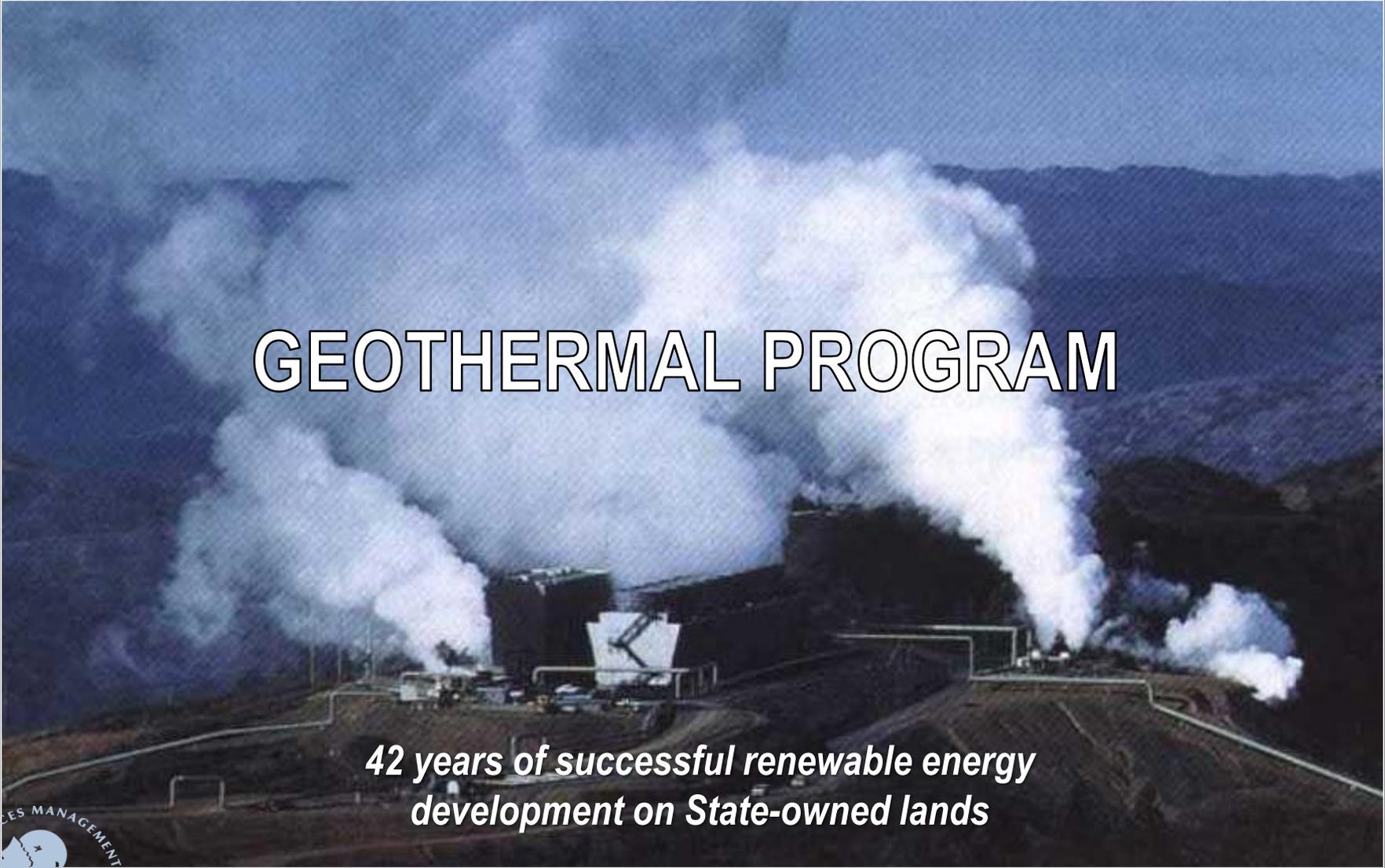


California State Lands Commission
Mineral Resources Management Division



GEOHERMAL PROGRAM

*42 years of successful renewable energy
development on State-owned lands*



updated: 05/2015

GEOHERMAL PROGRAM OVERVIEW

Objectives:

Manage orderly development, ensure public safety and environmental protection, and maximize revenue.

Functions:

- Issue prospecting permits and leases.
- Evaluate proposed drilling, development plans, and engineering projects.
- Inspect operations, assure lease compliance, verify production and royalty.

Primary Staff:

- Geothermal Engineers in Long Beach.
- Field Inspector in the Geysers.

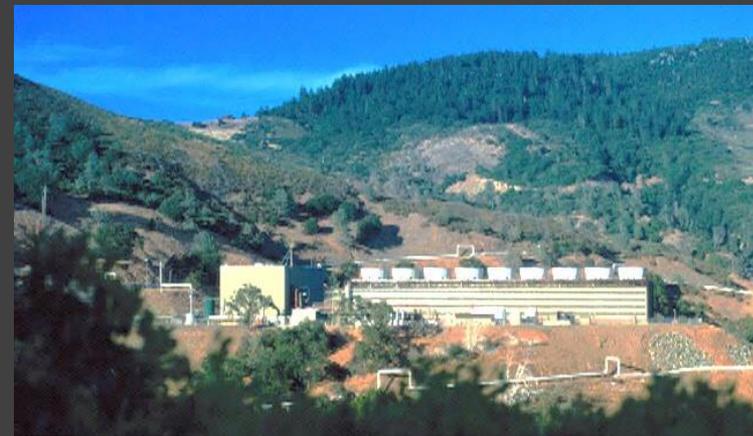
Authority:

1967 Geothermal Steam Act;
Public Resources Code, Division 6,
Article 5.5, amended 1978, 1983.



Power plants at The Geysers Field

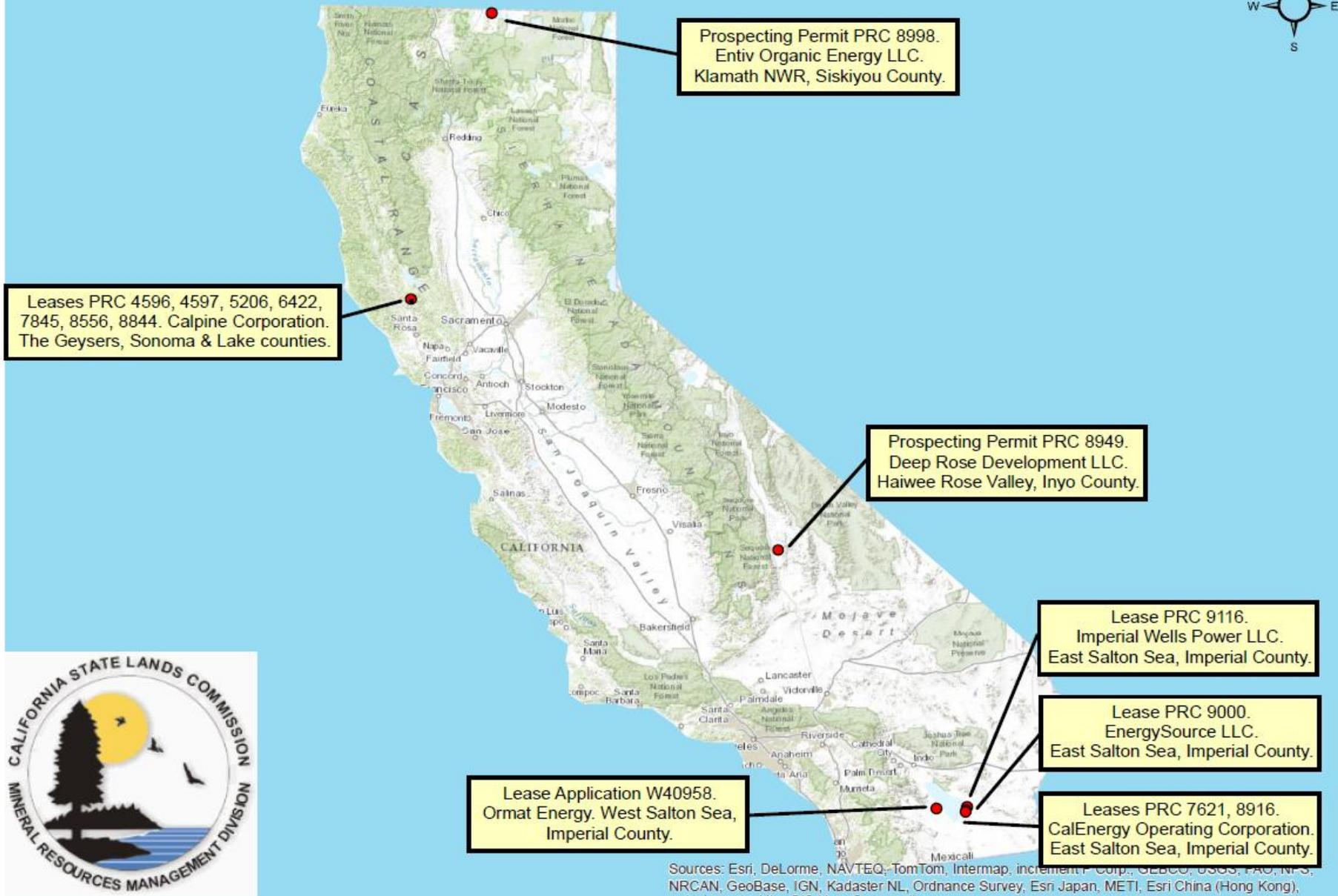
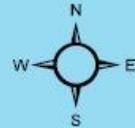
THE GEYSERS GEOTHERMAL FIELD :



SALTON SEA GEOTHERMAL FIELD :

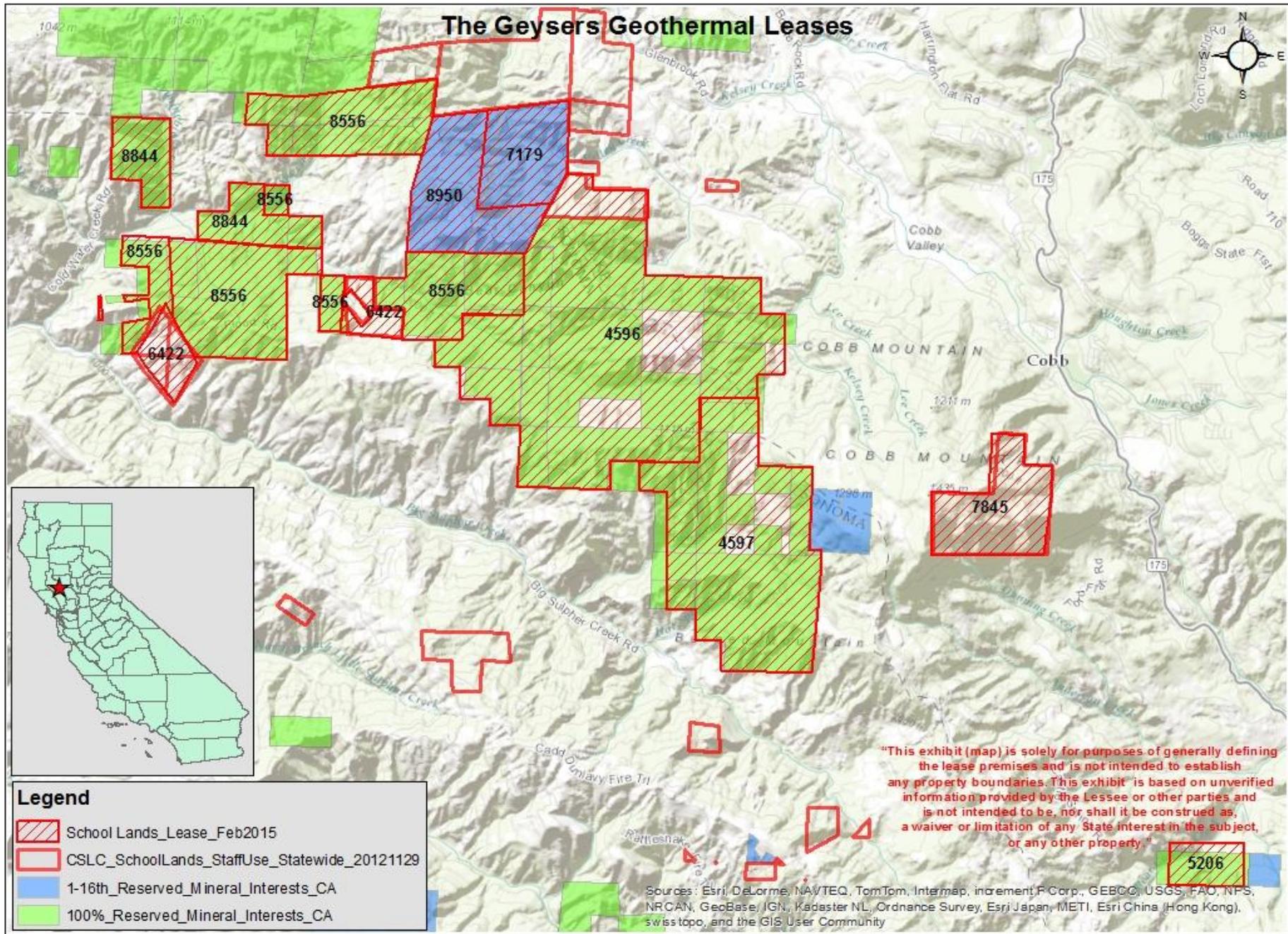


California Geothermal Leases, Permits, and Applications.



Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, and the GIS User Community.

The Geysers Geothermal Leases



Legend

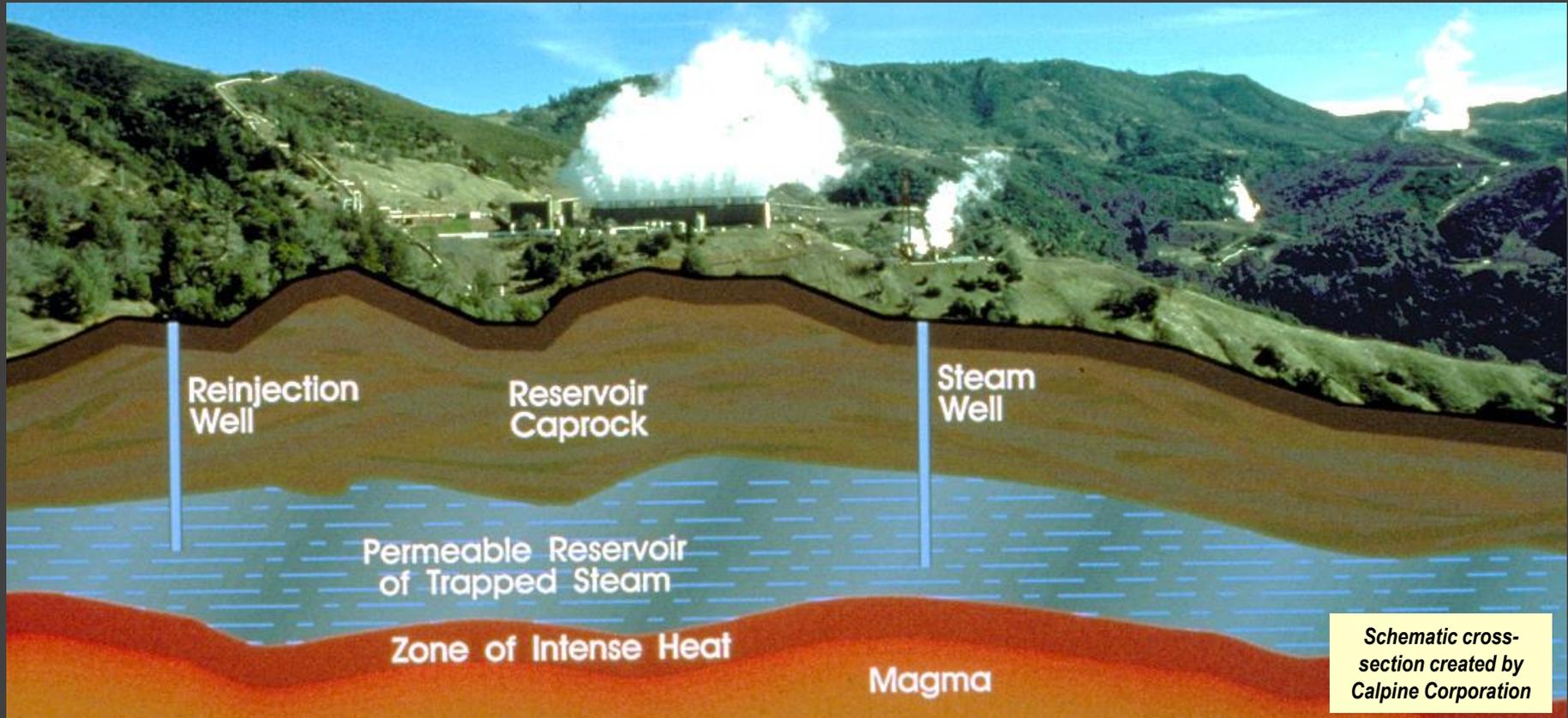
- School Lands_Lease_Feb2015
- CSLC_SchoolLands_StaffUse_Statewide_20121129
- 1-16th_Reserved_Mineral_Interests_CA
- 100%_Reserved_Mineral_Interests_CA

"This exhibit (map) is solely for purposes of generally defining the lease premises and is not intended to establish any property boundaries. This exhibit is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject, or any other property."

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

0 1.25 2.5 5 Miles

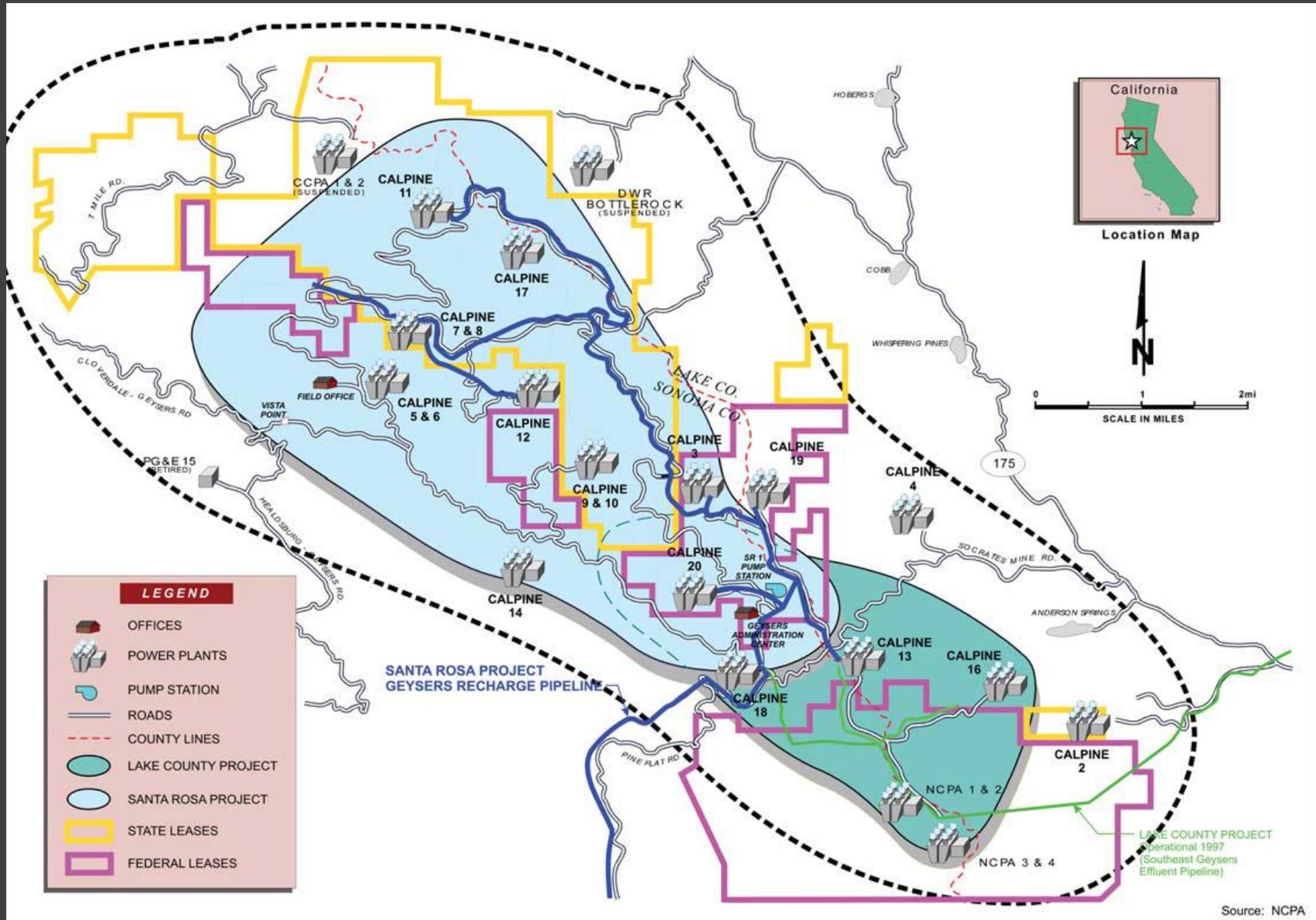
THE GEYSERS GEOTHERMAL FIELD



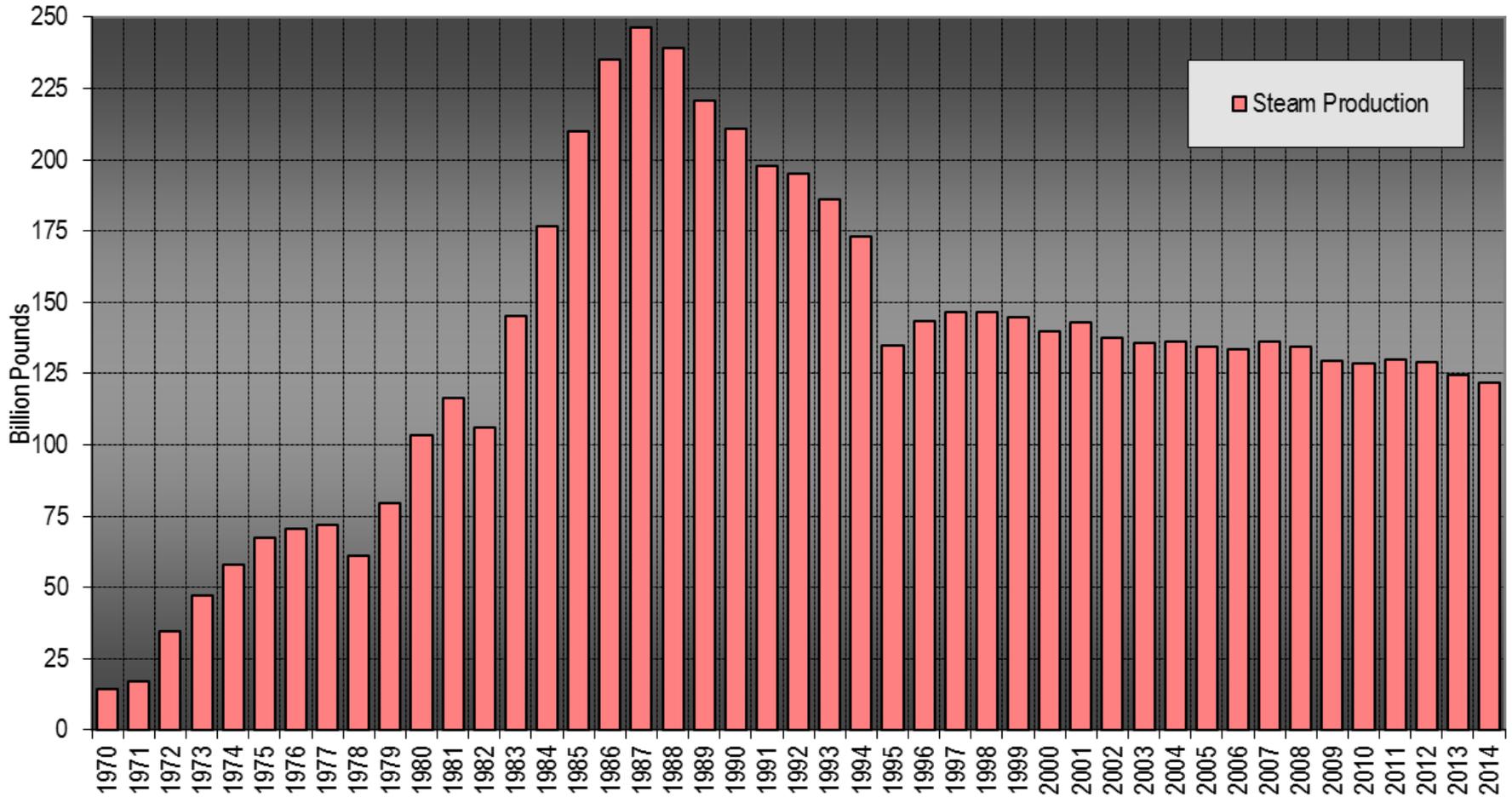
Field Facts:

- Largest geothermal development in world
- Stable, non-cyclical baseload production
- Operates 24 hours a day, 7 days a week
- 55 years continuous operation since 1960
- 20 generating units
- Current output ~1,000 MWe
- Over 400 production wells
- Over 100 injection wells

INJECTION OF RECLAIMED WASTEWATER AT THE GEYSERS

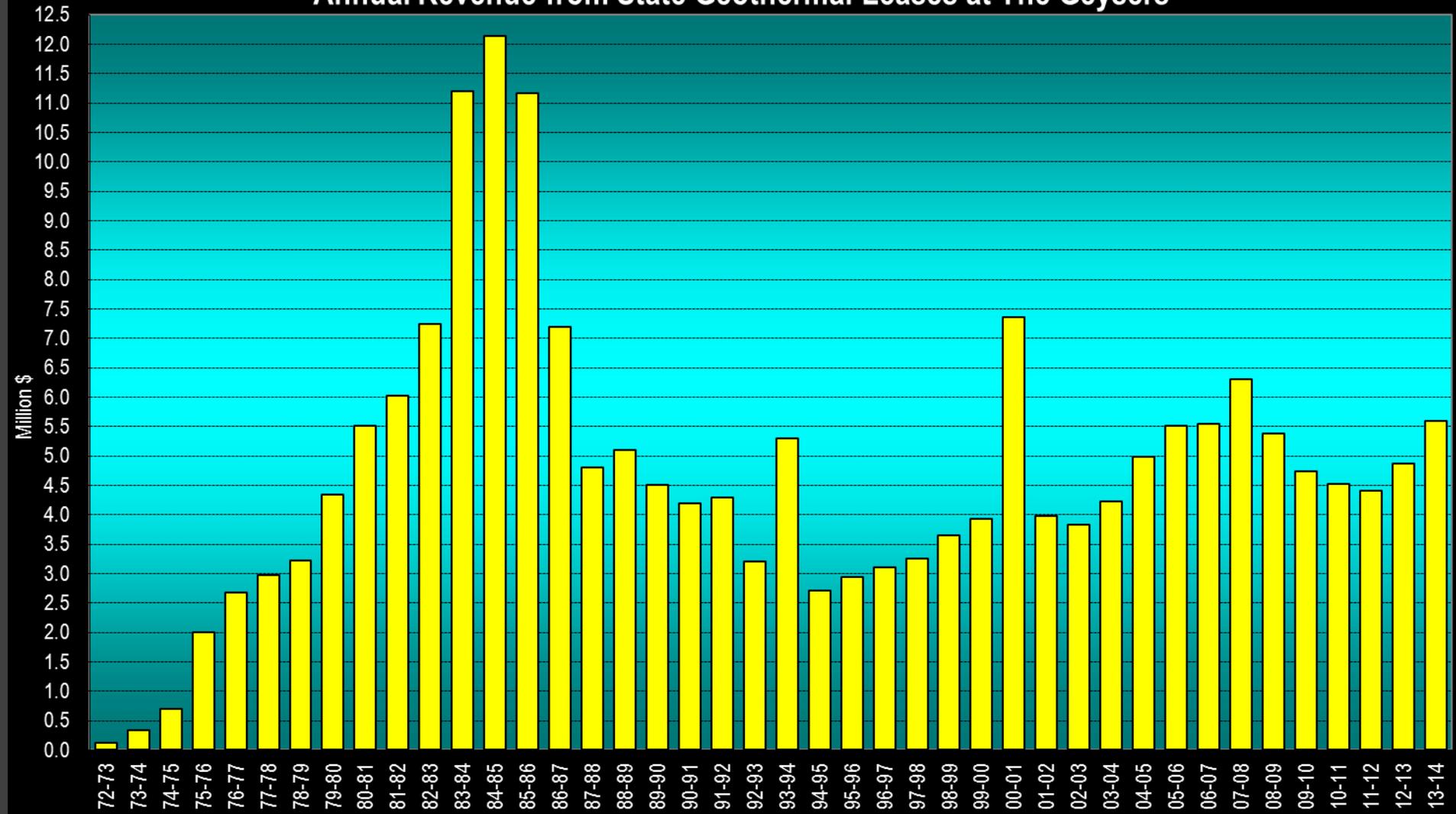


STEAM PRODUCTION at THE GEYSERS

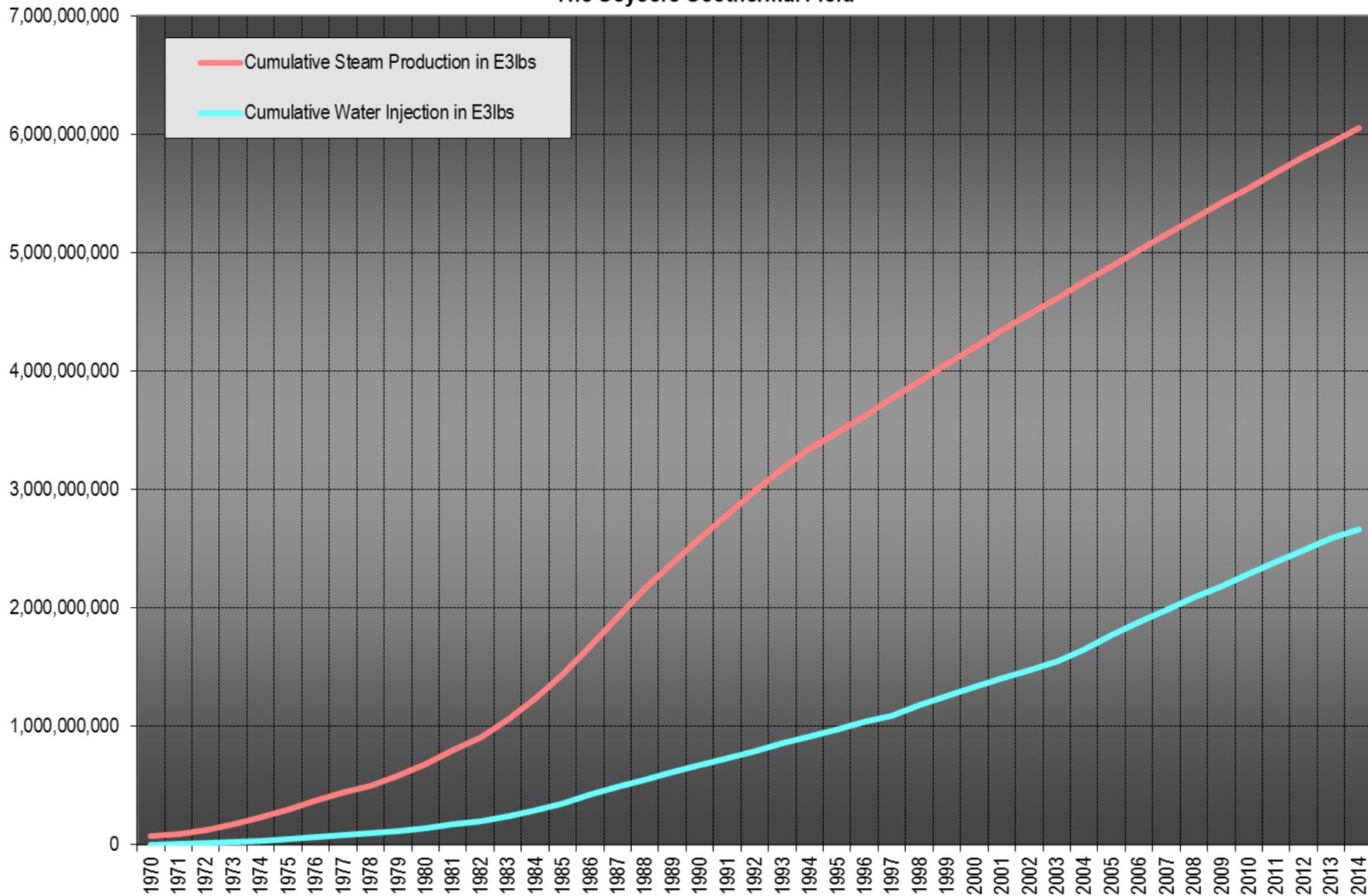


Data provided by California Division of Oil, Gas, and Geothermal Resources, and by Calpine Corporation

Annual Revenue from State Geothermal Leases at The Geysers



The Geysers Geothermal Field

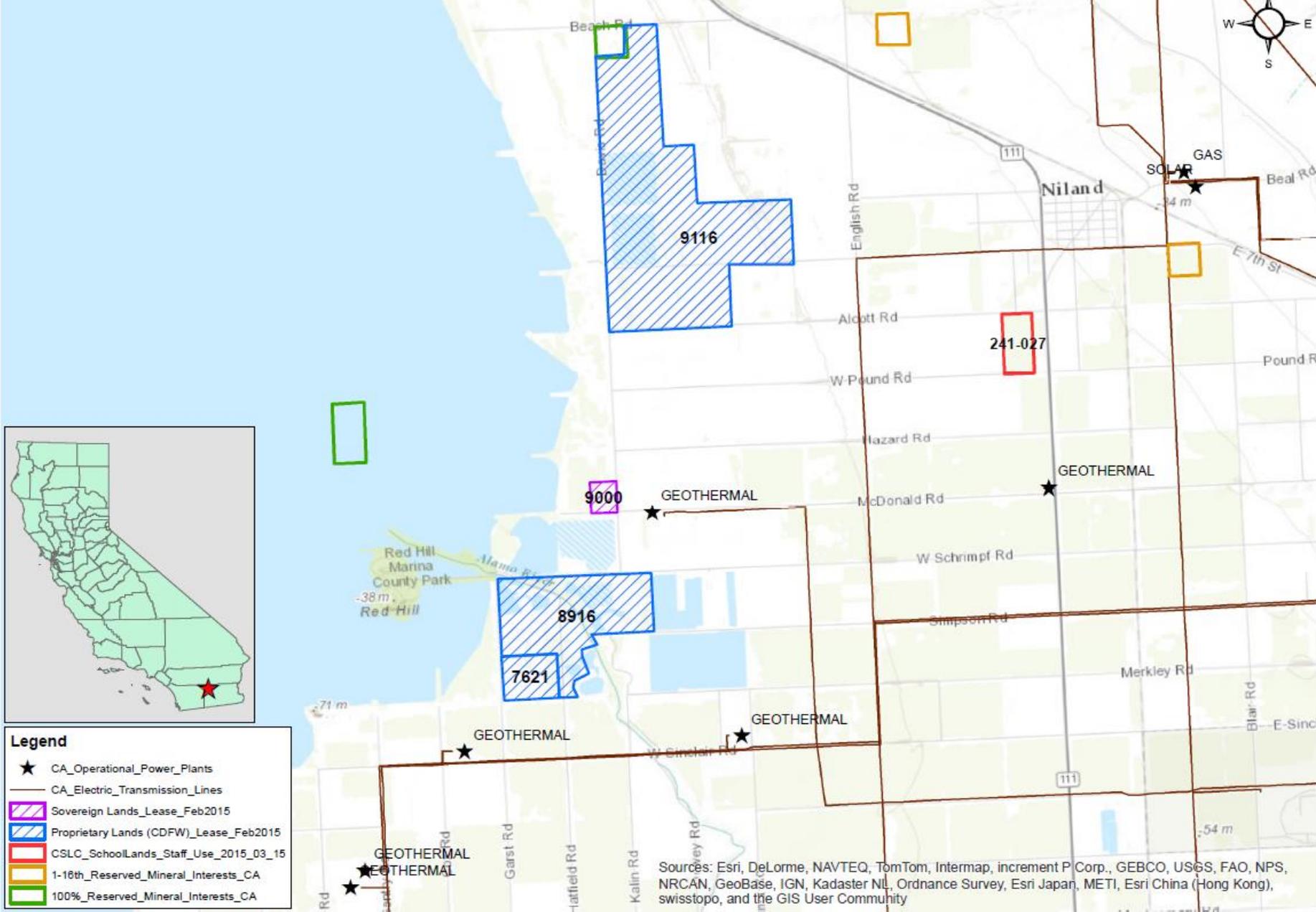


SALTON SEA GEOTHERMAL FIELD



Vonderahe #1

Salton Sea Geothermal Leases



Updated June 2015 by MRMD

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

PROGRAM MILESTONES



Power plant at The Geysers Field

1960s -----

First prospecting permits, first wells, first leases.

1970s -----

First production and royalty, first competitive lease sale.

1980s -----

SLC acquires lieu lands from U.S. at The Geysers.
Production and royalty peak.

1990s -----

First royalty from Salton Sea.
Operations consolidated at The Geysers.

2000s -----

Staff assists in getting reclaimed water to replenish The Geysers.
First new prospecting permit 20+ years.

2010s -----

New prospecting permits issued in Inyo and Siskiyou Counties, and north Geysers. New leases issued at Salton Sea Field.

SLC STAFF EFFORTS TO PROMOTE GEOHERMAL DEVELOPMENT

1967 – Drafting of Geothermal Steam Act

1974 – Joint Legislative Committee on Public Domain

1978 – Drafting of Geothermal Act (revisions to PRC)

1989 – Technical Advisory Committee at The Geysers

2003 – Santa Rosa - Geysers Recharge Project



Construction of water pipeline to The Geysers

PUBLIC RESOURCES CODE

Division 6 - Public Lands

Part 2 - Leasing of Public Lands

Chapter 3 - Oil and Gas and Mineral Leases

Article 5.5 - Geothermal Resources

(Added by Statutes of 1967)

- § 6901. Short title
- § 6902. Legislature findings and declaration
- § 6903. Geothermal resources
- § 6904. Permits and leases; issuance; state lands defined
- § 6905. Persons qualified to receive permits and leases
- § 6906. Application of article; rules and regulations
- § 6907. Production of other geothermal resources
- § 6906. Repealed
- § 6909. Nonexclusive exploration permits; authority to grant; terms, conditions
- § 6910. Prospecting permits; rules, regulations; application; rents; right to lease
- § 6911. Selection of lands for lease; competitive bids; rules and regulations
- § 6912. Lands sold with reservation of geothermal resources by state; application for permit or lease; rights of owner of surface of lands
- § 6913. Rentals and royalties provided in prospecting permit and lease; renegotiation, share in resource in lieu of payment
- § 6914. Quitclaim or relinquishment of rights under permit or lease
- § 6915. Right of permittee or lessee to reasonable use of surface
- § 6916. Leases for direct heat application of geothermal resources; waiver, suspension or reduction of rental or royalty
- § 6917. Termination of permit or lease
- § 6918. Primary term of lease
- § 6919. Agreements for compensation for drainage or geothermal leases of state-owned lands; conditions
- § 6920. Commingling of geothermal resources
- § 6921. Drilling special wells; conversion of producing wells or reactivating abandoned wells; payment to state
- § 6922. Prospecting permit or lease; accountable acres; cooperative plan
- § 6923. Collective adoption and operation of geothermal resources lands
- § 6924. Surface of state-owned lands under jurisdiction of other agency
- § 6925. Assignment, transfer or sublease of permit
- § 6925.1 Cessation of operations; risk to health, safety or welfare; pollution; resumption of operations
- § 6925.2 Lease for purposes other than electricity generation; terms

FUTURE OUTLOOK – OPPORTUNITIES



Power plant at The Geysers Field

- Continued operations at The Geysers
- Increasing productivity at The Geysers
- Unleased State lands in North Geysers
- More development at Salton Sea field
- State lands on west side of Salton Sea
- Exploration in Inyo County
- Modoc Plateau, northeastern California



Power plant at Salton Sea Field



Further Information

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Mineral Resources Management Division
200 Oceangate, 12th Floor
Long Beach, CA 90802-4331
(562)590-5201**