

Experimenting 2D Hotspot Analysis for Determining Topcuts for the Great Hamish Vein in Co-O Mine

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Article

New Outlier Top-Cut Method for Mineral Resource Estimation via 3D Hot Spot Analysis of Borehole Data

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Outline

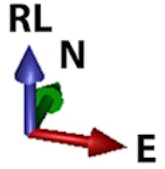
- I. Introduction
- II. Methodology
- III. Results
- IV. Conclusions and Recommendations



Introduction



ISOMETRIC VIEW



Scope and Limitation

- The two domains (2061 and 2062) comprising the most productive vein (GHV) was investigated
- The effect of the top cut on the grade of the resource estimate was solely investigated



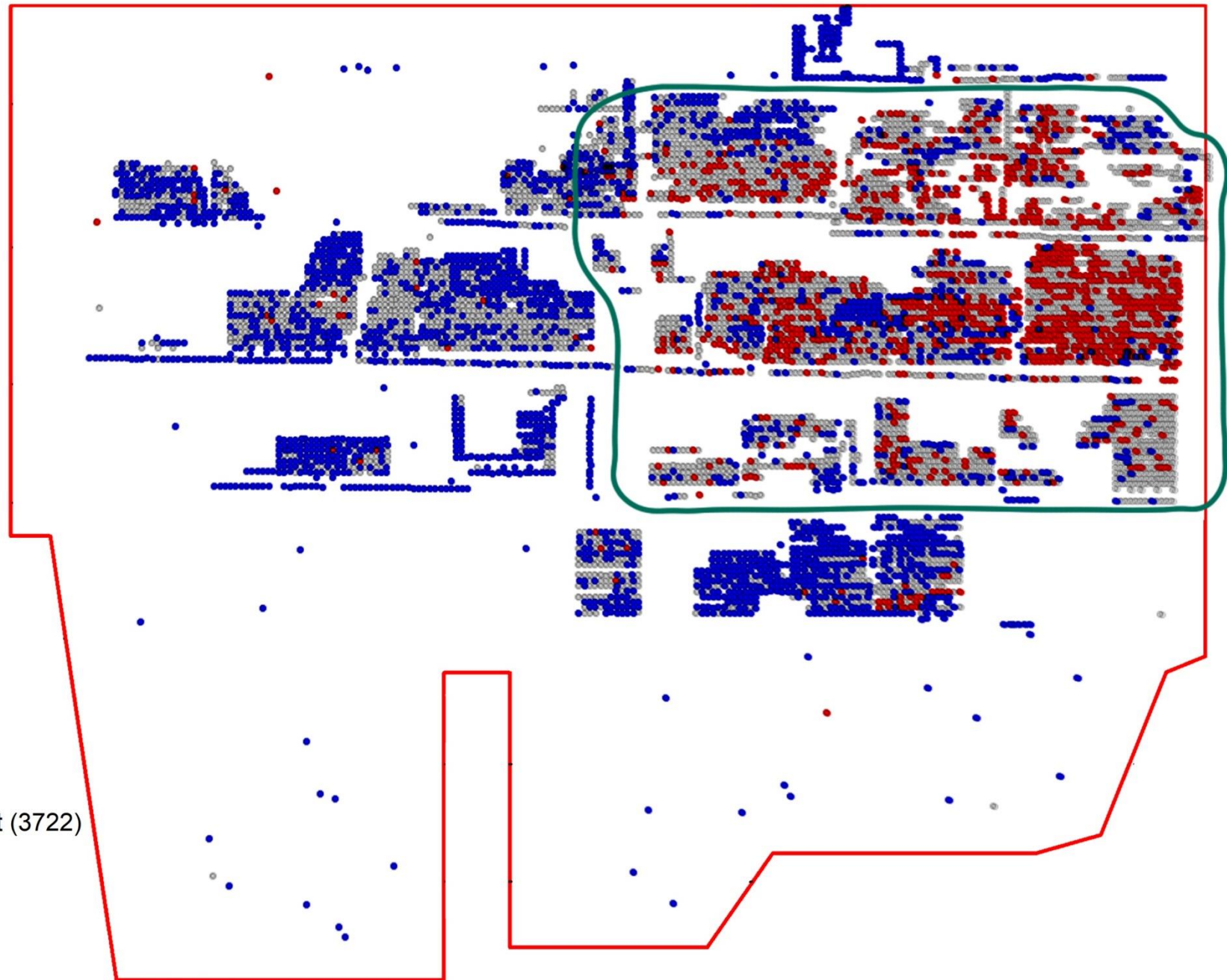
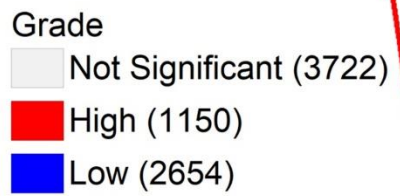
Methodology

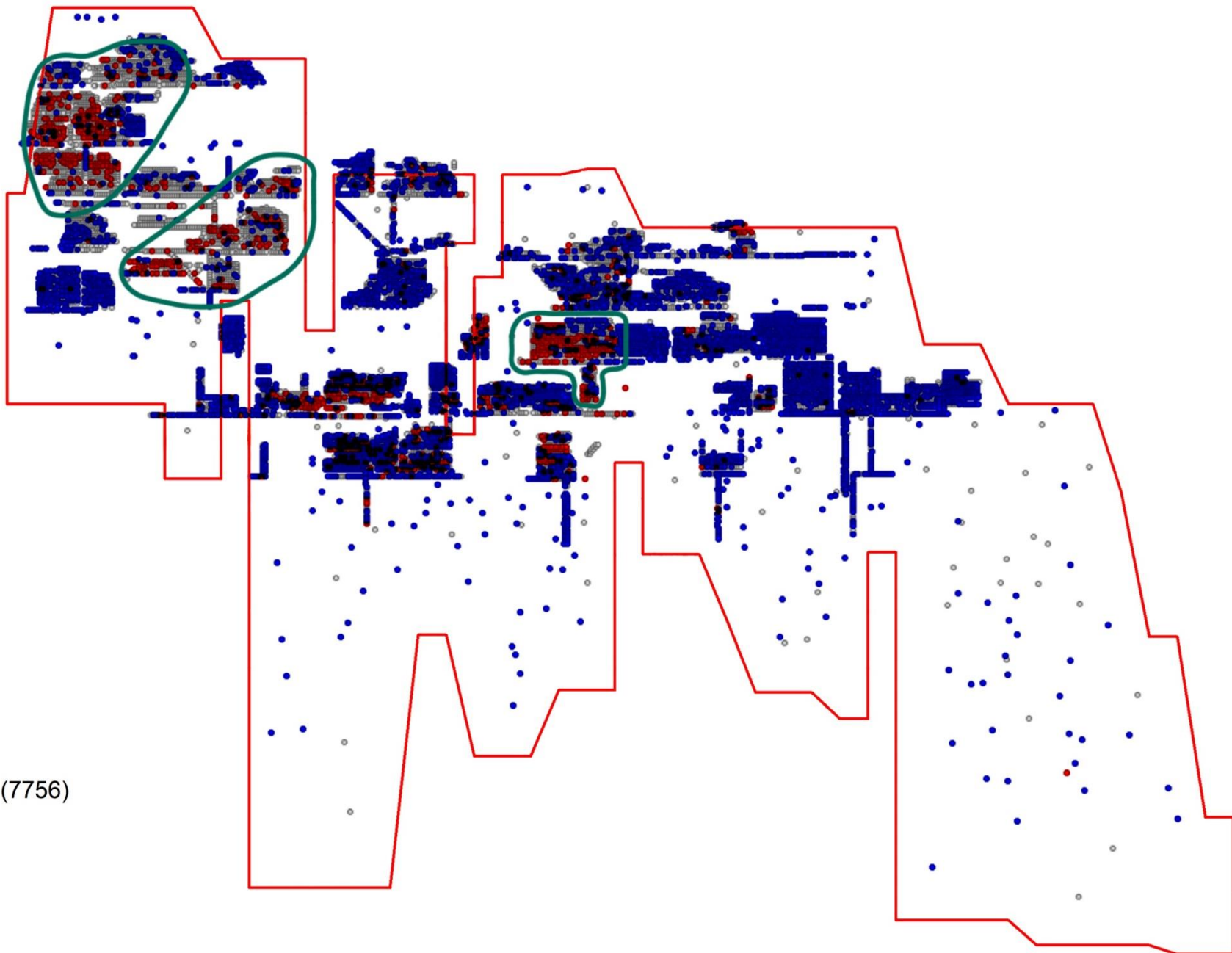


Hotspot Analysis

1. Calculate *Getis-Ord G_i^** values using Geoda
2. Generate hotspot boundaries using *Getis-Ord G_i^** values





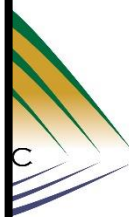


Grade

Not Significant (7756)

High (1189)

Low (5974)



Top Cuts

1. Percentile – 97.5th and 99th
2. Quartile – Minor and Major
3. Standard Deviation – Standard Deviation x 2



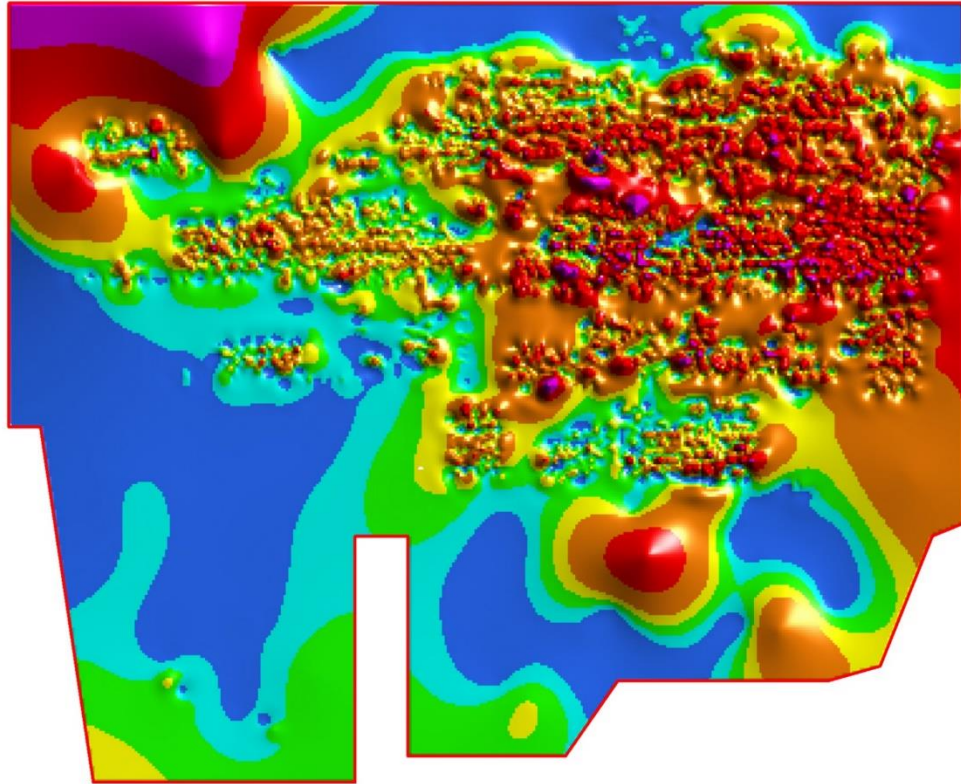
Results



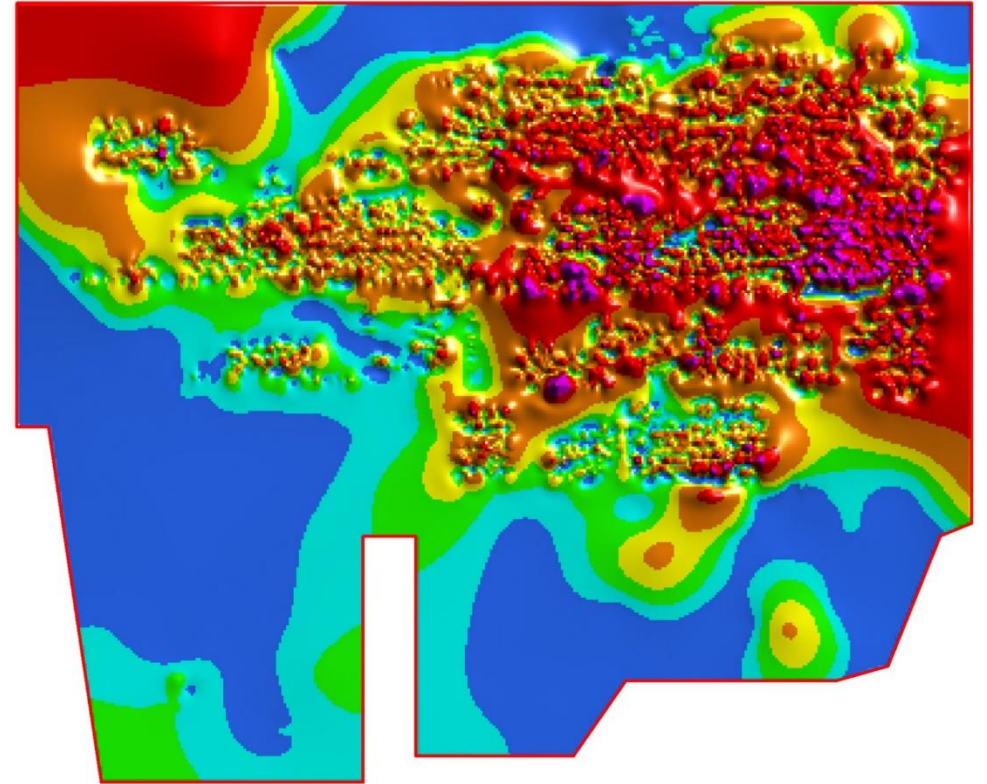
Domain 2061



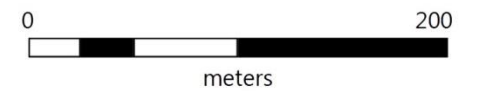
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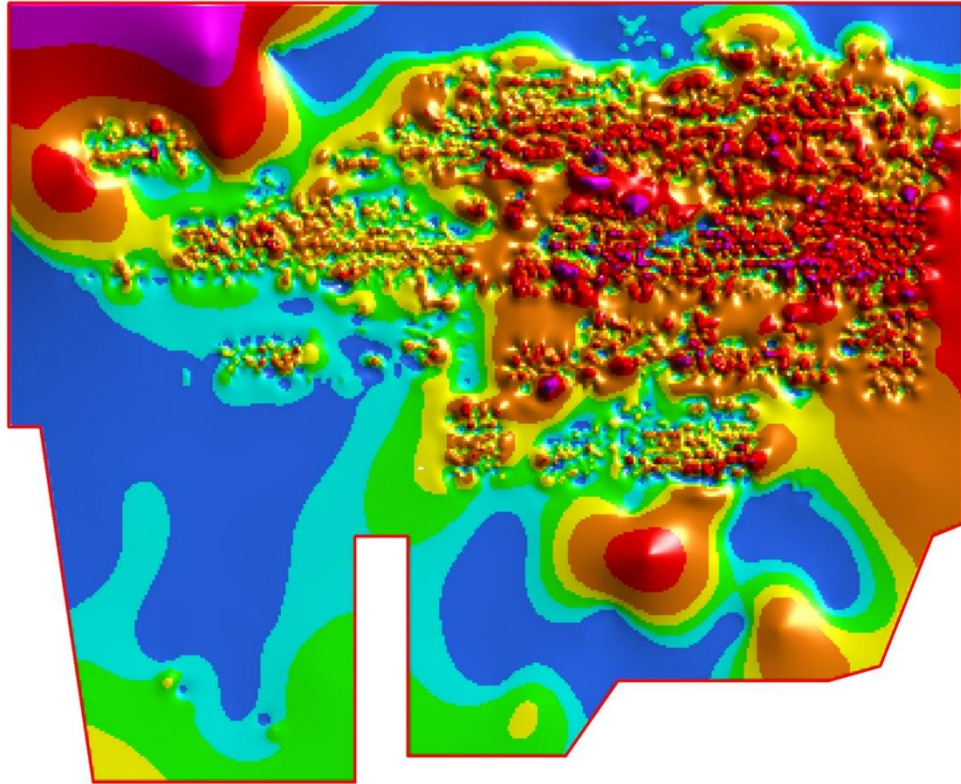
Co-O Resource



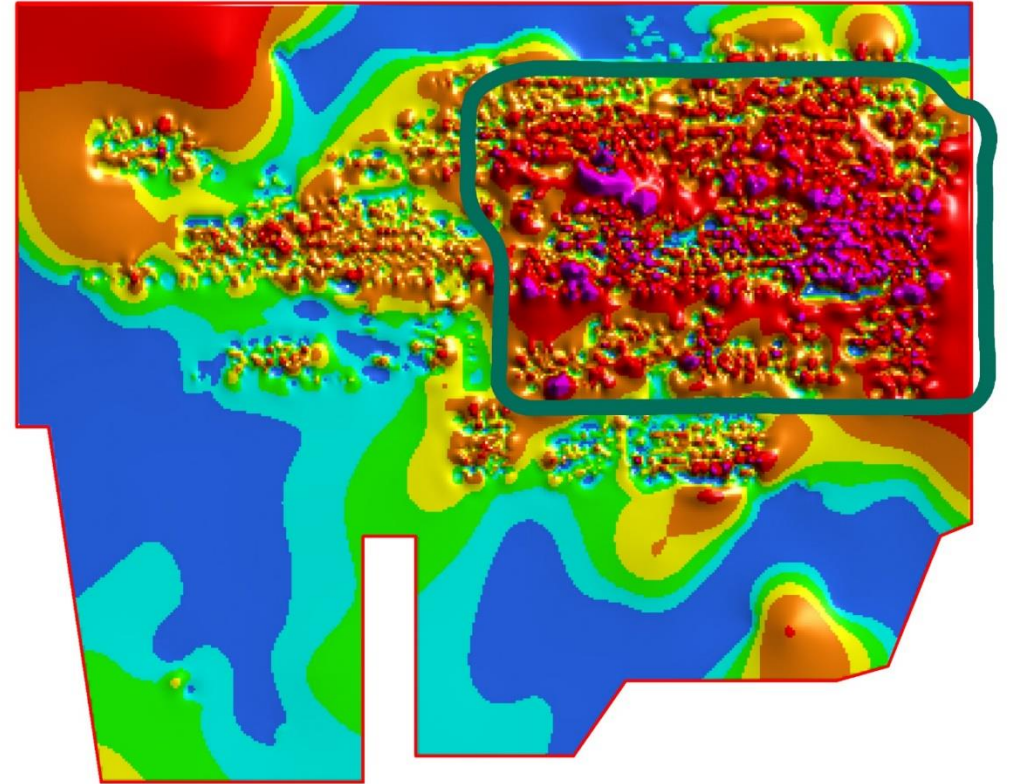
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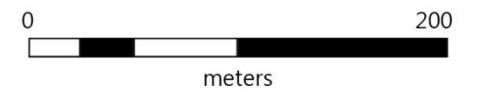
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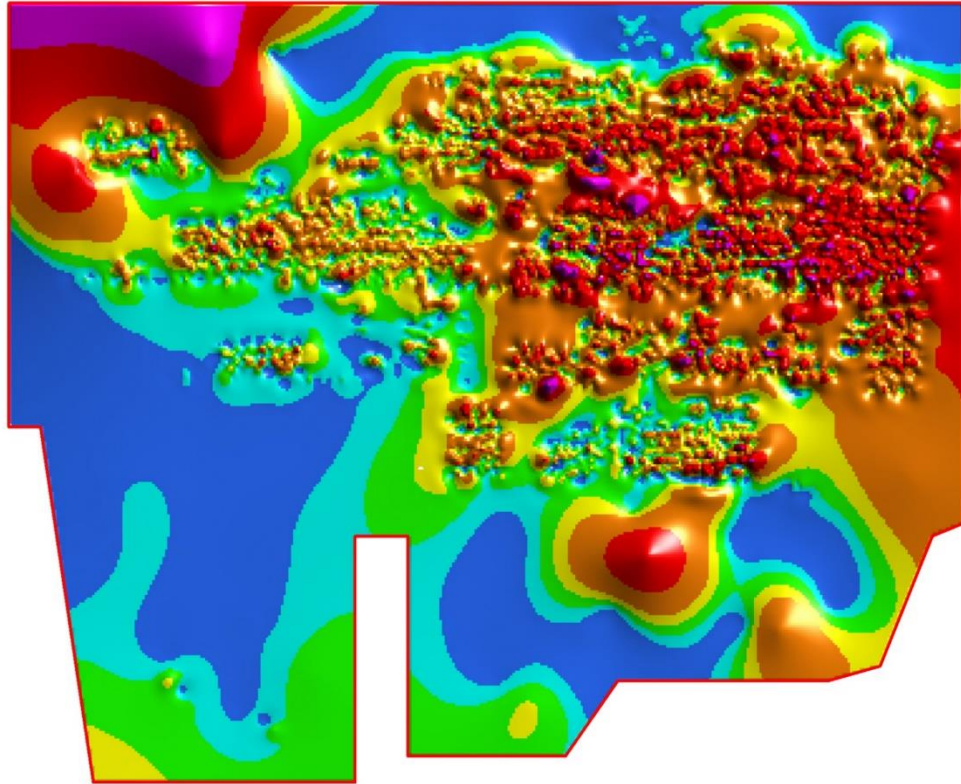
97.5th Percentile



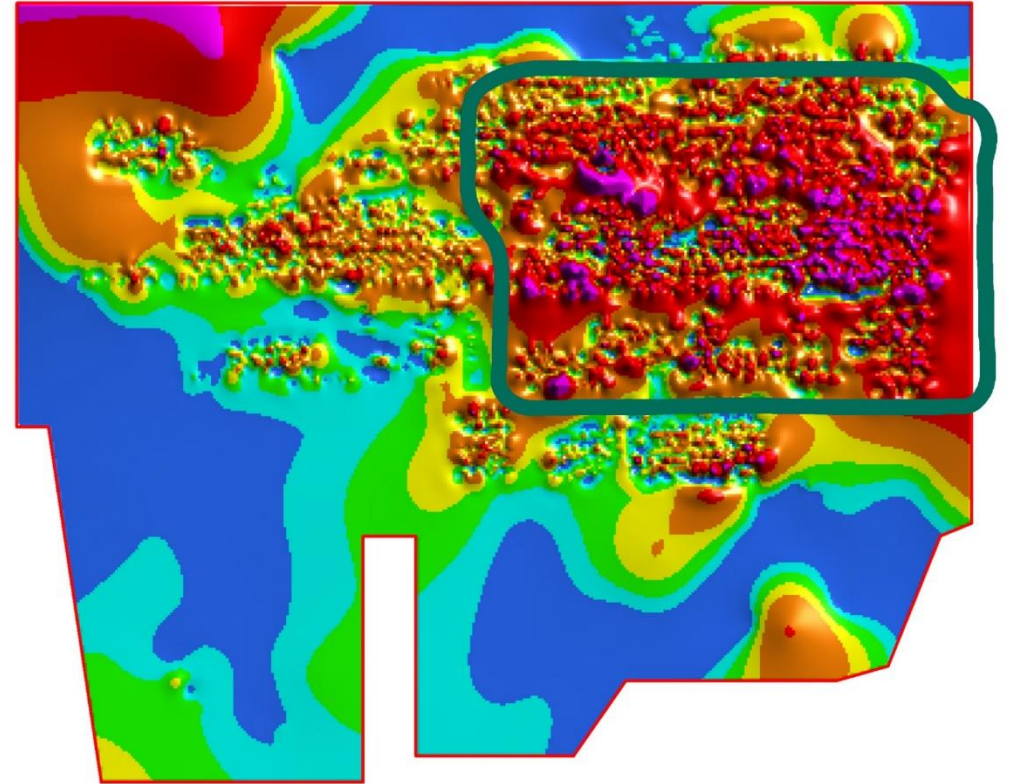
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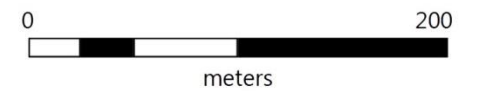
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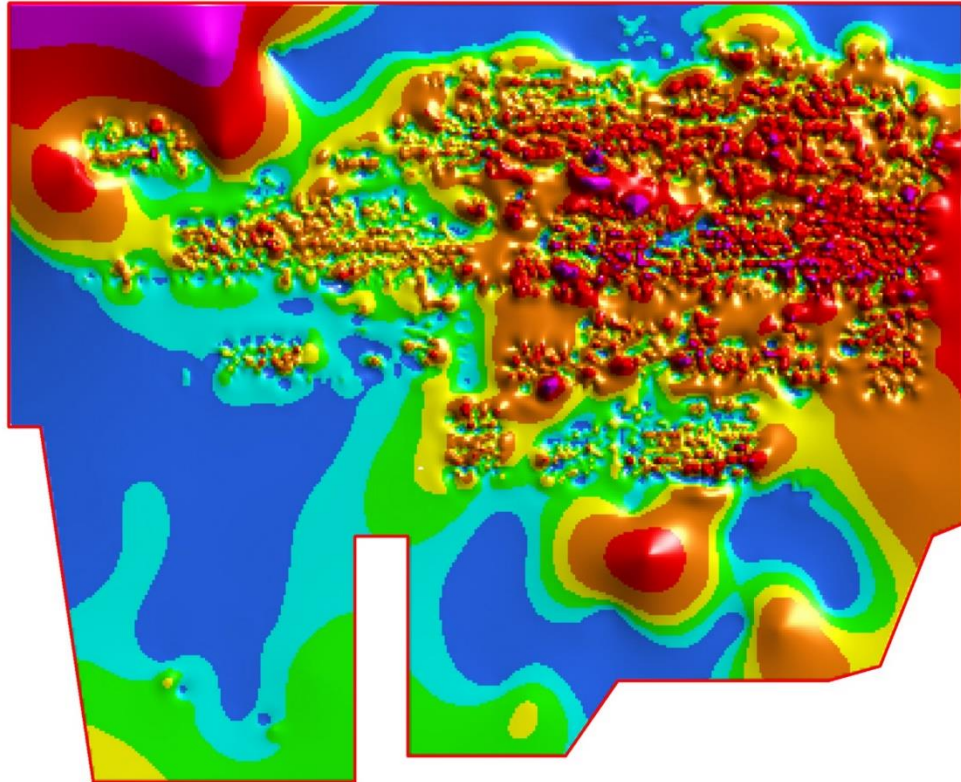
99th Percentile



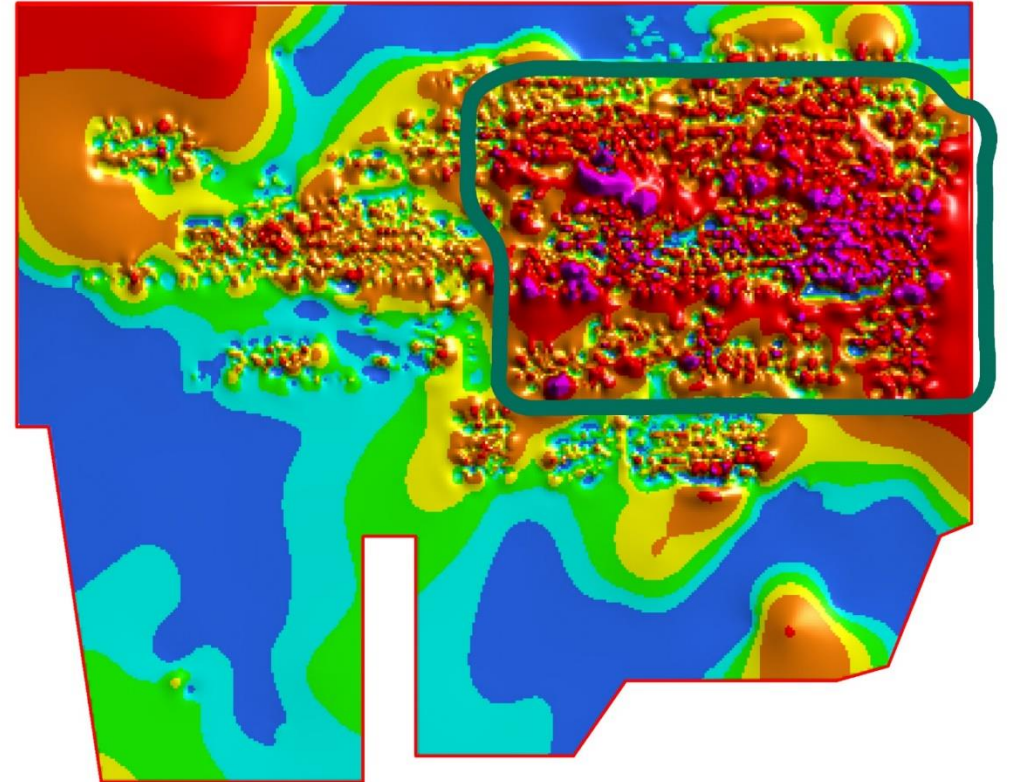
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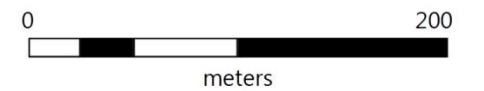
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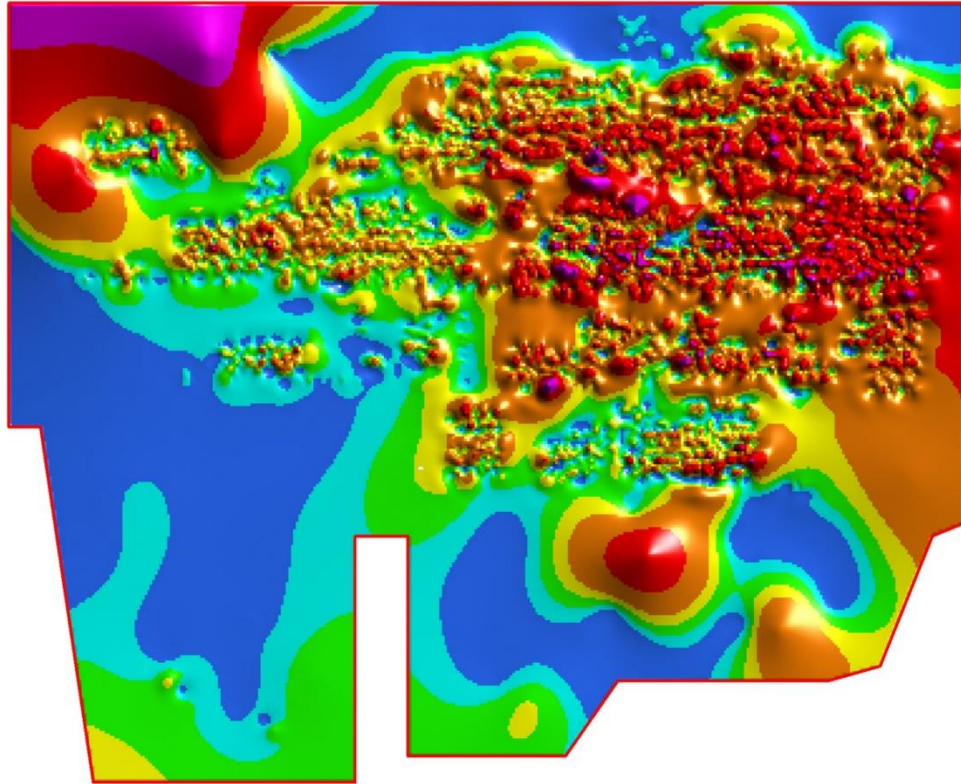
Minor Outlier



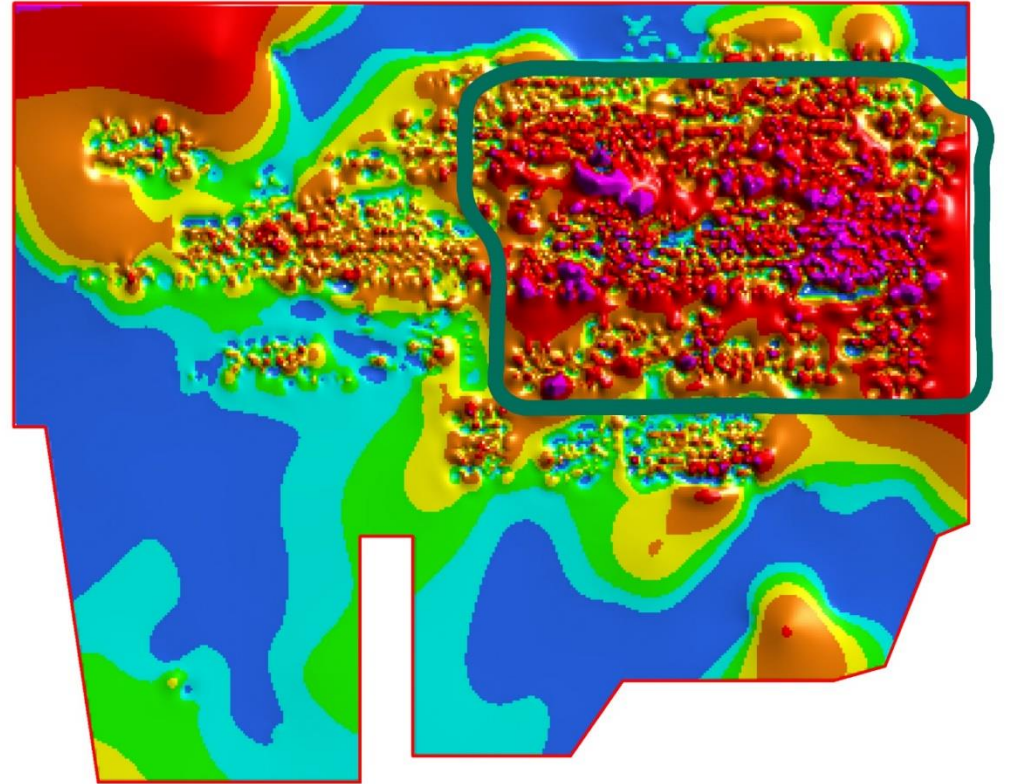
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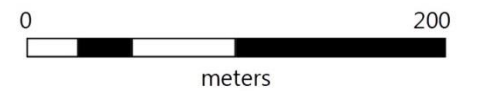
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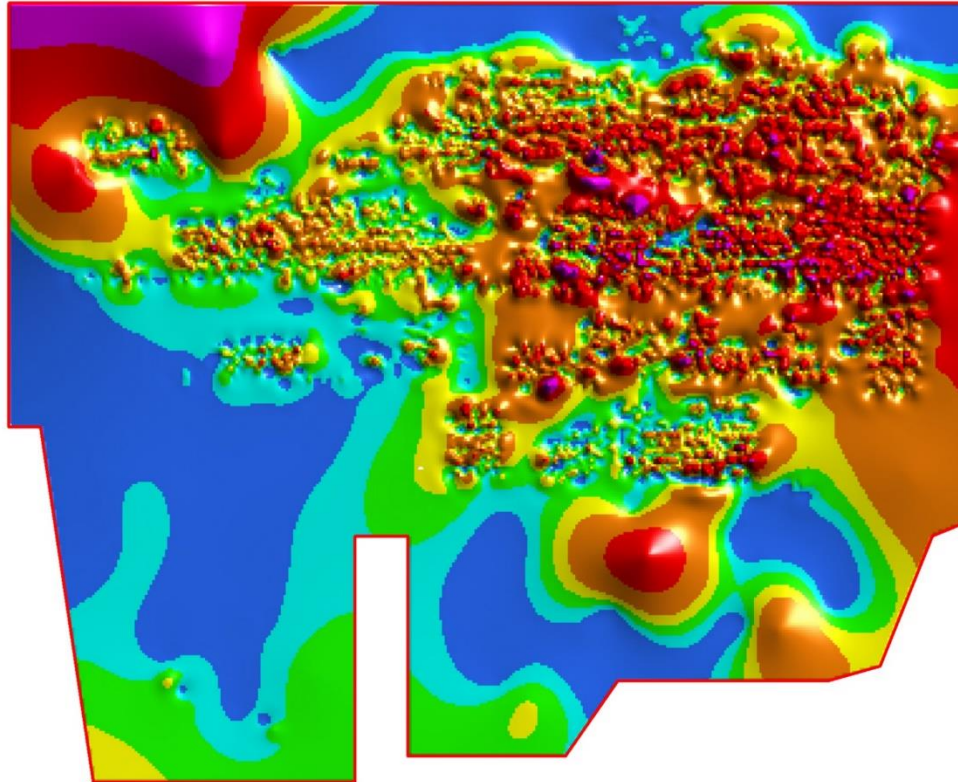
Major Outlier



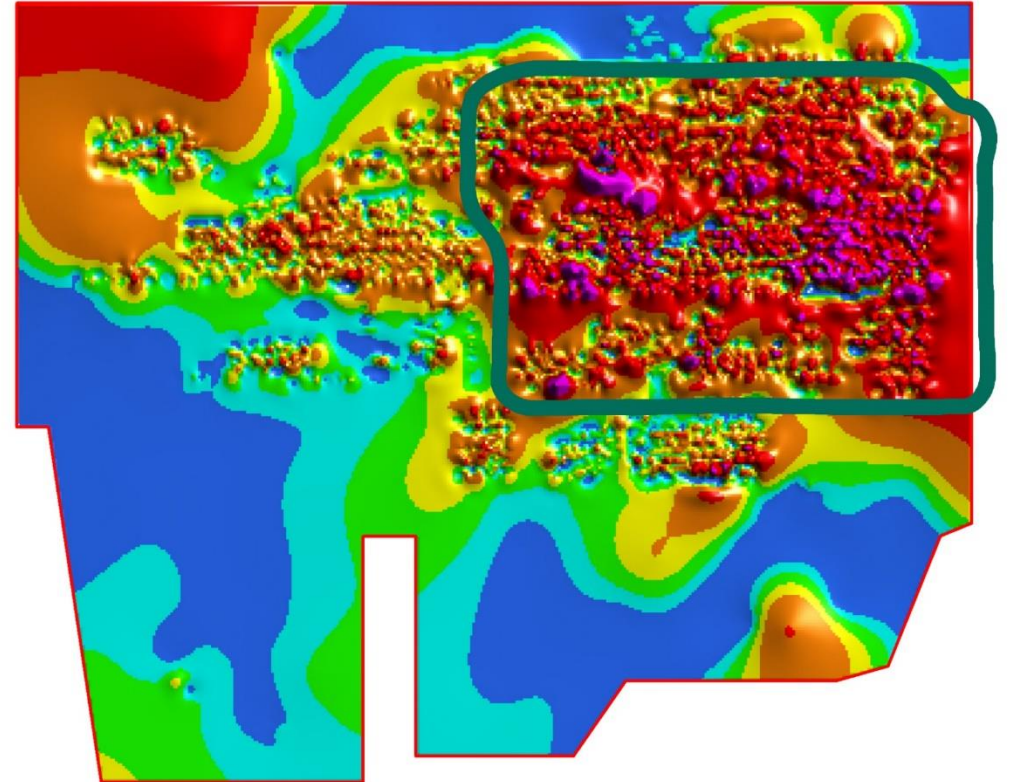
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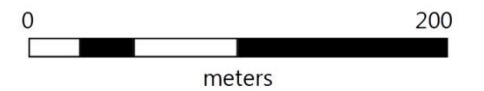
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Standard Deviation



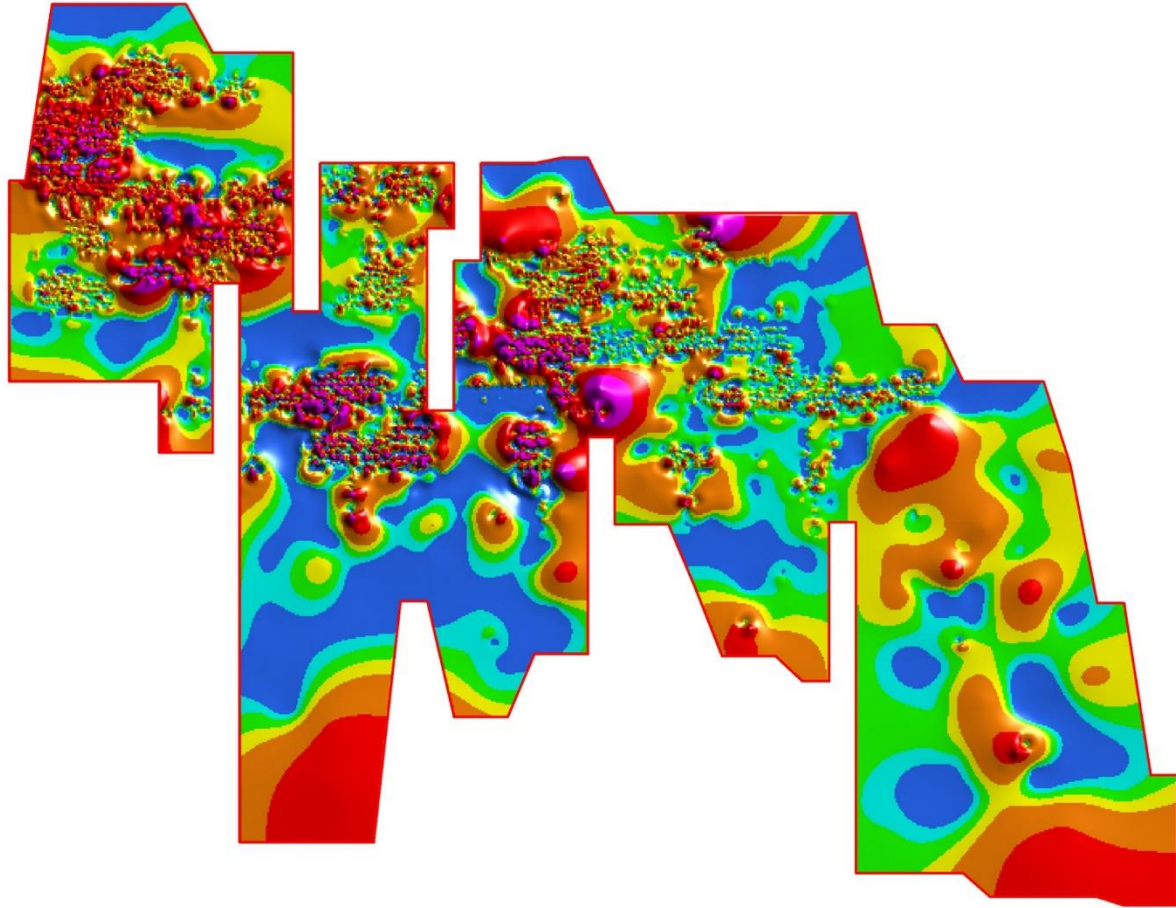
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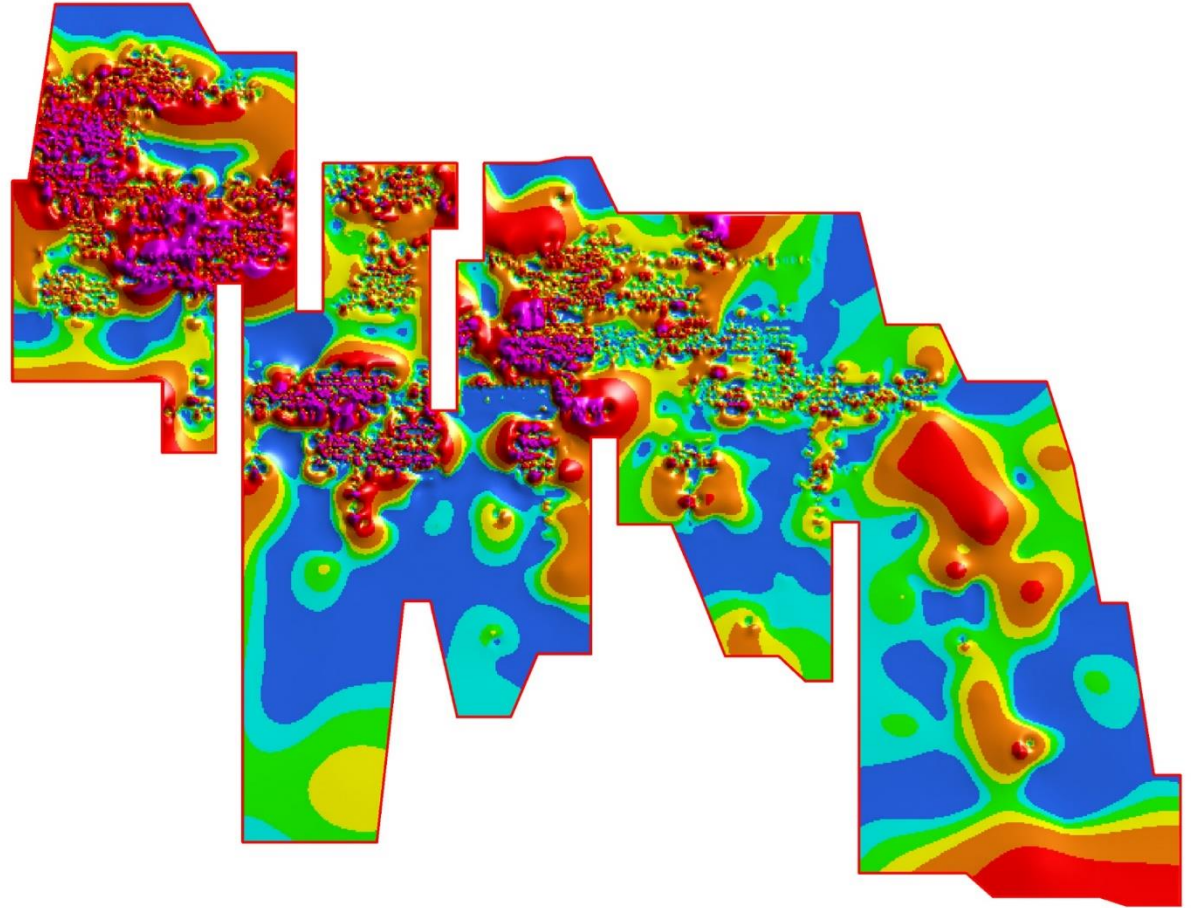
Domain 2062



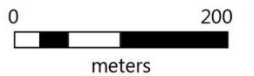
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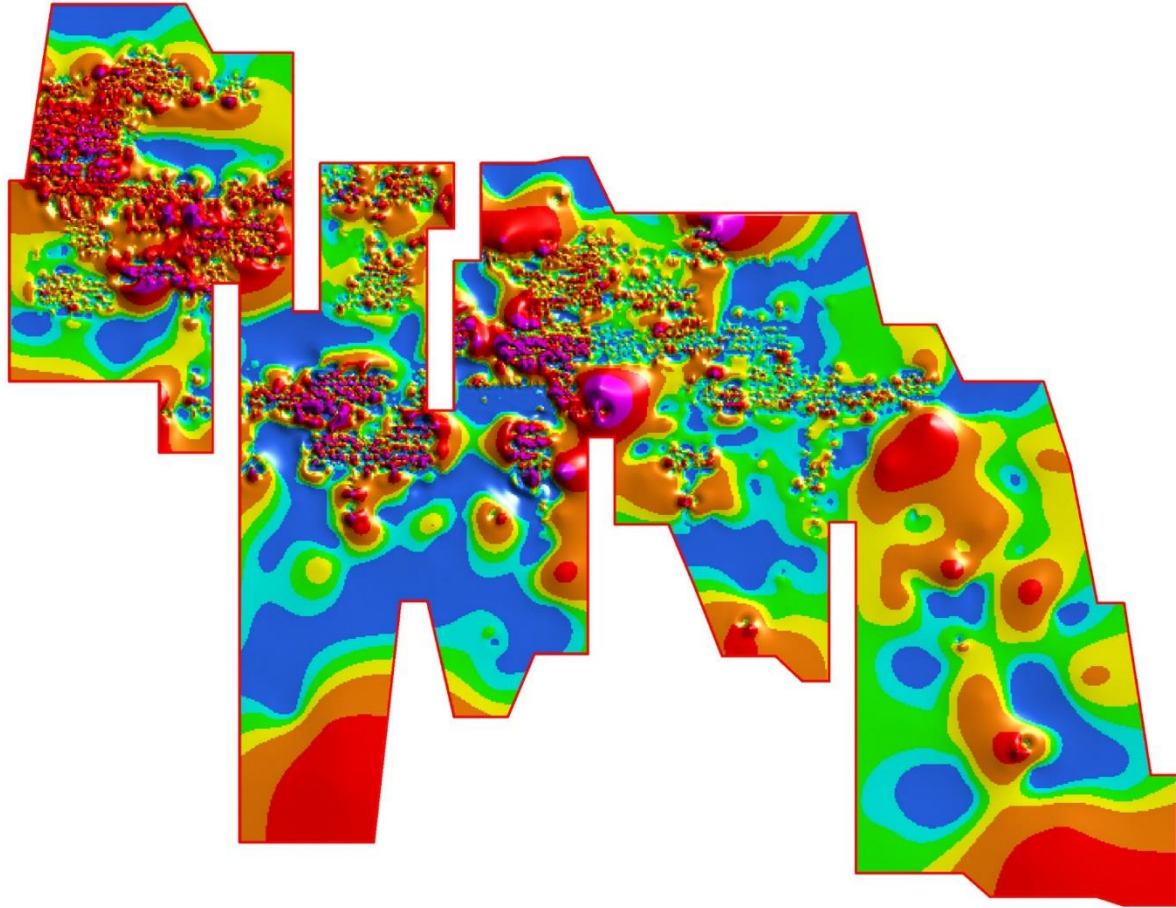
Co-O Resource



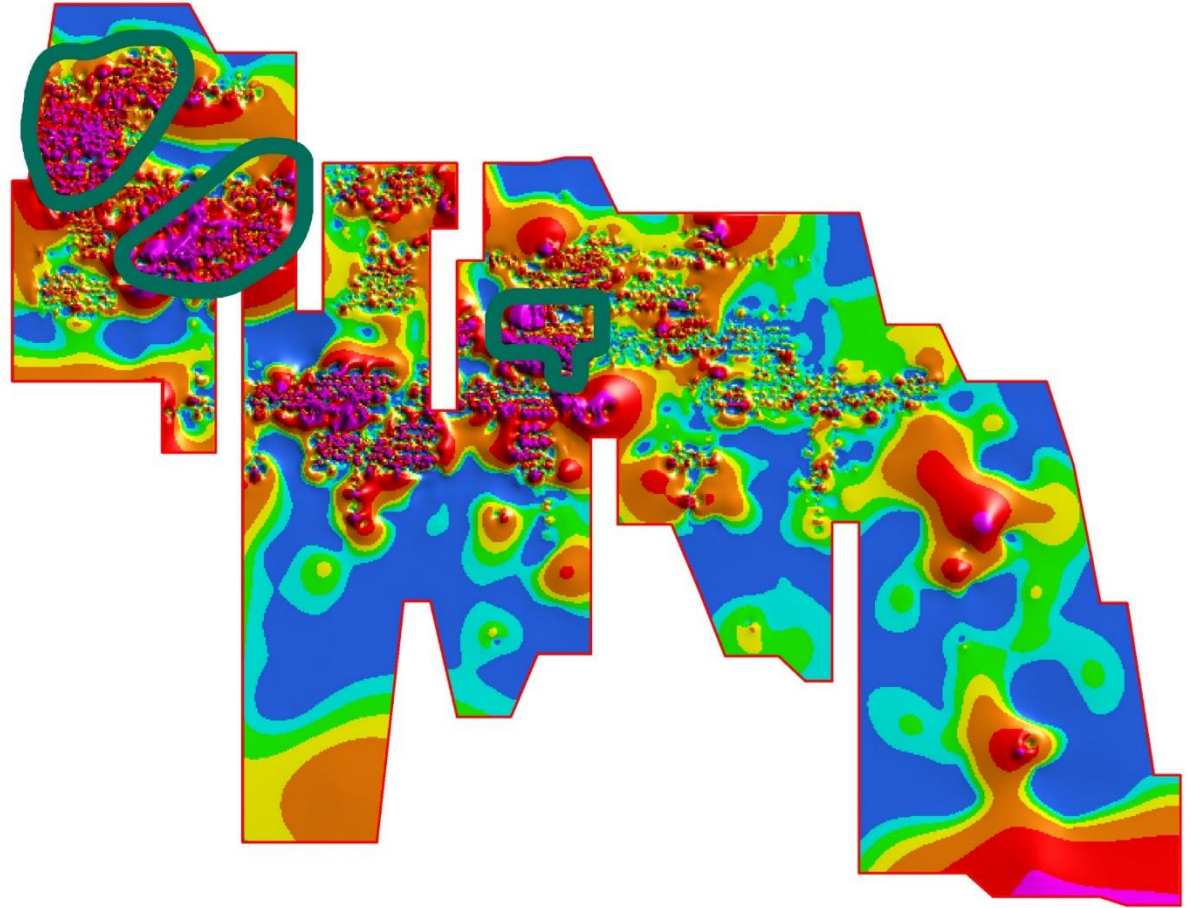
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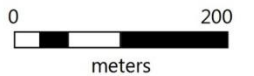
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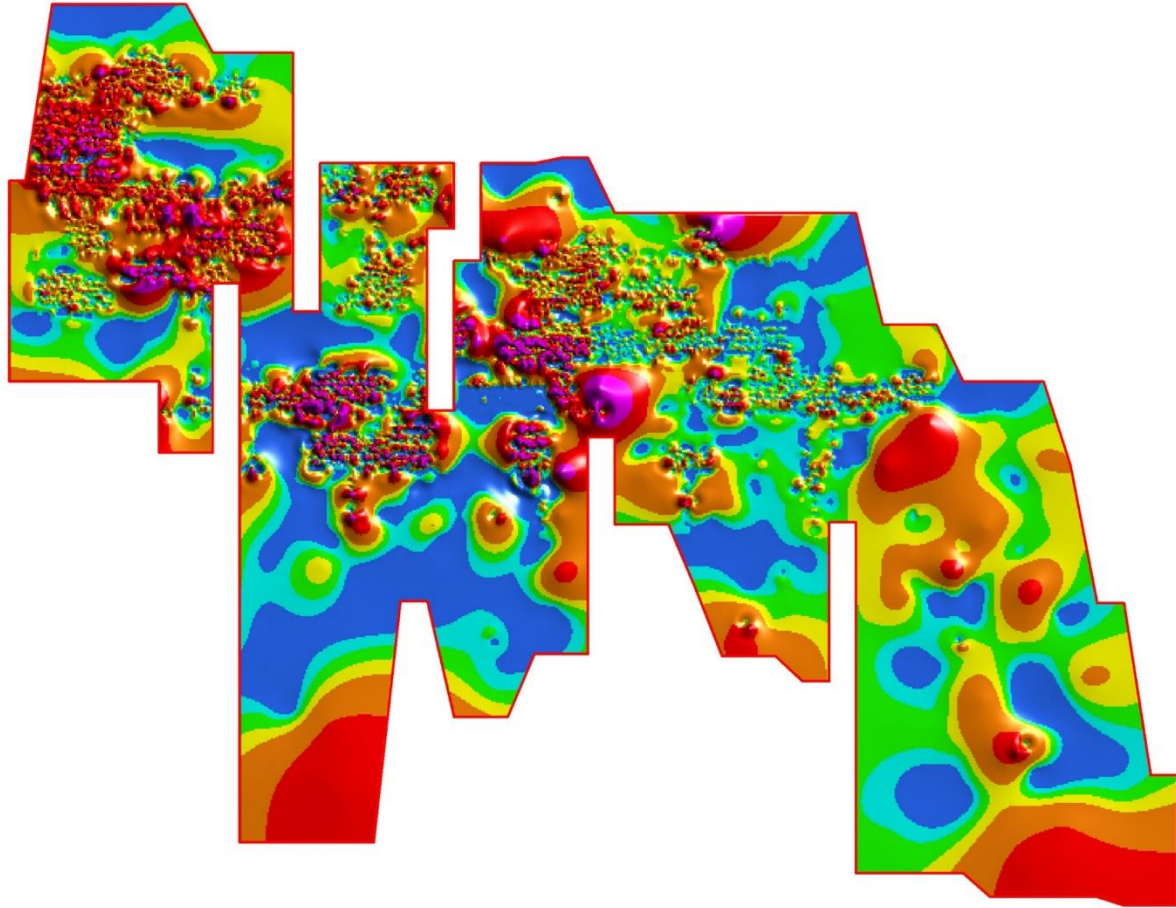
97.5th Percentile



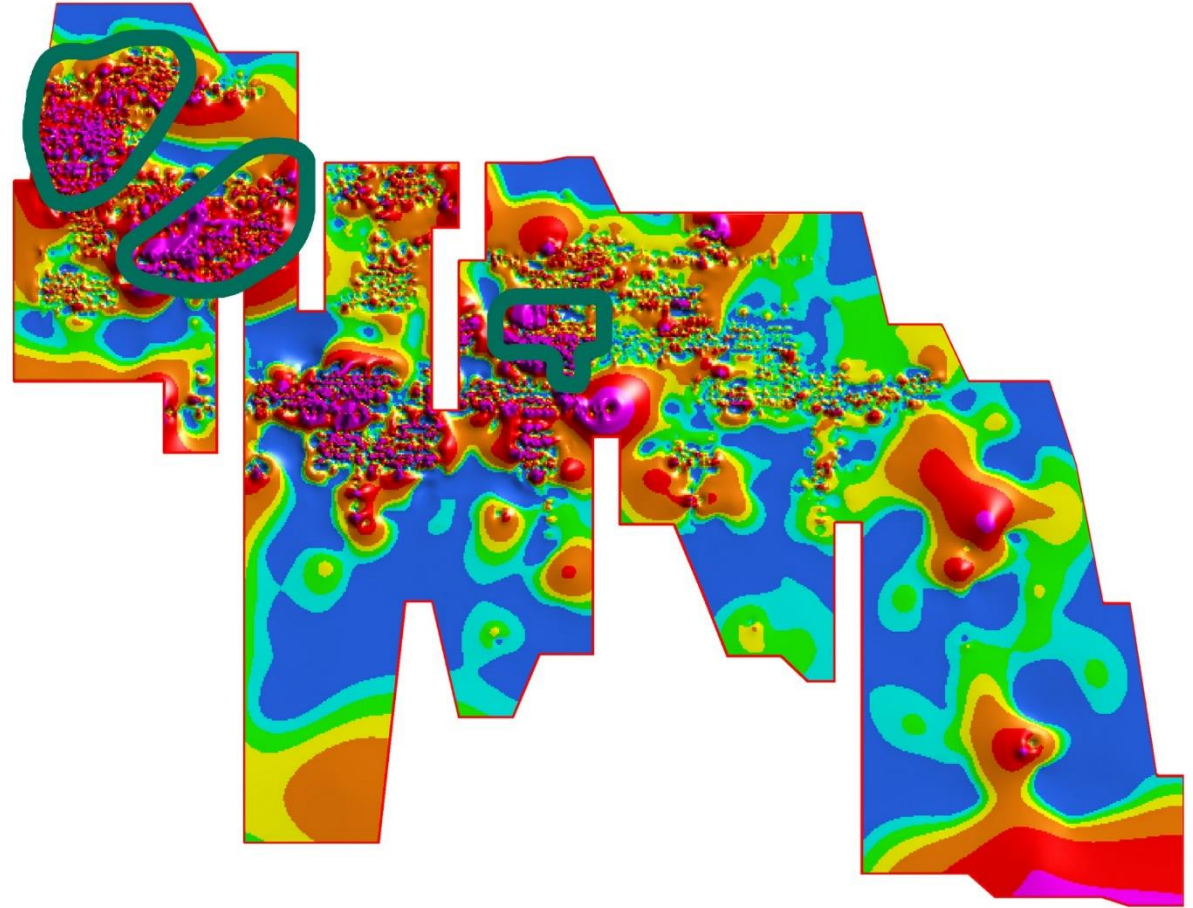
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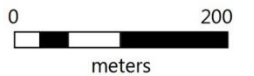
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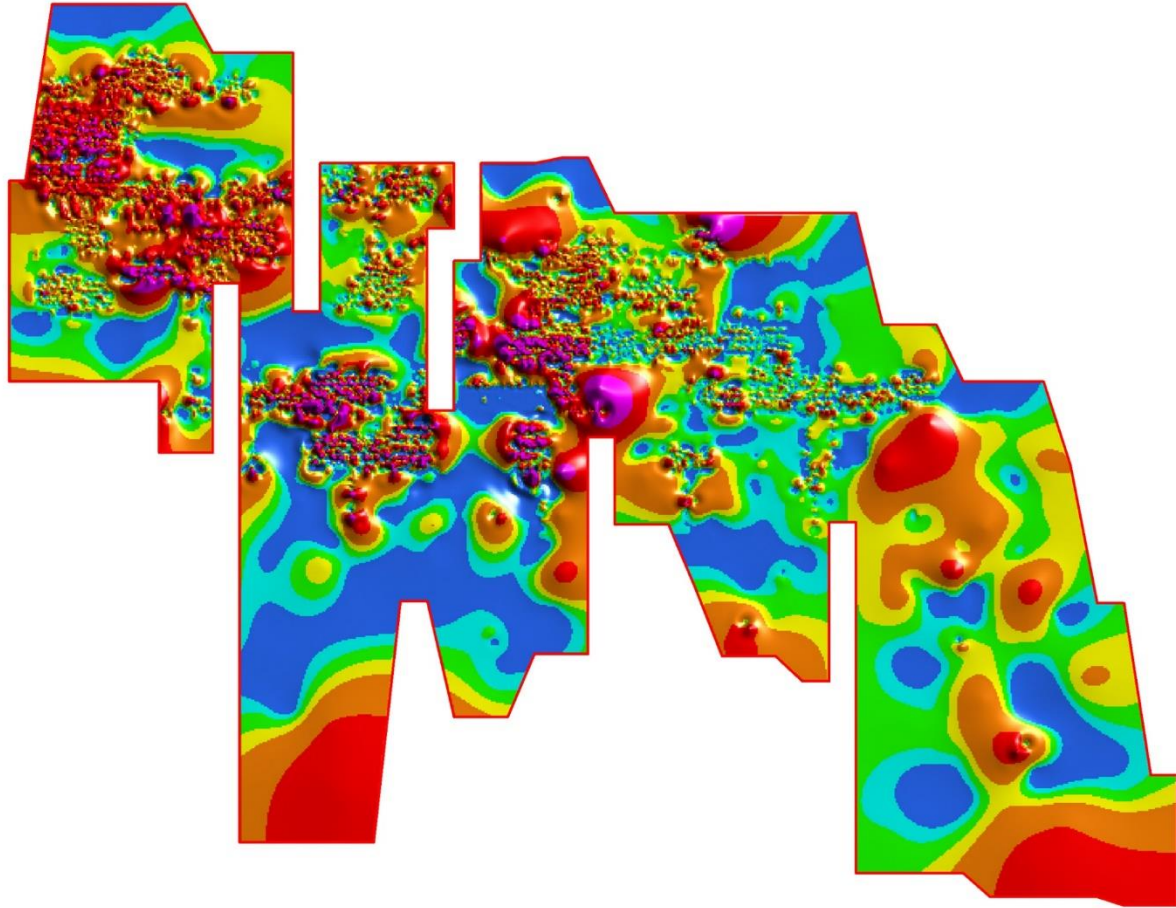
99th Percentile



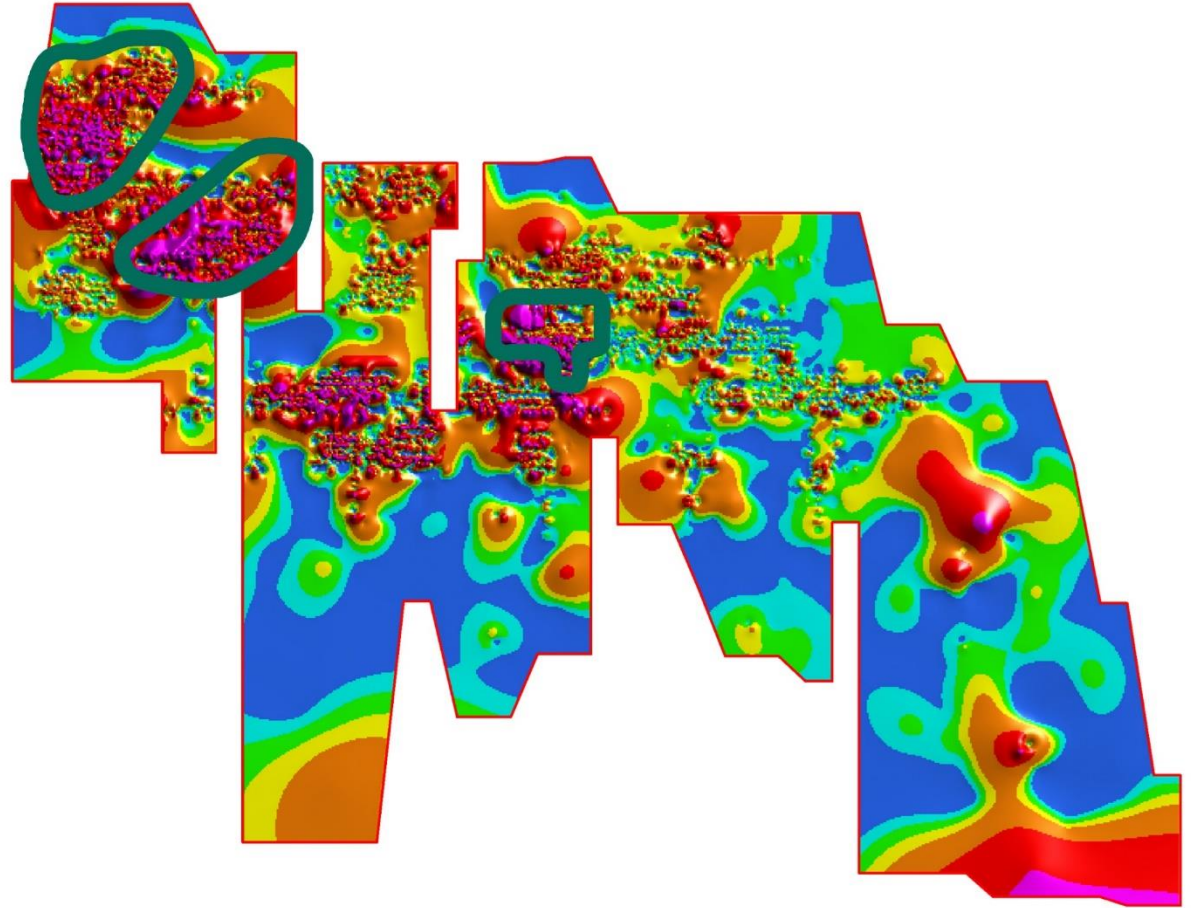
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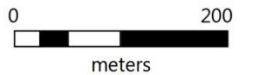
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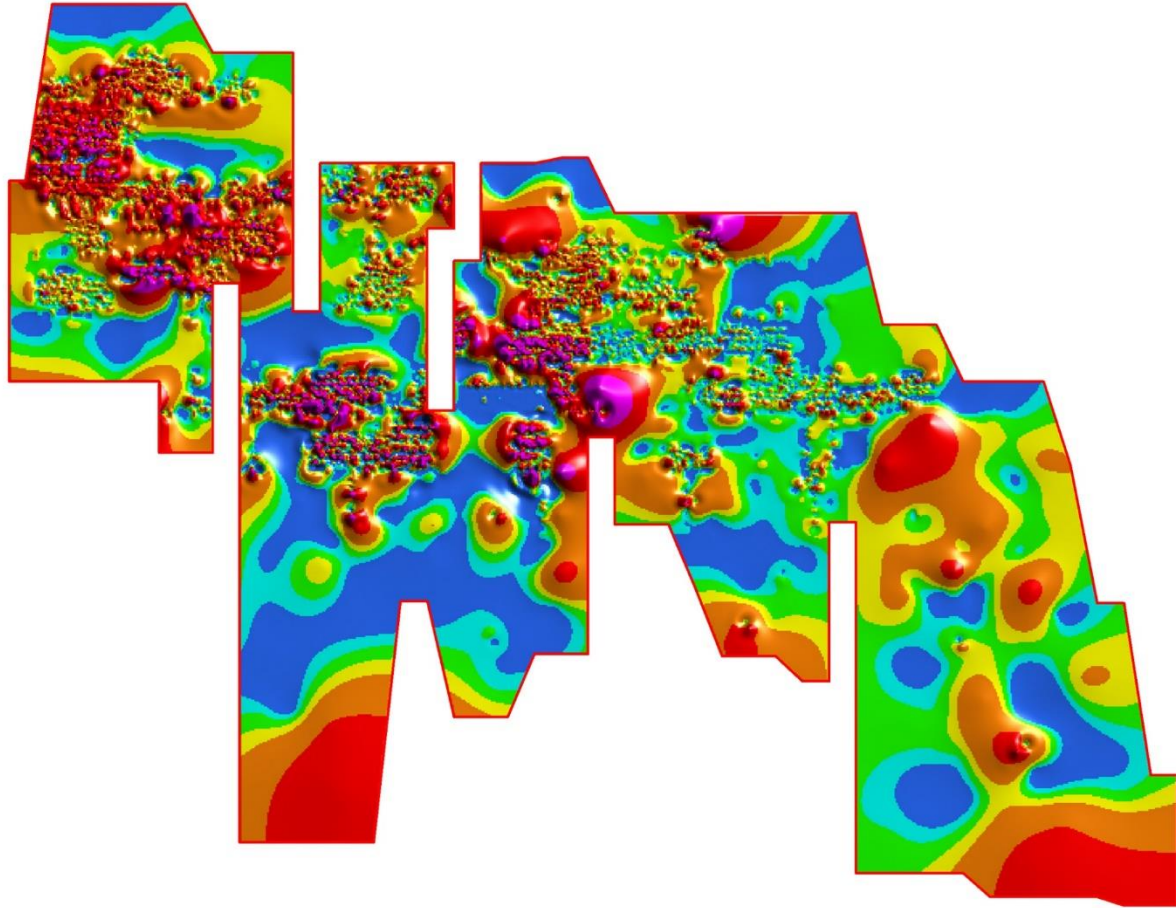
Minor Outlier



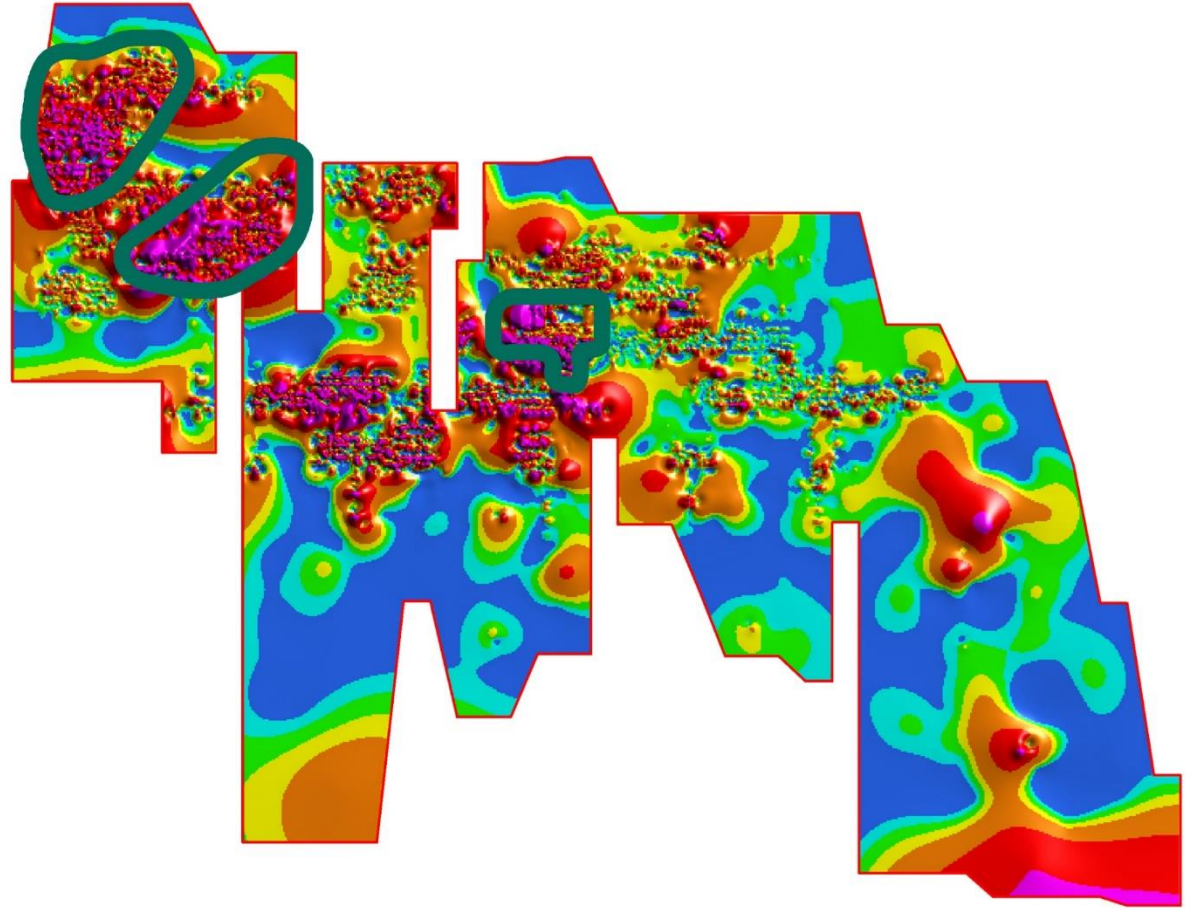
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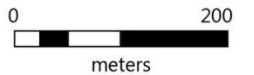
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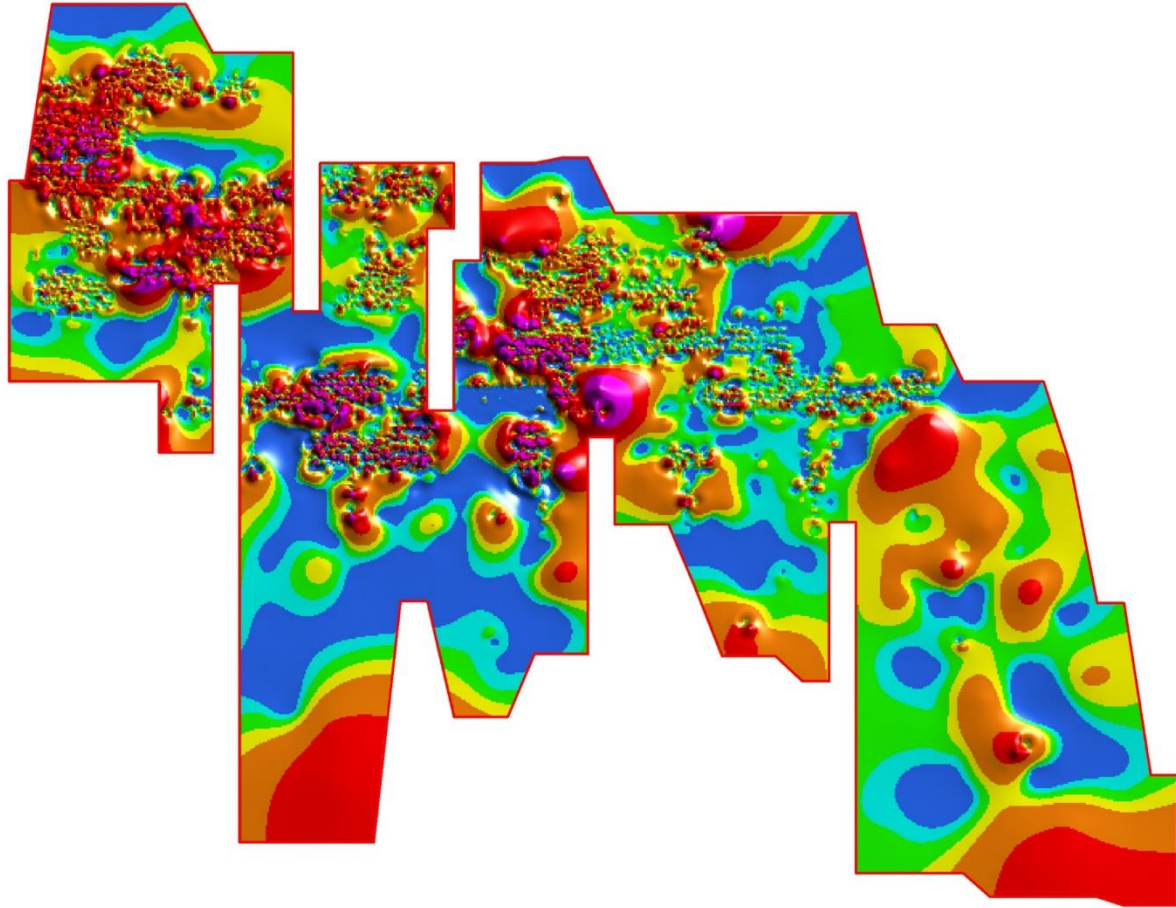
Major Outlier



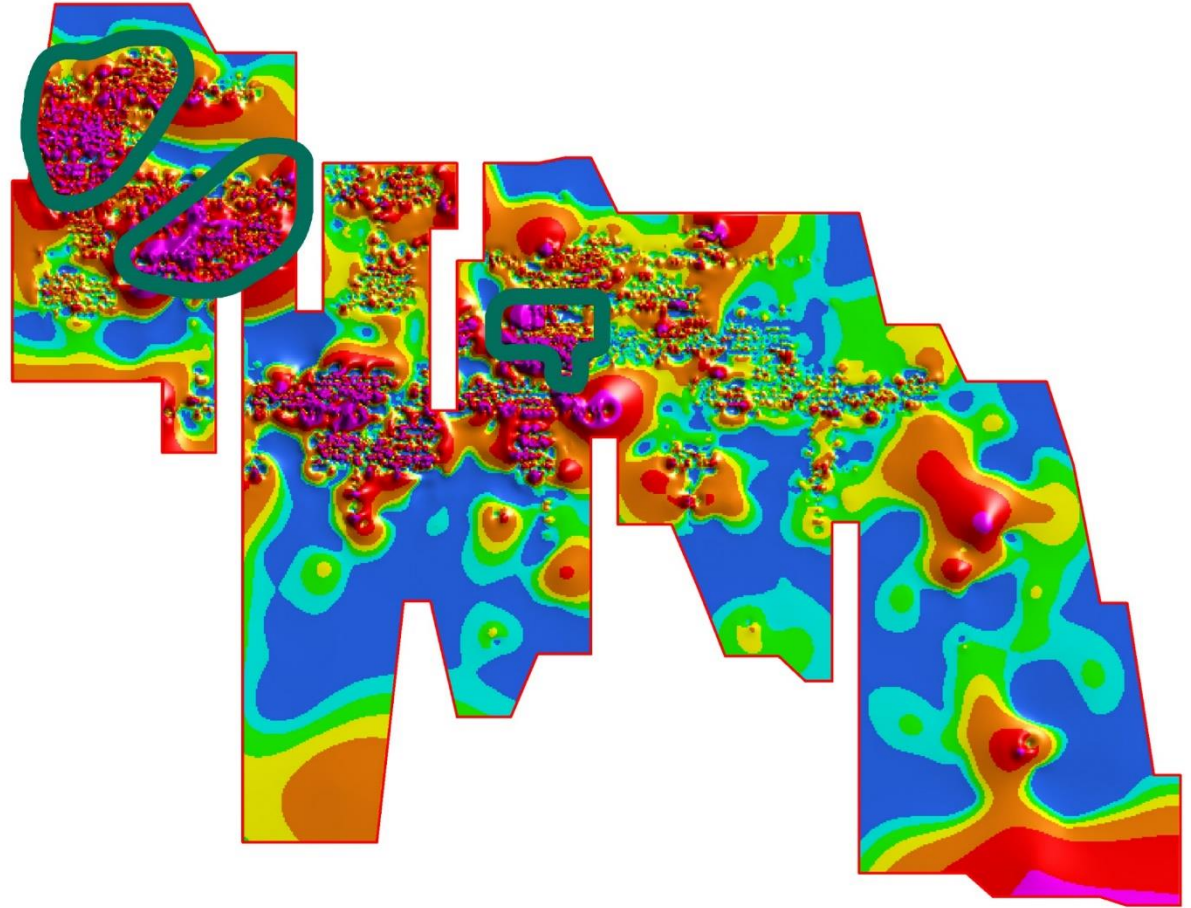
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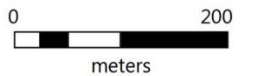
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Standard Deviation



Legend:



Conclusions & Recommendations



Conclusions & Recommendations

- Potentially undervalued resource estimate for GHV
- Apply the method to other veins
- Check the effect on the estimated tonnage and consequently the ounces

