#### The Mount Spurr Geothermal Project

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We will not update these forward-looking statements, even though our situation will change in the future.



#### **Outline**

- O. Introduction to Ormat; Geothermal Power; Mt. Spurr project
- 1. Project timeline
- 2. Total cost of project
- 3. Transmission needs
- 4. Cost of power to consumer
- 5. Amount of power supplied to railbelt
- 6. Likelihood of completion
- 7. Permitting roadblocks; environmental challenges
- +. Community Support



#### Introduction to Ormat

- A leader in geothermal power
- Owns and operates 520 MW worldwide

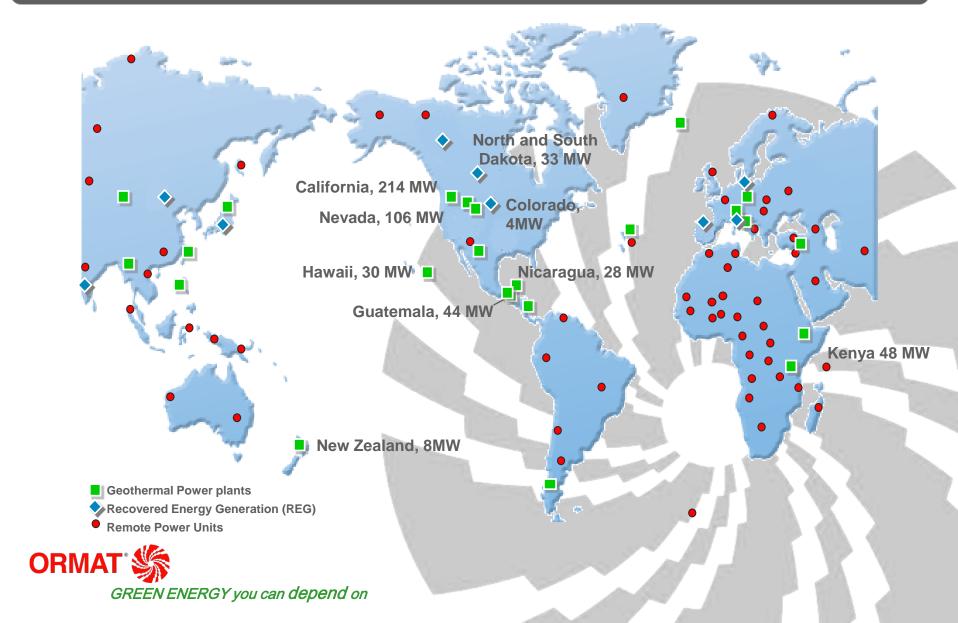
NYSE: "ORA"

Market Cap.: \$1.54B\*

LTM Revenues: \$415 M

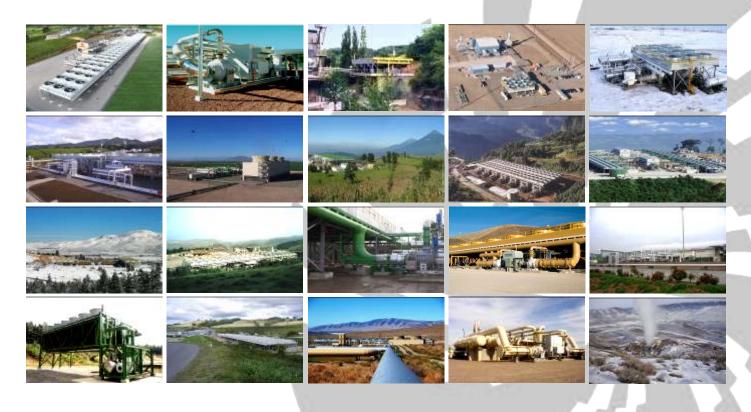
- Supplied approximately 1,300 MW to 24 countries
- Vertically integrated:
  - Explores, develops, engineers, manufactures, constructs, operates
- Currently exploring and developing projects in >6 states
- Employs >1,000 people worldwide; 450 in the U.S.

## Global Presence; 71 Countries



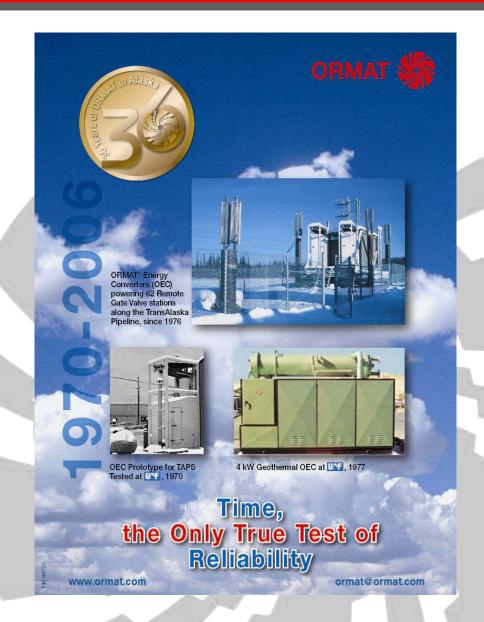
## The Power of Experience

1300 MW of field proven power plants, including in: remote locations; volcanic areas; arctic environment; un-manned facilities

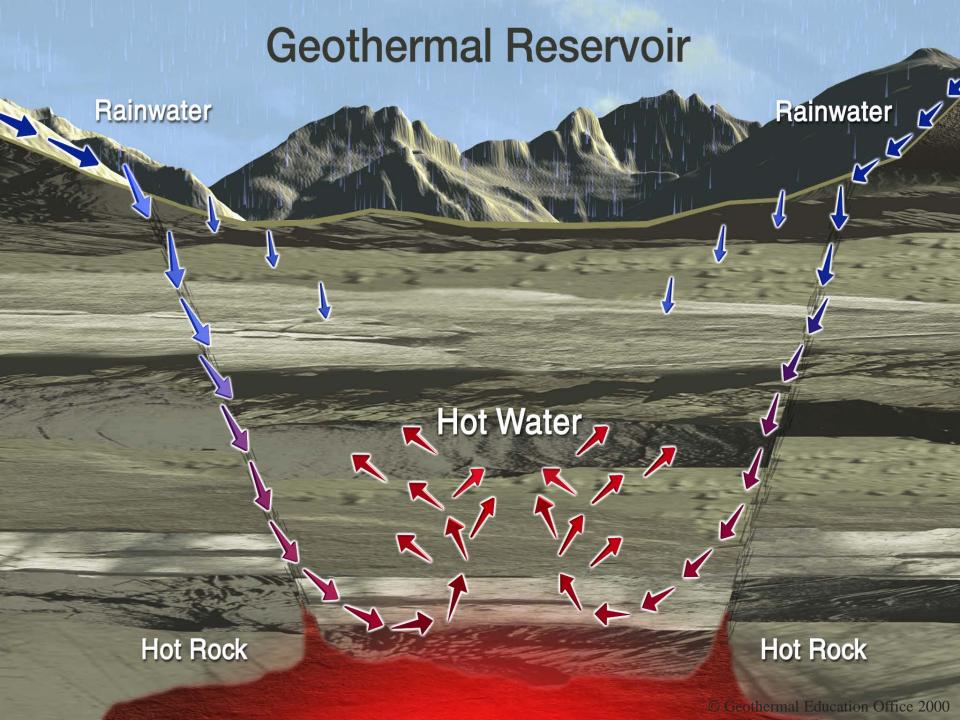


# Nearly 40 Years of Ormat in Alaska

- >100 Remote Power Units
  - Serving remote gate valves
  - TransAlaska Pipeline
  - Since 1975
- First geothermal unit
  - Tested in 1979
  - University of Alaska Fairbanks
  - At Manley hot springs







# ORMAT S **Air-Cooled Binary Geothermal Power Plant** II I◀ Cooled Hot Geothermal Geothermal Fluid Fluid

# Geothermal – Key Attributes

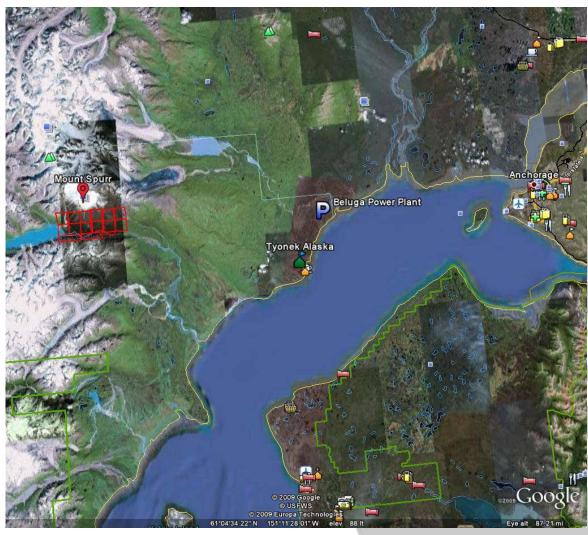
- Utilities' renewable energy of choice:
  - Base-load generation
  - Cost-competitive
  - Highly reliable; >95% availability
  - Proven technology: ~10,000 MW deployed worldwide
- No fuel cost risk; Fixed long-term pricing
- Sustainable & environmentally friendly
  - Closed loop system with near zero emissions
  - No water consumption [Mt. Spurr plant will be air-cooled]
  - Minimal surface and visual impact
- Creates long-term, high-quality jobs



# Mt. Spurr Geothermal Project



# Location

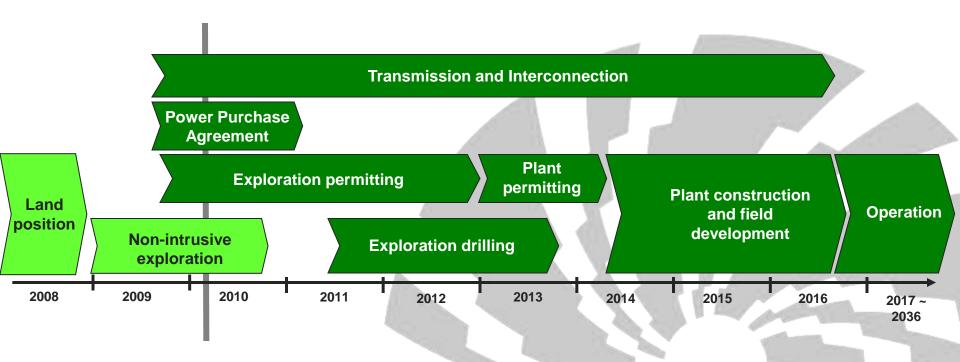


**West Cook Inlet** 

~75 miles west of Anchorage



# 1. Mt. Spurr – Estimated Timeline



- 36,000 acres of state lands leased in October, 2008
- Geophysical exploration began in summer of 2009
- Plan of exploration for 2010-2011 approved by DNR on January 2010



## 2. Total Cost of Project

- Estimated at \$5,000-\$6,000 / kW
  - Assuming 50 MW: \$250 \$300 million
- Requested funding:
  - \$2 million, matched by \$2.1 million, from the renewable energy grant program
  - Support 2010-2011 exploration plan



### 3. Transmission Needs

- ~40 miles to Chugach Electric's Beluga plant
- Assume the state or one or more local utilities will build, own and operate the line

# 4. Cost of Power to Utility

- 11~14 c/kWh (2009 dollars) or less, depending on:
  - Royalty rate
  - State incentives (e.g. tax credits)



#### 5. Amount of Power to Railbelt

Estimated at 50~100 MW net

At 95% capacity factor: 416.1 ~ 832.2 GWh / year



# 6. Likelihood to Completion

- Technology-wise: Very likely
  - Practically no technology risk
  - Ormat has built dozens of plants worldwide, ~1300 MW
- Business-wise: Depends on utilities and state
  - Chugach and other utilities highly interested in off-taking power
  - Need to incentivize development in order to meet the utilities' price expectations
- Resource-wise: Moderate
  - Preliminary geological analysis is encouraging; however
  - Significant exploration required to prove and size the resource



# 7. Permitting Roadblocks

- Area was studied by DNR and findings were published as part of the leasing process
- Ormat will adhere to DNR guidelines and mitigation measures
- Ormat will work with all relevant agencies to obtain the required exploration, development and construction permits
- No roadblocks or major challenges identified so far

# Project Endorsed by:

- Future ratepayers, e.g. Mayor of Anchorage
- All Railbelt utilities, primarily Chugach Electric
- Nearest communities:
  - Tyonek
  - Kenai Peninsula Borough
- Environmental and renewable energy communities:
  - Cook Inletkeeper
  - Renewable Energy Alaska Project (REAP)
  - Homer Electric Association Members Forum (HEAMF)
  - Alaska Center for Appropriate Technology (ACAT)

