

# **GEOHERMAL OPERATIONS**

**GEOHERMAL DISTRICT BOUNDARIES AND OFFICES  
of the  
Division of Oil, Gas, and Geothermal Resources**



# SUMMARY OF GEOTHERMAL OPERATIONS

*Richard P. Thomas, Geothermal Officer, Sacramento*

## PROGRAM HIGHLIGHTS:

**ENVIRONMENTAL AWARD** Mammoth-Pacific, L.P., received an award from the Department of Conservation for two years of outstanding lease and facility maintenance in Casa Diablo Geothermal field.

Salton Sea Geothermal field, which produces 327 megawatts, net, of electricity.

The start-up of the Zinc Recovery Project, designed to harvest minerals from high-temperature geothermal brines in the Salton Sea Geothermal field, was moved to 2001. The technology to extract and plate minerals involves ion exchange, solvent extraction, and electro-winning. Geothermal well fluids used for power generation will supply the zinc-laden brine. Full production capacity is estimated at 30,000 metric tons of zinc per year.

## DISTRICT NO. G1

*Elizabeth A. Johnson, District Engineer, Sacramento*



**GLASS MOUNTAIN POWER PROJECTS** The Four-mile Hill Geothermal Development Project, proposed for Glass Mountain in northeastern California, was approved by the U.S. Bureau of Land Management and the U.S. Forest Service. As proposed, the project will consist of a well field, a 49.9-megawatt geothermal power plant, and a 24-mile, 230-kilovolt transmission line. The project is located on federal leases in the Modoc National Forest.

CalEnergy Minerals LLC, a wholly owned subsidiary of MidAmerican Energy Holding Company, is the sole owner of the Salton Sea Zinc Recovery Project. CalEnergy Operating Corporation, an affiliate of CE Generation LLC, is the operator of the geothermal power plants owned by CE Generation in the Salton Sea field and is the operator of the Zinc Recovery Project. El Paso Energy Corporation owns 50 percent of CE Generation LLC.

The Interior Board of Land Appeals of the U.S. Department of the Interior has issued a stay of construction for the project, pending an appeal of the approved Record of Decision. The stay was granted based on appeals filed by the Native Coalition/Pit River Tribe and the Save Medicine Lake Coalition. A second geothermal power project located in the same area, the Telephone Flat Geothermal Development Project, was denied by the Bureau of Land Management.

## DISTRICT NO. G3

*M. Ali Khan, District Engineer, Santa Rosa*



**THE GEYSERS GEOTHERMAL FIELD** Calpine Corporation and the Northern California Power Agency (NCPA), the two operators in The Geysers Geothermal field, produced 64 billion kilograms of steam and injected 33 billion kilograms of water during the year.

The Central California Power Agency worked on the final abandonment of its Geysers operations, leaving two injection wells. Removal of the power plant, well pads, and related facilities—and site restoration—were nearly completed.

## DISTRICT NO. G2

*Michael Woods, District Engineer, El Centro*



**SALTON SEA GEOTHERMAL FIELD** Salton Sea Unit V (49 megawatts, net) and the CE Turbo (10 megawatts, net) power plants began operating in the

Pacific Gas & Electric Company's Unit 15 power plant was decommissioned in 2000 and the site restored. All but one of the wells were plugged and abandoned in 1996 and 1997. The pipelines remain.

**WASTEWATER INJECTION PROJECTS** Lake County's wastewater injection project, the first of its kind, has been in full operation since September 1997. It has helped stabilize steam pressure, increase power plant efficiency, and add 50 MWe of electrical generation at The Geysers. Lake County announced plans to build an additional 21 miles of pipeline to carry more treated effluent to the geothermal field.

By year's end, legal issues facing the Santa Rosa wastewater injection project were resolved and construction began in January 2001. The 40-mile pipeline from Santa Rosa to The Geysers is estimated to cost \$132 million and will supply 11 million gallons of tertiary-treated effluent to the field for injection. An additional 85 MWe of electricity may be generated. The Cities of Santa Rosa, Rohnert Park, and Cotati are working with Calpine Corporation to build the system. The Cities of Windsor and Healdsburg are expected to join later.

# **GEOHERMAL STATISTICS**

## GEOHERMAL OPERATIONS AND METERS DRILLED - 2000\*

Field or county	API county code	Drilled					Completed					Redrilled or deepened					Plugged & abandoned					Meters drilled		
		Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	Suspended	New wells	Reworks
DISTRICT G1																								
Casa Diablo	051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake City	049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Litchfield	035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Susanville	035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wendel	035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lassen County	035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Modoc County	049	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mono County	051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plumas County	063	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shasta County	089	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra County	091	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District G1 Totals		1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	Conf.	0
DISTRICT G2																								
Brawley	025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heber	025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Mesa	025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mesquite	025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salton Sea	025	0	0	0	0	0	0	0	0	0	0	0	7	0	7	1	1	1	0	0	3	0	0	0
Desert Hot Springs	065	0	2	0	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3,578
Imperial County	025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229
Inyo County	027	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kern County	029	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverside County	065	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernardino County	071	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Luis Obispo Coun.	079	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District G2 Totals		0	2	0	0	2	0	2	0	2	0	0	7	0	7	1	1	1	0	3	0	0	0	3,807
DISTRICT G3																								
Calistoga	055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Geysers	033	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	097	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13	0	0	14	0	0	0	0	0
Lake County	033	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mendocino County	045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Napa County	055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma County	097	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District G3 Totals		0	0	0	0	0	0	0	0	0	0	0	0	0	1	13	0	0	14	0	0	0	0	0
STATE TOTALS		1	2	0	0	3	1	2	0	3	0	0	7	0	7	2	14	1	0	17	0	0	Conf.	3,807

\* Data for federal leases are not included.

## CALIFORNIA'S STEAM-DOMINATED GEOHERMAL FIELDS\*

Year	Average number of producing wells	Gross steam produced kilograms (thousands)	Average number of active injection wells	Water injected kilograms (thousands)	Percent injected
The Geysers Geothermal field:					
1960	3	306,180	0	0	0
1961	3	857,431	0	0	0
1962	3	913,804	0	0	0
1963	7	1,530,900	0	0	0
1964	7	1,838,314	0	0	0
1965	7	1,727,581	0	0	0
1966	7	1,709,872	0	0	0
1967	13	2,862,470	0	0	0
1968	13	3,515,849	0	0	0
1969	26	6,812,616	1	410,788	6.0
1970	27	6,457,453	1	847,490	13.1
1971	30	7,813,799	2	1,224,598	15.7
1972	45	15,777,373	3	2,904,923	18.4
1973	60	21,464,314	4	4,064,929	18.9
1974	72	26,329,259	5	5,364,196	20.4
1975	84	30,514,607	5	7,473,397	24.5
1976	92	31,995,187	6	7,717,116	24.1
1977	95	32,527,275	6	7,496,076	23.0
1978	95	27,622,596	6	6,522,400	23.6
1979	123	36,138,118	9	8,723,633	24.1
1980	150	46,966,791	10	10,866,000	23.1
1981	165	52,864,353	12	13,595,090	25.7
1982	174	48,174,347	11	13,549,916	28.1
1983	225	65,893,108	15	19,081,541	29.0
1984	253	80,067,099	17	23,312,221	29.1
1985	309	95,232,214	22	26,517,067	27.8
1986	354	106,561,865	23	30,771,676	28.9
1987	390	111,821,897	23	31,495,280	28.2
1988	429	108,523,641	23	28,325,113	26.1
1989	439	100,205,378	23	28,348,657	28.3
1990	442	95,646,626	25	27,318,499	28.6
1991	436	89,660,288	26	25,747,804	28.7
1992	444	88,513,172	29	27,344,280	30.9
1993	450	84,379,560	29	30,183,128	35.8
1994	447	78,446,982	28	24,524,066	31.3
1995	428	61,104,078	26	26,825,435	43.9
1996	439	65,100,514	25	30,601,721	47.0
1997	429	66,488,424	20	26,701,703	40.1
1998	424	66,452,281	43	43,534,759	66.6
1999	424	65,467,390	43	34,919,122	53.3
2000	424	63,653,931	43	33,399,853	52.5

\* Data for federal leases included.

## CALIFORNIA'S WATER - DOMINATED GEOTHERMAL FIELDS\*

Geothermal field	Year	Average number of producing wells	Gross water produced kilograms (thousands)	Average number of injection wells	Water injected kilograms (thousands)	Geothermal field	Year	Average number of producing wells	Gross water produced kilograms (thousands)	Average number of injection wells	Water injected kilograms (thousands)						
Amedee	1988**	2	1,283,871	NO INJECTION		Litchfield	1984**	1	945,419	NO INJECTION							
	1989	2	4,778,856				1985	1	987,427								
	1990	2	5,443,317				1986	1	852,801								
	1991	2	5,778,129				1987	1	712,709								
	1992	2	5,946,618				1988	1	765,384								
	1993	2	5,535,367				1989	1	1,061,360								
	1994	2	4,970,443				1990	1	891,708								
	1995	2	5,357,734				1991	1	760,304								
	1996	2	5,670,982				1992	1	621,690								
	1997	2	5,374,700				1993	1	885,045								
	1998	2	5,573,927				1994	1	701,006								
	1999	2	5,580,968				1995	1	822,790								
2000	2	5,553,949	1996	1	729,777												
Brawley	1982**	2	1,833,217	PROJECT TERMINATED		Salton Sea	1982**	2	2,383,365	2	2,071,770						
	1983	2	2,397,722				1983	3	2,735,455								
	1984	1	1,122,414				1984	2	4,208,900								
	1985	1	555,731				1985	2	4,167,497								
	1986						1986	9	13,433,795								
Casa Diablo	1984**	1	1,317,788				1987	9	14,272,783	8	11,911,933						
	1985	3	3,840,401				1988	11	19,572,266								
	1986	3	6,076,840				1989	23	56,570,756								
	1987	4	6,754,790				1990	32	75,745,346								
	1988	4	6,723,808				1991	33	77,687,699								
	1989	3	6,871,002				1992	35	78,034,671								
	1990	4	6,971,231				1993	34	77,792,273								
	1991	10	24,538,220				1994	31	77,764,065								
	1992	10	24,604,335				1995	32	80,974,333								
	1993	10	23,544,466				1996	32	96,779,351								
	1994	10	23,637,236				1997	30	102,380,076								
	1995	9	22,498,589				1998	28	101,337,579								
	1996	9	22,500,565				1999	28	112,824,103								
	1997	9	22,229,408				2000	28	88,118,970								
	1998	9	22,822,269														
	1999	9	23,998,996														
	2000	9	25,889,625														
	Coso	1987**	5				4,125,630					Susanville***	1982**	1	21,228	1	21,228
		1988	15				13,965,143						1983	1	174,352		
		1989	32				44,187,631						1984	1	134,832		
1990		47	55,936,765	1985	1	339,792											
1991		57	46,624,874	1986	1	345,600											
1992		63	41,198,639	1987	1	436,751											
1993		68	47,726,990	1988	1	262,878											
1994		72	43,261,502	1989	1	448,792											
1995		75	40,317,057	1990	1	518,471											
1996		79	39,732,984	1991	1	525,490											
1997		82	36,611,570	1992	1	482,574											
1998		82	36,863,050	1993	1	589,658											
1999		82	38,428,411	1994	1	551,406											
2000		82	39,287,586	1995	1	565,345											
				1996	1	489,327											
				1997	1	415,313											
				1998	1	234,957											
				1999	1	247,606											
				2000	1	233,227											
East Mesa		1983**	5	3,196,215			Wendel			1985**	1		833,989	0			
	1984	6	4,050,175	1986				1	1,808,949								
	1985	6	3,659,938	1987				1	1,773,907								
	1986	6	4,725,162	1988				1	1,763,722								
	1987	15	14,187,024	1989				2	2,542,910								
	1988	25	40,952,496	1990				2	2,618,618								
	1989	32	67,990,914	1991				2	2,440,737								
	1990	39	79,221,063	1992				2	2,503,719								
	1991	42	91,984,758	1993				2	2,370,861								
	1992	42	97,750,781	1994				2	2,309,924								
	1993	43	97,849,346	1995				2	2,153,224								
	1994	43	90,589,304	1996				2	2,032,435								
	1995	43	90,488,703	1997				2	1,772,335								
	1996	43	92,604,479	1998				2	1,906,366								
	1997	42	92,797,342	1999				2	1,835,619								
	1998	34	78,787,415	2000				2	1,969,658								
	1999	34	85,628,077														
	2000	34	69,217,237														
	Heber	1985**	9	13,584,658									0				
		1986	13	32,263,682													
1987		16	34,472,259														
1988		12	29,769,219														
1989		11	29,384,658														
1990		10	29,487,574														
1991		10	29,215,287														
1992		10	29,478,685														
1993		17	41,674,826														
1994		22	53,988,169														
1995		22	56,645,248														
1996		22	58,358,658														
1997		22	60,145,589														
1998		22	60,273,518														
1999		22	60,941,298														
2000		22	56,997,887														

\* Data for federal leases included.

\*\* The first year that production data were reported to the Division of Oil, Gas, and Geothermal Resources.

\*\*\* Data are only available for the city's space-heating project.

## GEOHERMAL NOTICES FILED AND INSPECTIONS - 2000\*

Field or county	Notices to drill					Notices to rework					Notices to plug & abandon					Total inspections by district
	Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	Explor.	Prod.	Serv.	Temp. grad.	Total	
DISTRICT G1																
Casa Diablo	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lake City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Litchfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Wendel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Susanville	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lassen County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Modoc County	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	
Mono County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plumas County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Shasta County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sierra County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
District G1 Totals	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	140
DISTRICT G2																
Brawley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Heber	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	
East Mesa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mesquite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Salton Sea	0	0	0	0	0	7	15	0	0	22	5	4	0	0	11	
Desert Hot Springs	0	2	2	0	2	0	0	0	0	0	0	0	0	0	0	
Imperial County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Inyo County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Los Angeles County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Riverside County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
San Bernardino County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
San Luis Obispo County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
District G2 Totals	0	2	0	0	2	0	7	19	0	26	0	5	4	2	11	175
DISTRICT G3																
Calistoga	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	
The Geysers	0	0	0	0	0	8	2	0	0	10	1	10	0	0	11	
Lake County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mendocino County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Napa County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sonoma County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
District G3 Totals	0	1	0	0	1	0	8	2	0	10	3	10	0	0	13	892
STATE TOTALS	0	3	0	0	3	1	15	21	0	37	3	15	4	2	24	1,207

\*Data for federal leases not included. According to the Bureau of Land Management, 1 well was permitted on federal lands in California during federal fiscal year 2000 (October 1999-September 2000), the same as the year before.

## GEOHERMAL EXPLORATORY WELLS DRILLED TO TOTAL DEPTH IN 2000

County	B. & M.			Operator	Well designation and API number	Elev. (meters)	Month drilling completed	Total depth (meters)	Stratigraphic units penetrated and/or time-stratigraphic units at total depth (depth in meters)
	T.	R.	Sec.						
Modoc	25	42N	9E	MD	I'SOT Inc.	"Fountain" 1 049-90039	1311	June	- - - Confidential - - -

## GEOHERMAL CEQA APPLICATIONS AND SITE VISITS

Year	Projects filed				Notices issued				Reports				Site inspections		
	Temperature gradient	Exploratory	Other	Total	Preparation	Exemption	Determination	Total	Negative declaration	Draft EIR	Final EIR	Total	General	Specific	Total
1980	24	6	0	30	9	20	6	35	3	4	4	11	2	9	11
1981	12	7	0	19	15	15	6	36	3	3	2	8	0	11	11
1982	2	6	0	8	5	3	5	13	2	1	2	5	0	2	2
1983	4	7	0	11	4	6	2	12	1	2	2	5	0	5	5
1984	5	3	0	8	1	7	5	13	0	0	0	0	0	4	4
1985	5	3	0	8	2	5	3	10	1	2	2	5	0	0	0
1986	0	3	0	3	0	2	1	3	1	1	1	1	1	0	1
1987	0	5	0	5	0	3	1	4	1	0	0	1	1	4	5
1988	0	1	0	1	0	1	1	2	0	0	0	0	0	0	0
1989	0	2	0	2	0	1	1	2	1	0	0	1	3	2	3
1990	0	2	0	2	0	2	2	4	0	0	0	0	0	2	2
1991	0	3	0	3	0	3	0	3	0	0	0	0	0	3	3
1992	0	2	1	3	0	0	2	2	0	0	0	2	2	6	8
1993	2	2	0	4	2	2	2	6	2	0	0	2	4	4	8
1994	0	1	0	1	0	0	0	0	0	0	0	0	1	1	2
1995	0	1	0	1	0	1	0	1	1	0	0	1	1	1	2
1996	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1997	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1998	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1999	0	1	1	2	0	0	1	1	1	0	1	0	0	3	3
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

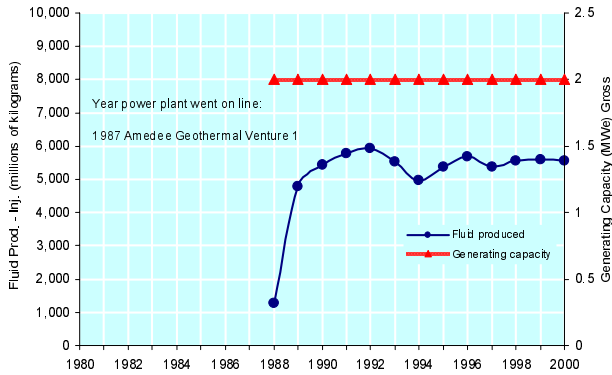


# FLUID PRODUCED AND INJECTED, AND POWER PLANT CAPACITY FOR CALIFORNIA GEOTHERMAL FIELDS

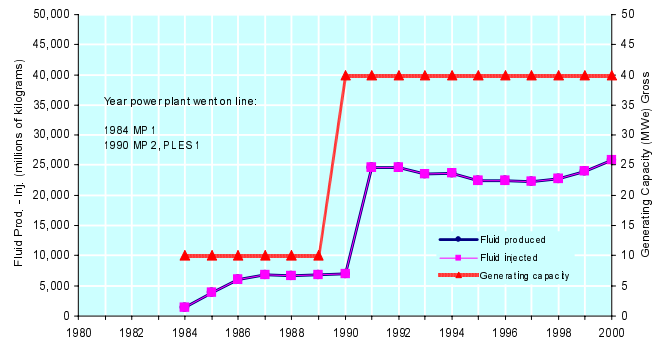
## DISTRICT NO. G1



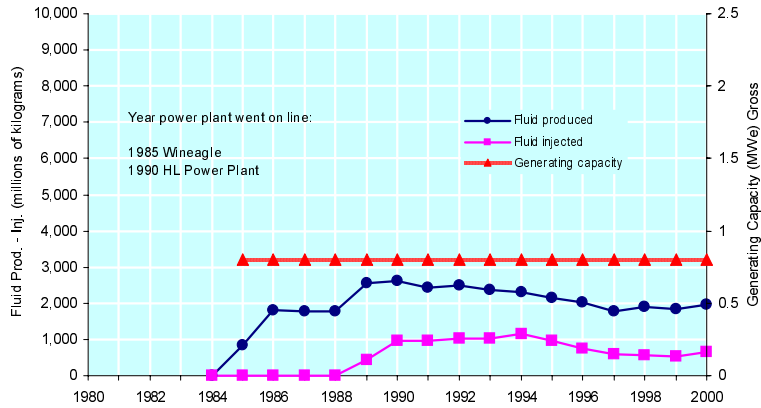
### AMEDEE GEOTHERMAL FIELD



### CASA DIABLO GEOTHERMAL FIELD



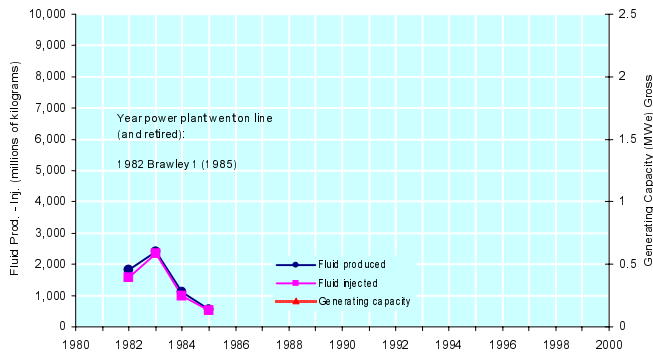
### WENDEL GEOTHERMAL FIELD



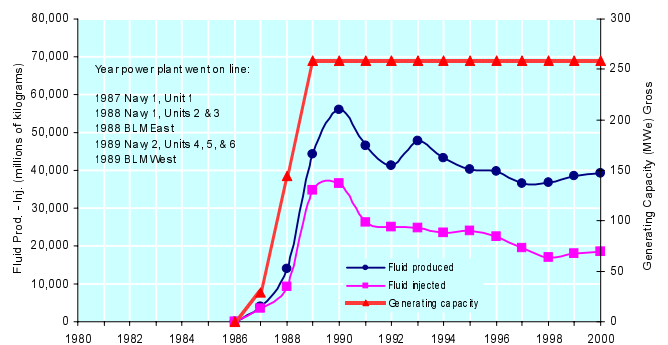
## DISTRICT NO. G2



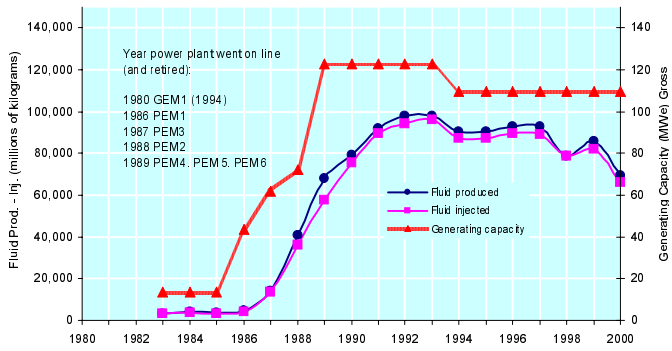
### BRAWLEY GEOTHERMAL FIELD



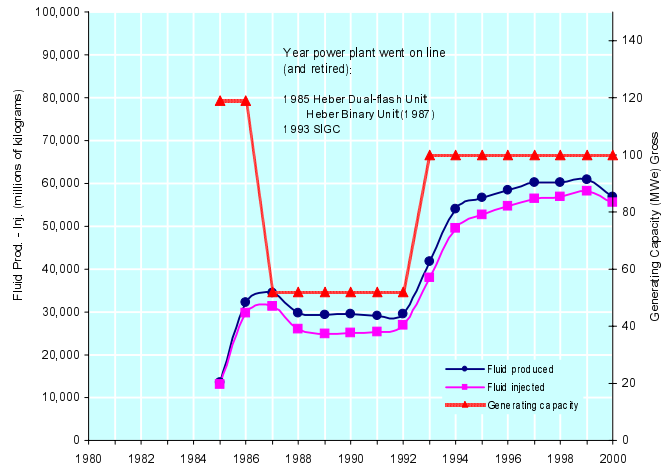
### COSO GEOTHERMAL FIELD



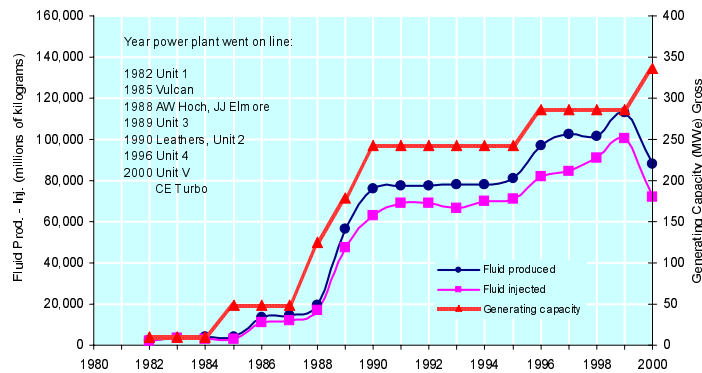
### EAST MESA GEOTHERMAL FIELD



### HEBER GEOTHERMAL FIELD

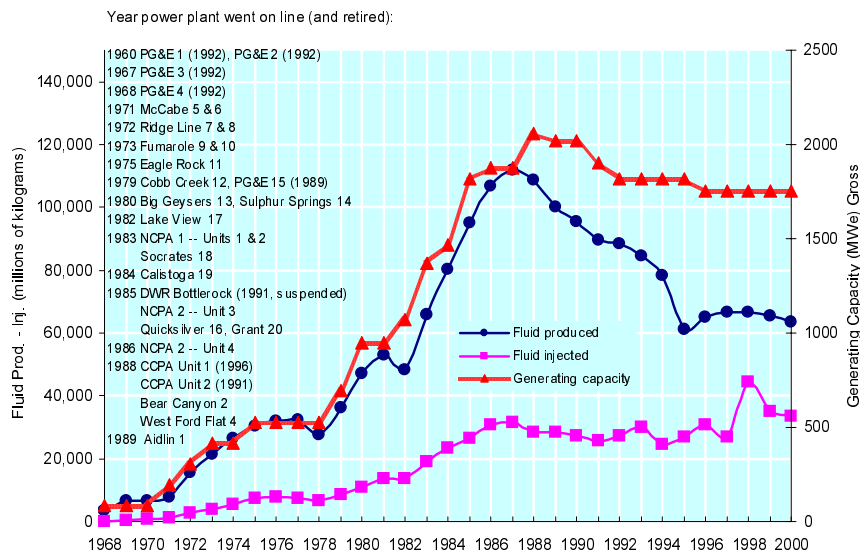


### SALTON SEA GEOTHERMAL FIELD



## DISTRICT NO. G3

### THE GEYSERS GEOTHERMAL FIELD



# **FINANCIAL REPORT**

# FINANCIAL REPORT

The following report is made in accordance with Section 3108, Division 3, *Public Resources Code*, which reads as follows:

"On or before the first day of October of each year the supervisor shall make public for the benefit of all interested persons, a report in writing showing:

(a) The total amounts of oil and gas produced in each county in the state during the previous calendar year. (Figures for 1999 are published in the *85th Annual Report of the State Oil and Gas Supervisor.*)

(b) The total cost of the division for the previous fiscal year.

(c) The total amount delinquent and uncollected from any assessments or charges levied pursuant to the chapter.

The report shall also include such other information as the supervisor deems advisable."

are raised by an assessment on oil and gas production as provided for in Article 7 of Division 3, *Public Resources Code*.

The assessment is based on the projected expenditures of the division, taking into account any previous surpluses or deficiencies, and the prior year's production. For the 2000-01 fiscal year, the rate of assessment was established at \$0.0348447 per barrel of oil or ten thousand cubic feet of gas.

As provided for in Chapter 4, Division 3, Section 3724.5 of the *Public Resources Code*, the division is also partly funded by an annual assessment levied on operators of high-temperature geothermal resource wells and by drilling fees charged to geothermal operators for drilling new wells or redrilling abandoned wells.

For the 2000-01 fiscal year, the fee-assessment was established at \$1,550 per high-temperature geothermal well.

## Collection of Funds by Assessment

Funds for the support of the Department of Conservation's Division of Oil, Gas, and Geothermal Resources

## Financial Statement

### 1999-00 Fiscal Year

Beginning Resource .....	\$	900,000.00
Balance Available from Prior Year .....	\$	24,000.00
Revenue Applicable to Oil, Gas, and Geothermal Operations .....	\$	<u>10,958,000.00</u>
Total Resources .....	\$	11,882,000.00
Total Expenditures .....	\$	<u>11,323,000.00</u>
Ending Resources .....	\$	559,000.00

## Hazardous and Idle-deserted Well Abandonment Expenditures

### 1999-00 Fiscal Year

No. of Wells			
85 .....	Hazardous and Idle-deserted Wells Plugged and Abandoned .....	\$	847,377.39
0 .....	Section 3237 PRC Wells Plugged and Abandoned .....	\$	7,065.21
<u>4</u> .....	Orphaned Wells Plugged and Abandoned (HIDWAF) .....	\$	<u>63,133.00</u>
89 .....	Total Wells Plugged and Abandoned .....	\$	917,575.60
5 .....	Wells On Which Remedial Action Was Taken .....	\$	<u>2,395.64</u>
	Gross Expenditure .....	\$	919,971.24
	Bond Reimbursement .....	\$	- 73,015.00
	Lien Reimbursement .....	\$	- 0
	Net Expenditure .....	\$	<u>846,956.24</u>

## Underground Injection Control Program Expenditures

(Oct. 1, 1999 – Sept. 30, 2000 Federal Fiscal Year)\*

Beginning Federal Grant Allotment .....	\$	466,300.00
Balance Available from Prior Year .....	\$	<u>6,845.00</u>
Total Resources .....	\$	473,145.00
Total Federal Dollar Expenditures .....	\$	<u>471,216.00</u>
Ending Resources .....	\$	1,929.00

\* Amounts reflect federal funding only.

## List of Delinquent Assessments and Penalties: Oil, Gas, and Geothermal Operations as of June 30, 2000

OPERATOR	YEAR	ASSESSMENT
OIL AND GAS OPERATORS		
Allied Energy Corp.	2000	\$163.06
American Barter Petro., Inc.	1993	\$5,720.01
	1994	\$4,610.18
American Titan Oil Co.	1996	\$370.68
Ancora-Verde Corp.	2000	\$201.44
Bellaire Oil Co.	1999	\$672.33
	2000	\$4,276.31
Blackhawk Oil Co.	1994	\$9,557.86
	1995	\$3,408.67
E. H. Brogdon	1996	\$98.28
Weldon Bruce	1989	\$766.37
Tri-Union Dev. Corp.	2000	\$18,306.29
Calif. Oil Independents, Inc.	1995	\$491.51
	1996	\$433.26
Cemco-Edison #1 Fr Prtnrshp.	1997	\$91.78
	1998	\$61.04
Central Lease Inc.	1991	\$1,978.50
	1992	\$1,412.16
	1993	\$1,052.30
	1995	\$111.50
Deuel Petroleum Co., Inc.	1987	\$146.70
	1988	\$251.45
Dynometrics	1996	\$267.94
	1997	\$141.27
E&B Natural Res. Mgmt. Corp.	2000	\$8,420.81
Eastern Pacific Oil Co.	1996	\$90.96
Elk Slough Pipeline Co.	2000	\$112.20
Energy Devel. of Calif.	1990	\$1,474.06
	1991	\$552.81
Henry & Jane Fong	1997	\$199.01
Fortune Petroleum Corp.	1996	\$342.69
	1997	\$1,034.52
Foust-Britton Opr.	1998	\$233.19
GEO Petroleum, Inc.	1996	\$2,129.81
	1997	\$2,728.84
	1998	\$1,653.58
	1999	\$50.67
Graham Royalty, LTD.	1994	\$10,539.15
Hilliard Oil & Gas Inc.	1986	\$550.54
Kalco Development Corp.	1988	\$3,656.76
	1989	\$2,836.96
	1990	\$587.85
	1991	\$405.27
Killingsworth Oil Co.	1994	\$172.49
Ted Koble, Opr.	1994	\$292.38
La Honda Fields, Ltd. Prtn.	2000	\$146.27
Lobodo Inc.	1994	\$265.86
	1995	\$87.09
	1996	\$93.36
	1997	\$73.29
	1998	\$122.86
	1999	\$61.35
Marlin Pacific Oil & Gas	1996	\$515.09
	1997	\$129.74
	1998	\$200.68
William McLennan	1998	\$79.81
Mitchell Oil Co.	1989	\$345.84
	1990	\$415.01
	1991	\$325.23
	1992	\$172.73
	1994	\$349.53
Nahama & Weagant Energy Co.	1994	\$2,239.32
	1996	\$7,467.82
Nahama & Weagant 1984 LP	1997	\$5,232.87
The National Oil Co.	1987	\$80.49
	1990	\$247.90
	1991	\$129.95
New Horizon Expl. Inc.	2000	\$669.49
Nugget Oil Co.	1997	\$448.42
	1998	\$366.97
Oilfield Pet. & Energy Co.	1995	\$169.01
	1996	\$290.04
Oro Negro, Inc.	1997	\$1,335.93
	1998	\$2,794.06
	1999	\$802.38
Pacific Inland Oper. Corp.	1996	\$4,163.49
Pan American Energy Corp.	1993	\$188.31
	1994	\$54.10
	1995	\$173.37
Pangea Inc.	1997	\$1,014.65
	1998	\$167.31
Petro Nova	1989	\$628.99
	1990	\$254.35
Pine Meadows Ranch Inc.	1996	\$1,494.43
	1997	\$955.71
Polaris Prod. Co.	1997	\$100.66
Harvey Pritchard	1998	\$77.69
Pueblo Oil & Gas	1992	\$566.59
	1993	\$507.04
Razar Resources	1996	\$575.54
	1997	\$157.24
	1998	\$68.58
Rincon Island LTD Prtnrshp.	1998	\$15,833.10
Sam Enterprises, Inc.	1996	\$177.27
St. Regis Resources Corp.	1995	\$512.98
Supreme Oil & Gas Corp.	1994	\$144.18
TRV Minerals Corp.	1987	\$470.02
Zachary T. Tatum	1995	\$128.78
	1996	\$289.24
	1997	\$265.24

OPERATOR	YEAR	ASSESSMENT
OIL AND GAS OPERATORS		
Terra Expl. & Prod. Co. Inc.	1999	\$112.32
Thomas Oil Co.	1987	\$406.36
	1988	\$544.93
	1989	\$333.92
	1990	\$302.98
	1993	\$466.03
	1994	\$549.93
	1998	\$180.08
	1999	\$57.82
	2000	\$24.21
Mary Thompson	2000	\$893.83
Tri Kern Resources	1988	\$673.30
	1989	\$320.56
Troy Resources Corp.	1988	\$256.40
	1989	\$540.49
Turco Products Division	1994	\$176.92
	1998	\$58.42
United Energy, Inc.	1996	\$763.22
	1997	\$2,139.70
	1998	\$2,311.74
	1999	\$64.45
TOTALS	1986	\$550.54
	1987	\$1,103.57
	1988	\$5,382.84
	1989	\$5,773.13
	1990	\$3,282.15
	1991	\$3,391.76
	1992	\$2,151.48
	1993	\$7,933.69
	1994	\$28,951.90
	1995	\$5,082.91
	1996	\$19,563.12
	1997	\$16,048.87
	1998	\$24,209.11
	1999	\$1,821.32
	2000	\$32,544.42
		\$157,790.81
GEOHERMAL OPERATORS		
Dept. Water Resources	2000	\$207.57
GEO Operator Corp.	1988	\$21,197.44
	1989	\$193,261.60
	1990	\$114,830.18
	1991	\$103,004.56
	1992	\$9,448.20
	1996	\$9,195.96
	1997	\$8,568.00
Geysers Power, Inc.	1992	\$61,364.00
	1993	\$71,930.40
	1994	\$76,890.00
	1995	\$63,345.00
	1996	\$64,371.72
	1997	\$59,976.00
Imperial Energy Corp.	1985	\$3,954.45
MSR Power Agency	1994	\$7,689.00
TOTALS	1985	\$3,954.45
	1986	\$0.00
	1987	\$0.00
	1988	\$21,197.44
	1989	\$193,261.60
	1990	\$114,830.18
	1991	\$103,004.56
	1992	\$70,812.20
	1993	\$71,930.40
	1994	\$84,579.00
	1995	\$63,345.00
	1996	\$73,567.68
	1997	\$68,544.00
	1998	\$0.00
	1999	\$0.00
	2000	\$207.57
		\$869,234.08
GRAND TOTAL		1,027,024.89

PR06 (9/01/UCP/2M)



**WILLIAM THOMAS RINTOUL  
1922-2001**

William (Bill) Rintoul passed away in Bakersfield, California, on June 26, 2001. In books, articles, and newspaper columns, Bill covered oil, gas, and geothermal developments in the state for over 50 years. Bill described the petroleum and geothermal worlds clearly, fairly, and accurately. He was admired by all who knew him.

Eleven years ago for the division, Bill wrote *Drilling Through Time, 75 Years with California's Division of Oil and Gas*. He did a beautiful job on a book that continues to gain new fans. Bill dedicated the book "To the men and women who have worked for the Division of Oil and Gas during its first 75 years," and in turn, with respect, the *Year 2000 Annual Report* is dedicated to Bill.