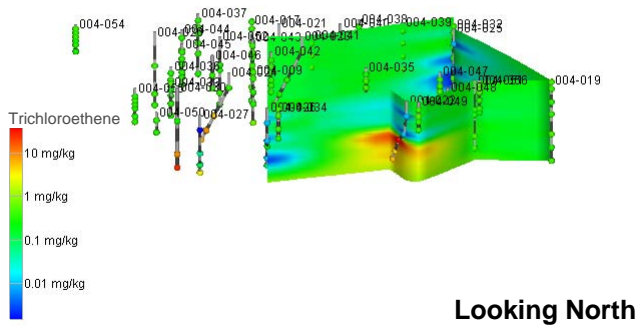
SWMU 4 Vanadium: 0 – 60 ft bgs (Vertical Exaggeration = 2)



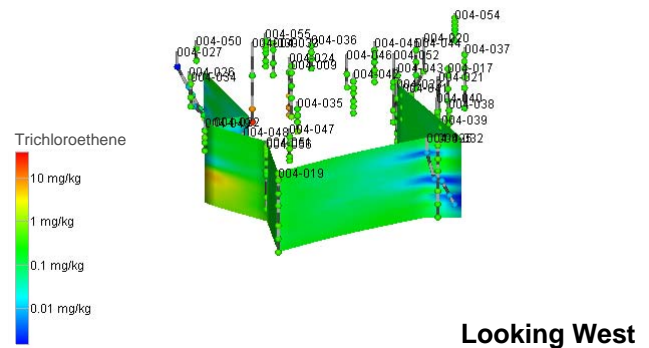
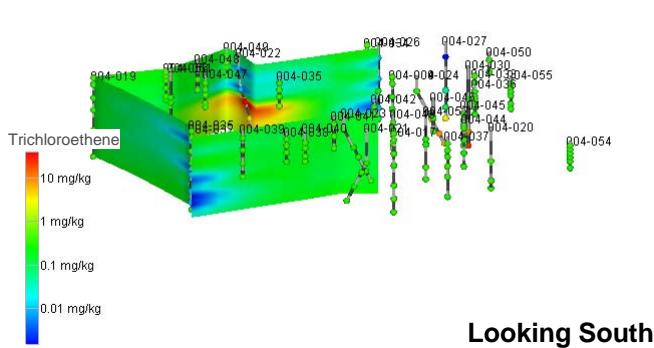
Looking South

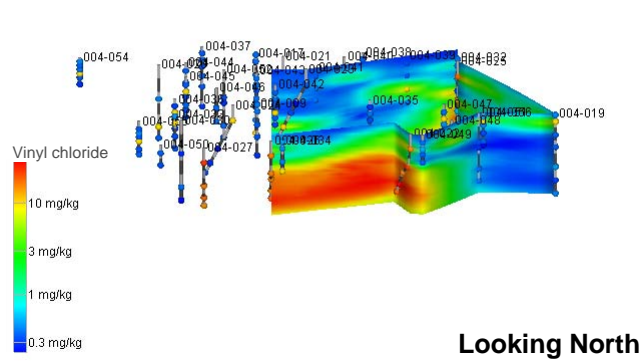


Looking West

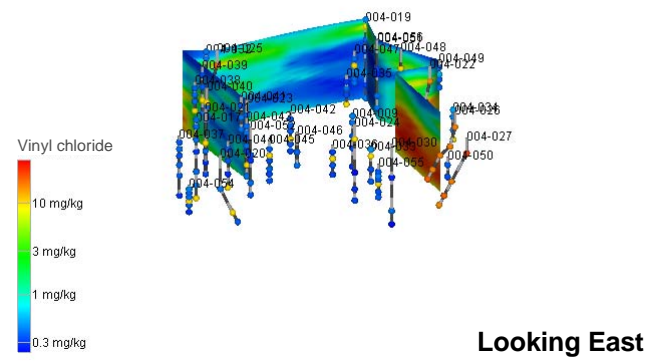


SWMU 4 Trichloroethene: 0 – 60 ft bgs (Vertical Exaggeration = 2)



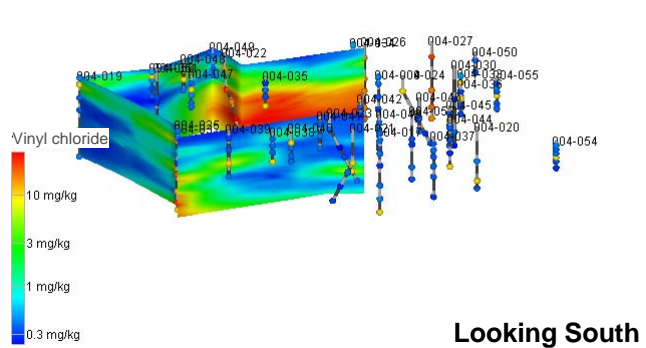


Looking North

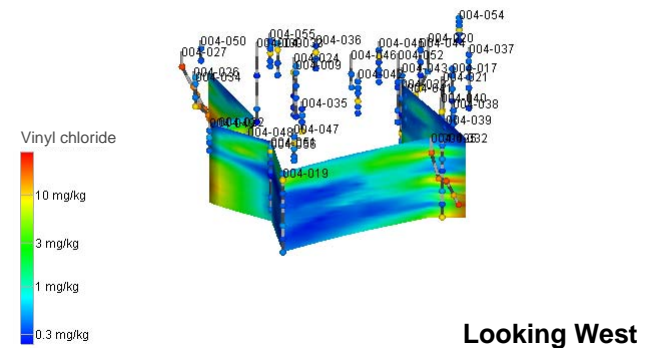


Looking East

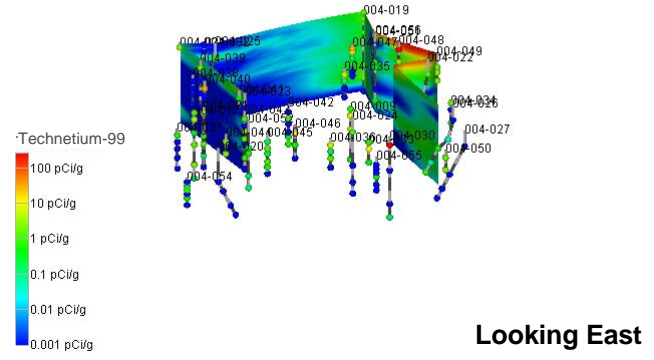
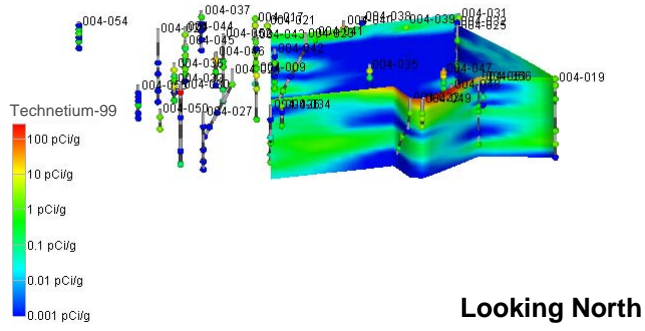
SWMU 4 Vinyl chloride: 0 – 60 ft bgs (Vertical Exaggeration = 2)



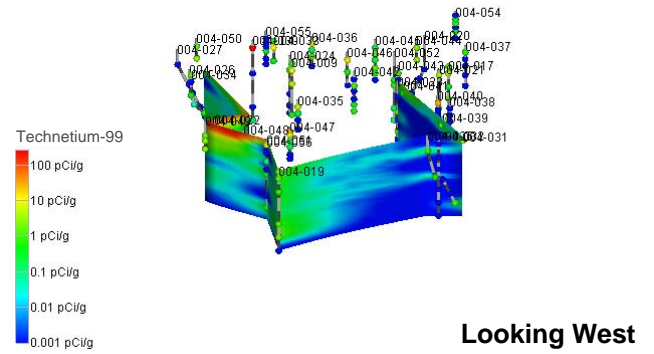
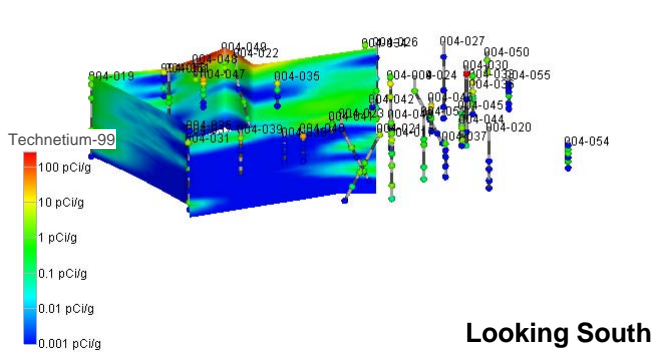
Looking South

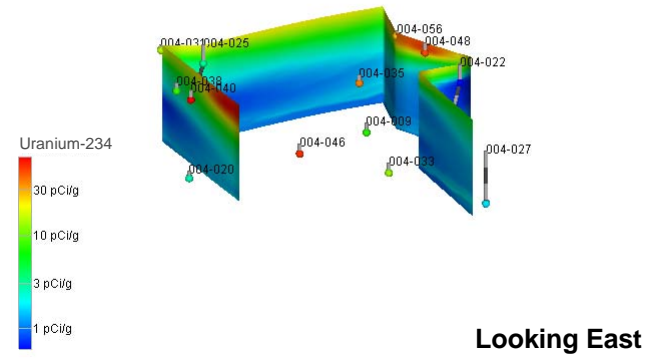
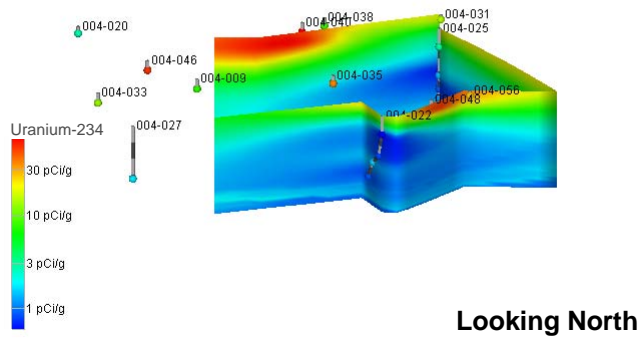


Looking West

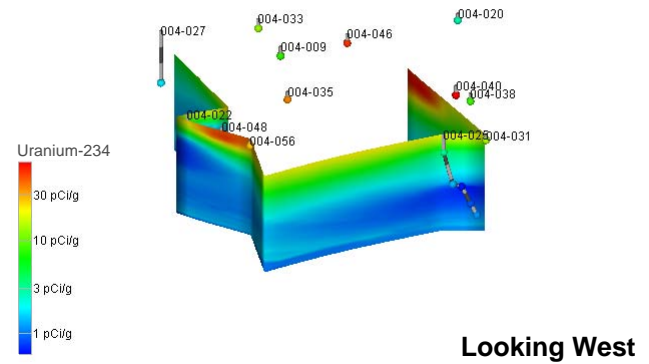
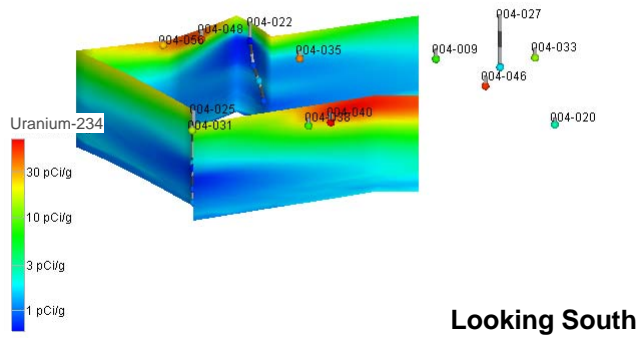


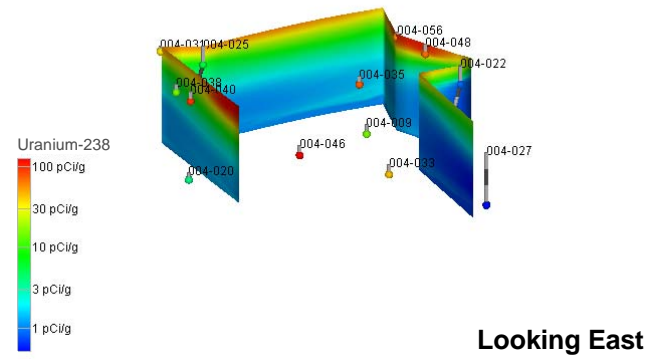
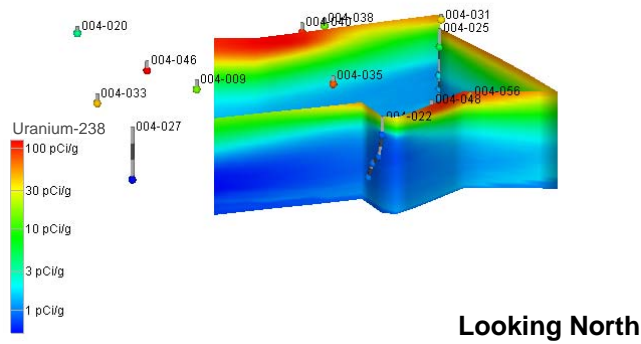
SWMU 4 ⁹⁹Tc: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



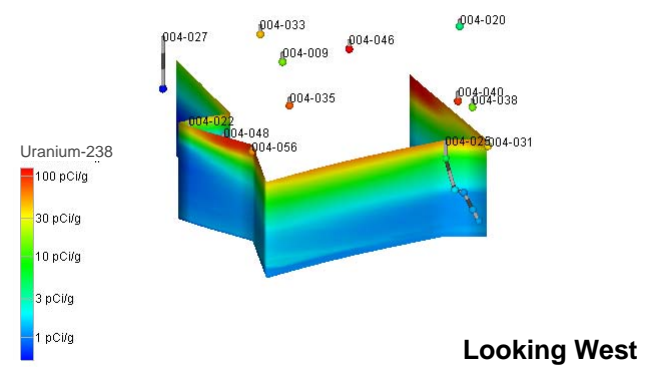
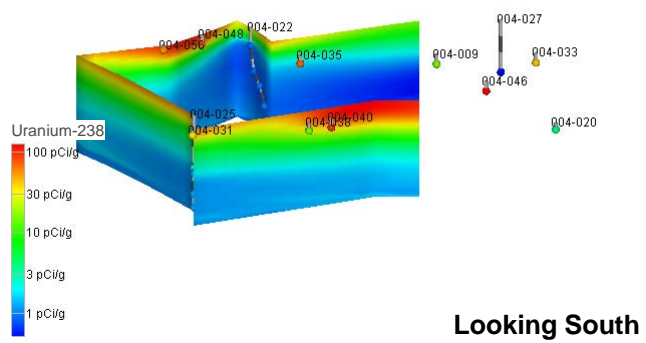


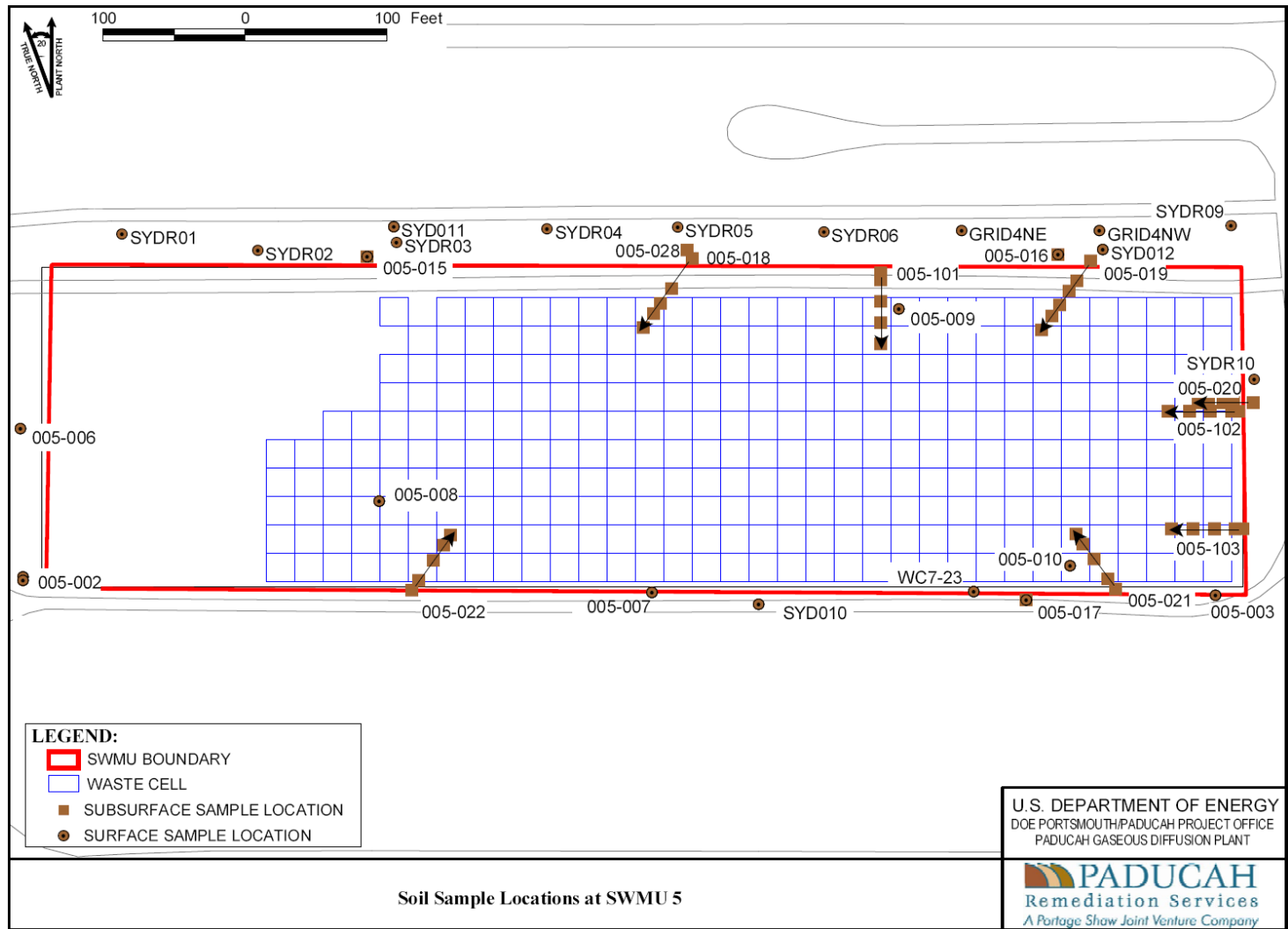
SWMU 4 ^{234}U : 0 – 60 ft bgs
(Vertical Exaggeration = 2)

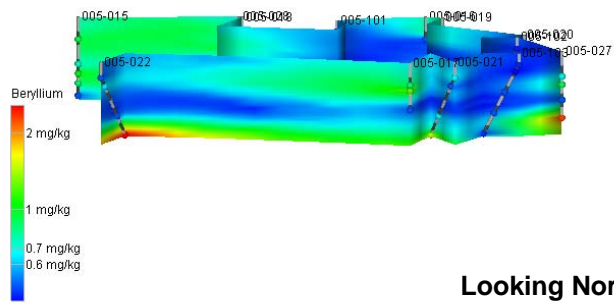




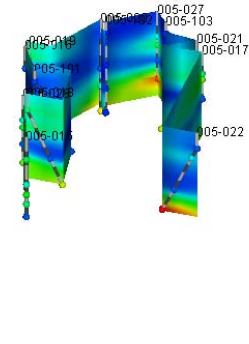
SWMU 4 ²³⁸U: 0 – 60 ft bgs
(Vertical Exaggeration = 2)





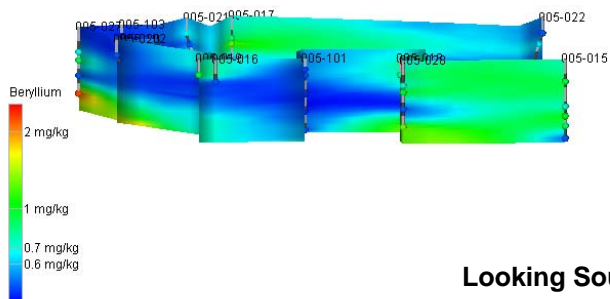


Looking North

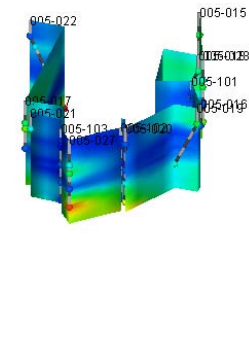


Looking East

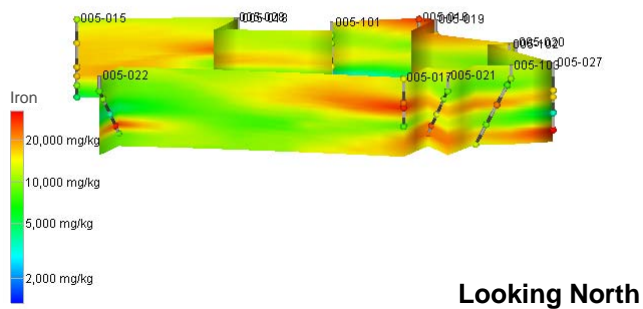
SWMU 5 Beryllium: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



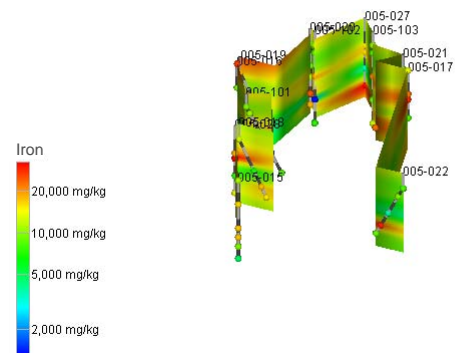
Looking South



Looking West

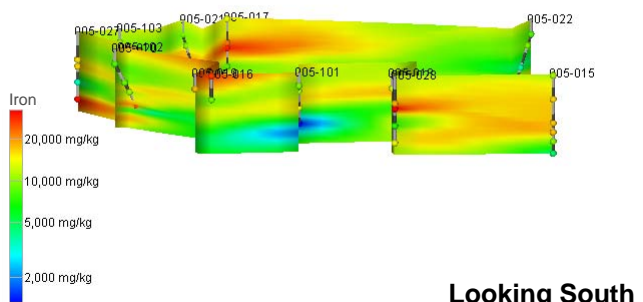


Looking North

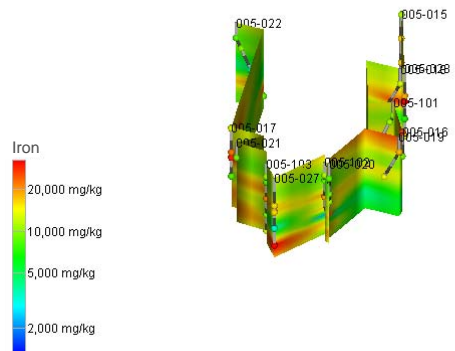


Looking East

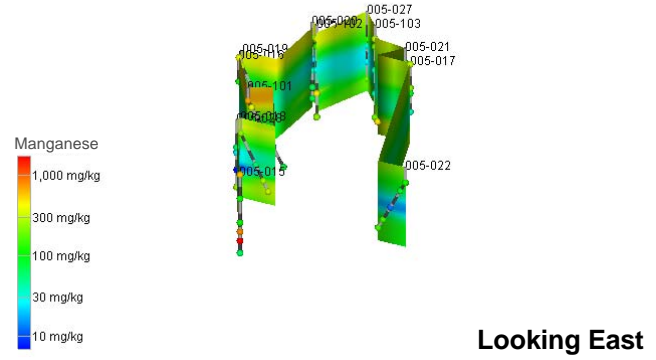
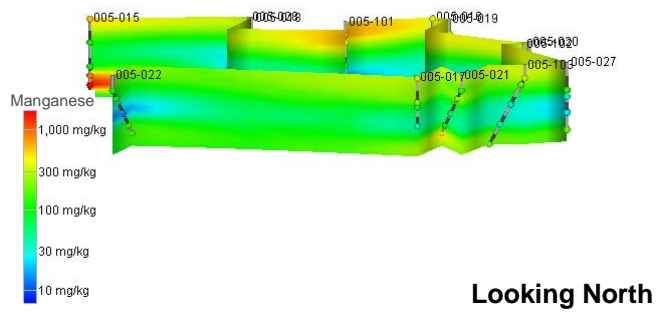
SWMU 5 Iron: 0 – 60 ft bgs (Vertical Exaggeration = 2)



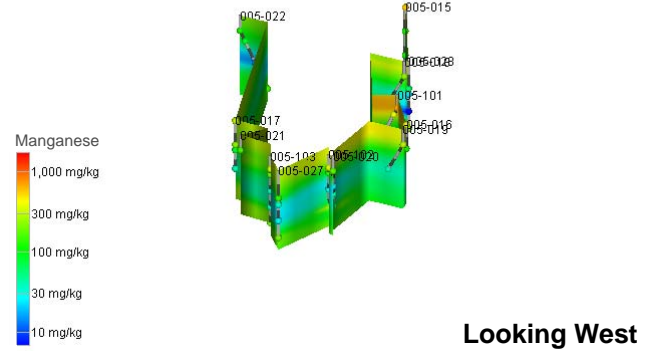
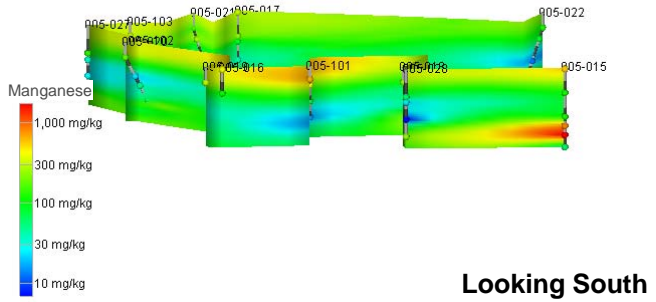
Looking South

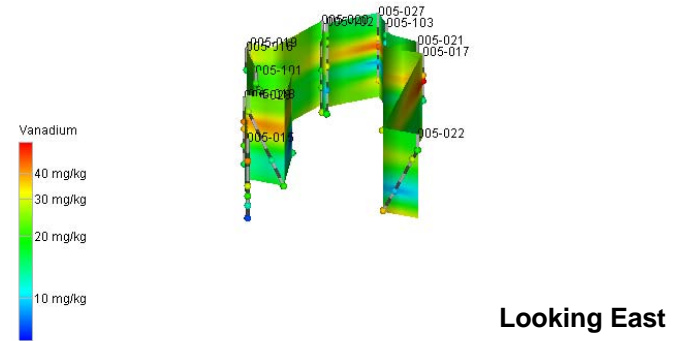
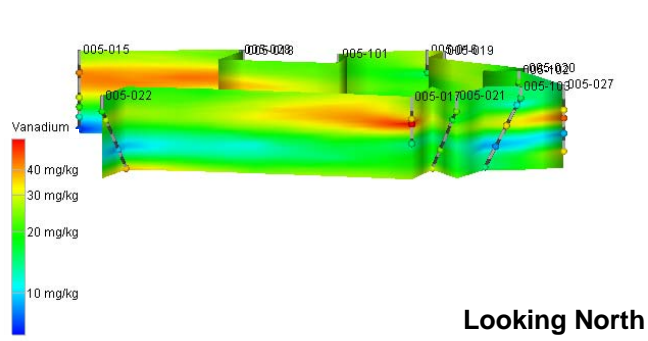


Looking West

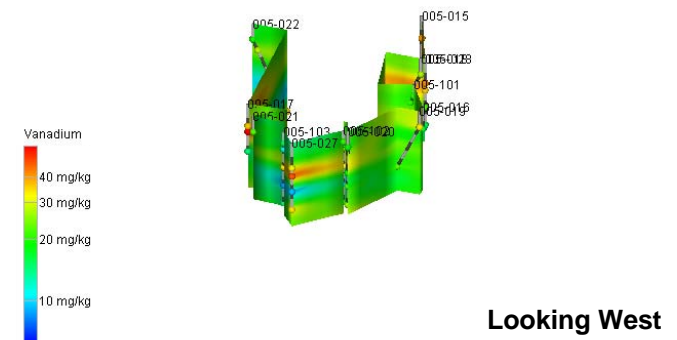
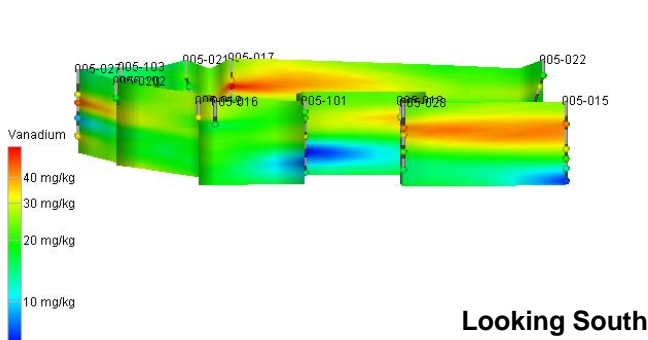


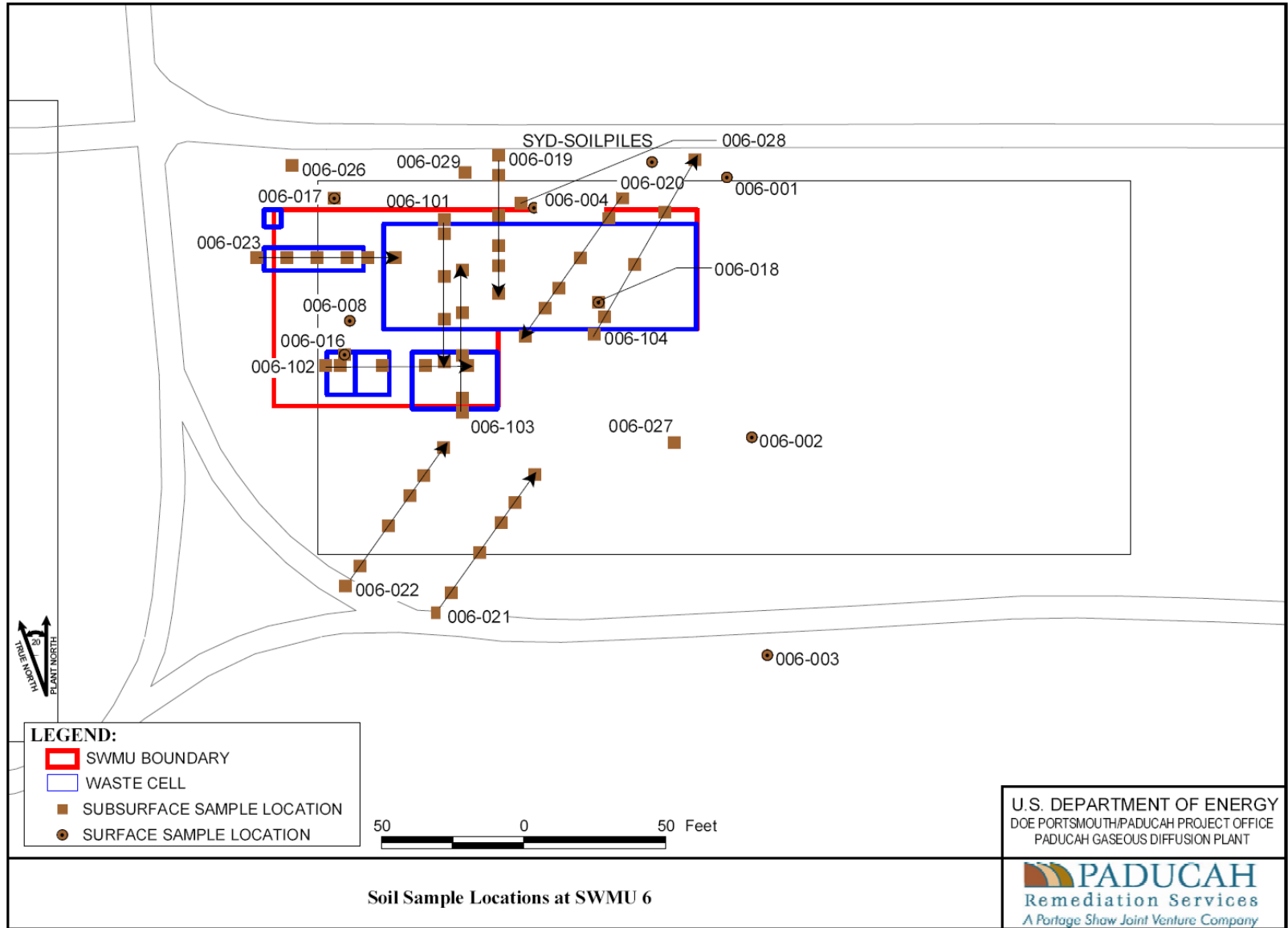
SWMU 5 Manganese: 0 – 60 ft bgs (Vertical Exaggeration = 2)

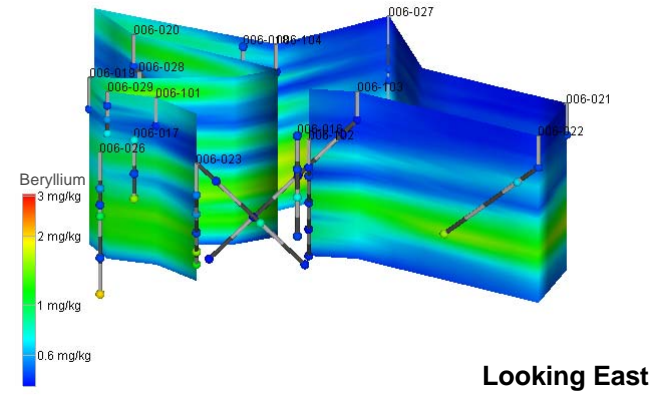
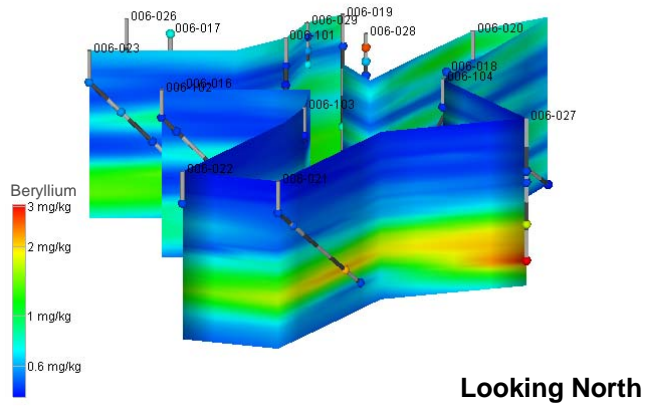




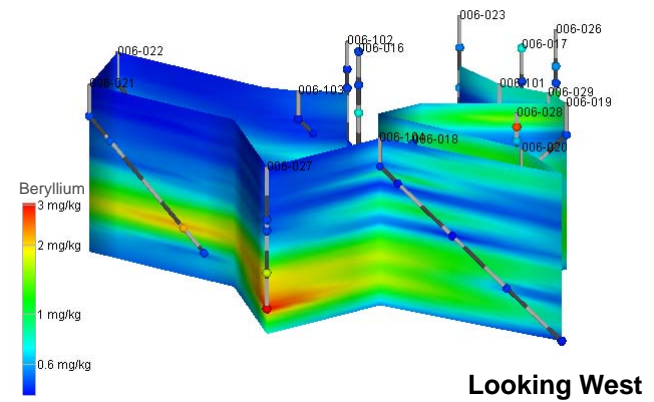
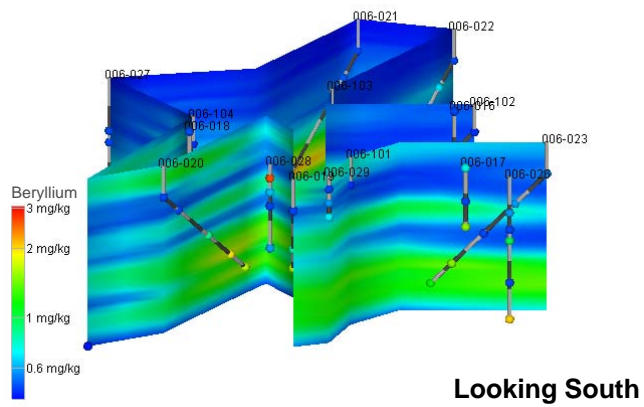
SWMU 5 Vanadium: 0 – 60 ft bgs (Vertical Exaggeration = 2)

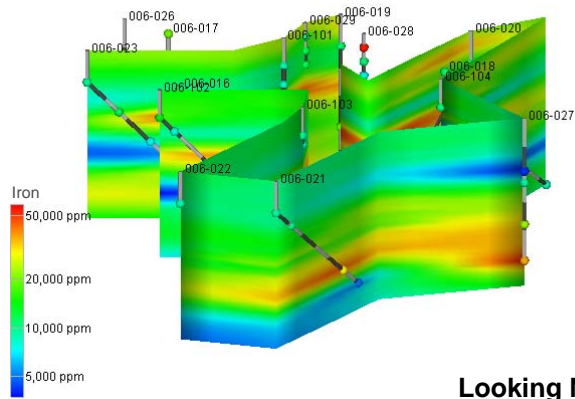




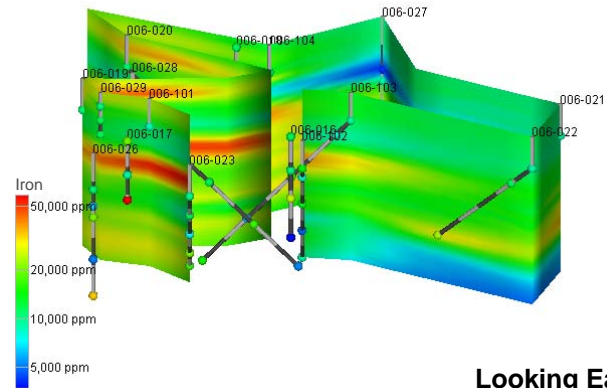


SWMU 6 Beryllium: 0 – 60 ft bgs (Vertical Exaggeration = 1)



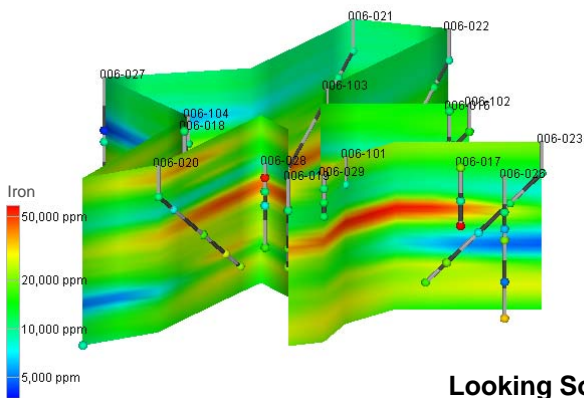


Looking North

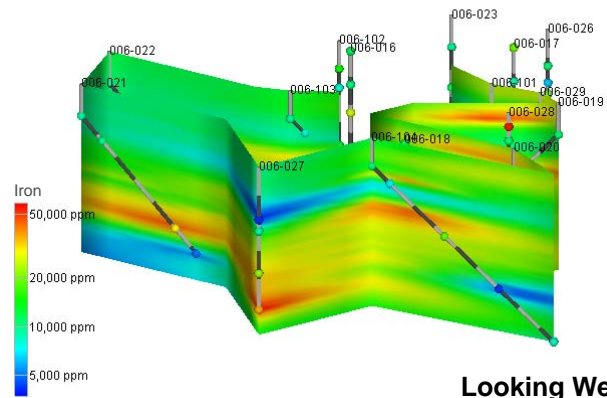


Looking East

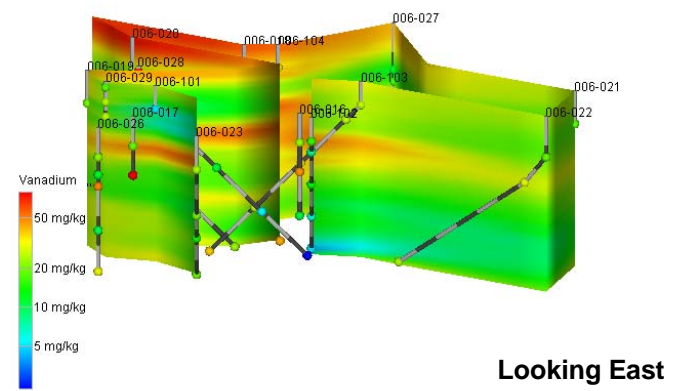
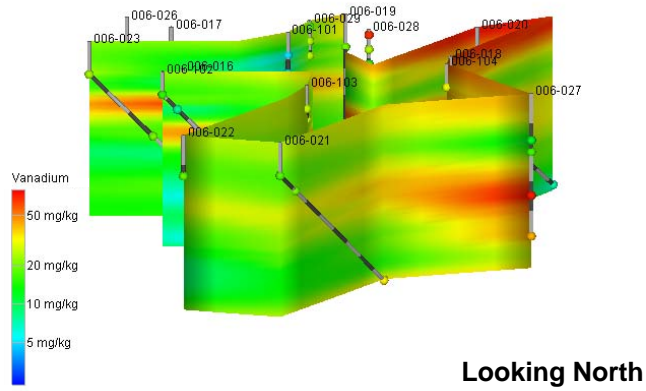
SWMU 6 Iron: 0 – 60 ft bgs (Vertical Exaggeration = 1)



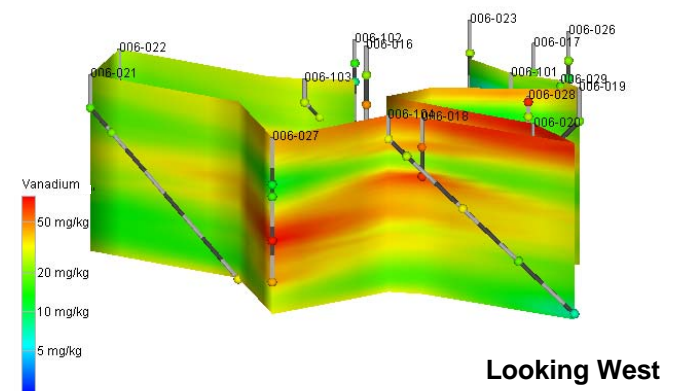
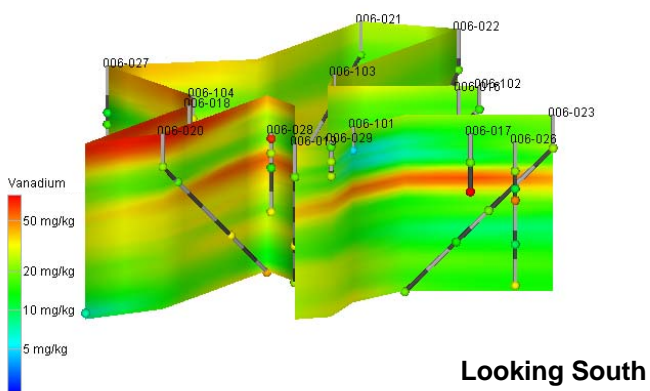
Looking South

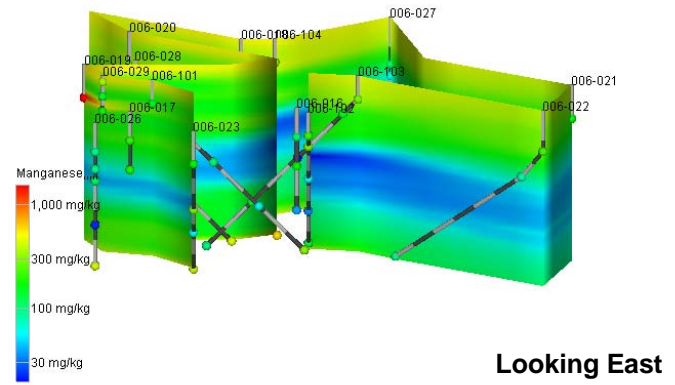
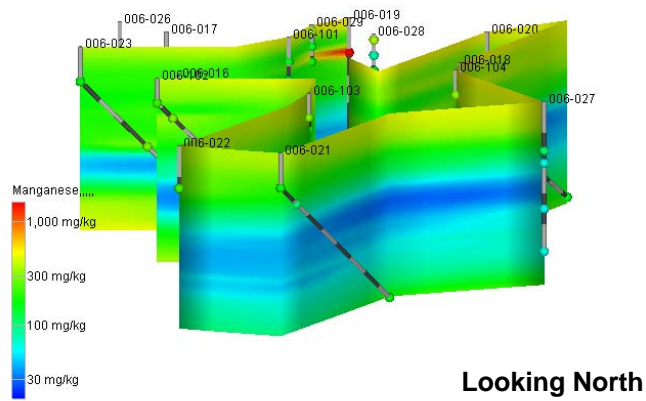


Looking West

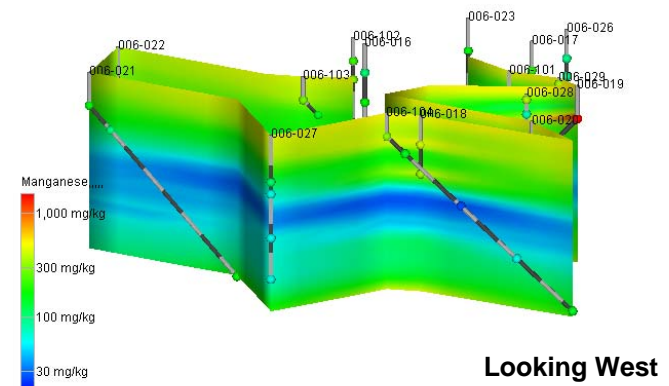
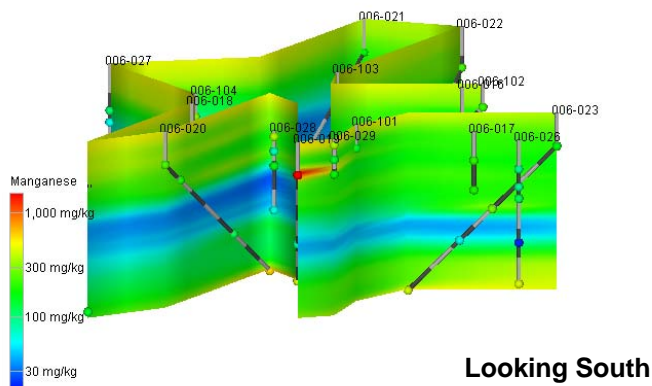


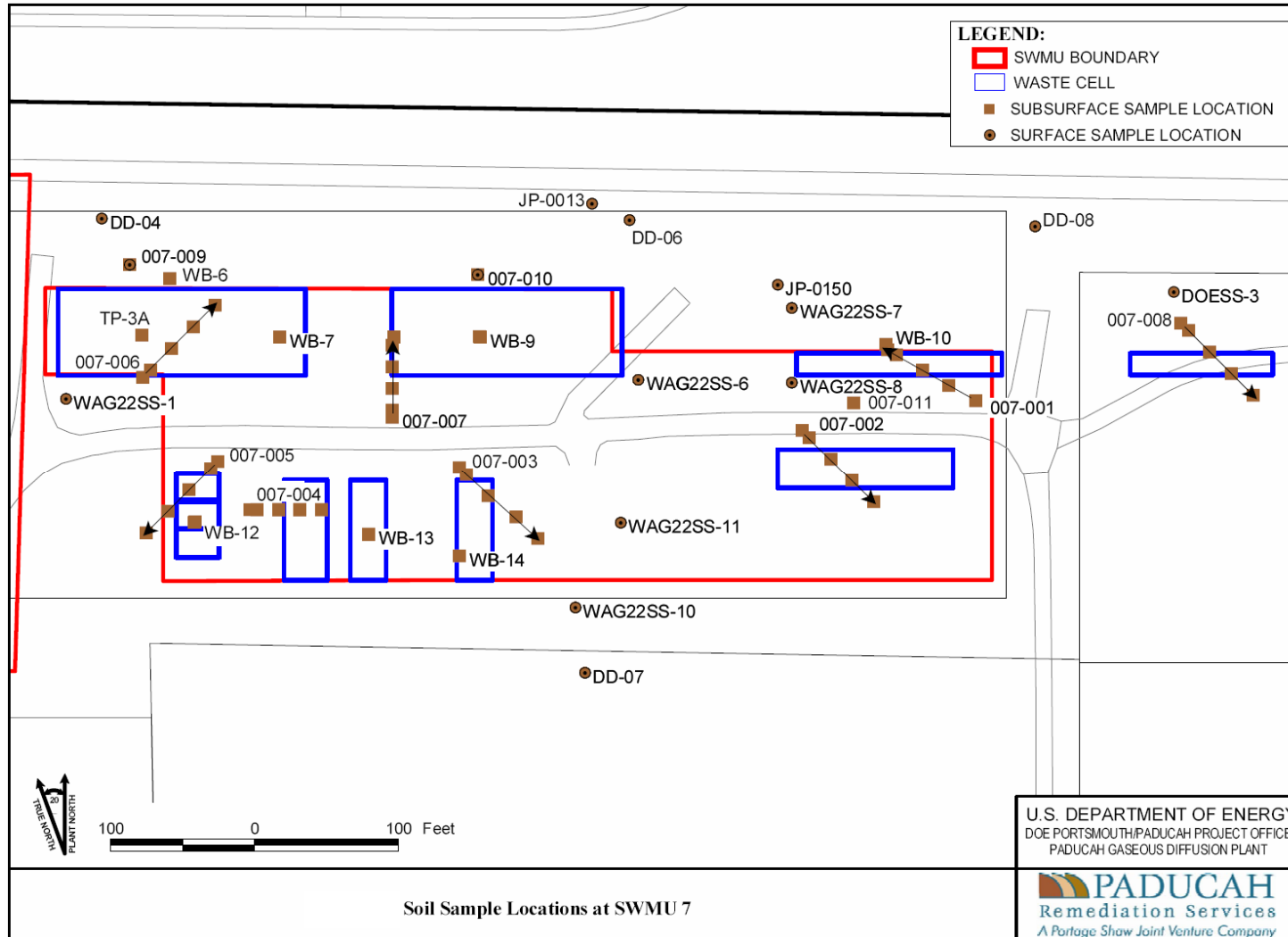
SWMU 6 Vanadium: 0 – 60 ft bgs (Vertical Exaggeration = 1)

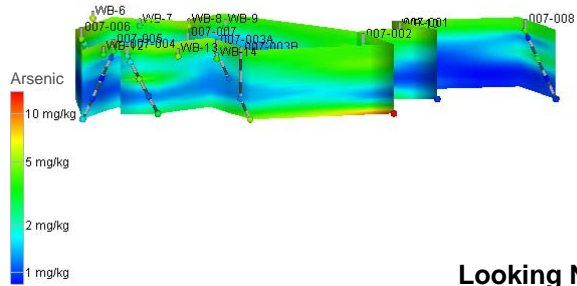




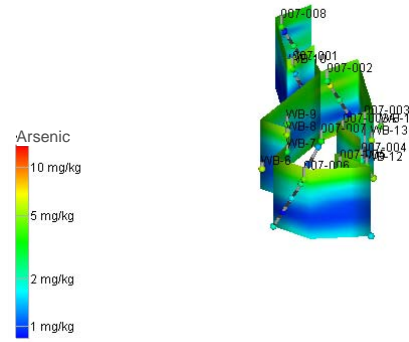
SWMU 6 Manganese: 0 – 60 ft bgs
(Vertical Exaggeration = 1)





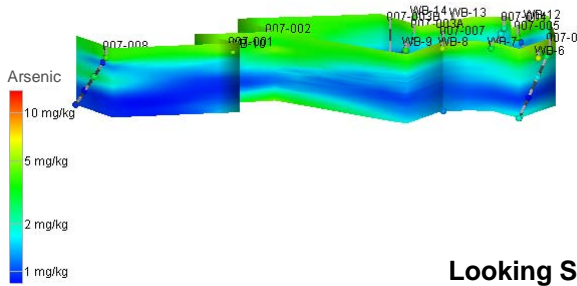


Looking North

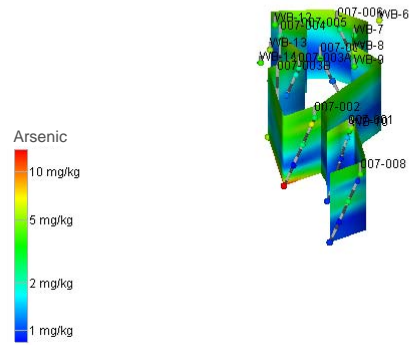


Looking East

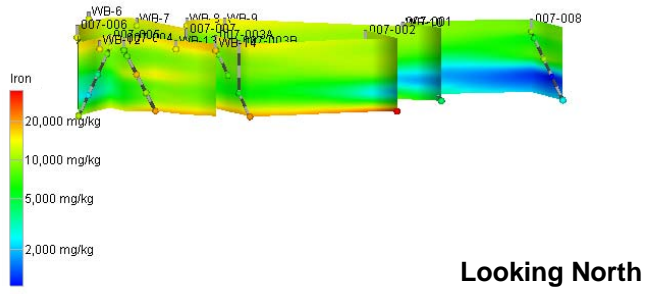
SWMU 7 Arsenic: 0 – 60 ft bgs (Vertical Exaggeration = 2)



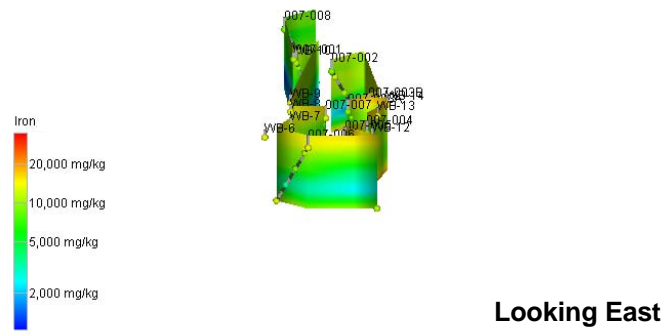
Looking South



Looking West

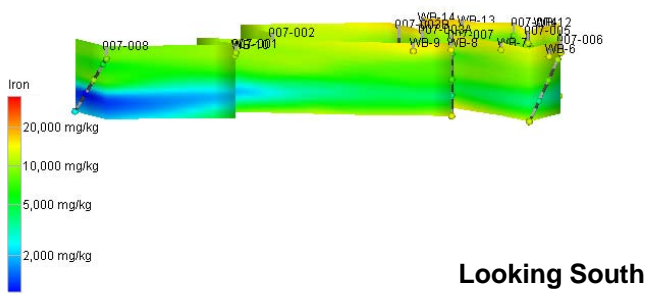


Looking North

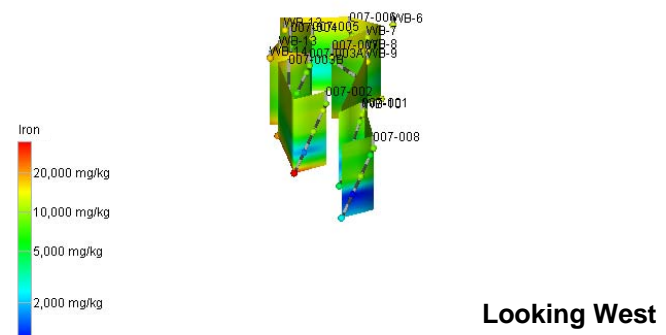


Looking East

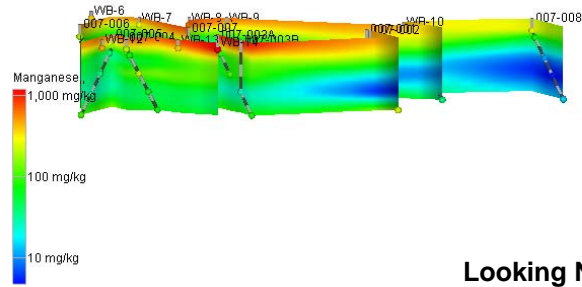
SWMU 7 Iron: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



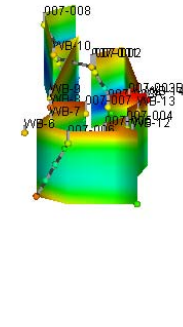
Looking South



Looking West

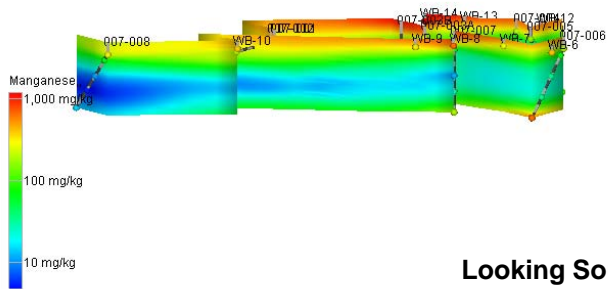


Looking North

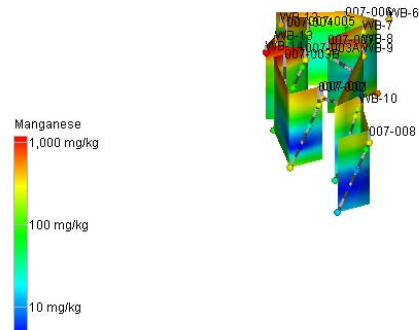


Looking East

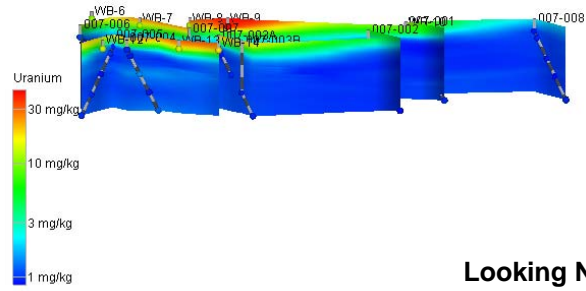
SWMU 7 Manganese: 0 – 60 ft bgs (Vertical Exaggeration = 2)



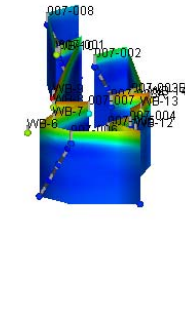
Looking South



Looking West

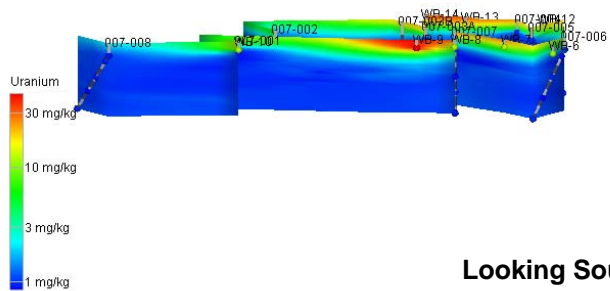


Looking North

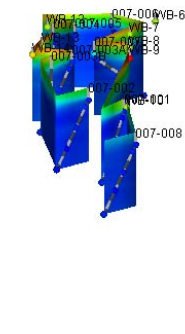


Looking East

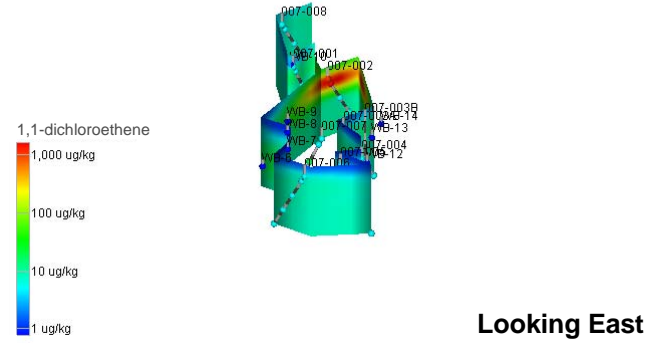
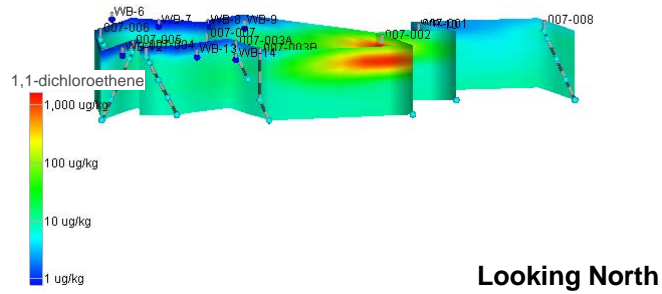
SWMU 7 Uranium: 0 – 60 ft bgs (Vertical Exaggeration = 2)



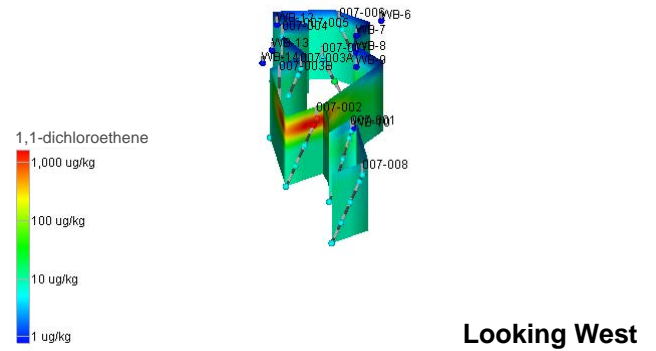
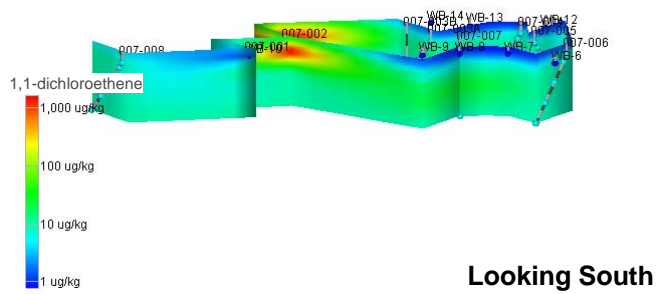
Looking South

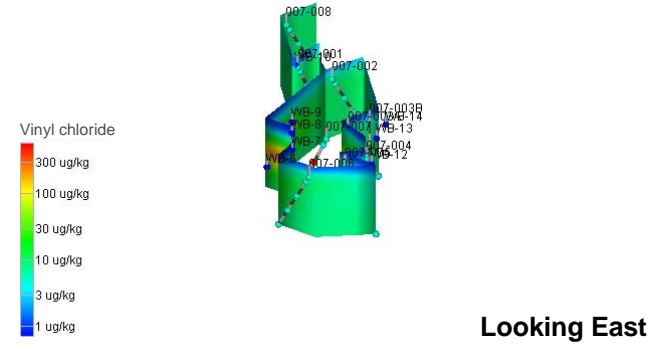
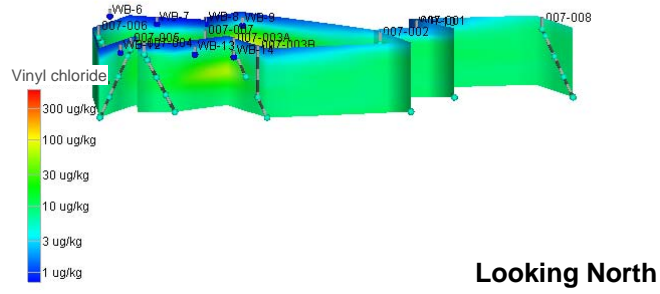


Looking West

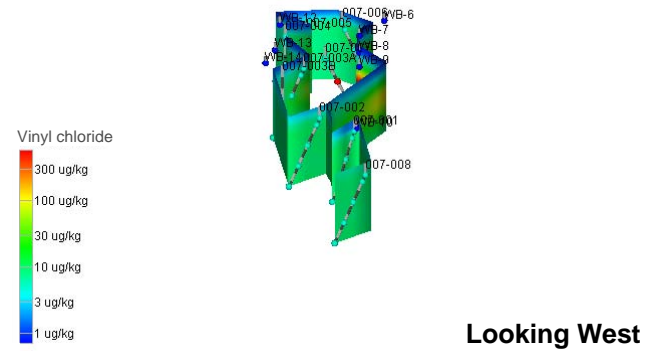
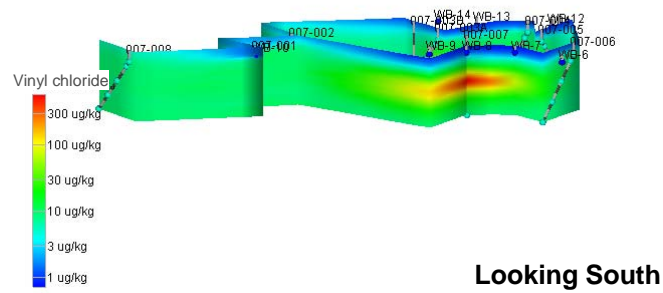


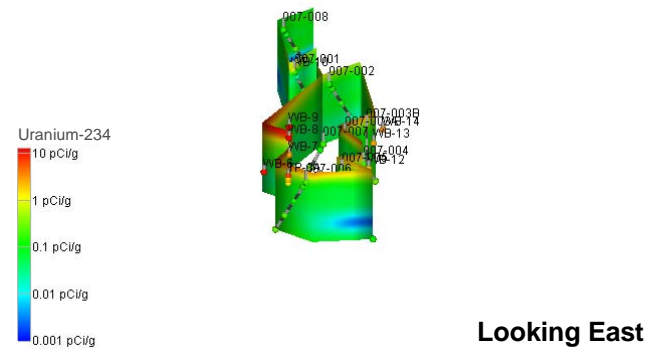
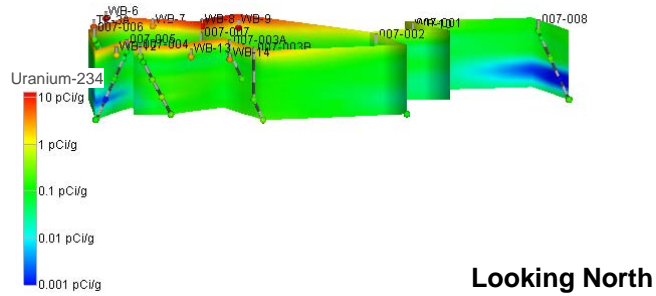
SWMU 7 1,1-Dichloroethene: 0 – 60 ft bgs (Vertical Exaggeration = 2)



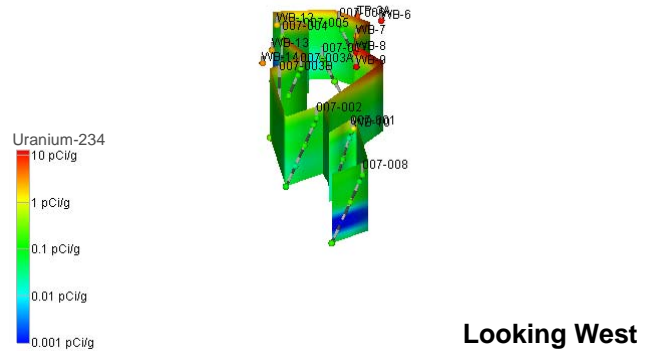
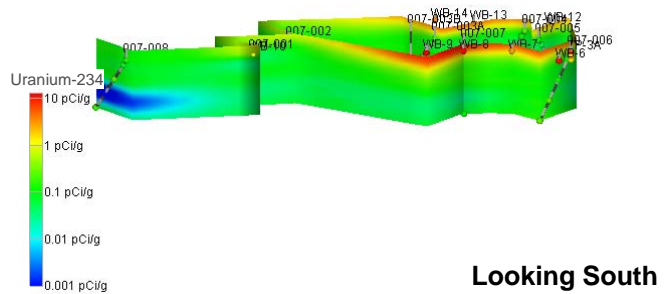


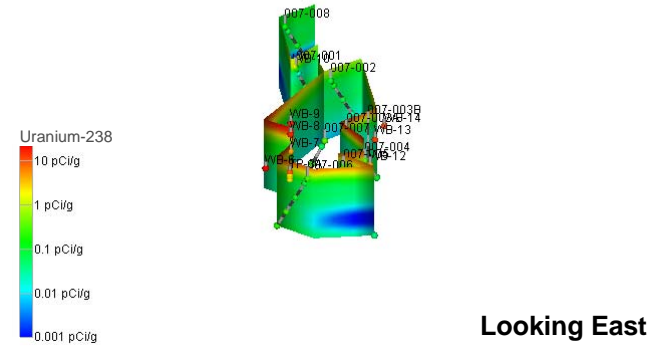
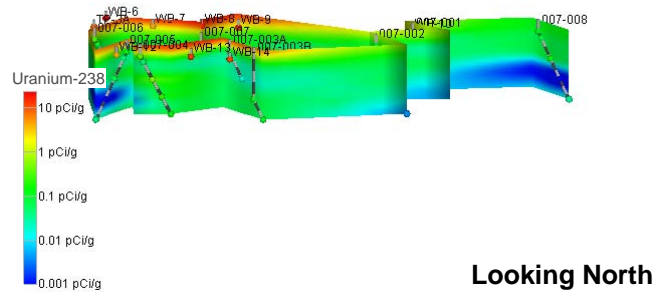
SWMU 7 Vinyl chloride: 0 – 60 ft bgs (Vertical Exaggeration = 2)



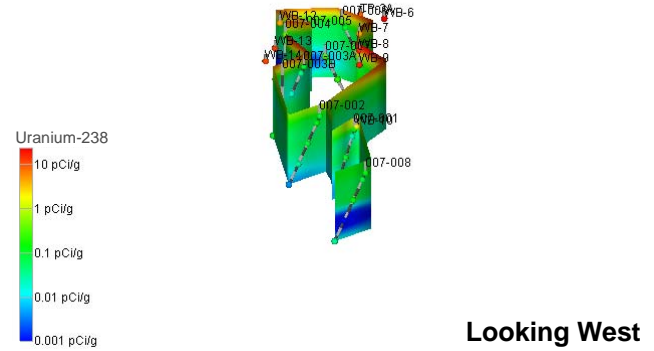
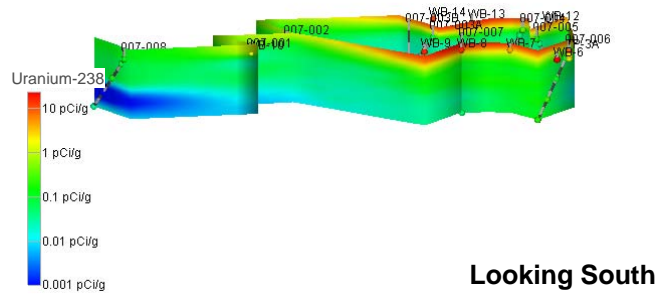


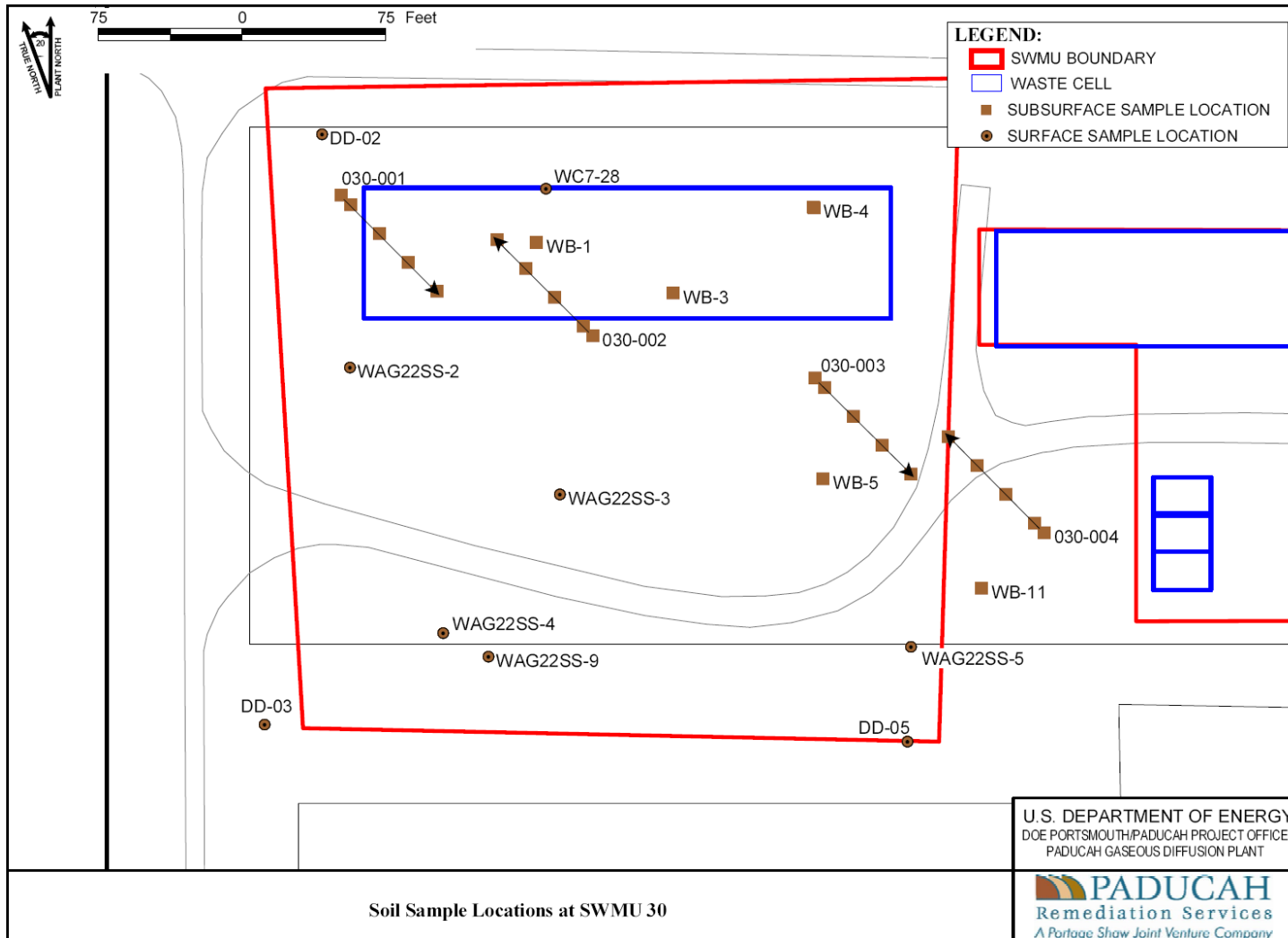
SWMU 7 ²³⁴U: 0 – 60 ft bgs (Vertical Exaggeration = 2)

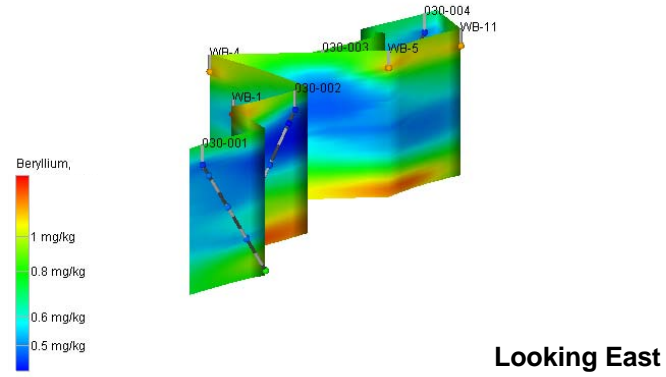
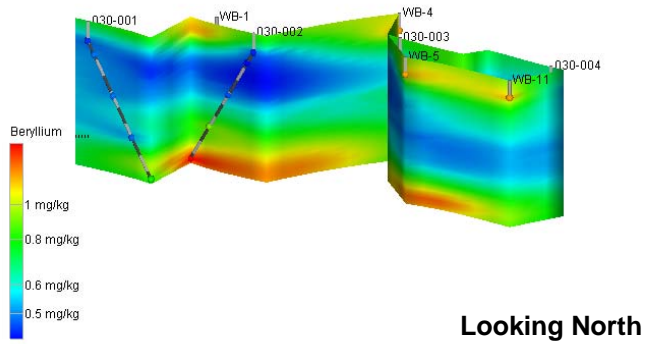




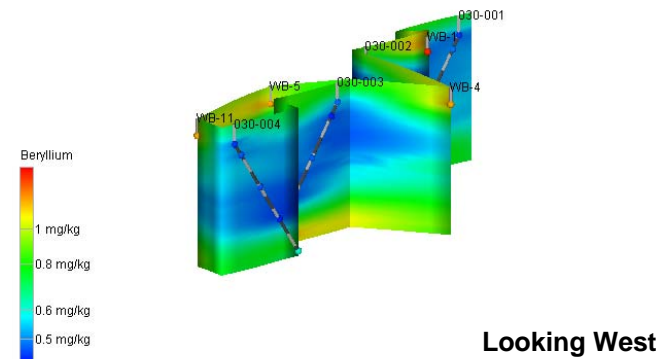
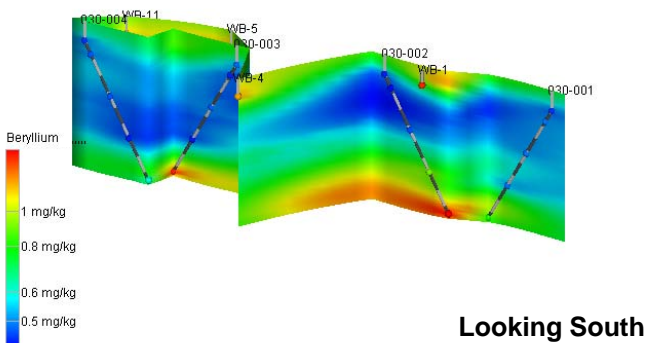
SWMU 7 ²³⁸U: 0 – 60 ft bgs (Vertical Exaggeration = 2)

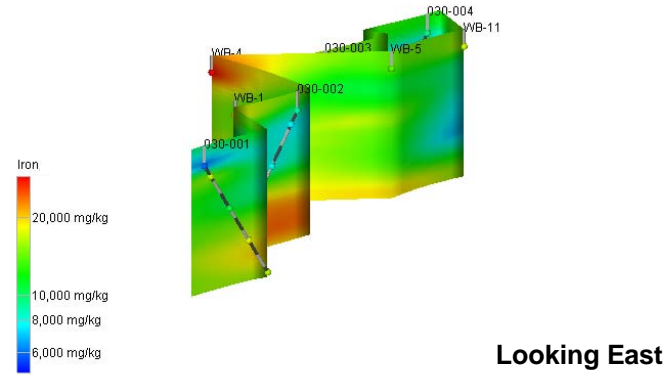
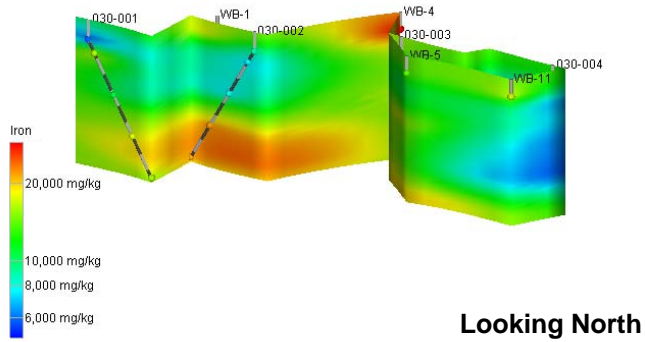




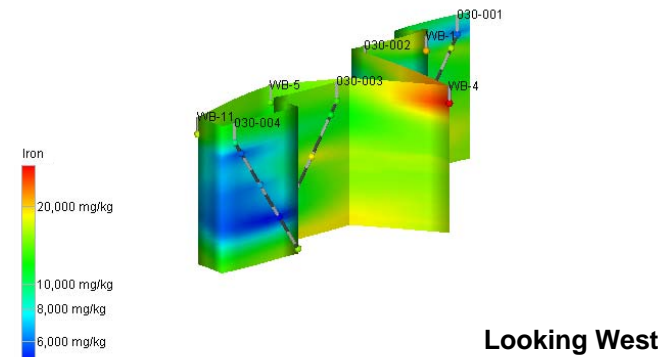
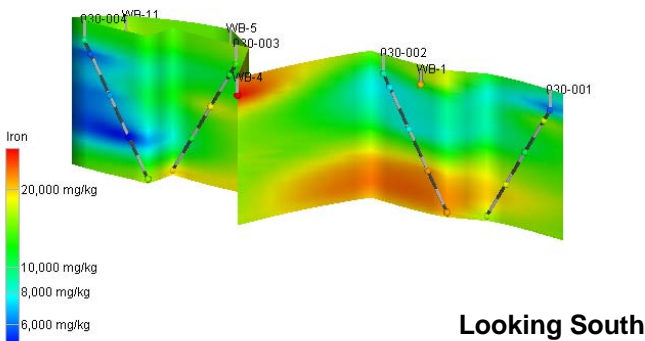


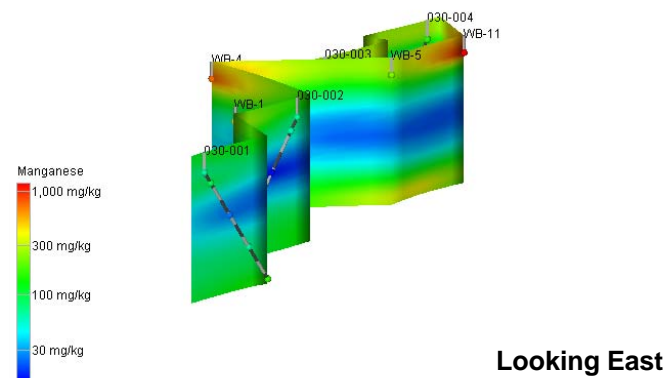
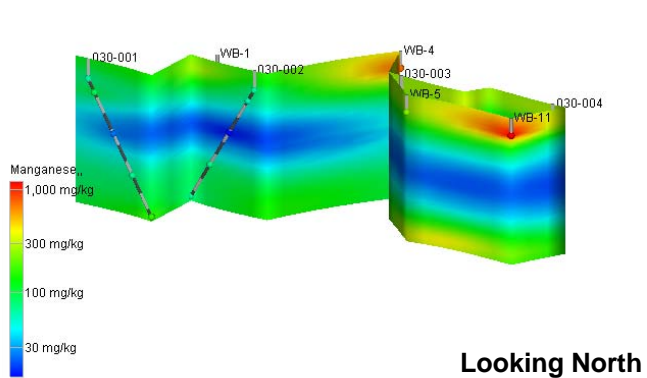
SWMU 30 Beryllium: 0 – 60 ft bgs (Vertical Exaggeration = 2)



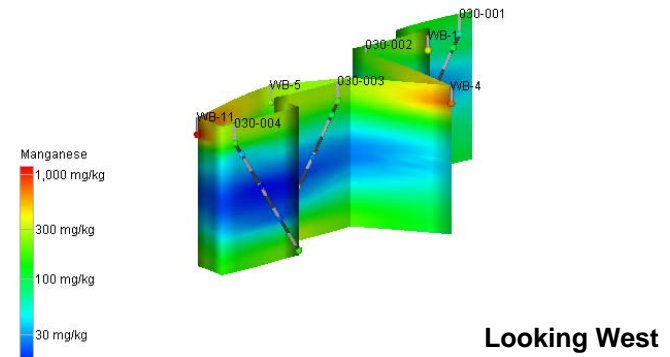
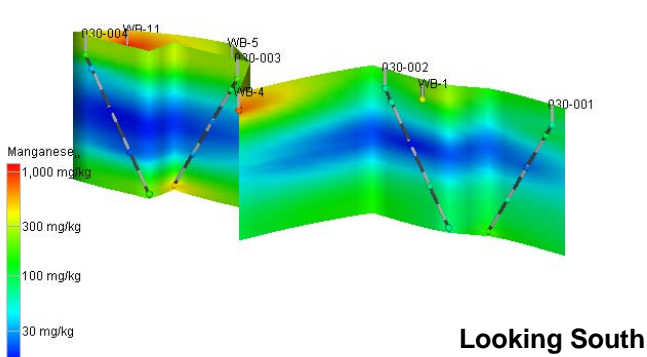


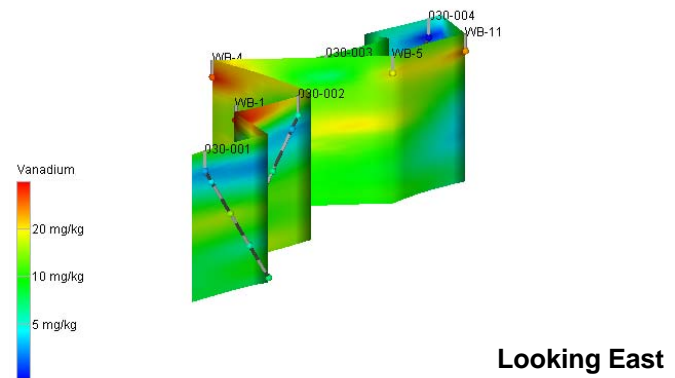
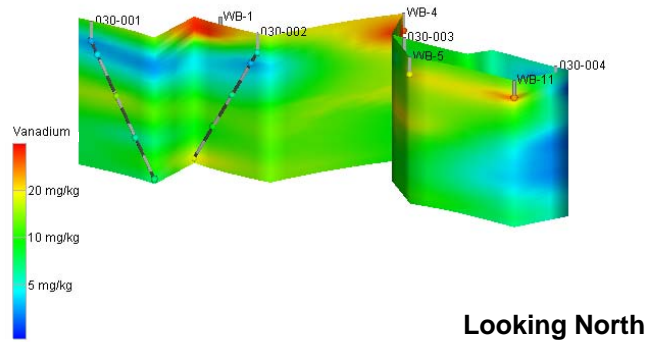
SWMU 30 Iron: 0 – 60 ft bgs
(Vertical Exaggeration = 2)



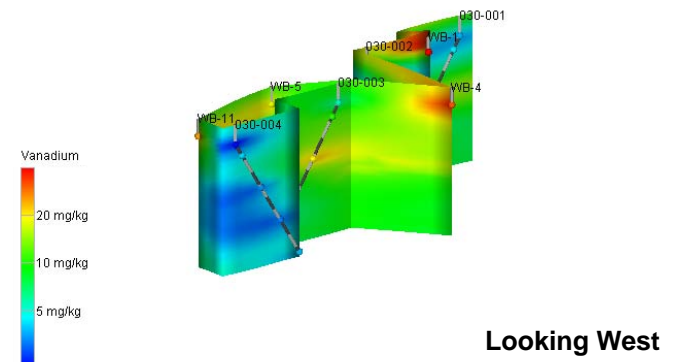
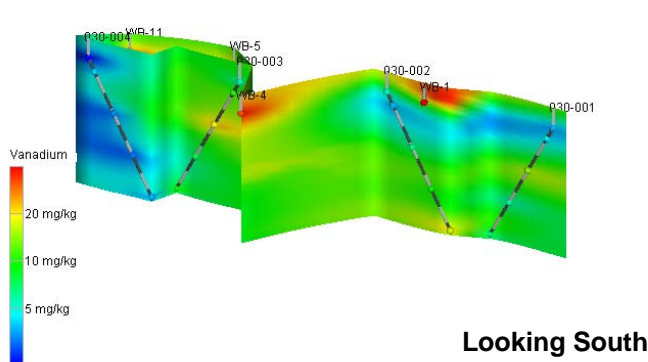


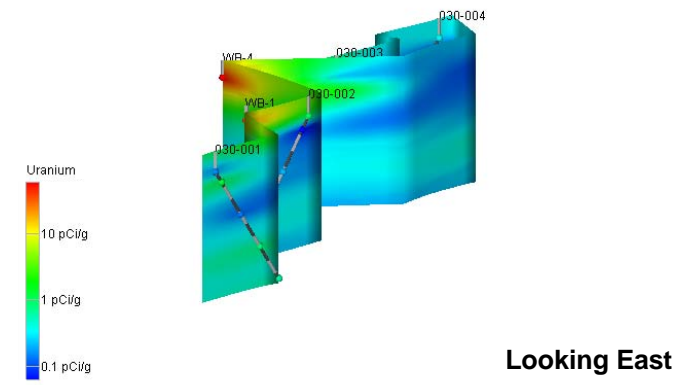
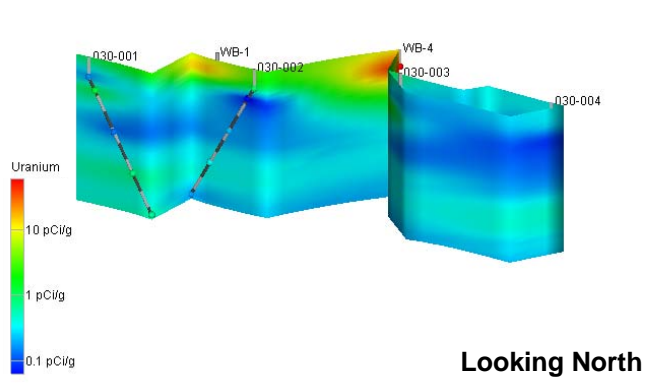
SWMU 30 Manganese: 0 – 60 ft bgs (Vertical Exaggeration = 2)



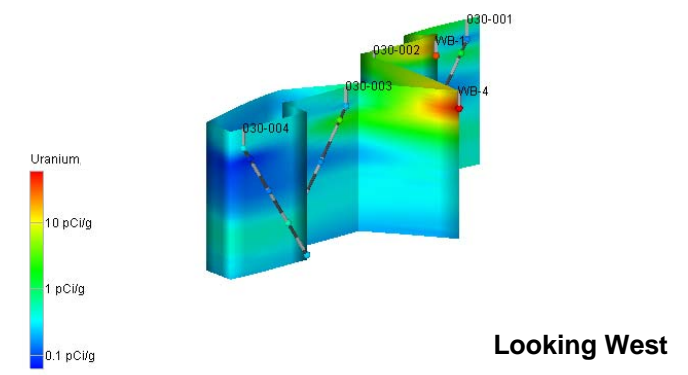
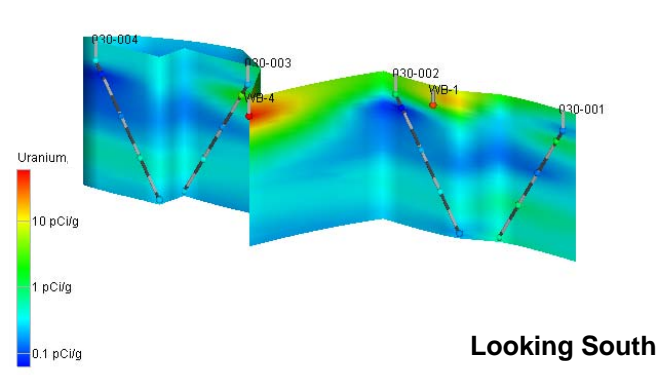


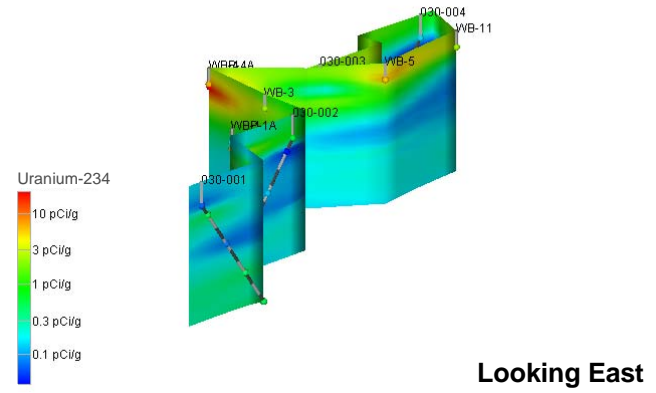
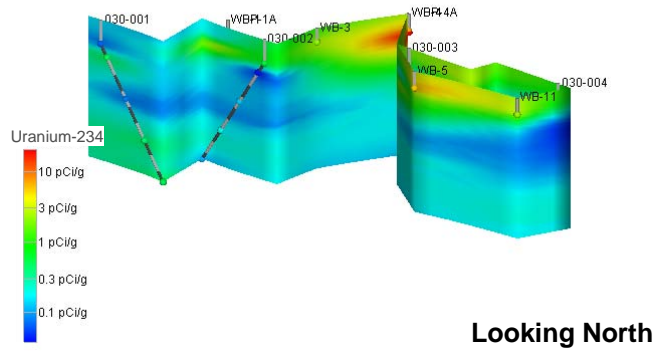
SWMU 30 Vanadium: 0 – 60 ft bgs (Vertical Exaggeration = 2)



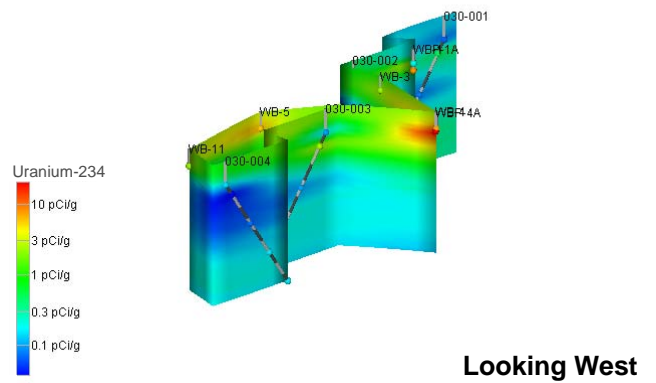
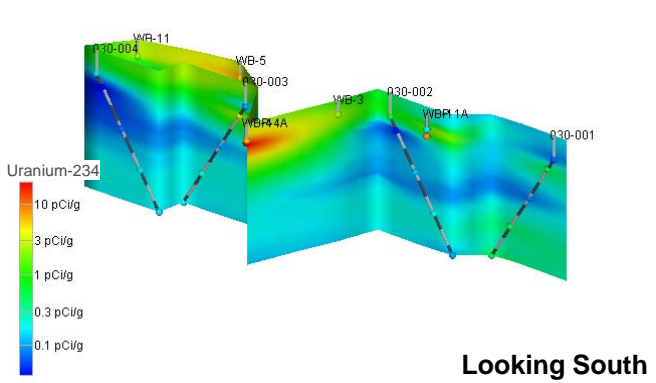


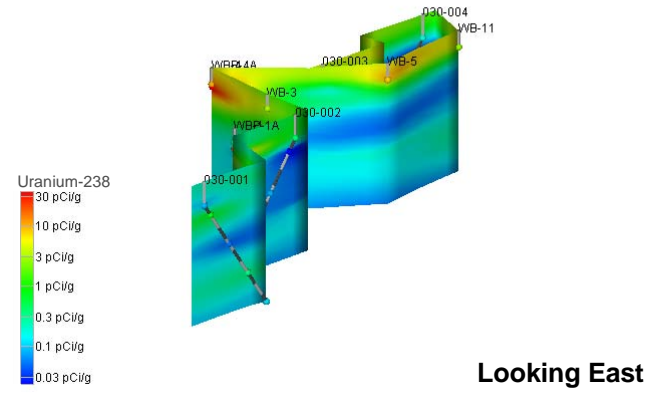
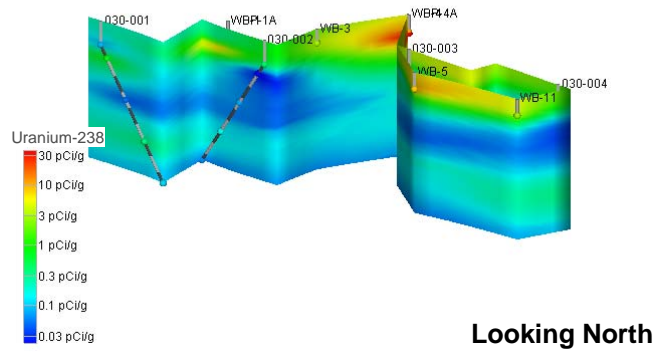
SWMU 30 Uranium: 0 – 60 ft bgs (Vertical Exaggeration = 2)



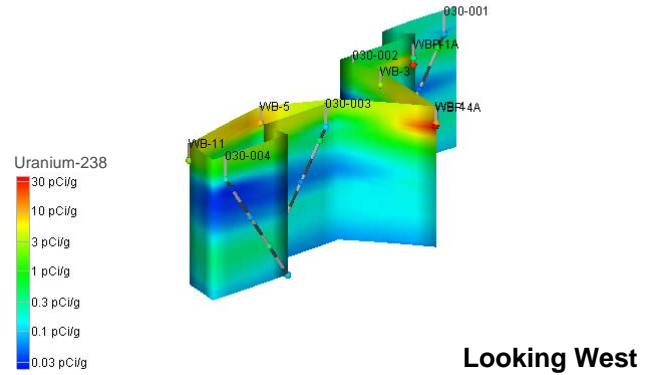
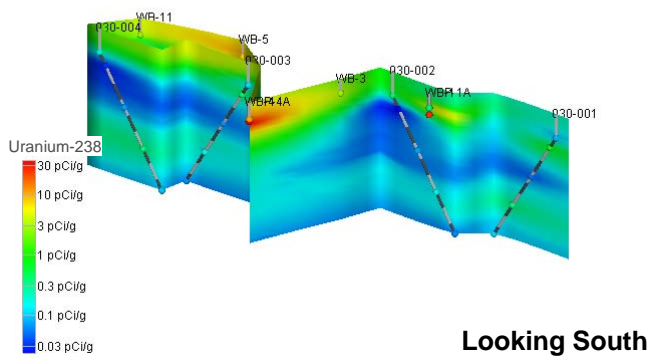


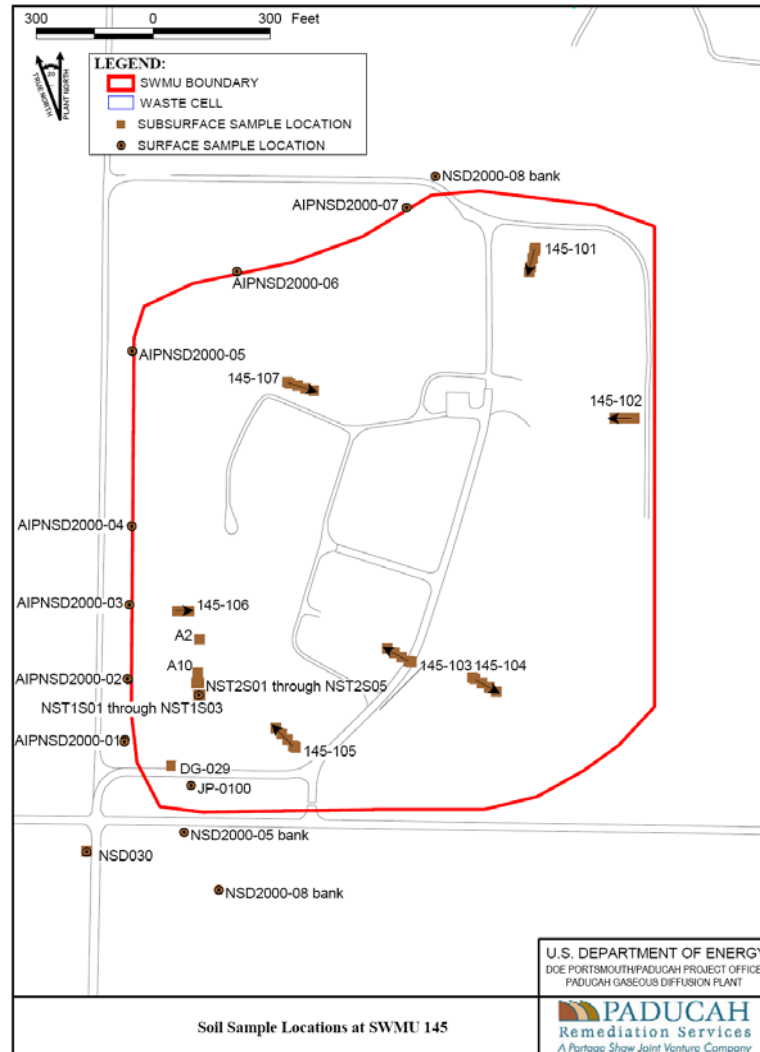
SWMU 30 ^{234}U : 0 – 60 ft bgs
(Vertical Exaggeration = 2)

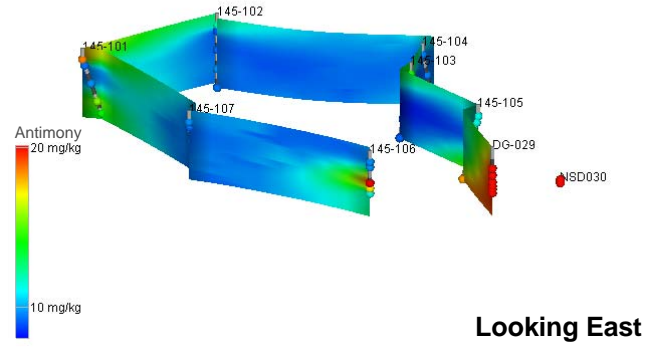
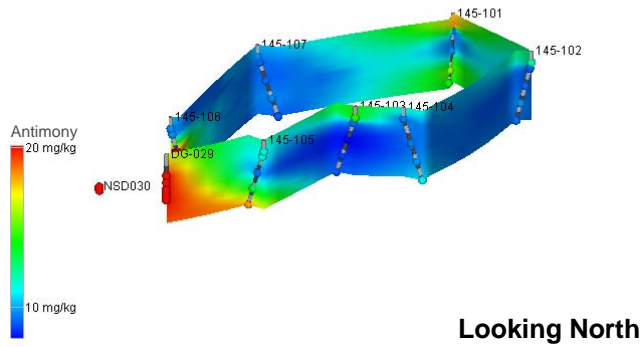




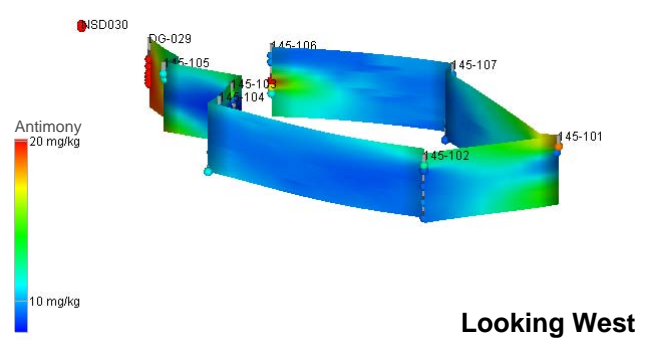
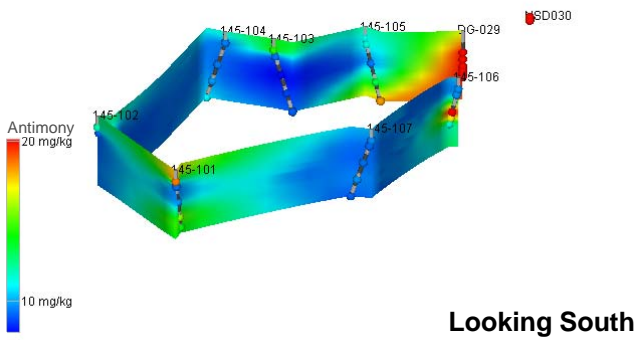
SWMU 30 ²³⁸U: 0 – 60 ft bgs
(Vertical Exaggeration = 2)

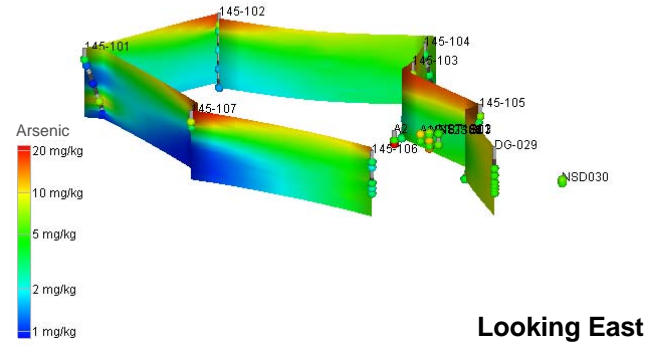
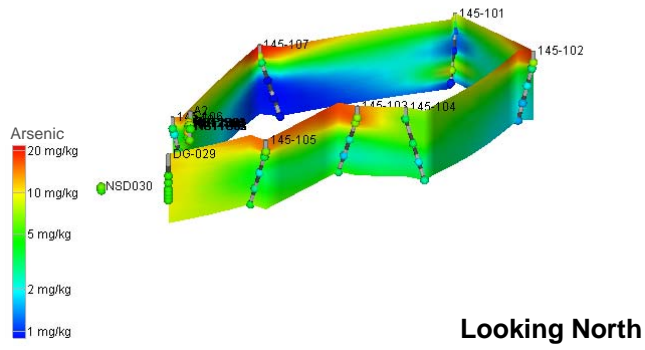




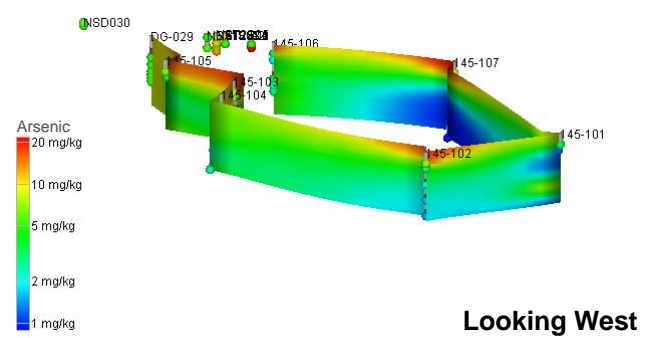
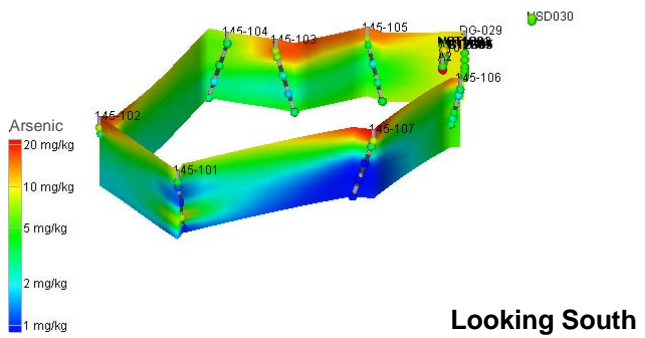


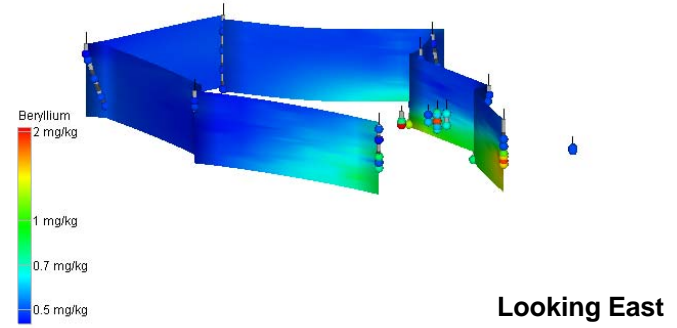
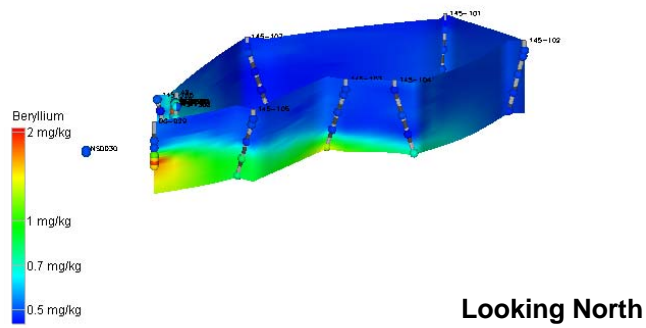
SWMU 145 Antimony: 0 – 60 ft bgs
(Vertical Exaggeration = 4)



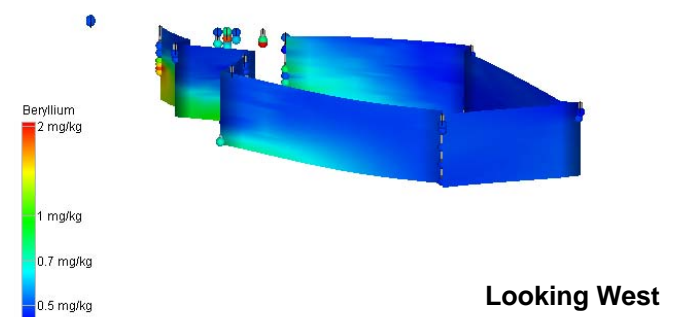
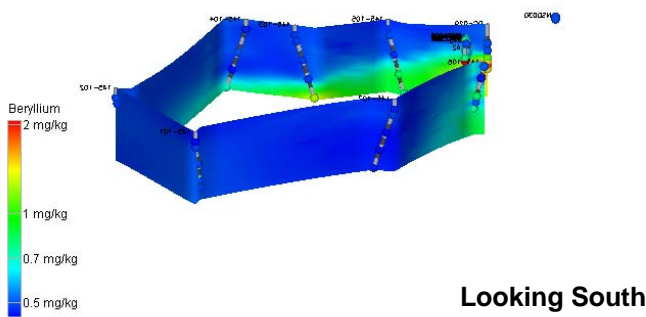


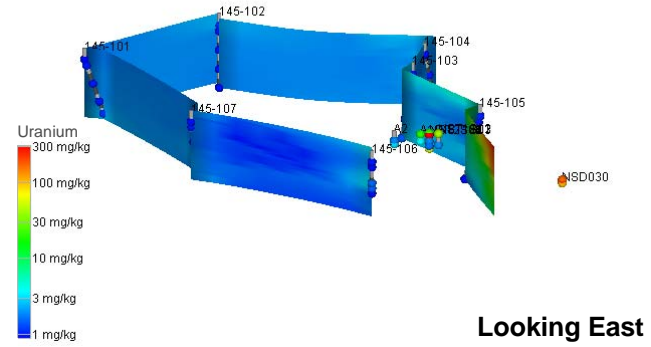
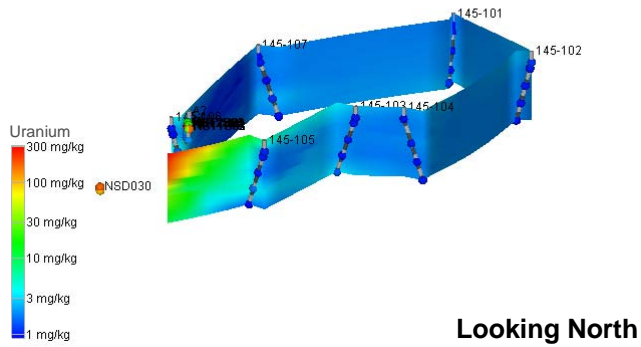
SWMU 145 Arsenic: 0 – 60 ft bgs
(Vertical Exaggeration = 4)



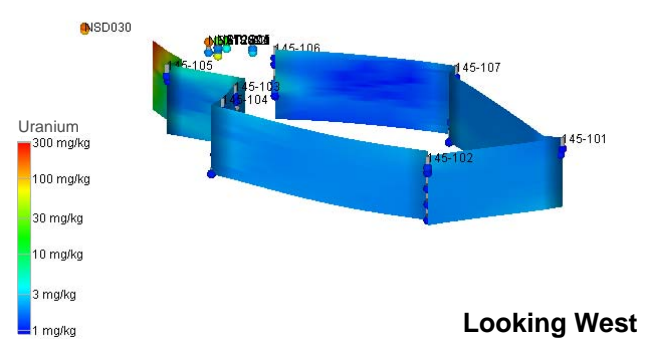
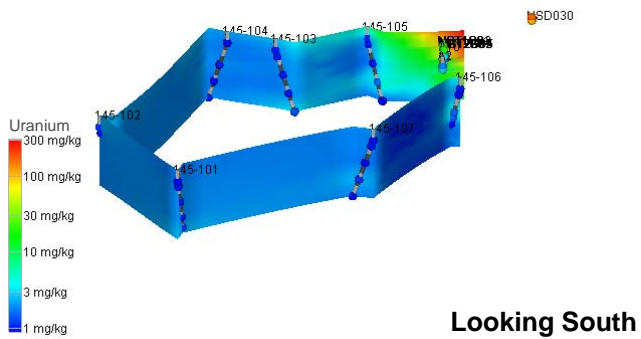


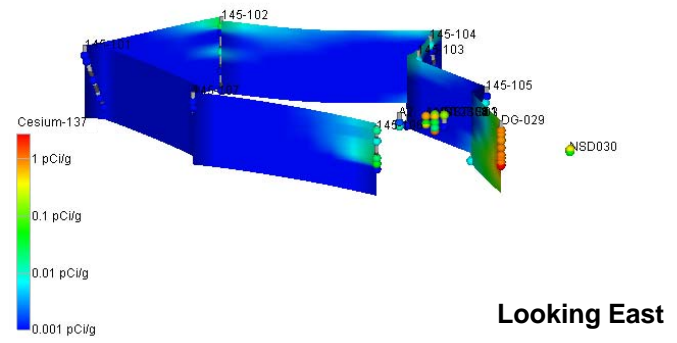
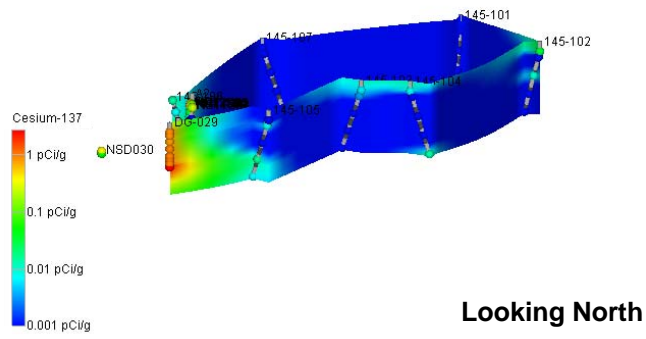
SWMU 145 Beryllium: 0 – 60 ft bgs (Vertical Exaggeration = 4)



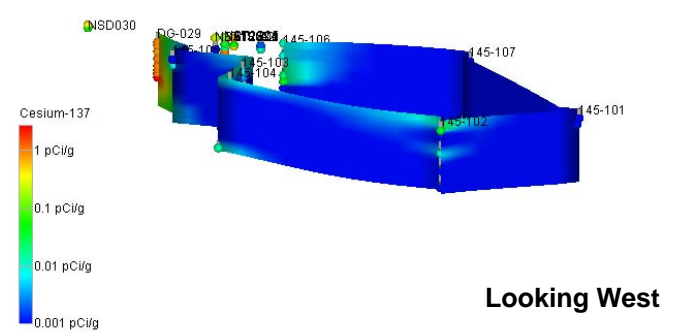
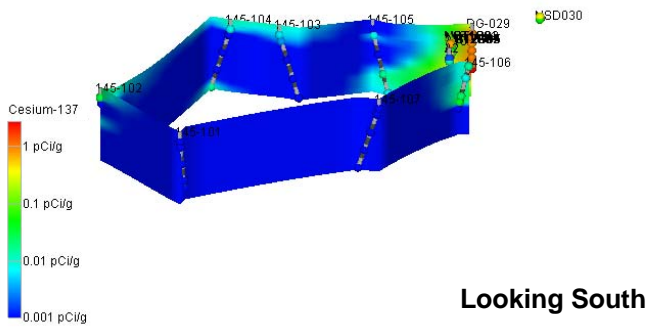


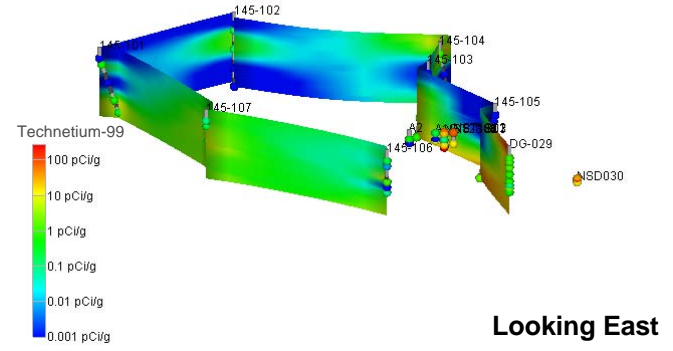
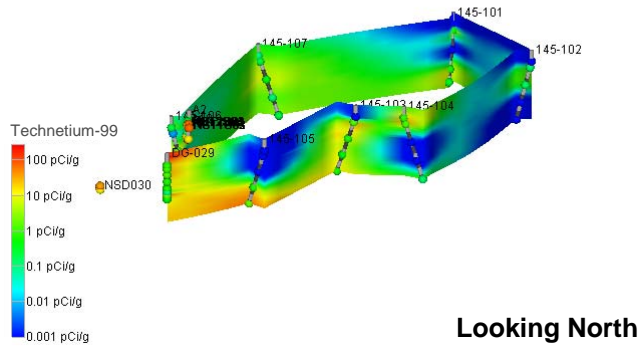
SWMU 145 Uranium: 0 – 60 ft bgs
(Vertical Exaggeration = 4)



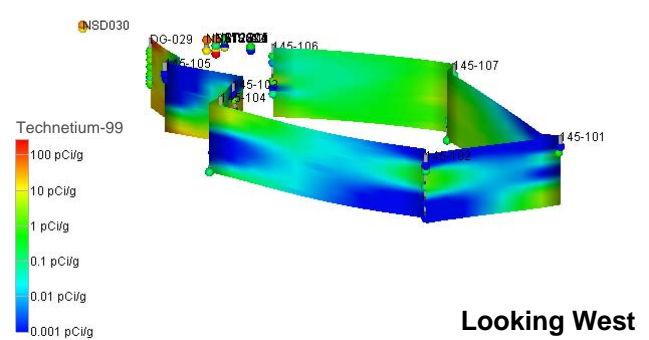
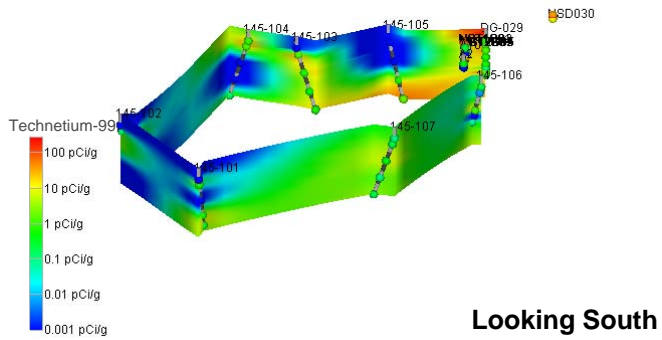


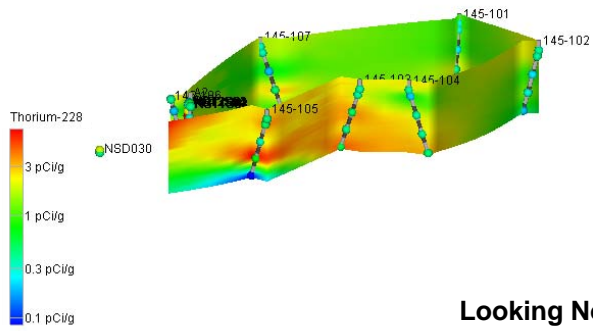
SWMU 145 ¹³⁷Cs: 0 – 60 ft bgs
(Vertical Exaggeration = 4)



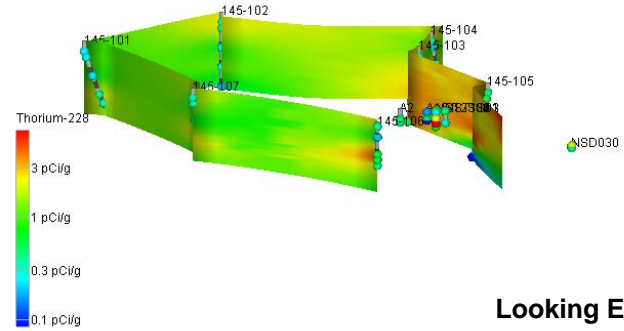


SWMU 145 ⁹⁹Tc: 0 – 60 ft bgs
(Vertical Exaggeration = 4)



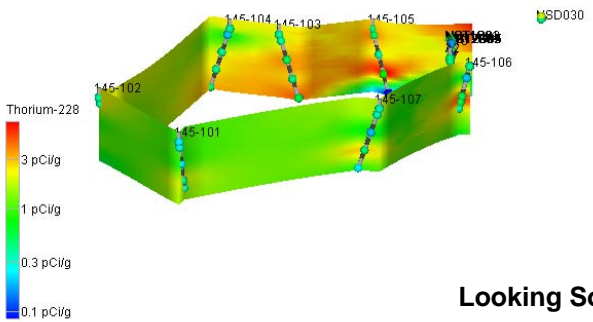


Looking North

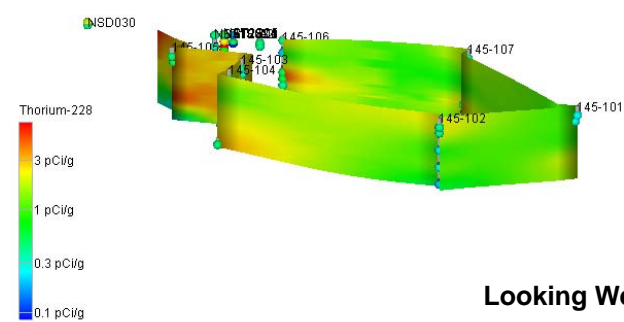


Looking East

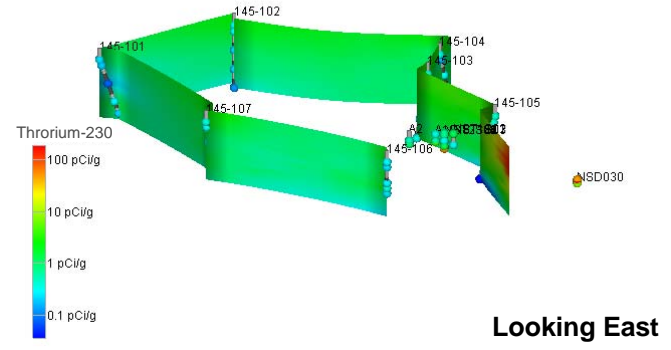
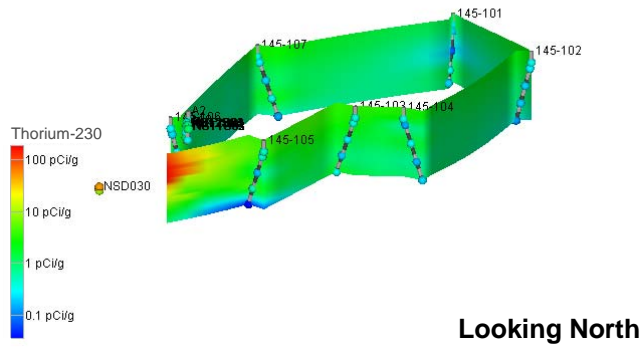
SWMU 145 ²²⁸Th: 0 – 60 ft bgs
(Vertical Exaggeration = 4)



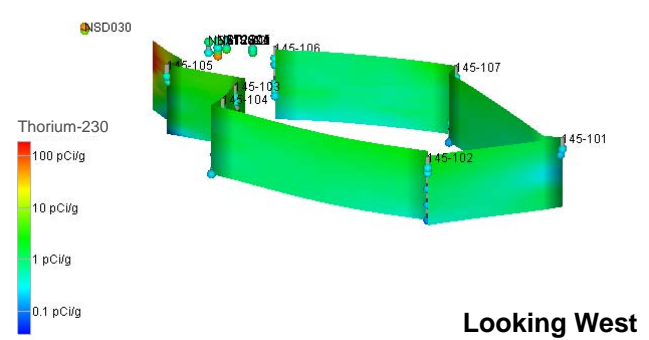
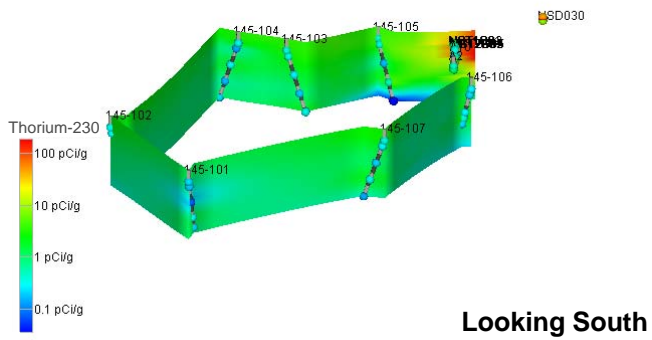
Looking South

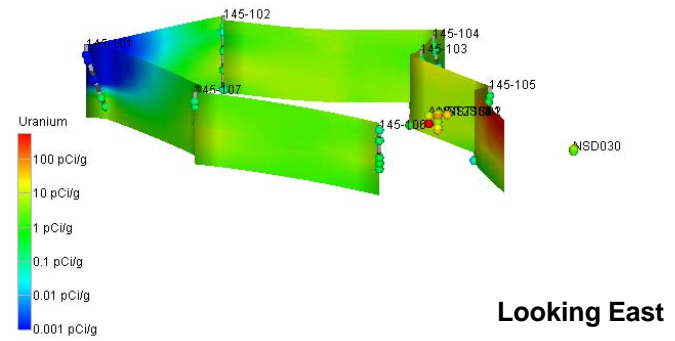
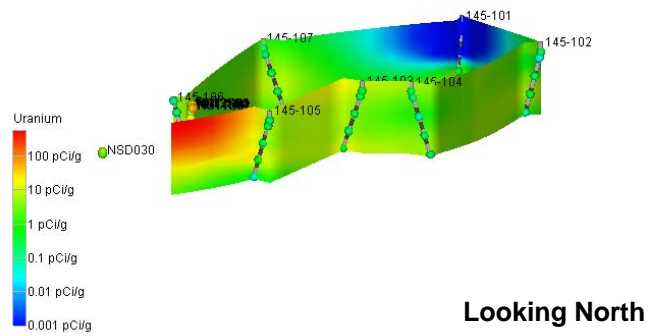


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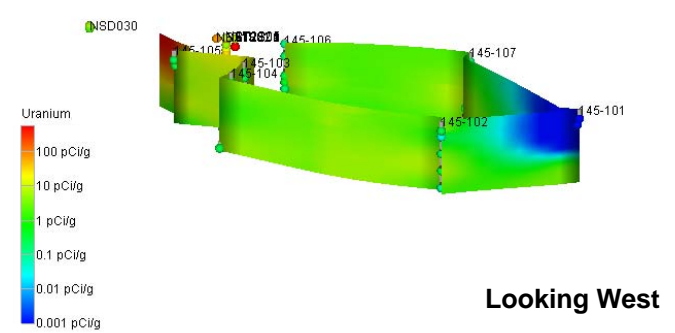
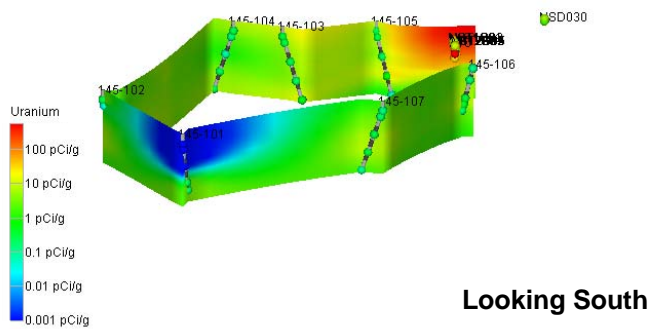


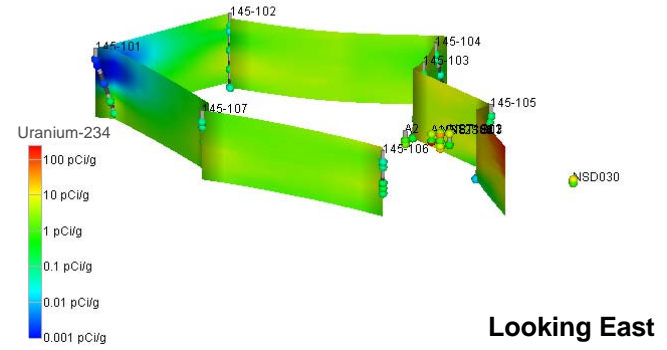
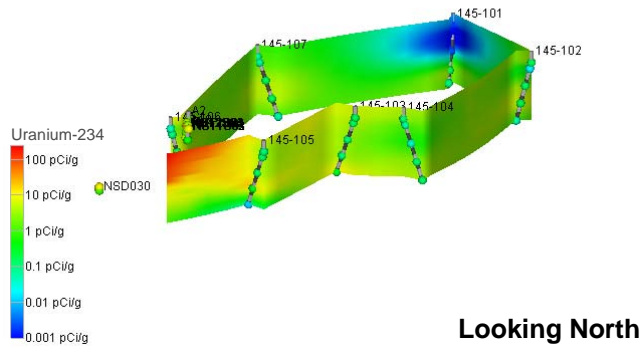
SWMU 145 ²³⁰Th: 0 – 60 ft bgs
(Vertical Exaggeration = 4)



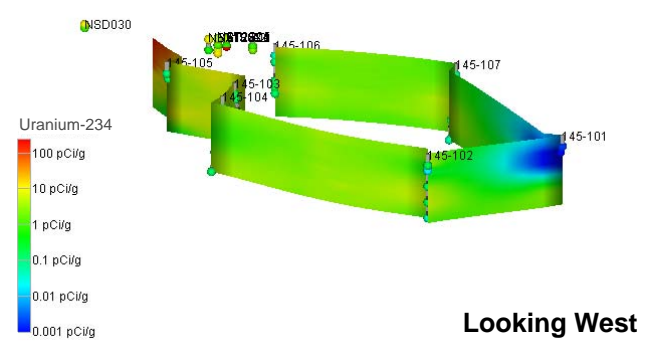
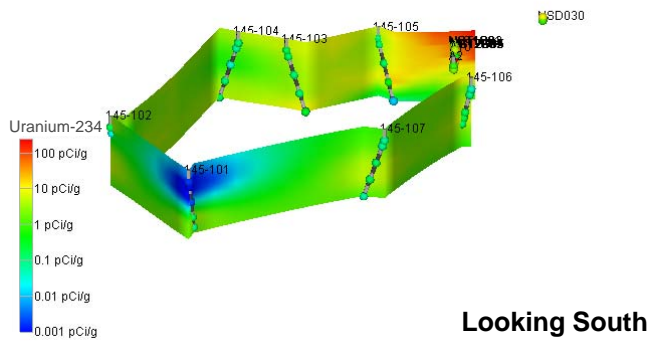


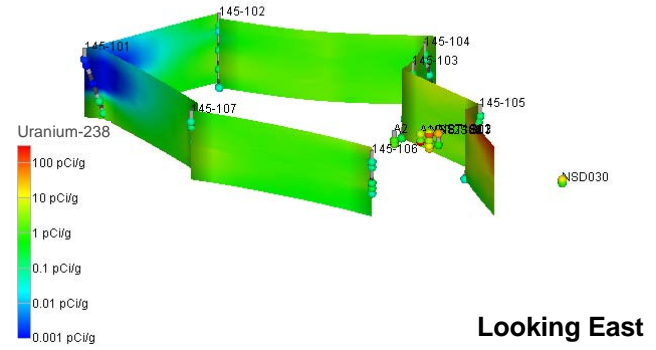
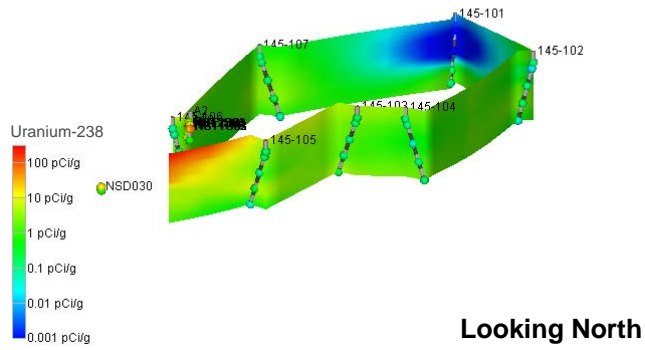
SWMU 145 Uranium: 0 – 60 ft bgs (Vertical Exaggeration = 4)



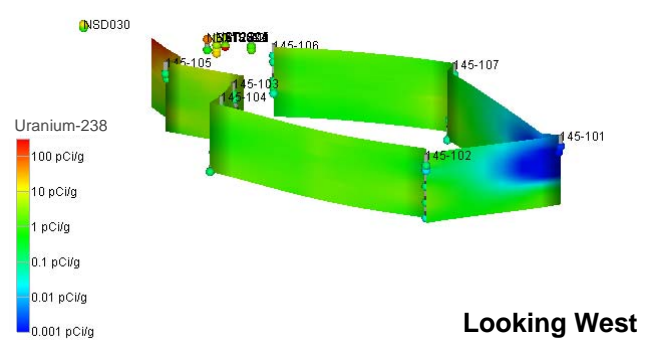
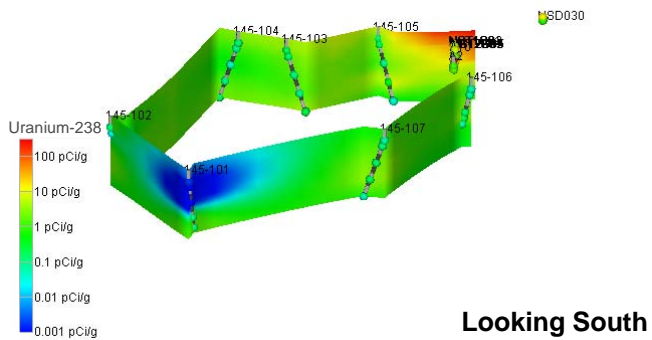


SWMU 145 ²³⁴U: 0 – 60 ft bgs
(Vertical Exaggeration = 4)





SWMU 145 ²³⁸U: 0 – 60 ft bgs
(Vertical Exaggeration = 4)



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