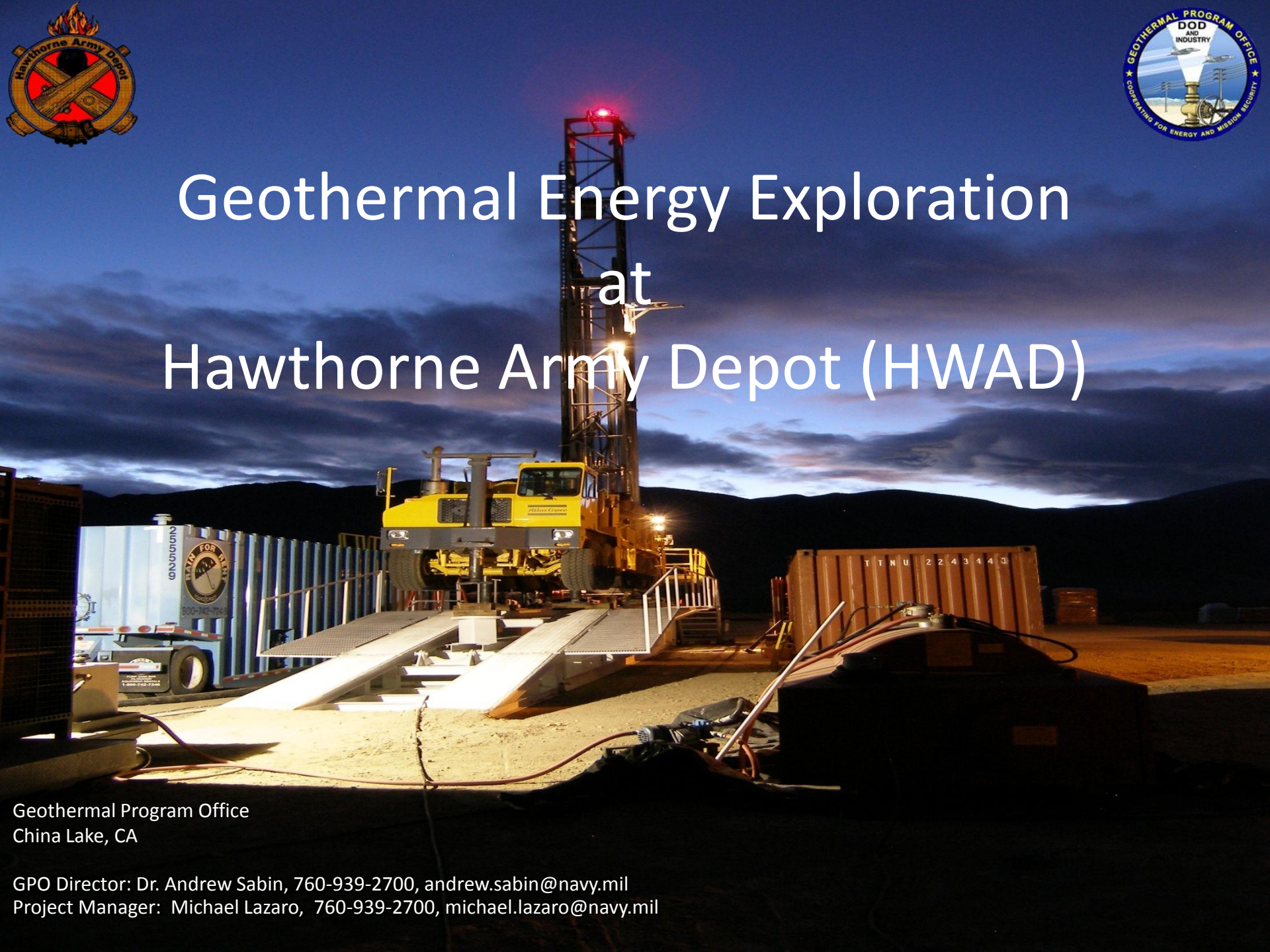
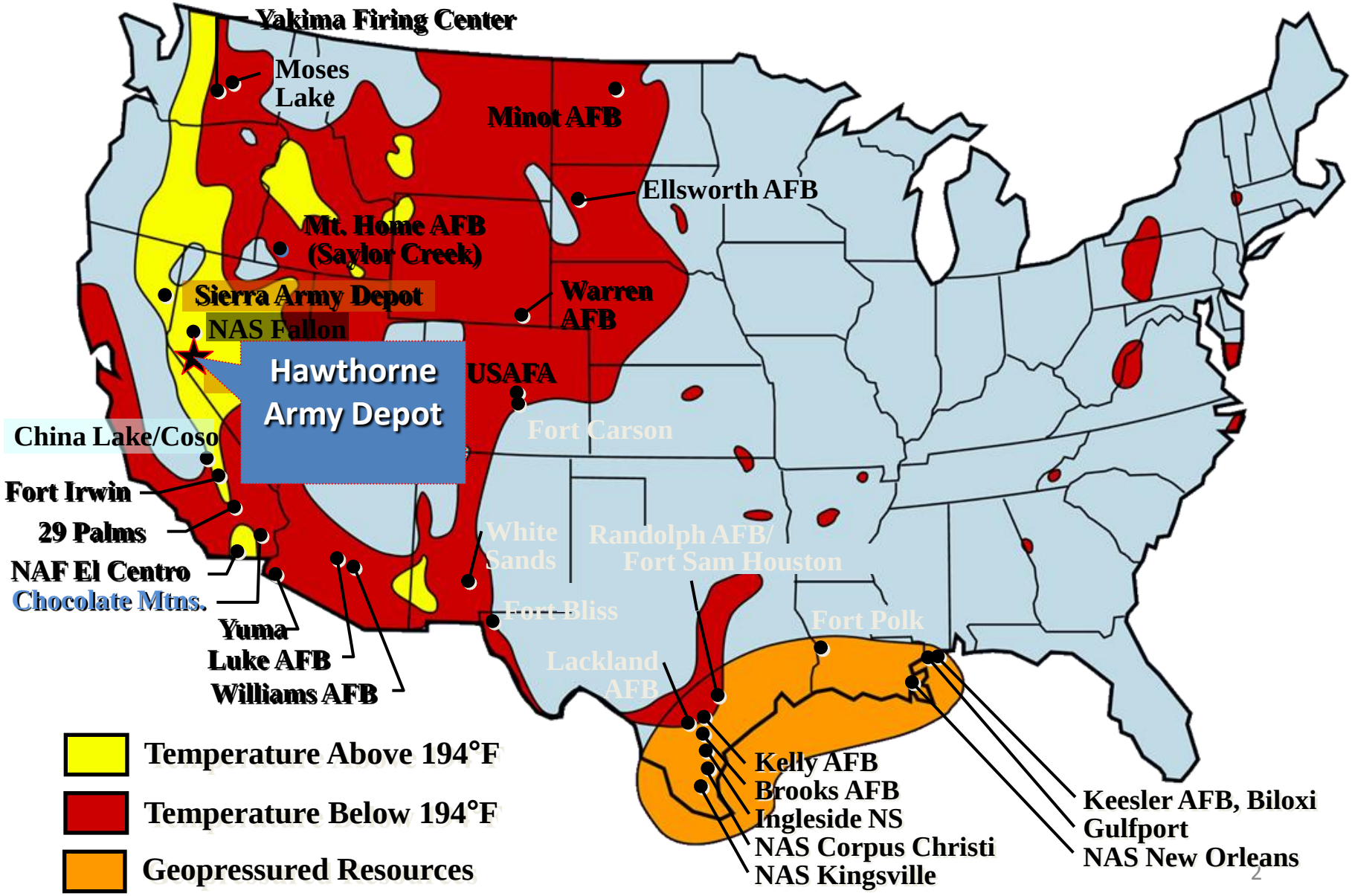
Geothermal Energy Exploration at Hawthorne Army Depot (HWAD)



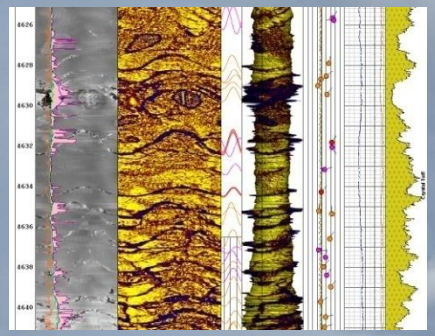
Geothermal Program Office
China Lake, CA

GPO Director: Dr. Andrew Sabin, 760-939-2700, andrew.sabin@navy.mil
Project Manager: Michael Lazaro, 760-939-2700, michael.lazaro@navy.mil

Military Geothermal Resources



GPO Exploration at HWAD

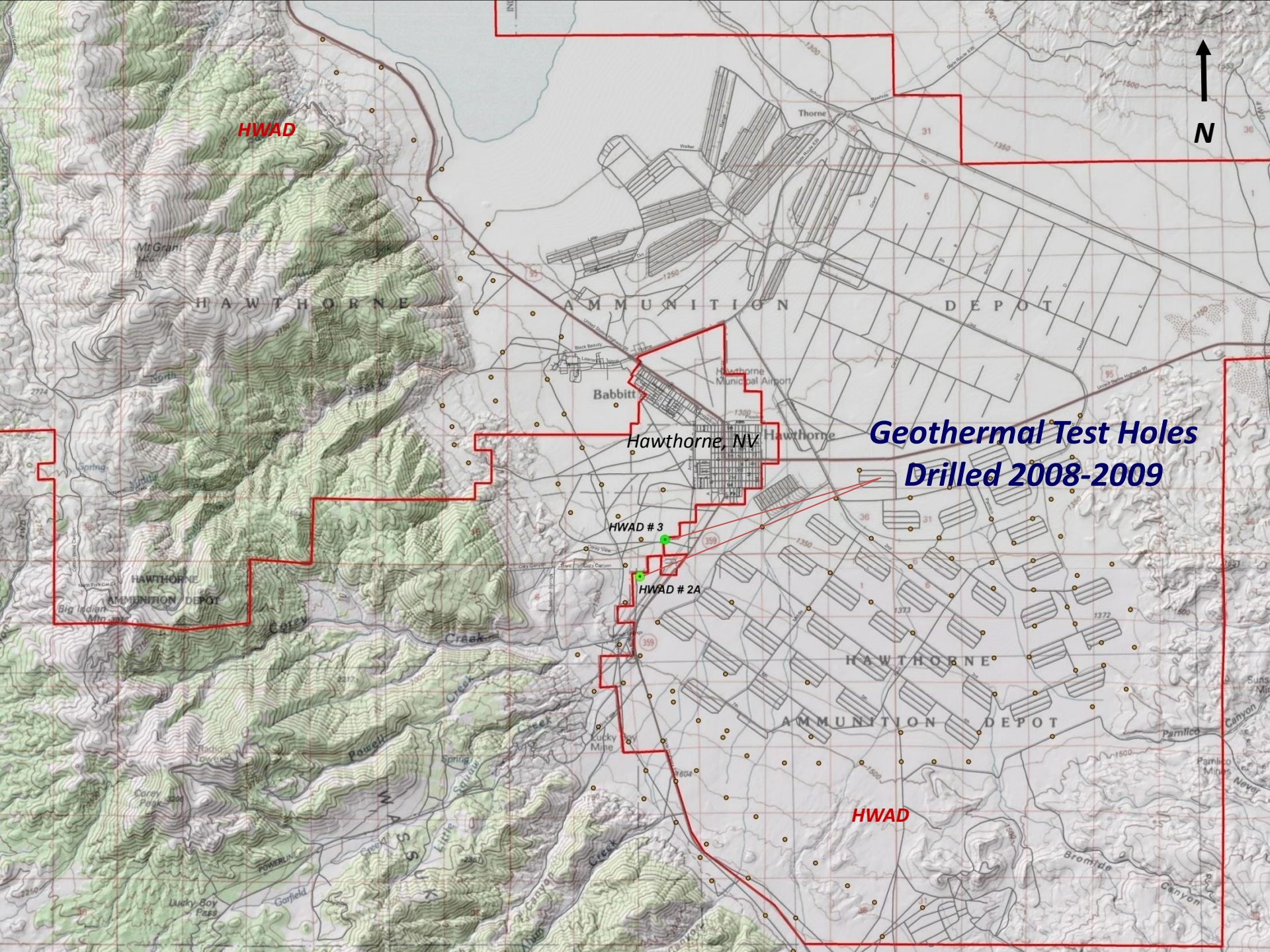


Down-hole acoustic image

HWAD #2a

- Elevated Shallow Temperatures
  - ✓220 deg F @ 1000’
  - ✓236 deg F @ 2500’
  - ✓ Reveals commercially viable resource

The Geothermal Program Office (GPO) has conducted exploration activities to locate a potential geothermal resource within the 147,000 acres of HWAD. GPO has conducted gravity and ground magnetic surveys, a 3-D seismic survey and interpretation, and has drilled 2 deep, slim holes.



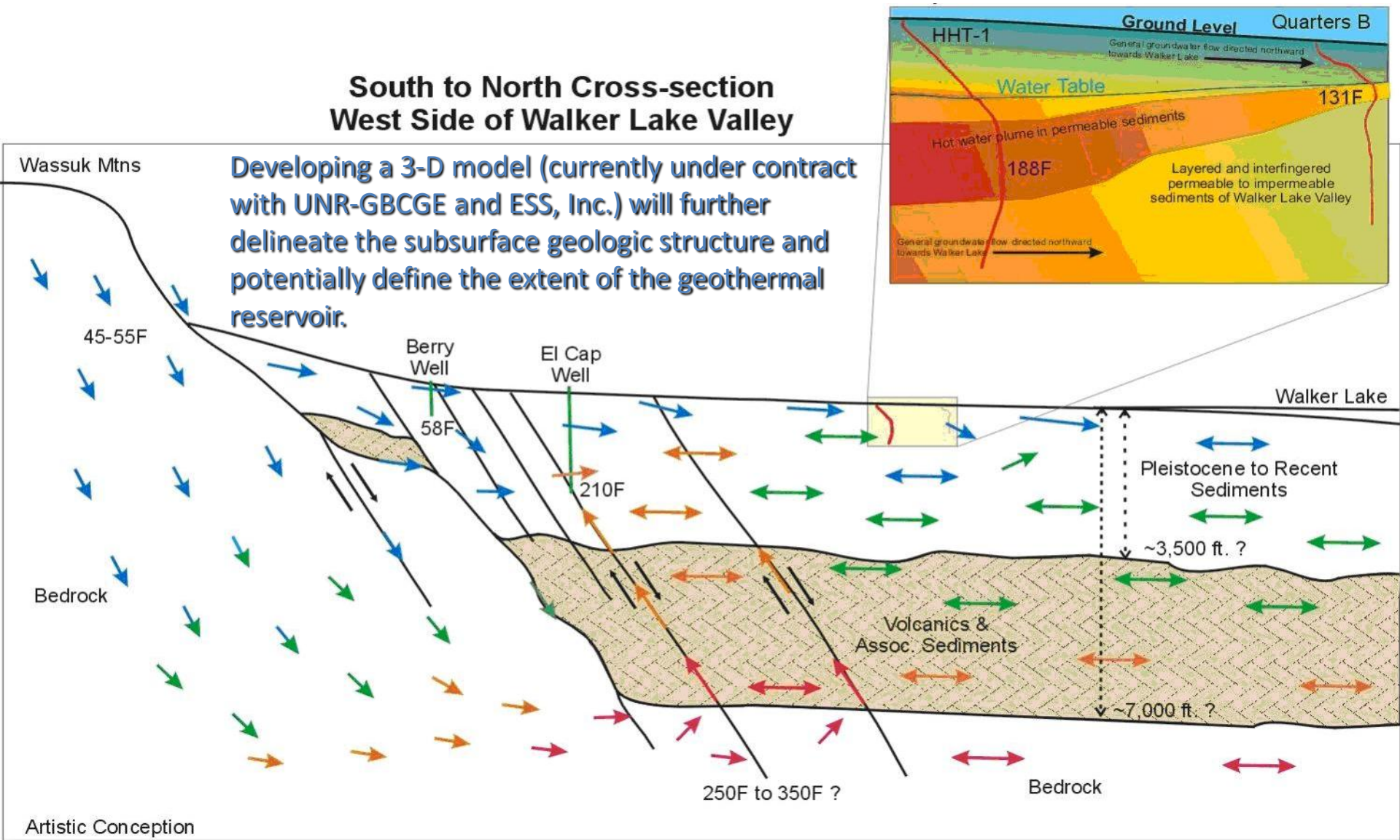
HWAD
N
Geothermal Test Holes
Drilled 2008-2009
Hawthorne, NV
HWAD # 3
HWAD # 2A
HWAD
HAWTHORNE AMMUNITION DEPOT
Babbitt
Hawthorne
Hawthorne Municipal Airport
Thorne
Mt Grant
Big Indian Mtn
Corey Creek
Powell Creek
Lucky Boy Mine
Lucky Boy Pass
Pamlico Canyon
Pamlico Mines
Bromide Canyon

Milestones

- MOA between Department of the Army and Department of the Navy signed 12/7/2009
- Department of the Navy will:

  - Provide Technical Assistance with Geothermal Project Contracting Strategy
  - Assist Army in conducting any industry forum and prep of solicitation
  - Consult Department of the Army throughout the PPV contracting process
  - Maintain resource management expertise and oversight of geothermal project to ensure long-term energy
  - Monitor and report on condition of resource and provide monthly revenue reports

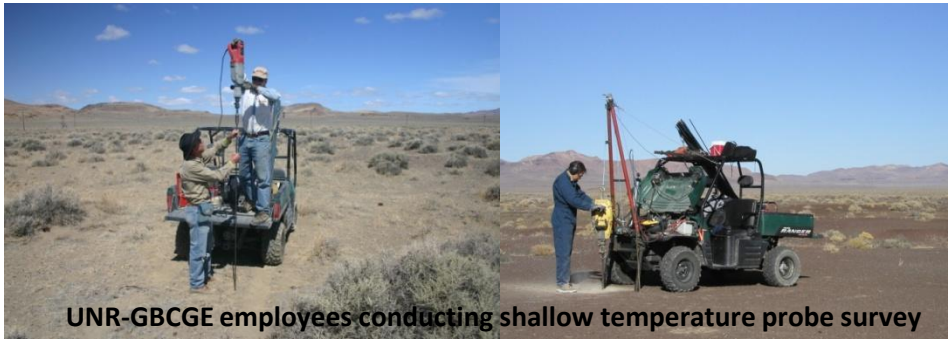
Geologic Modeling



Current/Future Exploration

Current Exploration

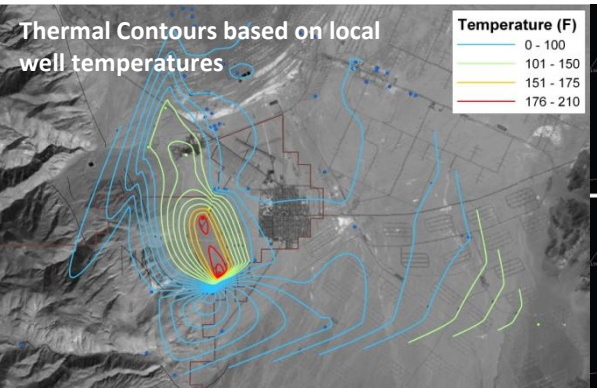
- Synthesize data/create a complete 3-D Geologic model
- Establish shallow and intermediate/deep drilling targets from synthesized data and geologic model

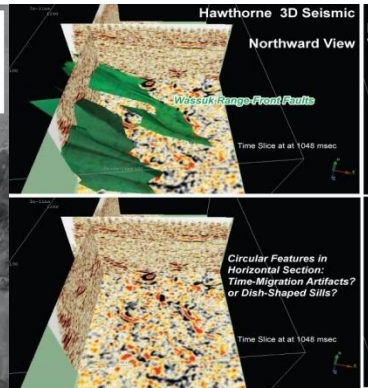


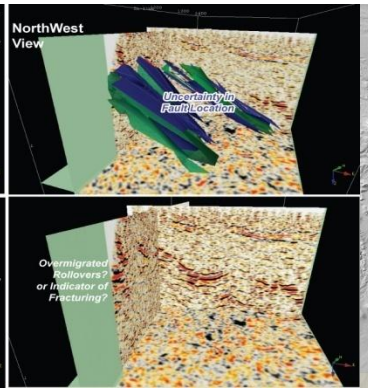
UNR-GBCGE employees conducting shallow temperature probe survey

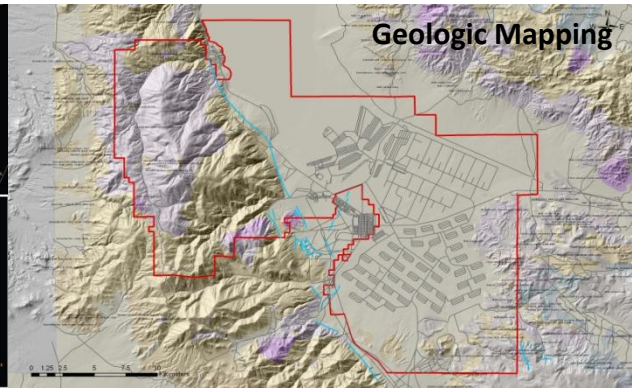
Future Exploration

- Site (Catex) – Drill Shallow and Intermediate/Deep Slim TGH
- 3rd Party Geothermal Resource Assessment
- Develop Marketing Video on HWAD for potential developers









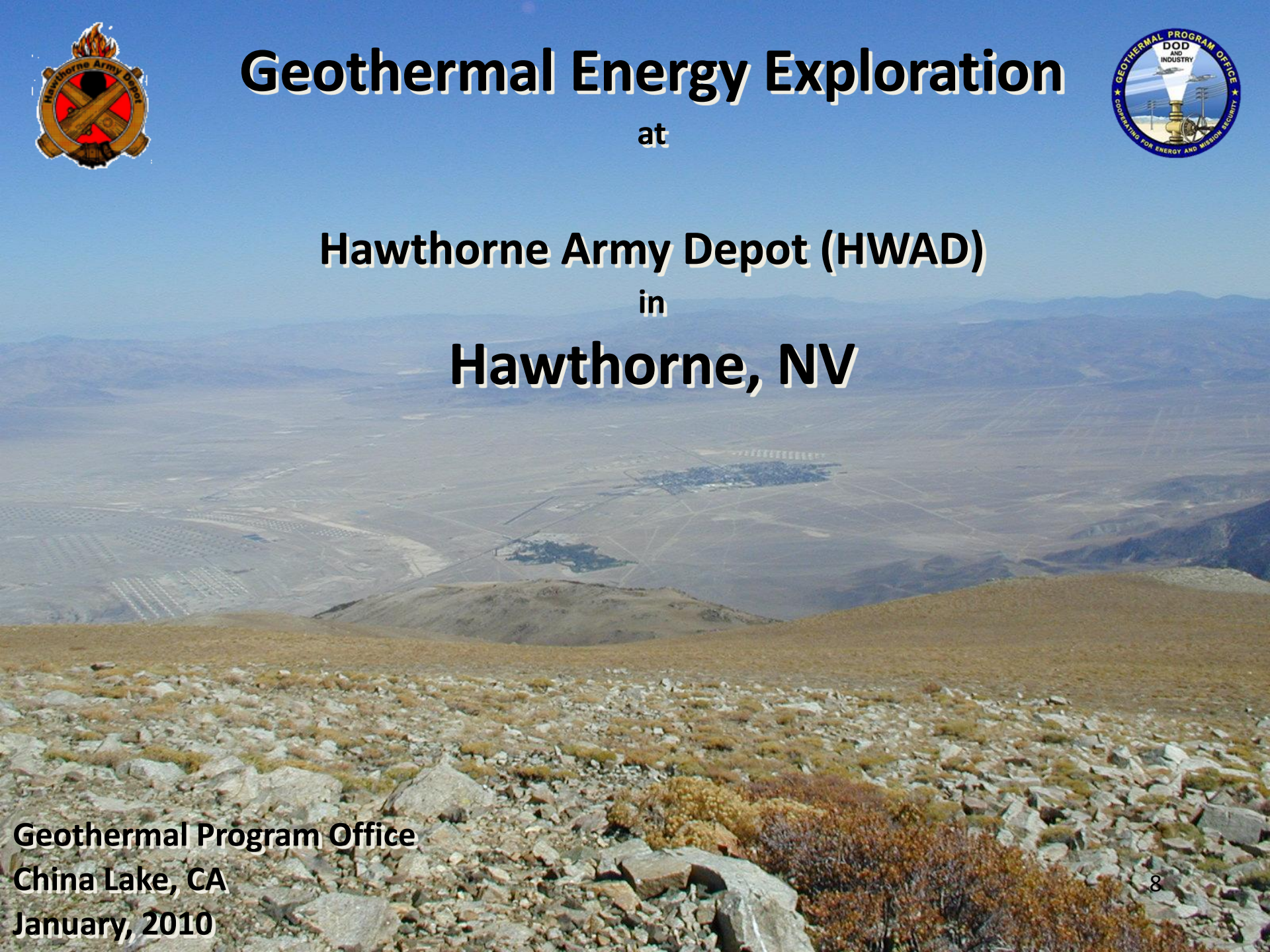
Geothermal Energy Exploration

at

Hawthorne Army Depot (HWAD)

in

Hawthorne, NV



Geothermal Program Office
China Lake, CA
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