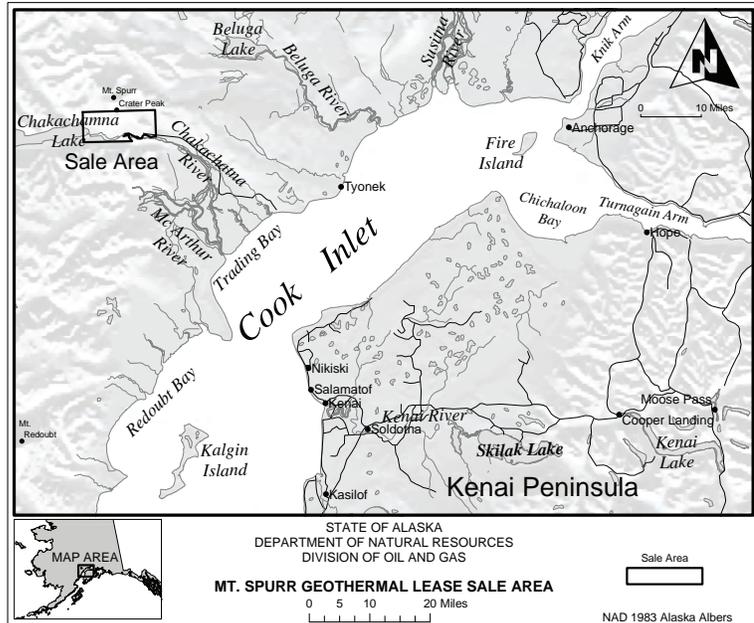


Geothermal Leasing

DNR has held a total of three geothermal lease sales, all along the southern flanks of Mount Spurr, located about 40 miles northwest of Tyonek. The first two sales, held in 1983 and 1986, did not result in any development. In 2006, amid renewed interest in Alaska's geothermal resource potential, DNR received requests from industry to make Mt. Spurr available for geothermal leasing again. On September 10, 2008, DNR held the Mount Spurr Geothermal Lease Sale No. 3, and received 20 bids on 16 available tracts, generating \$3,527,073.34 in bonus bids.

DNR also received interest in geothermal resource development on Augustine Island, located in lower Cook Inlet. DNR is currently in the process of evaluating the area. A finding to determine whether it is in the state's best interest to offer the area for geothermal leasing is anticipated to be completed in 2009.

Geothermal leasing procedures are set out in 11 AAC 84.70. For areas of known geothermal potential, the commissioner designates a proposed geothermal disposal area comprised of individual tracts of not more than 2,560 acres, and invites applications for the tracts during a specified period. At the same time, the commissioner invites public comments on the proposed area. After reviewing available geologic information and the response to the call for applications, the commissioner determines whether the tracts will be leased competitively or whether noncompetitive geothermal prospecting permits will be issued. (Noncompetitive prospecting permits may be issued for tracts receiving only one application; tracts receiving two or more applications must be leased competitively.) A best interest finding is required before the sale can occur.



The competitive lease sale process is the same as for oil and gas lease sales, which consists of a public opening and reading of sealed bonus bids. The highest qualified bidder per acre on a tract is awarded the lease.

Geothermal leases are issued for a primary term of ten years, with one five year extension possible if the lessee has begun operations necessary to drill a geothermal well. Geothermal lease extension requirements are set out in 11 AAC 84.745. Once commercial production has begun, leases will be extended for the duration of commercial production. Annual lease rentals are \$3 per acre, and the state's royalty rate is 10 percent of the gross revenues derived from the production, sale or use of geothermal resources under the lease.

For more information on the state's geothermal leasing program, please see the division's web page at www.dog.dnr.state.ak.us/oil/products/publications/geothermal/geothermal.html.

Active Geothermal Leases

Location	ADL	Lessee	Acres	Effective Date	Expires
Mt. Spurr	391354 - 391368	Ormat Nevada Inc.	35,806.90	11/1/2008	10/31/2018
Mt. Spurr	391369	Chad Attermann	250.23	11/1/2008	10/31/2018

Geothermal Resources in Alaska surface manifestations

EXPLANATION

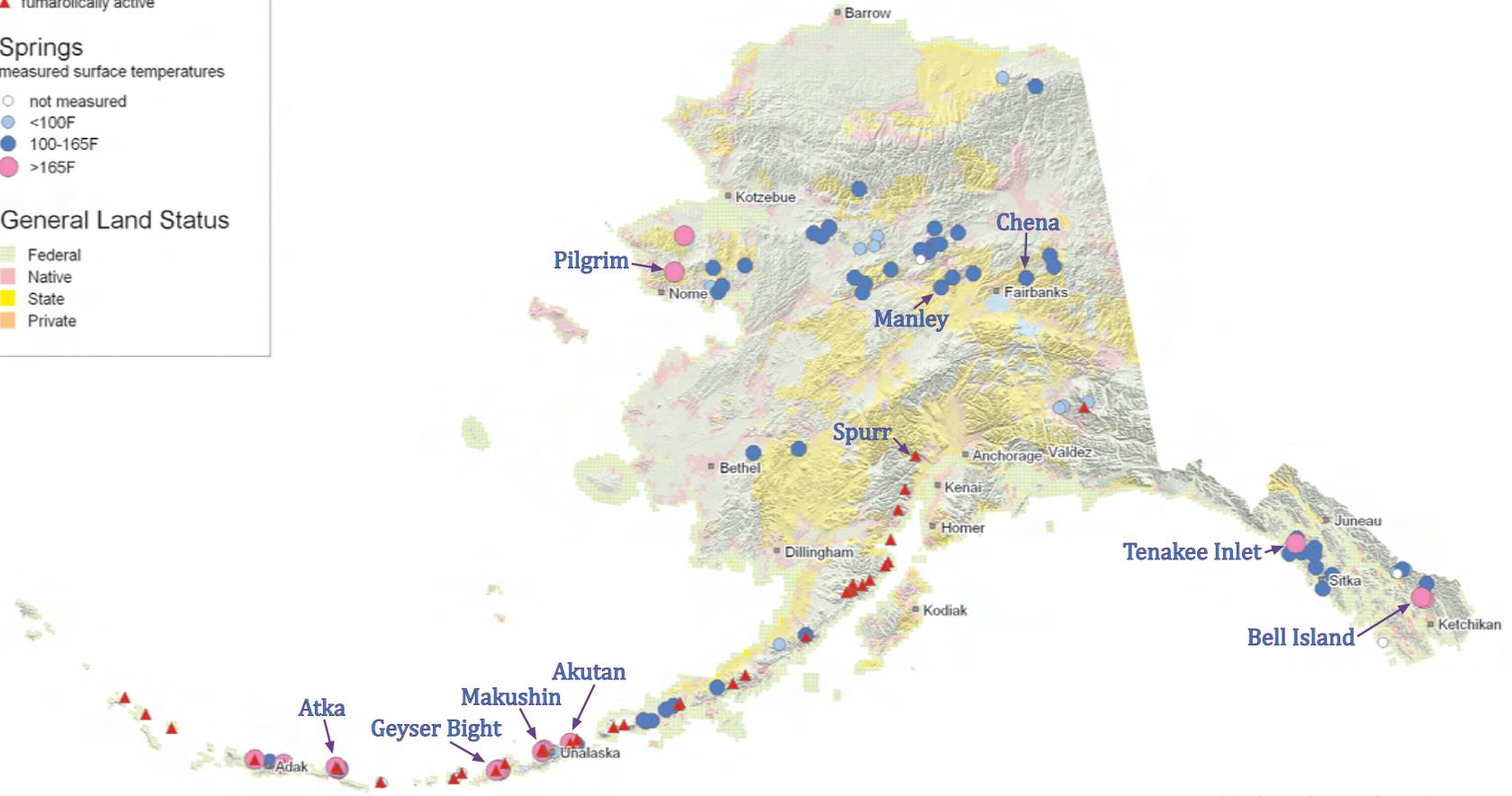
Volcanoes
▲ fumarolically active

Springs
measured surface temperatures

- not measured
- <100F
- 100-165F
- >165F

General Land Status

- Federal
- Native
- State
- Private



DNR / Geological & Geophysical Surveys
2008

Data from: Motyka, R.J., Moorman, M.A., and Liss, S.A., 1983, Geothermal resources of Alaska: Alaska Division of Geological & Geophysical Surveys Miscellaneous Publication 8, 1 sheet, scale 1:2,500,000.
<http://www.dggs.dnr.state.ak.us/pubs/pubs?reqtype=citation&ID=671>

Mt. Spurr Geothermal Lease Sale No. 3



Sale Results Summary Mt. Spurr Geothermal Lease Sale No. 3

Date of Sale: 9/10/2008
Bidding Method: Cash Bonus Bid, Fixed Royalty

Final Report
9/19/2008

Total Tracts Sold: 16
Total Acres Sold: 36,057.13
Min Bid Per Acre: \$1.00
Royalty %: 10.00000%

Highest Bid: \$1,529,400.00
Tract Number: 3
Submitted By: Ormat Nevada Inc.

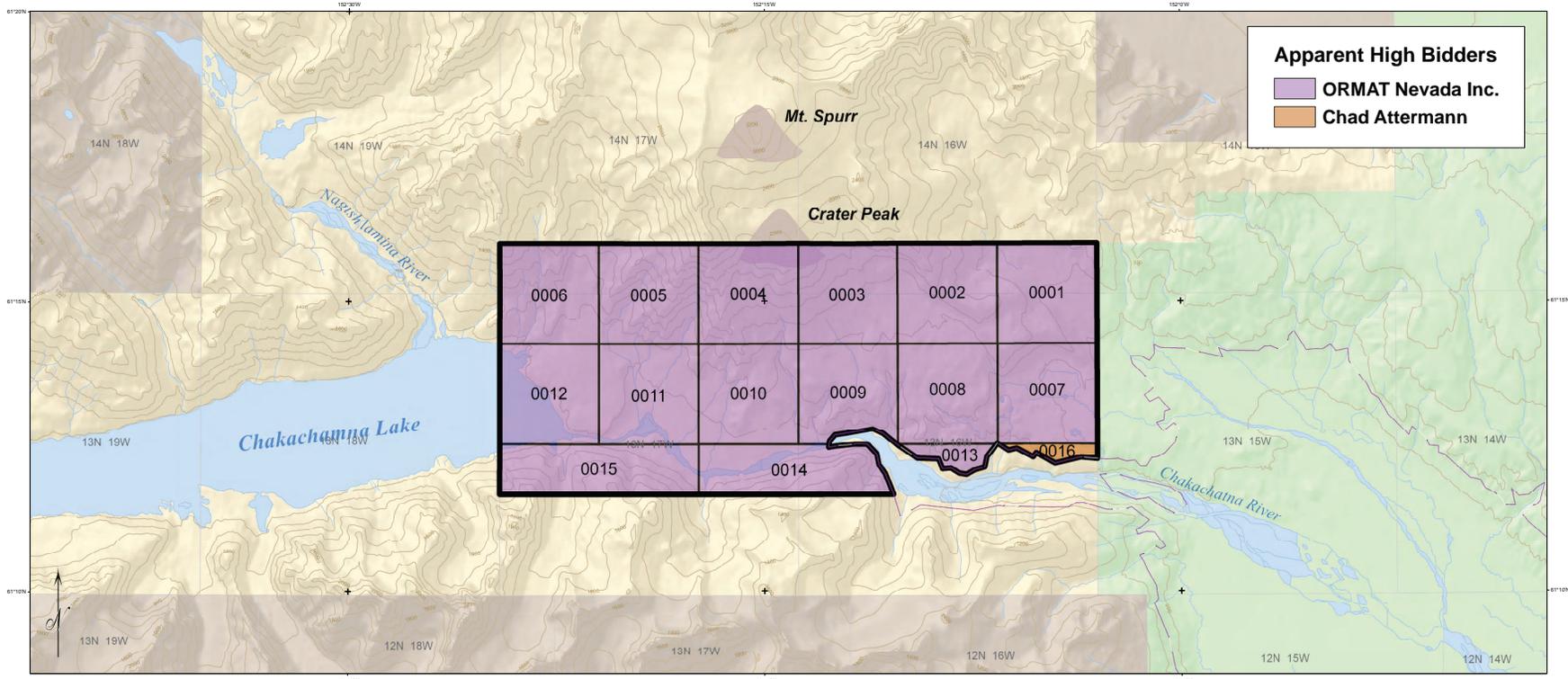
Total Number of Valid Bids: 20
Total High Bonus Bids: \$3,527,073.34
Total Exposed (Sum Of All Valid Bids): \$3,570,069.44
Average High Bonus Bid Per Acre: \$90.44

Highest Bid/Acre: \$600.00
Tract Number: 3
Submitted By: Ormat Nevada Inc.

Bidder Company or Group Name	Number of Tracts Bid	Total of All Bids	Number of Tracts Won	Total of High Bids
ORMAT NEVADA INC. 100.00000%	16	\$3,522,816.93	15	\$3,522,066.24
ICELAND AMERICA ENERGY INC. 100.00000%	3	\$42,245.41	0	0
Chad Attermann 100.00000%	1	\$5,007.10	1	\$5,007.10

The royalty rate is 10.0% of the gross revenues derived from the production, sale or use of geothermal resources under the lease.

Oil and Gas Lease Sale Mt. Spurr Geothermal Sale 2008 Apparent High Bidders



Apparent High Bidders

- ORMAT Nevada Inc.
- Chad Attermann

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State of Alaska
 Department of Natural Resources
Division of Oil and Gas



Scale 1:60,000



Alaska Albers Equal Area Conic
 False Easting: 0.000000
 Central Meridian: -150.000000
 Standard Parallel 2: 65.000000

Standard Parallel 1: 55.000000
 Latitude of Origin: 50.000000
 False Northing: 0.000000
 GCS North American 1983

- Sale Boundary
- Sale Tracts
- State Acreage Available for Lease
- Federal Lands
- Native Lands
- ACMP Boundary

DATA SOURCES

Base map data, including hydrologic data, village and town locations, land status and boundaries, etc. are from the State of Alaska Statewide Land Records Information Systems GIS database. Oil and gas wells are from the Alaska Division of Oil and Gas database as adapted from the Alaska Oil and Gas Conservation Commission dataset. Land status is derived from the Federal Bureau of Land Management's general land status dataset.

Information on this map is depicted only at a township or section level resolution. For detailed information regarding any specific area, interested individuals may consult the land records of one or more of the following agencies:

- The State of Alaska, Dept of Natural Resources
- The Federal Bureau of Land Management
- The Federal Minerals Management Service
- Arctic Slope Regional Corporation

Discrepancies in boundary alignments are the result of merging multiple data sets from a number of different sources.

Bidders are solely responsible for determining the availability of acreage prior to submitting a bid.