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Docket Stamp Updated:	10/30/2023 8:30:54 AM
Docket Number:	23-AFC-02
Project Title:	Elmore North Geothermal Project (ENGP)
TN #:	252808
Document Title:	Elmore North Geothermal Project Data Request Response Set 2
Description:	N/A
Filer:	Jerry Salamy
Organization:	Jacobs
Submitter Role:	Applicant Consultant
Submission Date:	10/27/2023 4:04:45 PM
Docketed Date:	10/27/2023

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Submission Date:	10/27/2023 3:25:54 PM
Docketed Date:	10/27/2023

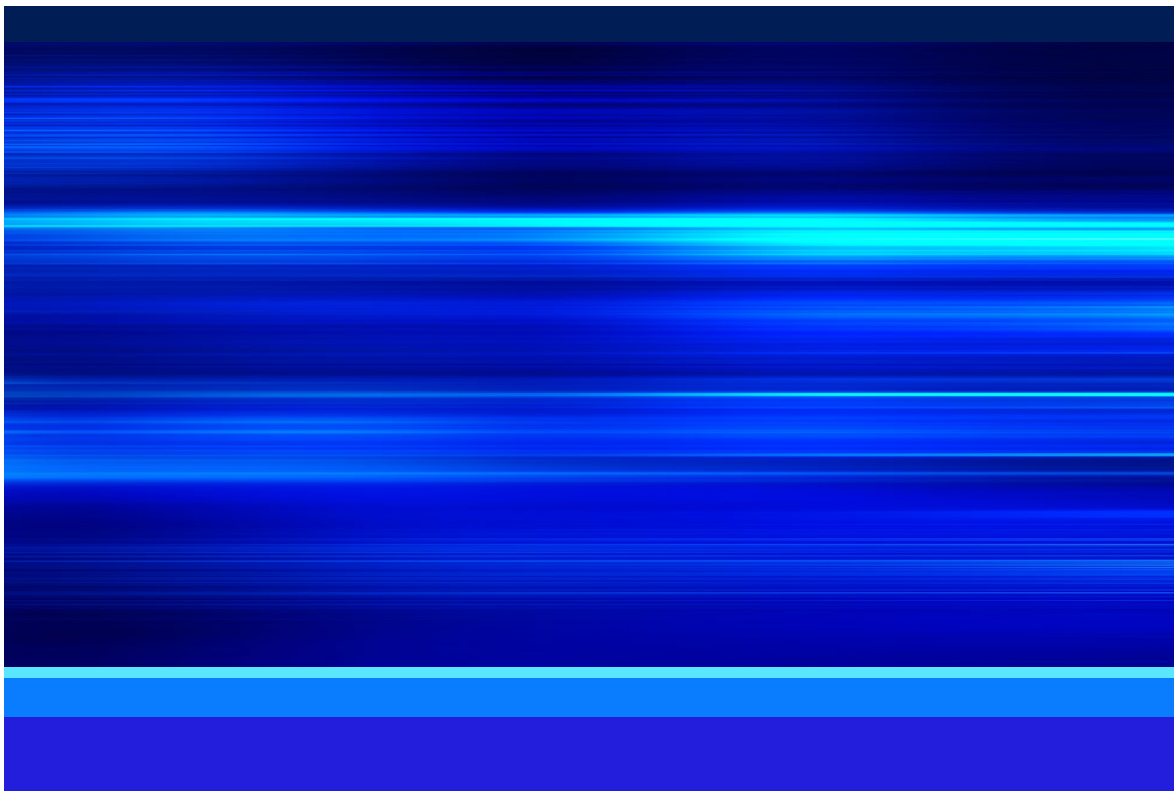
Data Response Set 2 (Responses to Data Requests 1 to 11)

Submitted to
California Energy Commission

Prepared by
Elmore North Geothermal LLC

With assistance from
Jacobs

Elmore North Geothermal Project
(23-AFC-02)
October 27, 2023



Introduction

Attached are Elmore North Geothermal LLC's¹ (Applicant) responses to the California Energy Commission (CEC) Staff's *Data Requests Set 2* regarding the Application for Certification (AFC) for the Elmore North Geothermal Project (ENGP) (23-AFC-02). This submittal includes a response to Data Requests 1 through 11.

The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as presented *Data Requests Set 2* and are keyed to the Data Request numbers.

New or revised graphics or tables are numbered in reference to the Data Request number. For example, the first table used in response to Data Request 28 would be numbered Table DRR 28-1. The first figure used in response to Data Request 28 would be Figure DRR 28-1, and so on. Figures or tables from the ENGP AFC that have been revised have a "R" following the original number, indicating a revision.

Additional tables, figures, or documents submitted in response to a data request (for example, supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end of each discipline-specific section and are not sequentially page numbered consistently with the remainder of the document, though they may have their own internal page numbering system.

¹ An indirect, wholly owned subsidiary of BHE Renewables, LLC ("BHER").

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Acronyms and Abbreviations

ACE	Agricultural conversation easement
AFC	Application for Certification
BHER	BHE Renewables, LLC
BRGP	Black Rock Geothermal Project
BD	Border
BR	Brawley
CalGEM	California Geologic Energy Management division
CEC	California Energy Commission
CEQA	California Environmental Quality Act
DRR	Data Request Response
EB	East Brawley
EIR	Environmental Impact Report
EM	East Mesa
ENGP	Elmore North Geothermal Project
GL	Glamis
HB	Heber
IID	Imperial Irrigation District
MA	Mesa de Andrade
MBGP	Morton Bay Geothermal Project
MI	Mullet Island
MS	Mesa de San Luis
NEPA	National Environmental Policy Act
OB	Obsidian Butte
RE PAIR	Programmatic Environmental Impact Report for the Imperial County Renewable Energy and Transmission Element Update
RH	Rock Hill
RI	Red Island
SA	San Andreas transform fault zone
SS	Salton Sea
ST	Salton trough
TN	Transaction Number
TU	Tulecheck
UIC	Underground Injection Control
WM	Westmoreland

1. Cultural and Tribal Resources (DR 1-4)

Background: Federal Nexus for the Project (DR 1-4)

The Black Rock Geothermal Project (BRGP) AFC, which shares several project elements with the Elmore North Geothermal Project (ENGP), states that “the Black Rock Geothermal Project may receive federal funding, the federal agency issuing the funds may need to conduct a NEPA [National Environmental Policy Act] analysis.” (Jacobs 2023a, page 5.8-10.) However, the ENGP does not include this same language and it is unclear if the BRGP may receive federal funding for project elements shared with the ENGP.

Data Requests:

1. *Is the proposed ENGP funded in whole or in part by one or more federal agencies?*

Response: The ENGP is not proposed to be funded in whole or in part by any federal agencies.

- a. *If the proposed ENGP has federal funding, please identify the funding agencies, contact information for federal personnel, and the status of federal environmental impact assessment.*

Response: The ENGP is not proposed to be funded in whole or in part by any federal agencies.

2. *Does the proposed ENGP require any federal entitlements, leases, or permits, or is it on federal lands? If so, please describe the federal obligation(s) on the proposed ENGP.*

Response: The Applicant does not expect the ENGP to require any federal entitlements, leases, or permits. There are no project features located on federal lands.

3. *Would the BRGP or the Morton Bay Geothermal Projects receive any federal funds for any project elements shared with the ENGP? If so, please identify the funding agencies, contact information for federal personnel, and the status of federal environmental impact assessment.*

Response: The Black Rock and Morton Bay Geothermal Projects will not be funded in whole or in part by any federal agency.

Background: Citation Correction (DR 4)

In section 6.2.2 of Appendix 5.3A of the AFC the following statement includes a citation error: “The archaeological study area is composed of agricultural fields, human-made ponds, a riparian landscape adjacent to the Alamo River, and mud flats (Error! Reference source not found. to Error! Reference source not found.).” (Jacobs 2023b, page 41.).

Data Requests:

4. *Please provide a correction for this citation.*

Response: The correction for this citation is as follows:

“The archaeological study area is composed of agricultural fields, human-made ponds, a riparian landscape adjacent to the Alamo River, and mud flats ([Figure 6-1 to Figure 6-4](#)).”

2. Land Use (DR 5-9)

Background: Agricultural Land Uses (DR 5-6)

The application states in Section 5.11.1.4.1 that the project site is an active agricultural site currently planted with Bermuda Grass crop. Section 5.11.1.4.1 also states that the ENGP power plant, adjacent production and injection well pads, associated pipelines, the IID switching station, gen-tie line, borrow pits, laydown areas, and construction camps are in, or traverse through, areas designated as Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance. Disturbance at the laydown yards, construction camps, and borrow sites would be temporary, as these sites would be restored back to pre-construction conditions or conditions specified by the landowner after construction. However, permanent disturbance would occur at the power plant site and the IID switching station, with a permanent loss of 50.63 acres of Prime Farmland and 91.57 acres of Farmland of Statewide Importance, according to Table 5.11-2 in Section 5.11.1.1 of the application. Although some of this farmland conversion would be specific to the ENGP, part of this conversion would result from facilities shared by the three geothermal facilities, including the IID switching station.

Data Requests:

- Please describe current land uses at the sites that would be permanently converted from Prime Farmland and Farmland of Statewide Importance. If currently or recently used for agriculture, please discuss the crops currently and/or recently farmed.

Response: Current land uses for project features that will be permanently converted from Prime Farmland or Farmland of Statewide Importance include the ENGP project site, switching station, and well pads. As described in the AFC, while the well pads and pipelines will also be located on or within Important Farmlands, those areas may still be used for agriculture. Many of these features are located within actively farmed parcels. The ENGP project site and IID switching station has historically been planted with alfalfa since 2018. A request has been submitted to the Imperial County Agricultural Commissioner for a list of crops currently and historically farmed at the well pads and pipelines locations beyond the project site. A copy will be provided once available. Although the site-specific information is not yet available, Table DRR 5-1 provides the top crops from 2019-2021 based on acreage for Imperial County.

Table DRR 5-1. Top Crops for Imperial County

	2019 Rank	2019 acres harvested ^a	2020 Rank	2020 acres harvested ^b	2021 Rank	2021 acres harvested ^c
Cattle	1	NA	1	NA	1	NA
Alfalfa	2	150,562	2	143,963	2	150,984
Head Lettuce	5	13,663	9	5,545	3	15,629
Broccoli	4	11,957	10	8,507	4	12,591
Leaf Lettuce	3	14,066	3	12,001	5	10,654
Bermuda	6	64,660	5	71,918	6	74,892
Romaine Lettuce	9	8,050	6	9,940	7	8,650
Carrots	7	14,327	7	13,974	8	12,900
Onions	-	11,803	11	12,476	9	14,877

	2019 Rank	2019 acres harvested ^a	2020 Rank	2020 acres harvested ^b	2021 Rank	2021 acres harvested ^c
Spinach	10	8,128	15	7,027	10	7,701
Sugar Beets	8	25,417	-	23,981	-	23,376

a <https://agcom.imperialcounty.org/wp-content/uploads/2022/10/2021-CR-Draft-Final.pdf>

b <https://agcom.imperialcounty.org/wp-content/uploads/2021/08/2020-Crop-Report-v2.pdf>

c <https://agcom.imperialcounty.org/wp-content/uploads/2020/12/2019-Crop-Report.pdf>

6. *Please describe current land uses at the sites where Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance would be temporarily disturbed. If currently or recently used for agriculture, please discuss the crops currently and/or recently farmed.*

Response: Several parcels that will be used for construction laydown, construction camps, and parking areas are currently farmed. As discussed in DR 5, a request has been submitted to the Imperial County Agricultural Commissioner for a list of crops currently and historically farmed at these locations. A copy will be provided once available. Although the site-specific information is not yet available, Table DRR 5-1 provides the top crops from 2019–2021 based on acreage from the Imperial County Agricultural Commissioner.

Background: Agricultural Mitigation (DR 7-9)

The application states in Section 5.11.2.3.1 that there would be less-than-significant impacts to agriculture with the mitigation discussed in Section 5.11.4.2, which is part of the Imperial County Mitigation Monitoring and Reporting Program. The application states that the proposed project would comply with one of three mitigation options for approval by Imperial County. These options include procuring Agricultural Conservation Easements, paying an Agricultural In-Lieu Mitigation Fee, or paying an Agricultural Benefit Fee to Imperial County. CEC staff notes that Imperial County's full list of mitigation measures for renewable energy project agricultural impacts can be found in the Final Programmatic Environmental Impact Report for the Imperial County Renewable Energy and Transmission Element Update, at the link below:

<https://www.icpds.com/assets/planning/cec-alternative-energy-update/reports-and-documents/21-feir-cec-renewable-energy-mmrp.pdf>

CEC staff also found that the Imperial County General Plan includes a program on page 65 of the Land Use Element which applies to the proposed project. It states that when a project is proposed on land designated as "Agricultural" by the General Plan and would result in the loss of more than 40 acres of Prime Farmland, the developer must provide at least the same amount of replacement land for mitigation. It also states that the replacement land must be placed under a Williamson Act contract, must have water availability, must be cultivated, and must be located outside the path of development.

Staff notes that although these mitigation measures used by Imperial County can help to partially reduce impacts to agriculture, recent CEQA case law has established that the only way to completely mitigate the loss of agricultural land to less-than-significant is to add new farmland in at least the same quantity as the farmland converted. Simply preserving farmland that already exists offsite, while helpful for partial mitigation, is inadequate to support a finding that the impacts of the loss to farmland proposed by this project are less than significant. (See King & Gardiner Farms, LLC v. County of Kern, (2020) 45 Cal.App.5th 814, 875). Adding new farmland may consist of taking farmland previously developed and converting it back to farmland uses. If new farmland in a 1:1 ratio is not added, this project would likely result in

significant impacts to agriculture, which would require the CEC to adopt a statement of overriding considerations, if approved.

Data Requests:

7. *Please identify the specific Imperial County agricultural mitigation option(s) that the project applicant will pursue, if known.*

Response: With respect to the referenced policy and program identified in the Background to this Data Request, the Applicant respectfully disagrees that it is applicable to the ENGP. The Policy and Program applies where there is a “direct and total loss of Prime Farmland in excess of 40 acres.” As described in Table 5.11-2, 70.58 acres of the 71.08-acre ENGP site will be located on land designated as Farmland of Statewide Importance. The remaining acreage is not designated as Important Farmland. While other project components, such as well pads and pipelines will be located on or within Prime Farmland, the Policy and Program does not apply, as A) well pads/piping land may be used for agricultural and B) even with acreage for the well pads considered, acreage remains below 40 acres and is lower than the threshold. (See, ENGP AFC Table 5.11-2, Footnote b.) Therefore, because the ENGP will not result in a direct and total loss of Prime Farmland in excess of 40 acres, the aforementioned program does not apply.

Second, the Policy and Program applies to “Development Projects”, which is described elsewhere in the Land Use Element as “a planned residential community, large scale commercial park, industrial park, etc.” (See, Land Use Element, p. 9.) In contrast, the ENGP is a renewable energy project located in the geothermal and renewable energy overlay that is subject to the more specific provisions set forth in the Renewable Energy and Transmission Element, Renewable Energy Overlay Zone, and, where applicable depending on the potential impacts of a renewable energy project, the mitigation measures described in the Programmatic Environmental Impact Report for the Imperial County Renewable Energy and Transmission Element Update (“RE PEIR”). This reading is consistent with the February 23, 2010 resolution of the Board of Supervisors to not accept any new Williamson Act contracts or renew existing contracts, and the July 25, 2023 letter from the Imperial County Board of Supervisors (TN#251675) stating that the County is developing a programmatic Environmental Impact Report (EIR) for geothermal and lithium recovery development that will identify geothermal and lithium facilities as being exempt from mitigation requirements resulting from significant agricultural impacts to both Prime Farmland and Farmland of Statewide Importance.

Imperial County Mitigation Measures for Agricultural Impacts

As noted in the Application for Certification, 70.58 acres of Farmland of Statewide Importance would be converted from agricultural to renewable energy production use. Based on the approximately 538,326 acres of land in Imperial County classified as Important Farmland, this will result in the loss of approximately 0.01% of the total net acreage in agricultural production. This is not a substantial loss of farmland warranting mitigation.

The County’s RE PEIR provides for two suites of mitigation measures for Renewable Energy Projects that were developed based on guidance from the Department of Conservation Division of Land Resource Protection (RE PEIR, p. 4.2-7.)

For non-Prime farmland, such as the ENGP site, the RE PEIR provides for the implementation of at least one of the following measures to mitigate potential impacts to agriculture:

- Option 1: The project proponent of a future renewable energy facility shall procure Agricultural Conservation Easements on a “one-to-one” basis on land of equal size, of equal quality of farmland,

outside the development footprint. The Conservation Easement shall meet the State Department of Conservation's regulations and shall be recorded prior to issuance of any grading or building permits.

- Option 2: The project proponent of a future renewable energy facility shall pay an "Agricultural In-Lieu Mitigation Fee" in the amount of 20 percent of the fair market value per acre for the total acres of proposed site based on five comparable sales of land used for agricultural purposes as of the effective date of the permit, including program costs on a cost recovery/time and material basis. The Agricultural In-Lieu Mitigation Fee will be placed in a trust account administered by the Imperial County Agricultural Commissioner's office and will be used for such purposes as the acquisition, stewardship, preservation, and enhancement of agricultural lands within Imperial County; or
- Option 3: The project proponent of a future renewable energy facility and County voluntarily enter into an enforceable Public Benefit Agreement or Development Agreement that includes an Agricultural Benefit Fee payment that is: (1) consistent with Board Resolution 2012-005; (2) the Agricultural Benefit Fee must be held by the County in a restricted account to be used by the County only for such purposes as the stewardship, preservation, and enhancement of agricultural lands within Imperial County and to implement the goals and objectives of the Agricultural Benefit program, as specified in the Development Agreement, including addressing the mitigation of agricultural job loss on the local economy. (RE PEIR, p. 4.2-8.)

Similar options are provided for Prime Farmland, with the following differences: (1) agricultural conservation easements are to be procedure on a "two-to-one" basis and (2) there is an additional option of revising the project to avoid Prime Farmland. (RE PEIR, p. 4.2-8.)

The Applicant disagrees that CEQA case law "establish[es] that the only way to completely mitigate the loss of agricultural land to less-than-significant is to add new farmland in at least the same quantity as the farmland converted."

In *Masonite Corp. v. County of Mendocino* (2013) 218 Cal.App.4th 230, 238, the First District Court of Appeal specifically held that agricultural conservation easements ("ACE") "may appropriately mitigate the direct loss of farmland when a project converts agricultural land to a nonagricultural use, even though an ACE does not replace the onsite resources."

This conclusion was affirmed again by the First District in *Save the Hill Group v. City of Livermore* (2022) 76 Cal.App.5th 1092, 1117, review denied (July 13, 2022), which declined to adopt the Fourth District Court of Appeal's position on conservation easements. The First District found that CEQA "does not require mitigation measures that completely eliminate the environmental impacts of a project" but "permits mitigation measures that would substantially lessen the significant environmental effects of a project." *Save the Hill Group v. City of Livermore* (2022) 76 Cal.App.5th 1092, 1117, review denied (July 13, 2022). The First District specifically recognized that the "toolbox" of mitigation measures that may be implemented by agencies includes conservation easements, which are specifically authorized by Section 15370 of the CEQA Guidelines:

Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements. (14 C.C.R. § 15370(e); see also, *Save the Hill Group v. City of Livermore* (2022) 76 Cal.App.5th 1092, 1117, review denied (July 13, 2022).)

Therefore, both the CEQA Guidelines and the First District Court of Appeal affirm the use of conservation easement as mitigation for the significant impacts of a project.

The First District is not the only appellate court to uphold the use of conservation easements. In an unpublished decision, the Fourth District found the analysis in *Save the Hill* persuasive, and similarly

declined to follow the holding in *King. Santee v. City of Santee* (Cal. Ct. App., Sept. 21, 2023, No. D080664) 2023 WL 6155499 at 10. The Fourth District noted that “the court in King did not consider the CEQA Guidelines’ 2018 amendment, which specifically provides for the use of conservation easements as a mitigation measure, likely because the EIR before the King court pre-dated the amendment.” *Santee v. City of Santee* (Cal. Ct. App., Sept. 21, 2023, No. D080664) 2023 WL 6155499, at 10. The court recognized:

To construe CEQA as requiring a complete offset or compensation for any loss of habitat would have the practical effect of limiting the use of conservation easements to only those situations in which the land identified as a potential easement would need to be converted into the type of land sought to be conserved (e.g. raw land would need to be converted into farmland or into coastal sage) so that it could entirely offset the loss of such land in the project. The language of Guideline section 15370, subdivision (e) does not support such a construction, nor do any of the cases cited by the Appellant. Rather, we agree that CEQA does not required a *complete* offset for lost habitat, and that conservation easements can *mitigate* such loses by substantially *lessening* the impacts to a particular species’ habitat. (See Guideline § 15091 [permitting an agency to certify an EIR if mitigation measures “avoid or substantially lessen the significant environmental effect as identified” (italics added)].)

Finally, *King & Gardiner Farms, LLC v. County of Kern* does not support the proposition that the only way to completely mitigate the loss of agricultural land to less-than-significant is to add new farmland in at least the same quantity as the farmland converted. The Court only examined the sufficiency of the four mitigation measures that were proposed in the EIR, which included agricultural conservation easements, restoration of agricultural lands, purchase of conservation credits, and participation in any agricultural land mitigation program adopted by the local agency. The Court found that restoration of agricultural lands could provide effective mitigation. With respect to conservation credits, the Court found that the record did not contain substantial evidence that mitigation banks or preservation programs were available, but that “money spent on fees or credits could be an appropriate form of mitigation if linked to a reasonable plan for mitigation.” *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 877 [259 Cal.Rptr.3d 109, 160], as modified on denial of reh’g (Mar. 20, 2020). The Court found a similar lack of substantial evidence to support the last proposed mitigation measure, stating that because there was no specific program identified, the option did not provide available, effective mitigation for the conversion of agricultural land. *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 877 [259 Cal.Rptr.3d 109, 160], as modified on denial of reh’g (Mar. 20, 2020).

8. *Please describe how the project will comply with the Imperial County General Plan’s mitigation program for the conversion of Prime Farmland.*

Response: The ENGP will not result in a direct and total loss of Prime Farmland in excess of 40 acres; therefore, the aforementioned program does not apply. Although there are components of the ENGP that will be located on or within Prime Farmland, those areas will continue to be used for agricultural purposes after construction is completed. Further, the Applicant will minimize potential impacts to Prime Farmland to the extent feasible by maximizing space planning for the project site, well pads, and pipeline routes.

9. *Please demonstrate how, if possible, the project’s mitigation measures for loss of agricultural land would create new farmland equal to or greater than the amount of farmland converted as part of the project. If it is not possible to create new farmland, please explain why.*

Response: The ENGP will not result in a significant impact to agricultural resources due to the small amount of land that will be converted from agricultural uses. However, as stated above in response to

DR 7, even if mitigation were required for the acreage of farmland that will be converted to non-agricultural uses, CEQA does not require the creation of new farmland equal to or greater than the amount of farmland converted to mitigate significant impacts to agriculture.

Moreover, creation of new farmland equal to or greater than the amount of farmland converted is not a feasible mitigation measure. The process would require finding land that contains soils with the proper characteristics (soil temperature range, acid-alkali balance, water table, soil sodium content, uncontrolled runoff from natural precipitation, erodibility, permeability rate, rock fragment content, and soil rooting depth), or modifying the soil characteristics to provide growth medium sufficient to sustain crops. Presumably, in order to "create" new farmland, farmable soil would have to be taken elsewhere and by removing this soil, farmland would be proportionally destroyed. As the third district discussed, it may not even be "possible to recreate prime farmland on other lands." *Citizens for Open Government v. City of Lodi*, 205 Cal.App.4th 296, 322-23 (2012). In addition, the land would need to have an available water supply. This process would be expensive, time consuming, and without any guarantee of being successful. Therefore, the Applicant considers creation of new farmland infeasible.

3. Water Resources (DR 10-11)

Background: Geothermal UIC Permit Requirements (DR 10-11) (Revised 10/5/23)

*Per regulation (CCR Title 20, Section 2010, Appendix B, [14] [A] [A] [iv]) all information required to apply for Underground Injection Control (UIC) permits shall be included in the application. **Twelve** [Seven] Class V injection wells are proposed to inject geothermal fluids. The California Geologic Energy Management Division (CalGEM) would administer the UIC program for these wells.*

Data Requests:

10. *To allow environmental review of the potential impacts of the whole of the project, please provide preliminary information used for planning injection well installation, as follows):*
 - a. *Known properties of the injection reservoir*
 - b. *Well diagram of proposed injection wells*
 - c. *Contour map of the top of the intended injection zone*
 - d. *Cross-section showing injection wells and the injection and overlying formations*

a. Known properties of the injection reservoir

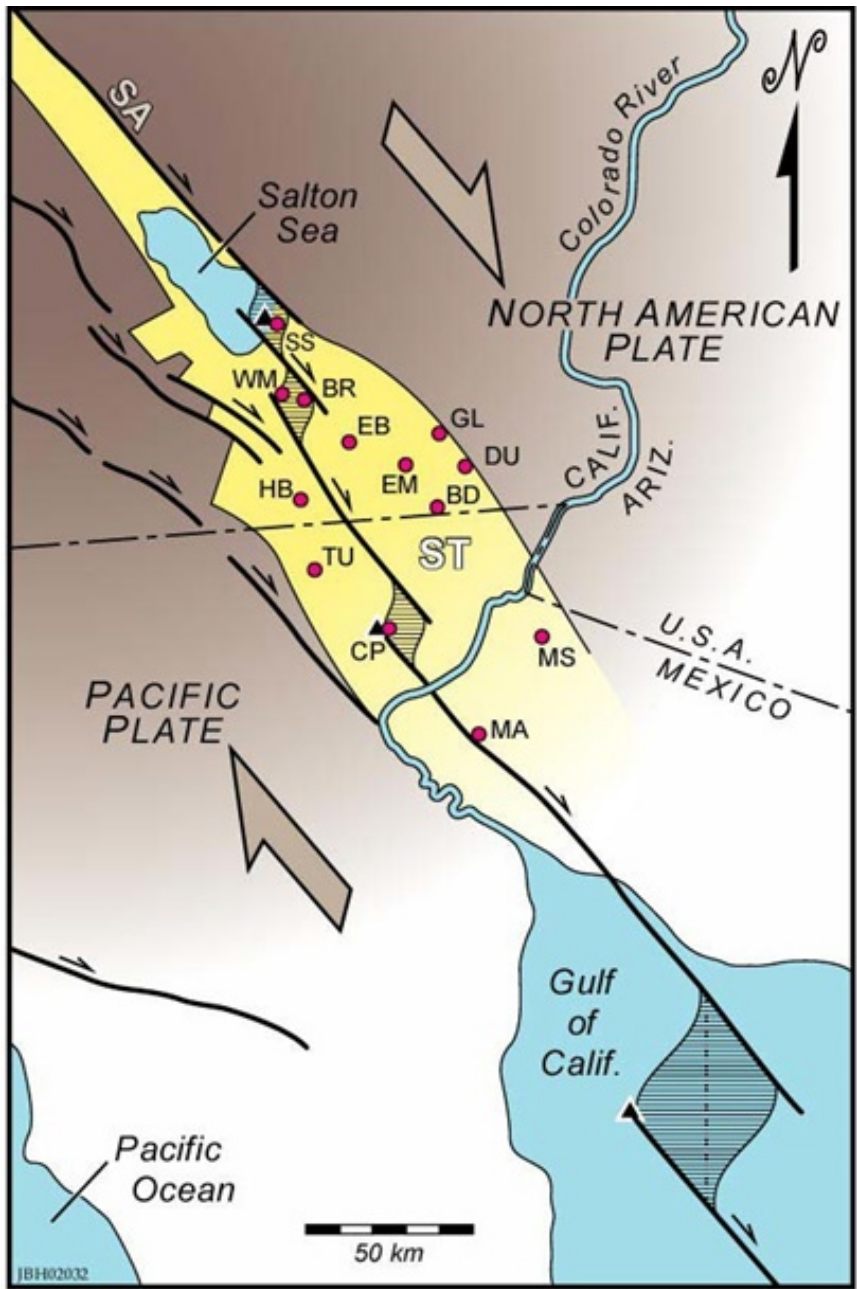
Response:

Geology

The Salton Sea geothermal reservoir occurs in fractured sedimentary rocks within the Salton Trough, a structural depression on the boundary between two tectonic plates. The northwest motion of the Pacific Plate on the west, relative to the North American Plate on the east, has created regional right-lateral faults striking NW-SE and local conjugate left-lateral faults striking NE-SW shown as Figure 1 in the report titled "*Geology and a Working Conceptual Model of the Obsidian Butte (Unit 6) Sector of the Salton Sea Geothermal Field* (Hulen et al., 2003²). A copy of this figure is provided as Figure DRR 10a-1. The Salton Trough began its existence in Oligocene to Miocene time as a coaxial but smaller and shallower proto-rift, developed as a Basin and Range-style back-arc basin in response to subduction of the Farallon plate beneath the North American plate. Oligocene to Miocene basalts along the margins of the modern Trough attest to the lithospheric thinning, heating, and mafic-alkaline magmatism that accompanied the older rifting episode. The nature of the basement in the Trough remains conjectural. Gravity and seismic data suggest that low-density (2.3-2.55 g/cm³) sediments rest upon an intermediate-density (2.65 g/cm³) basement extending to about 39,000 feet depth. The intermediate basement, in turn, overlies a higher density (3.1 g/cm³) layer extending to the base of the crust at about 77,000 feet. This deep layer is inferred to be gabbro, added to the crust to compensate isostatically for the low-density sediments supplied from above (Hulen et al., 2002³).

² Hulen et al. (2003); *Geology and a Working Conceptual Model of the Obsidian Butte (Unit 6) Sector of the Salton Sea Geothermal Field*, California; *Proceedings* GRC 2003.

³ Hulen et al. (2002); *Refined Conceptual Modeling and a New Resource Estimate for the Salton Sea Geothermal Field, Imperial Valley*, California; *Proceedings* GRC 2002.









-  Extent of "normal"¹ crystalline continental crust according to Fuis and Hohler(1984)
 -  4-5 m.y.-old incipient continental rift zone
 -  Pull-apart zone at extensional overstep
 -  Geothermal fields
 -  Quaternary volcanoes
 -  High-angle faults; arrows show displacement
- ¹Quotation marks are the writers'

Figure DRR 10a-1
 Salton Trough Tectonic Map,
 Black Rock Geothermal Project
 Imperial County, California

Source: Hulen et al. (2002)

Heat sources for the high-temperature geothermal systems of the Salton Trough have traditionally been envisioned as gabbroic. The Salton Trough is filled to a depth of approximately four (4) miles with Colorado River sediments, interbedded with salt deposits from periods of lake evaporation. Within the Salton Sea field, past volcanic activity is indicated by five outcrops of rhyolite - Obsidian Butte, Rock Hill, Red Island (North and South), and Mullet Island) - as well as extrusive and shallow intrusive igneous rocks encountered in several wells.

Reservoir Properties (Temperature, Pressure, and fluid chemistry)

Figure 2 in the report entitled "Refined Conceptual Modeling and a New Resource Estimate for the Salton Sea Geothermal Field, Imperial Valley, California; Proceedings" identifies the shallow thermal gradient anomaly compiled with data available through June 2002 (Hulen et al. 2002). A copy of this figure is provided as Figure DRR 10a-2. The reservoir temperature at 1,350 feet below mean sea level (msl) is shown in Figure 2.1 of the resource adequacy report entitled "Numerical Reservoir Simulation of the Salton Sea Geothermal Resource for Power Generation," dated May 2023 (TN No. 250040) which was provided to CEC. The reservoir pressure is shown in Figure 2.2 of the resource adequacy report. Expected fluid composition is shown in Table 2-2 of the Application for Certification for the Elmore North Geothermal Project.

b. Well diagram of proposed injection wells

Response: Due to proprietary information Figure DRR 10a-2, Preliminary Hot Brine Injection Well Diagram and Figure DRR 10b-2, Preliminary Aerated Brine Injection Well Diagram have been submitted under a request for confidential designation.

c. Contour map of the top of the intended injection zone

Response: Due to proprietary information Figure DRR 10c-1, Injection Zone Contour Map has been submitted under a request for confidential designation.

d. Cross-section showing injection wells and the injection and overlying formations

Response: Due to proprietary information Figure DRR 10d-1 Injection Wells and Formations has been submitted under a request for confidential designation.

11. Please provide the following items in compliance with CalGEM UIC regulation (CCR Title 14, Section 1961) as part of the UIC project application or when available.

- a. Injection reservoir conditions.
- b. Method of injection.
- c. Map showing contours on the geologic marker at or near the intended injection zone.
- d. One or more cross-sections showing the wells involved.

Response: Applications for UIC permits are typically submitted after the wells are drilled when the information is available. Preliminary data for the injection reservoir conditions, along with the requested map and cross section are presented in DRR 10. The preliminary data provided is based on the best available information. Upon completion of drilling the wells, reservoir and geologic data will be collected and used to complete the UIC project application. The "Method of injection" for the wells will be through casing, tubing, or tubing with a packer. The fluids will be pumped from the power generation facilities to the injection wells and injected down through a cemented casing.

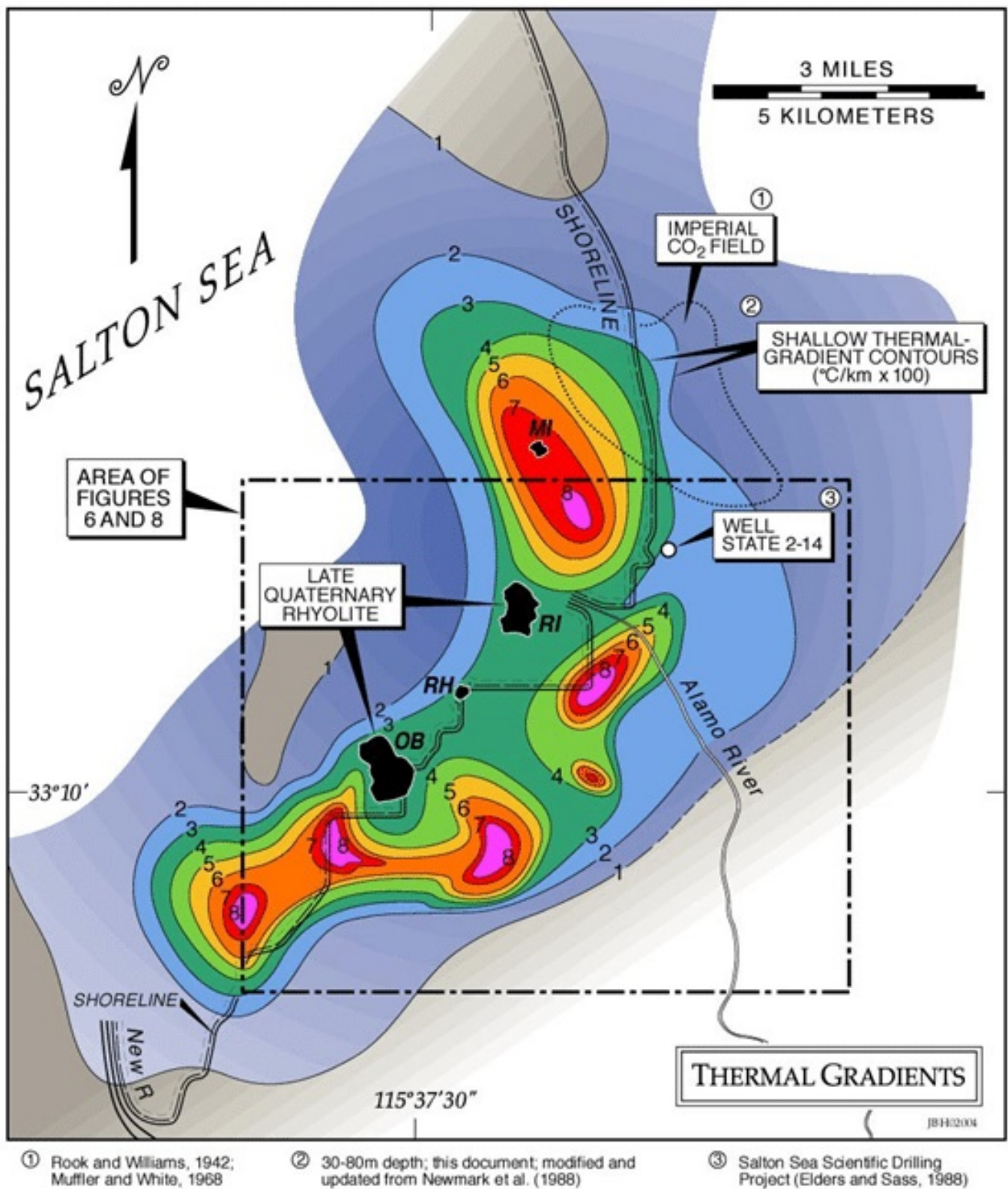


Figure DRR 10a-2
 Salton Sea Shallow Thermal Gradient,
 Black Rock Geothermal Project
 Imperial County, California