



# Gas Technology Institute

UTSR Fellow: Geoffrey Bartz

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Summer 2018



Due to the proprietary nature of this project, significant details and imagery were left out of this presentation.



# About the Fellow

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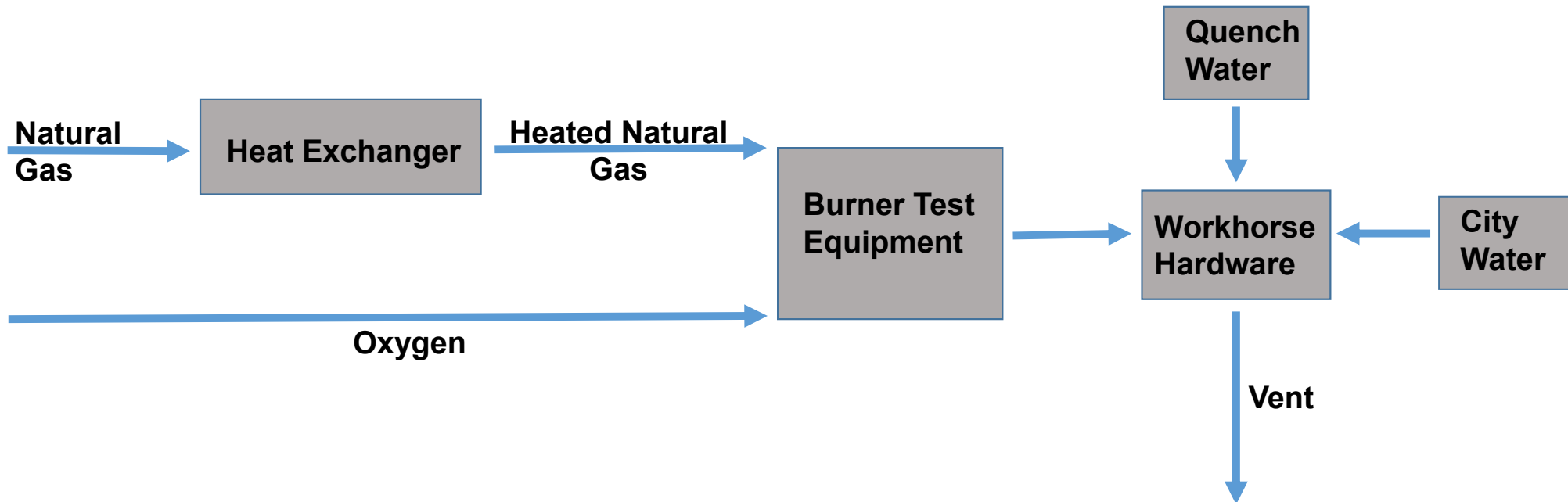
- Enrolled as a fourth year mechanical engineering undergraduate at University of California, Santa Barbara.
- Currently set to graduate in June 2019.
- Areas of interest: Upstream oil and gas production, gas turbine research, downstream hydrocarbon refining.

# Project

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- Phase I testing
  - Record heat flux and flow characteristics under different, predetermined conditions.
  - Compare two different burner configurations
  - Verify operations with cooled workhorse hardware

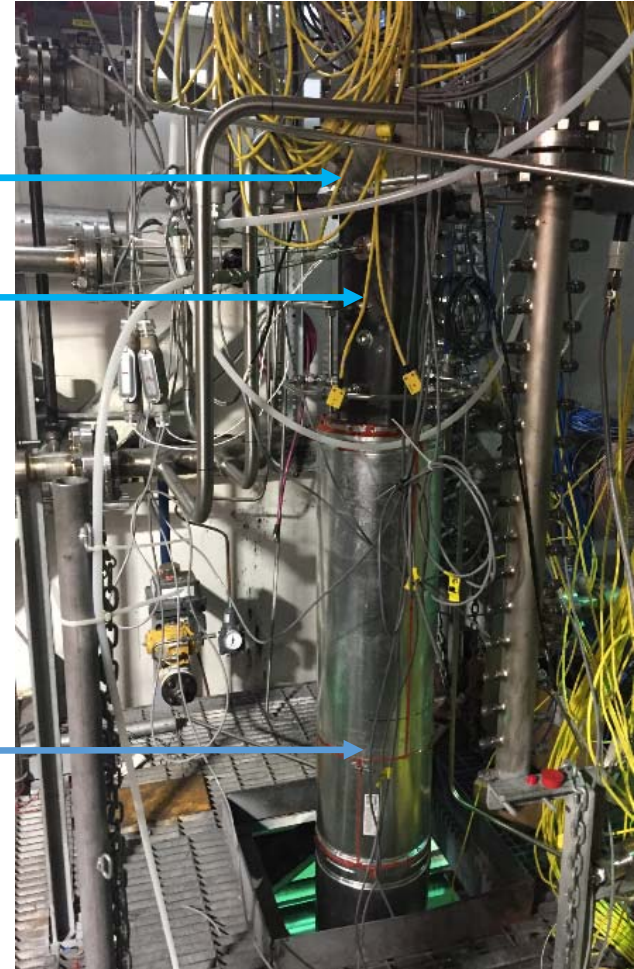
# Hardware Set-up



# Installed Hardware

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- Instrumentation installed in Phase I testing...
  - Burner
  - Workhorse Hardware
  - Ducting



# Roles in Project

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- Worked in a team of engineers and technicians to troubleshoot controls system that automates the plant.
  - Assisted with the resolution of instrumentation, mechanical, and electrical plant problems that could have caused operational issues.
- Assisted in testing through operation of valves, process monitoring, and collecting data.
- Assisted in the assembly and pressure testing of hardware for Phase II testing.

# Conclusion

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- Burner worked as planned.
- Controls system runs without errors.
- Construction of permanent reactor is currently in progress.
- Testing of full system to start 2-4 weeks after end of fellowship.