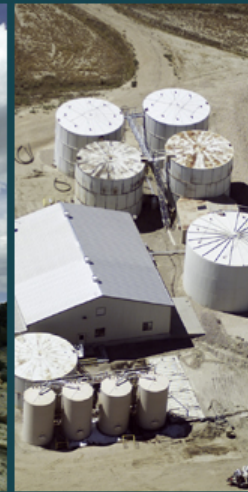
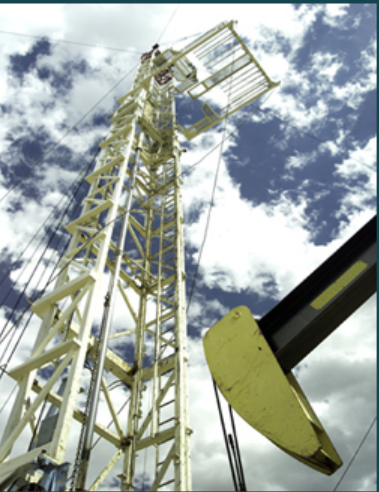


ROCKY MOUNTAIN OILFIELD TESTING CENTER

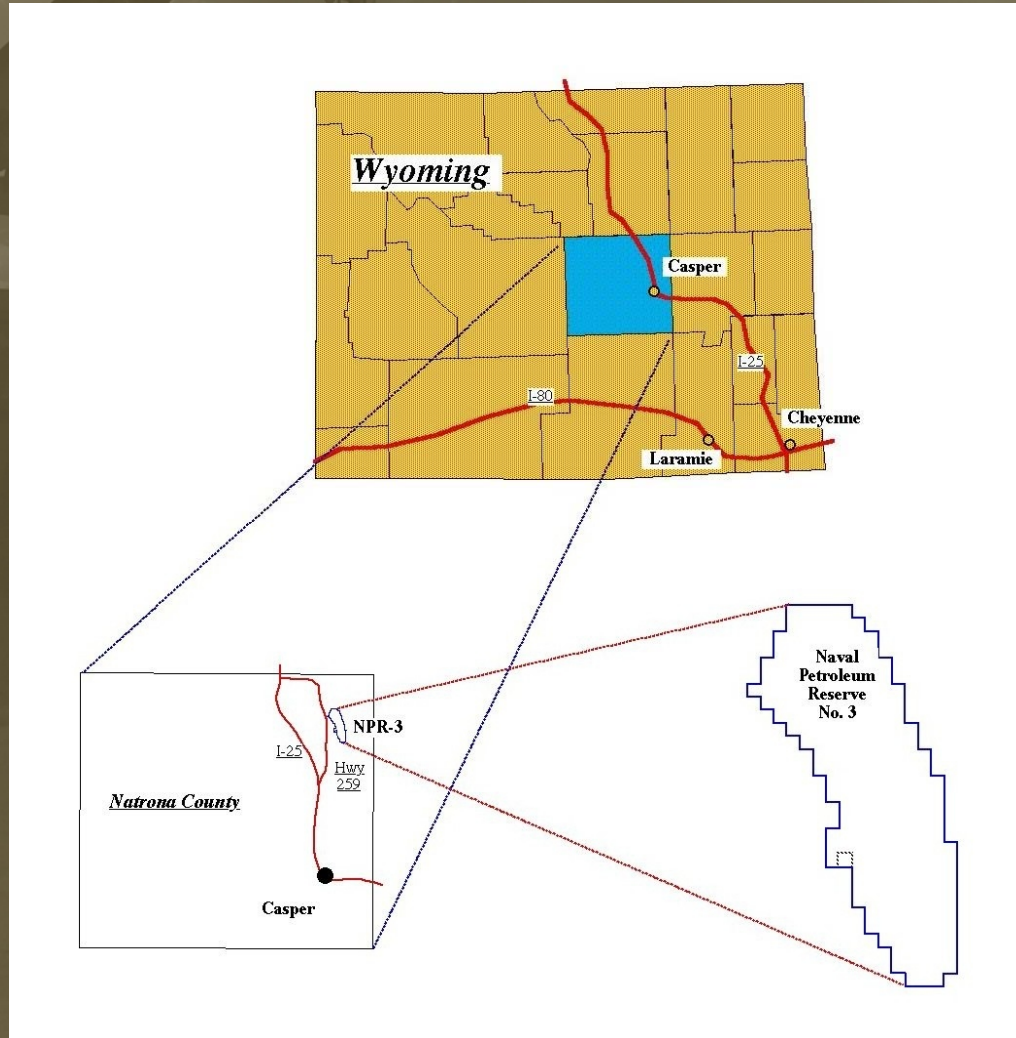
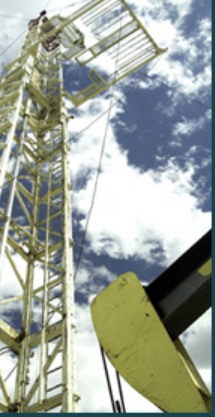


Produced Water from NPR-3 Oil & Gas Wells for
Low-Temperature Geothermal Application

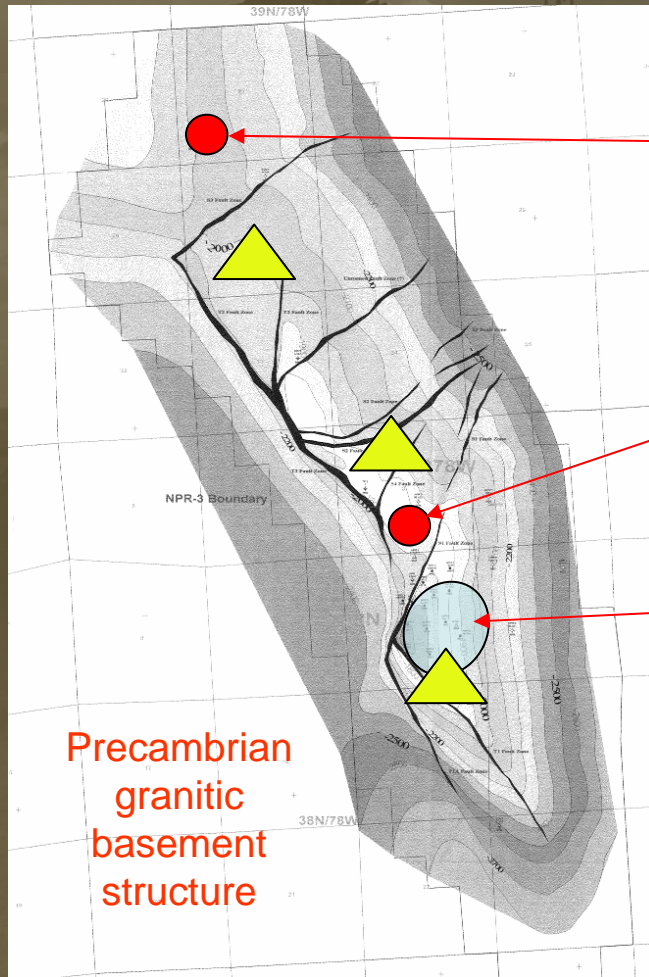
Lyle A. Johnson, PE, RMOTC & Daniel N. Schochet, Ormat Nevada, Inc.



RMOTC Location



Potential Geothermal Supply Wells

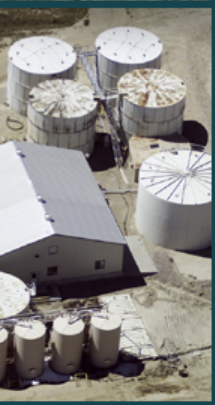
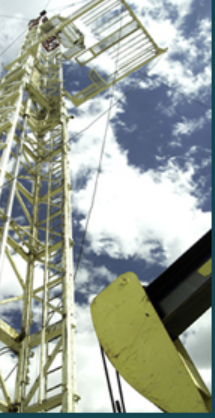


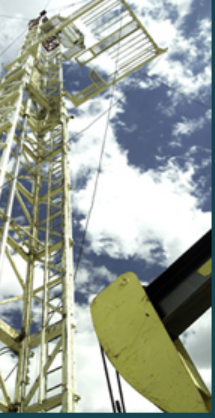
17-WX-21
Madison and Tensleep
Possibly 35 MBWPD flowing

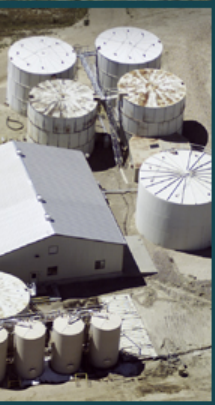
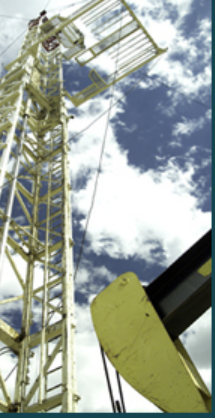
57-WX-3
Madison and Tensleep
Possibly 10 MBWPD flowing

TENSLEEP PRODUCING AREA

OTHER POSSIBLE TENSLEEP
SOURCE WELLS AND DEEPENING
CANDIDATES







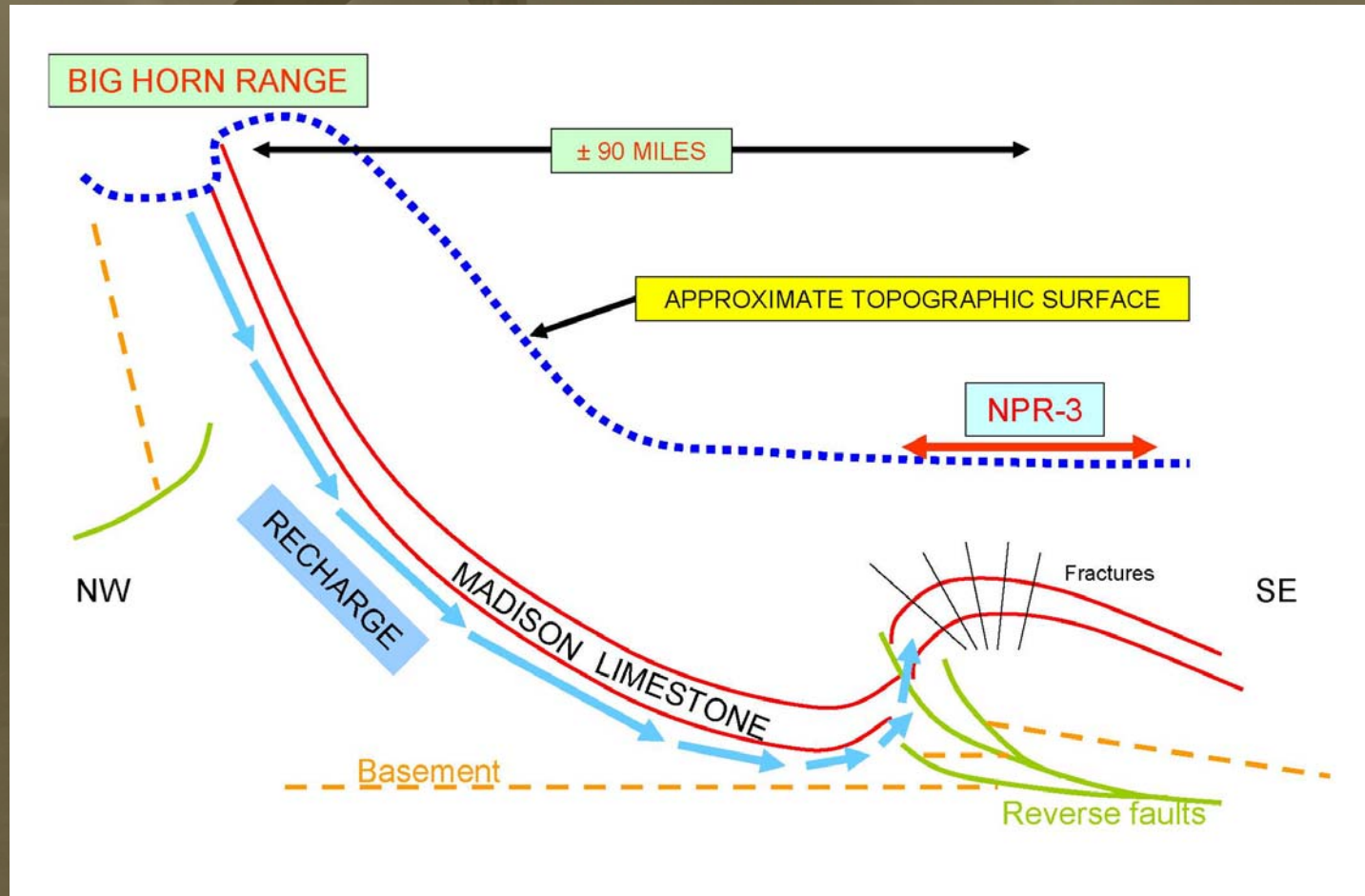
Projected Geothermal Potential



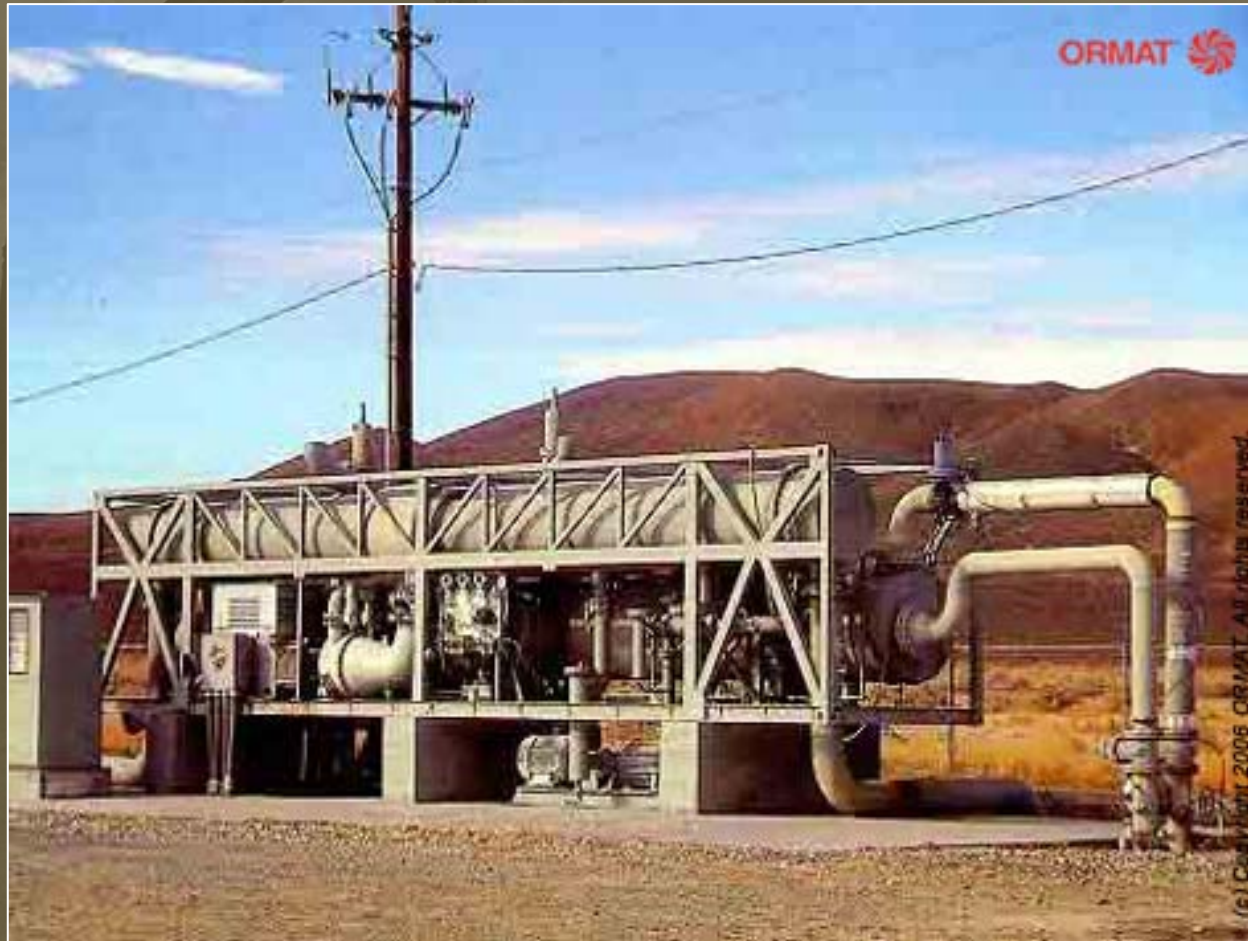
Well	Zone	Rate, MBWPD		Comments
		Low	High	
17-WX-21	Madison	20	25	Flowing
17-WX-21	Tensleep	4	10	Needs perforating
41-2-X-3	Tensleep	1	3	Flowing
41-2-X-3	Madison	6	12	Needs deeping
48-X-28	Tensleep	2	6	Flowing
61-2-X-15	Tensleep	2	6	Flowing
61-2-X-15	Madison	6	12	Needs deeping
57-WX-3	Madison	2	6	Flowing
Total all other Tensleep Production		40	60	Pumping
Total Flowing Production		43	80	Projected
Total Pumping & Production		86	160	Projected
All Potential Production		126	210	All on pump



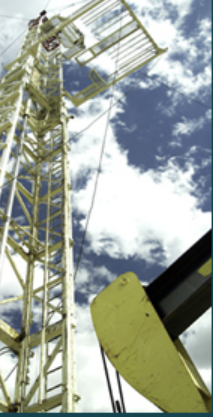
NPR-3 Recharge System



Wabuska, NV – 700 kW, 219°F



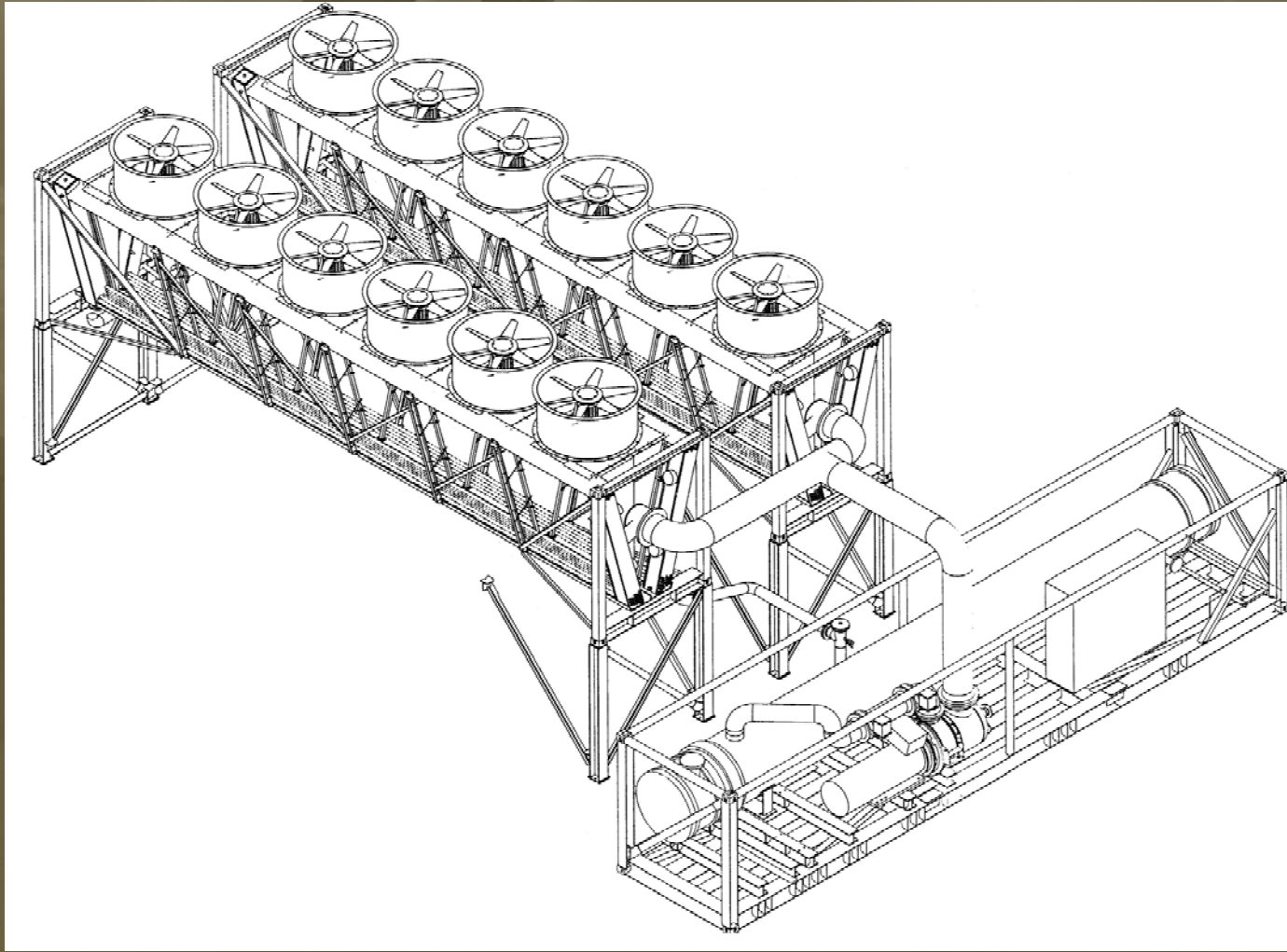
Fang, Thailand – 300 kW



Bad Blumau, Austria – 200 kW, 212°F



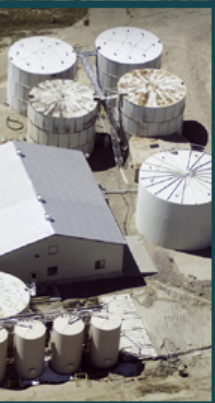
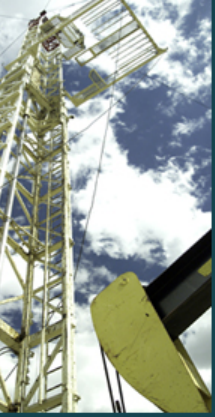
Proposed OEC Unit



OEC Projected Performance



Flow Rate:	584,000 pounds per hour
Inlet Temperature:	170°F
Outlet Temperature:	152°F
Ambient Temperature:	50°F
Generator Gross Power:	180 kW
Net Power Output:	132 kW



Contact



- Rocky Mountain Oilfield Testing Center
907 N. Poplar, Suite 150
Casper, WY 82601
- Phone: 888.599.2200
- Email: info@rmtc.doe.gov
- Internet: www.rmtc.com

