

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 90-044

WASTE DISCHARGE REQUIREMENTS
FOR
FREEPORT MCMORAN RESOURCE PARTNERS
GEYSERS GEOTHERMAL DIVISION
TRUCKHAVEN WELLS
South of Salton City - Imperial County

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. Freeport McMoran Resource Partners, Limited Partnership, Geysers Geothermal Company Division (hereinafter referred to as the discharger), P.O. Box 11279, Santa Rosa, CA 95406, submitted an updated Report of Waste Discharge, dated September 11, 1989.
2. Supplemental Environmental Documentation was received in the Regional Board's Office on November 30, 1989.
3. The application was deemed complete by the Regional Board staff on March 21, 1990.
4. The discharger proposes to workover one well and drill several new exploratory wells south of Salton City, Imperial County, California. The proposed locations for some of these wells are:

<u>WELL NO.</u>	<u>LOCATION</u>
No. 1 - Existing Well	NE $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sect. 7, T11S, R10E Fee Land
No. 2 - Proposed Well	SW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sect. 5, T11S, R10E Fee Land
No. 3 - Proposed Well	NW $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, Sect. 5, T11S, R10E Fee Land
No. 4 - Proposed Well	SE $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sect. 31, T11S, R10E Fee Land
No. A - Proposed Well	SE $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sect. 6, T11S, R10E BLM Lease CA6419
No. B - Proposed Well	SE $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$, Sect. 6, T11S, R10E BLM Lease CA6419
No. C - Proposed Well	SW $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sect. 6, T11S, R10E BLM Lease CA6419
No. D - Proposed Well	NW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sect. 6, T11S, R10E BLM Lease CA6419
No. E - Proposed Well	SW $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sect. 6, T11S, R10E BLM Lease CA6419

5. Temporary containment basins, capable of containing the maximum discharge of drilling mud, drill cuttings, geothermal test, cleanout, and production fluids, including a two (2) foot freeboard will be constructed at each well site.
6. Geothermal brines in portions of Imperial County are known to contain certain constituents which are classified as hazardous by the Department of Health Services, Hazardous Materials Management Section.

*Change of
name/ownership
3-11-92
92-024*

7. The Water Quality Control Plan for the Colorado River Basin Region of California designates the beneficial uses of ground and surface waters in this Region.
8. The beneficial uses of ground waters in the West Salton Sea Hydrologic Unit are:
 - a. Municipal supply (MUN)
 - b. Agricultural supply (AGR)
9. The Imperial County Planning Department certified an Environmental Impact Report, State Clearinghouse Number 81050106, on September 23, 1981 for some of the proposed wells. An additional environmental study was performed by consultants for the discharger to investigate any impacts that this exploration project may have. An Initial Study, Number 3021-89, was also prepared by the Imperial County Planning Department. A Negative Declaration was certified and a Conditional Use Permit, Number 3001-89, was issued by the Imperial County Planning Department on February 14, 1990.
10. Geothermal projects on non-Federal lands are also regulated by the California Division of Oil and Gas and applicable federal agencies. The Regional Board and the local District of the Division of Oil and Gas (located in El Centro) have reviewed this project in accordance with the Memorandum of Agreement between the State Water Resources Control Board and the Division of Oil and Gas as originally approved in August 1982, with subsequent amendments approved on May 19, 1988.
11. Geothermal brines may be reinjected into underground reservoirs as a means of disposal.
12. The Board has notified the discharger and all known interested agencies and persons of its intent to update waste discharge requirements for this discharge.
13. The Board in a public meeting heard and considered all comments pertaining to this discharge.
14. This discharge has been subject to waste discharge requirements adopted in Board Order No. 87-010.

IT IS HEREBY ORDERED, that the discharger shall comply with the following:

A. Specifications:

1. The treatment or disposal of wastes at this facility shall not cause pollution or nuisance as defined in Sections 13050(1) and 13050(m) of Division 7 of the California Water Code.

2. Geothermal cleanout fluid, test and production fluid shall be discharged for temporary storage into either:
 - a. Earthen basins with a minimum 6-inch compacted clay lining¹ having a lining permeability of 1×10^{-6} cm/sec. or less.
 - b. Earthen basins lined with a synthetic liner of not less than 40 mil thickness, approved by the Regional Board's Executive Officer, or
 - c. Metal or other type containers approved by the Regional Board's Executive Officer.

All basins and containers shall be constructed, protected, and maintained to ensure their effectiveness.

3. A minimum depth of freeboard of two (2) feet shall be maintained at all times in each temporary containment basin.
4. Final disposal of residual wastes and cleanup of all containment basins and sumps shall be accomplished to the satisfaction of the Regional Board's Executive Officer upon abandonment or closure of operations. Lack of construction or operational activity on the site for a period of one year shall constitute abandonment for the purposes of this Board Order.
5. All containment basins shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods having a predicted frequency of once in 100 years.
6. Once the wells at each well site in Finding No. 4, above, have been completed, their respective mud pits shall have all of the drilling muds and cuttings removed and disposed of in a manner acceptable to the Regional Board's Executive Officer. The final disposal of these wastes and the final closure of the respective mud pits shall be completed within 60 days of the completion of the drilling of the respective wells.
7. Prior to the disposal of any material removed from the temporary storage basins, well pads or other project locations, the discharger shall inform the Regional Board's Executive Officer concerning the nature and volume of the materials, and the proposed location of disposal.
8. Permanent (longer than 1 year) disposal or storage of geothermal waste in on-site temporary containment basins is prohibited.
9. At least 10 days prior to the initial discharge of any material into a new temporary containment basin, the discharger shall submit a report signed by a California Registered Civil Engineer to the Regional Board advising the Regional Board's Executive Officer that the containment basin and attendant facilities are constructed to meet the requirements of this Board Order.

¹Clay lining shall be defined as at least 40 percent of the material, by weight, passing a No. 200 U.S. Standard Sieve.

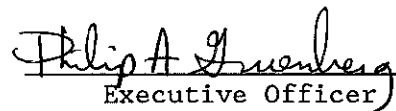
10. The discharger shall submit a report prepared by a California Registered Civil Engineer to the Regional Board, certifying that the basin is constructed to meet the requirements of this Board Order at least 10 days prior to the discharge of any material into a new basin as defined in Specification 2, above.
11. Fluids discharged by subsurface injection shall be injected into the receiving aquifer under requirements as set forth by the California Division of Oil and Gas.
12. All fluids discharged by subsurface injection shall not be injected into any subsurface aquifer without the approval of the California Division of Oil and Gas.

B. Provisions:

1. The discharger shall comply with "Monitoring and Reporting Program No. 90-044", and future revisions thereto, as specified by the Regional Board's Executive Officer.
2. Permanent (longer than one (1) year) disposal or storage of geothermal waste to on-site temporary containment basins is prohibited.
3. The storage basins shall be protected from any washout or erosion of wastes or covering material, and from any inundation which could occur as a result of floods having a predicted frequency of once in 100 years.
4. The discharger shall ensure that all site operating personnel are familiar with the content of this Board Order.
5. Prior to any change in ownership or management of this operation, the discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Regional Board.
6. This Board Order does not authorize violation of any federal, state, or local laws or regulations.

IT IS FURTHER ORDERED that Board Order No. 87-010 be superseded by this Board Order.

I, Philip A. Gruenberg, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on June 27, 1990.


Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 90-044
FOR

FREEMONT MCMORAN RESOURCE PARTNERS
GEYSERS GEOTHERMAL DIVISION
TRUCKHAVEN WELLS

South of Salton City - Imperial County

Location of Discharge: Sections 5, 6, 7, and 31, T11S, R10E SBB&M

MONITORING

The discharger shall report monitoring data to the Regional Board in accordance with the following schedule:

1. At least 10 days prior to the initial discharge of any new materials into a temporary containment basin, the discharger shall submit a report signed by a California Registered Civil Engineer to the Regional Board, advising the Executive Officer that the temporary containment basin and attendant facilities are constructed to meet the requirements of this Board Order.
2. The discharger shall submit the following information:

<u>Constituent</u>	<u>Unit</u>	<u>Reporting Frequency</u>
a. Daily volume of discharge contained in each temporary containment basin.	Gallons	Monthly
b. Total Dissolved Solids (TDS) concentration of fluids in each temporary containment basin, once per month.	mg/l	Monthly
c. Daily volume of geothermal waste discharged at a waste management facility, and name of facility.	Gallons	Monthly
d. Daily total Dissolved Solids concentration and volume of fluid injected into each injection well.	mg/l, Gallons	Monthly
e. Daily total Dissolved Solids concentration of ground water contained in strata proposed to receive fluid waste injection.	mg/l	At least 10 days prior to commencement of injection
f. Daily volume of waste fluid injected into each injection well.	Gallons	Monthly

3. Immediate reporting of any accidental spillage or release of waste material, and immediate measures being taken to correct same and to limit detrimental effects.
4. Report of completion of removal of all geothermal waste from temporary storage basins within 10 days of completion of the work.
5. At least 10 days prior to destruction of each temporary storage basin, the discharger shall request a Regional Board staff inspection and approval of the cleanup procedures.

REPORTING

The discharger shall inform the Regional Board of the location of all sampling stations for the above monitoring.

1. Immediate reporting of any accidental spillage or release of waste material, and immediate measures being taken to correct same and to limit detrimental effects.
2. Reports for Item 1, above, shall be forwarded immediately and shall be preceded by telephone communication to the Regional Board's office, at (619) 346-7491. Copies of the reports submitted to the Regional Board pursuant to the Monitoring and Reporting Program shall be maintained at the operations site, and shall also be made available to staff of the Regional Board upon request.
3. Report of completion of removal of all geothermal waste from temporary storage basins within 30 days from the date of abandonment of the temporary storage basin.
4. Monthly monitoring reports shall be submitted to the Regional Board by the 15th day of the following month.

Submit monitoring reports to:

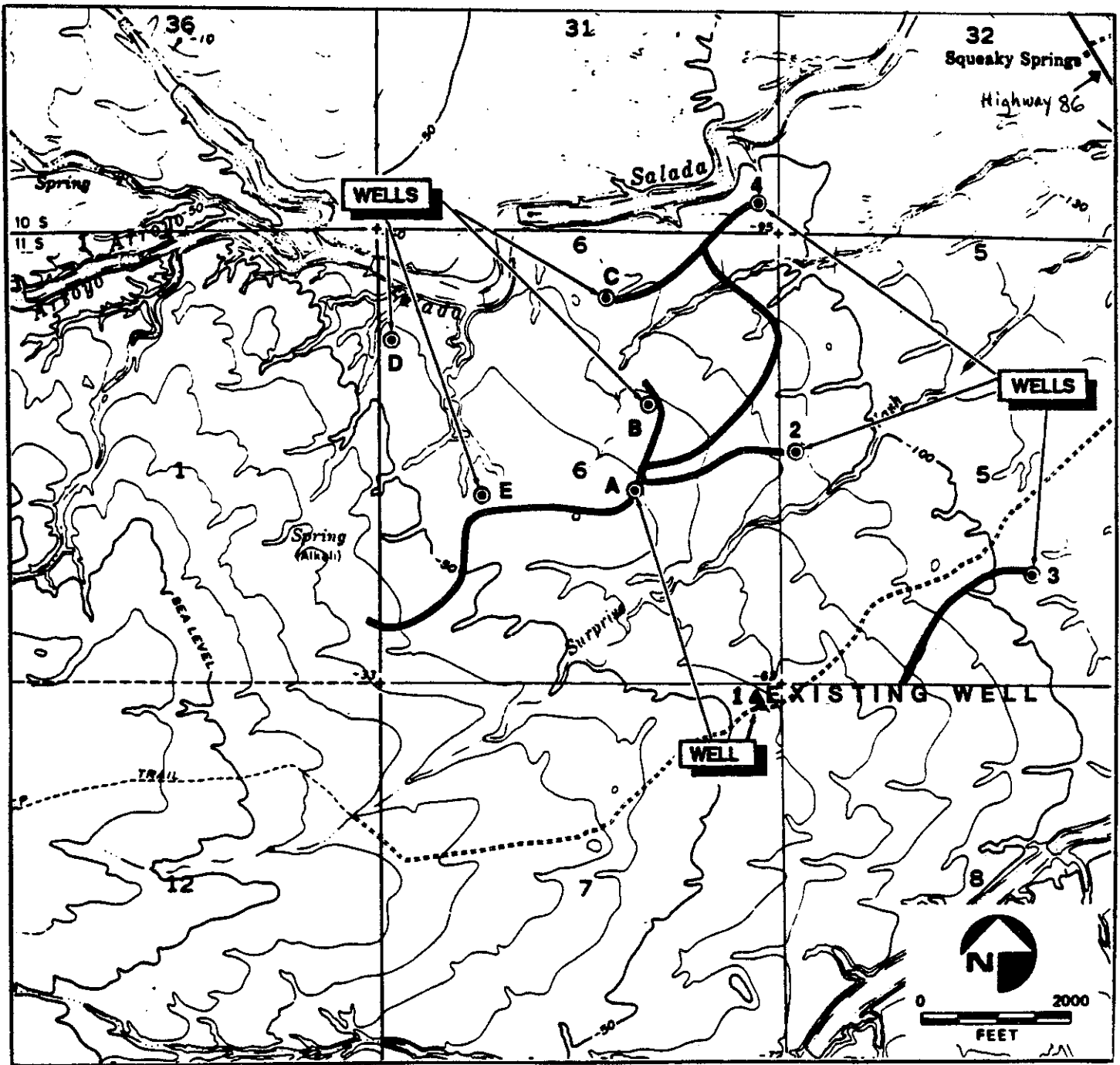
California Regional Water Quality Control Board
Colorado River Basin Region
73-271 Highway 111, Suite 21
Palm Desert, CA 92260

ORDERED BY:

Philip A. Gruenberg
Executive Officer

June 27, 1990

Date



SITE MAP

FREEPORT MCMORAN RESOURCE PARTNERS
GEYSERS GEOTHERMAL DIVISION
TRUCKHAVEN WELLS
South of Salton City - Imperial County
Sections 5, 6, 7, and 31, T11S, R10E SBB&M
USGS Kane Spring NW 7.5 min. Topographic Map