

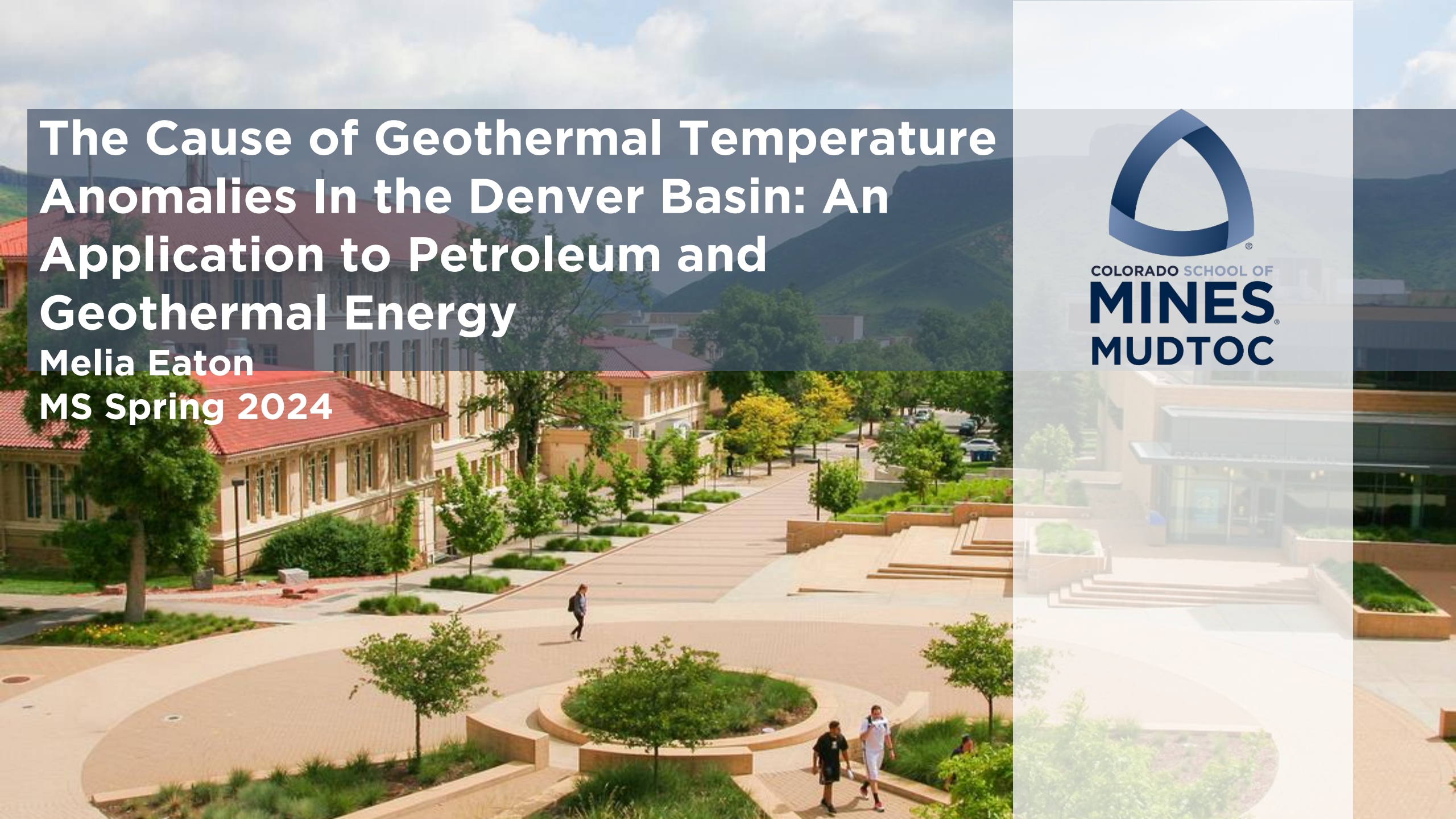
The Cause of Geothermal Temperature Anomalies In the Denver Basin: An Application to Petroleum and Geothermal Energy

Melia Eaton

MS Spring 2024



COLORADO SCHOOL OF
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About

- Originally from Charlotte, NC.
- Graduated from University of North Carolina Wilmington in 2022 with a B.S. Geology-Honors in Geology, Geospatial Technologies minor, GEOINT certificate.

Projects

Undergraduate Honors Thesis: “Analysis of the Deep Direct-Use Geothermal Potential of the Upper Atlantic Coastal Plain, NC”

GEOINT Capstone: “Characterization of Hurricane Irma Damage from Big Pine Key to Cudjoe Key, FL”

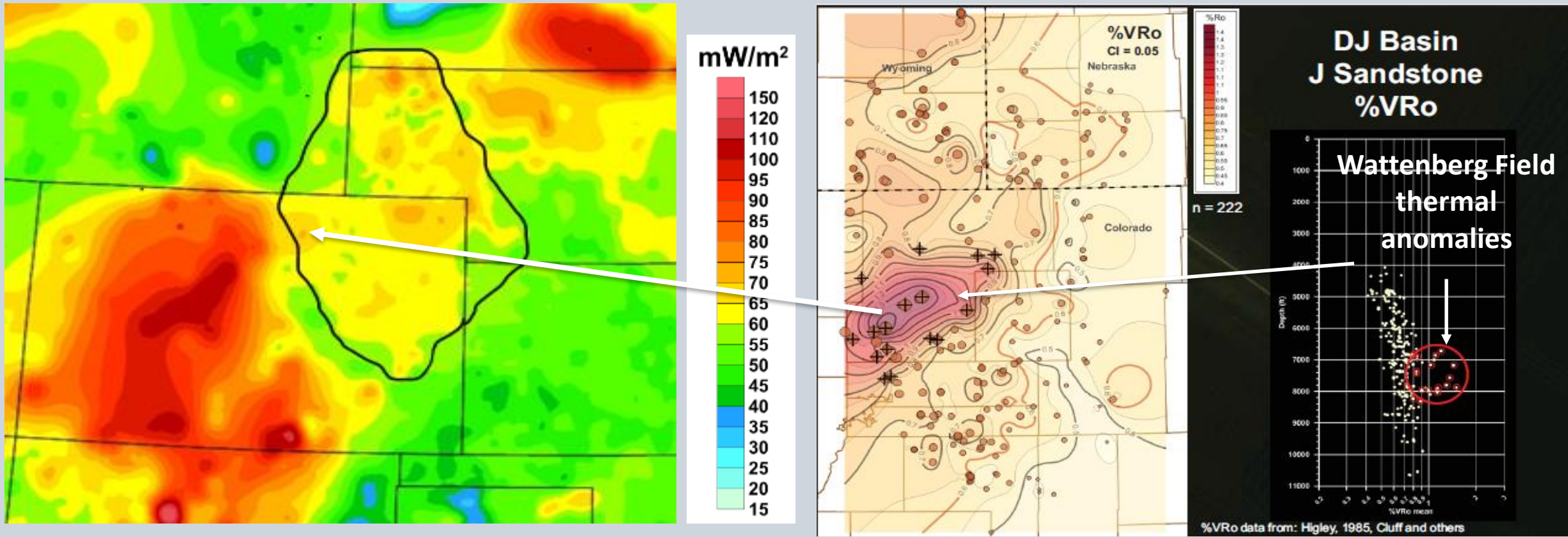
Till Wagner Research Group: “Flow Vector Analysis of Icebergs and Sea Ice”

Effects of Temperature on Petroleum and Geothermal Resources

- Positive correlation between locally higher subsurface temperatures and hydrocarbon production
- Thermal anomalies correspond to higher oil gravity, higher gas-oil ratios, and better productivity
- Higher reservoir temperatures are required for electrical power generation which can be distributed to larger areas
- lower temperature reservoirs can only be used locally for direct use applications

M.S. Geology Thesis

“The Cause of Geothermal Temperature Anomalies in the Denver Basin: Application to Petroleum and Geothermal Energy”



Blackwell, David, M. Richards, Z. Frone, J. Batir, A. Ruzo, R. Dingwall, and M. Williams 2011, Temperature at depth maps for the conterminous US and geothermal resource estimates, GRC Transactions, 35 (GRC1029452)

Higley, 1985, Hallau and Cluff (multiple years)

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