

**RECLAMATION DISTRICT NO. 1601  
TWITCHELL ISLAND  
BOARD OF TRUSTEES MEETING  
TUESDAY, AUGUST 17, 2021  
9:00 AM  
ENGINEER'S REPORT**

**I. PLAN REVIEW – USGS SEISMOGRAPH INSTALLATION**

- A. Review Draft Sites for an Encroachment Permit from USGS for the installation of seismic monitoring equipment.

***EXHIBIT A: Google Earth Site Map showing potential sites for Seismograph.***

***EXHIBIT B: Email Correspondence from Jemile Erdem regarding Draft Sites and request for Soil Boring Logs from RD 1601 Dated 8/03/21.***

***EXHIBIT C: Email Correspondence from KSN Inc. to Jemile at USGS transmitting Ultimate Levee Setback footprint along the San Joaquin River District dated 8/12/21.***

# Exhibit A

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# USGS SEISMOGRAPH

Potential Installation Sites

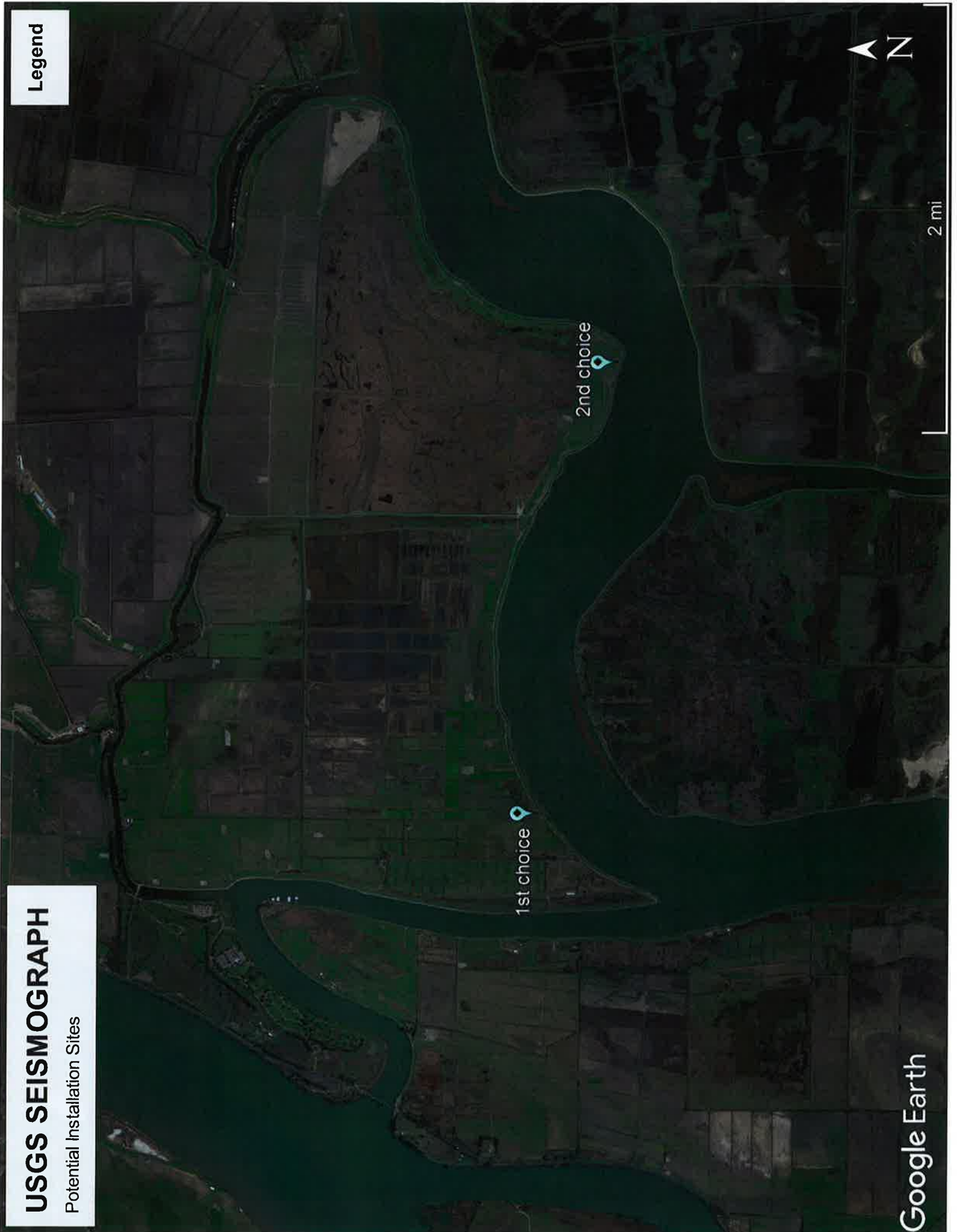
Legend

1st choice

2nd choice

Google Earth

2 mi



# Exhibit B

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## **Christopher H. Neudeck**

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**From:** Erdem, Jemile E <jerdem@usgs.gov>  
**Sent:** Tuesday, August 3, 2021 3:20 PM  
**To:** Christopher H. Neudeck  
**Subject:** Re: [EXTERNAL] RE: Twitchell Island pore pressure site selection  
**Attachments:** drill\_locations\_updated.kml

**CAUTION:** This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Chris,

I have attached a kml for you to share with the Board at your Aug 17 meeting. It shows both our preferred and backup locations for the pore pressure/seismic station. Please let us know how close to the levee we can drill and how much flexibility there is in the exact location along the levee toe for both sites (e.g. anywhere within 100 feet from the coordinates indicated in the kml).

If you are able to find time before the meeting, would you mind taking a look at the Appendix 4: Soil Boring Logs report that Muhammad sent to me and clarifying the following?

1. From the two profiles shown below (Appendix 4 pgs 12-13), do you have the following detailed boring logs that you could send to me? 91-6, 91-5A, 91-26 through 91-30 and 92-8, located between DWR-23 and DWR-25



Christopher H. Neudeck, P.E.  
Vice President

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cneudeck@ksninc.com www.ksninc.com



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right solution for our clients' needs.

**From:** Erdem, Jemile E <jerdem@usgs.gov>

**Sent:** Monday, July 12, 2021 12:35 PM

**To:** Christopher H. Neudeck <cneudeck@ksninc.com>; rd1601@frontiernet.net; Hoirup, Don@DWR <Don.Hoirup@water.ca.gov>

**Subject:** Twitchell Island pore pressure site selection

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Hi All,

Thanks to Rick for showing me around Twitchell Island last week. I have attached a kml showing the coordinates of the three locations we identified as possible sites for the drilling. Could someone provide me with any available geotechnical reports from these three locations (or nearby locations)? This information would help us finalize our site selection and drilling plan, which I am hoping we can do in the next week or two.

Thank you all again for supporting this project.

Cheers,  
Jem

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Jemile Erdem  
Geophysicist  
Earthquake Science Center  
U.S. Geological Survey  
345 Middlefield Rd., MS-977  
Menlo Park, CA 94025  
(650) 329-4714



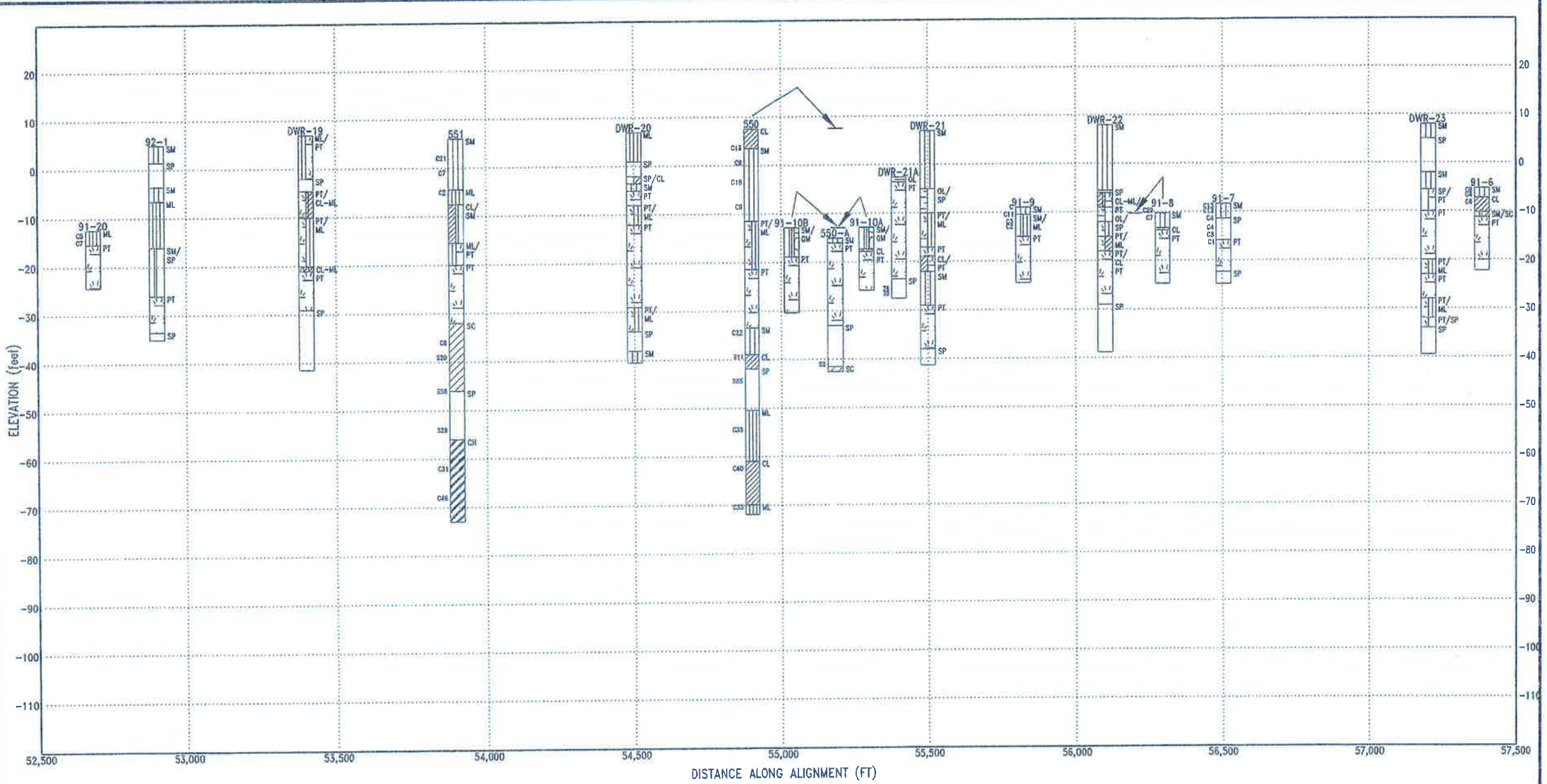


Revising No. Description	Date	By	Checked By	Scale	Date	Sheet Number
				1" = 800'	SEP. 2010	

**RECLAMATION DISTRICT NO. 1601  
TWITCHELL ISLAND**

**K S** KJELDSSEN SINNOCK  
Part of Case No. 844

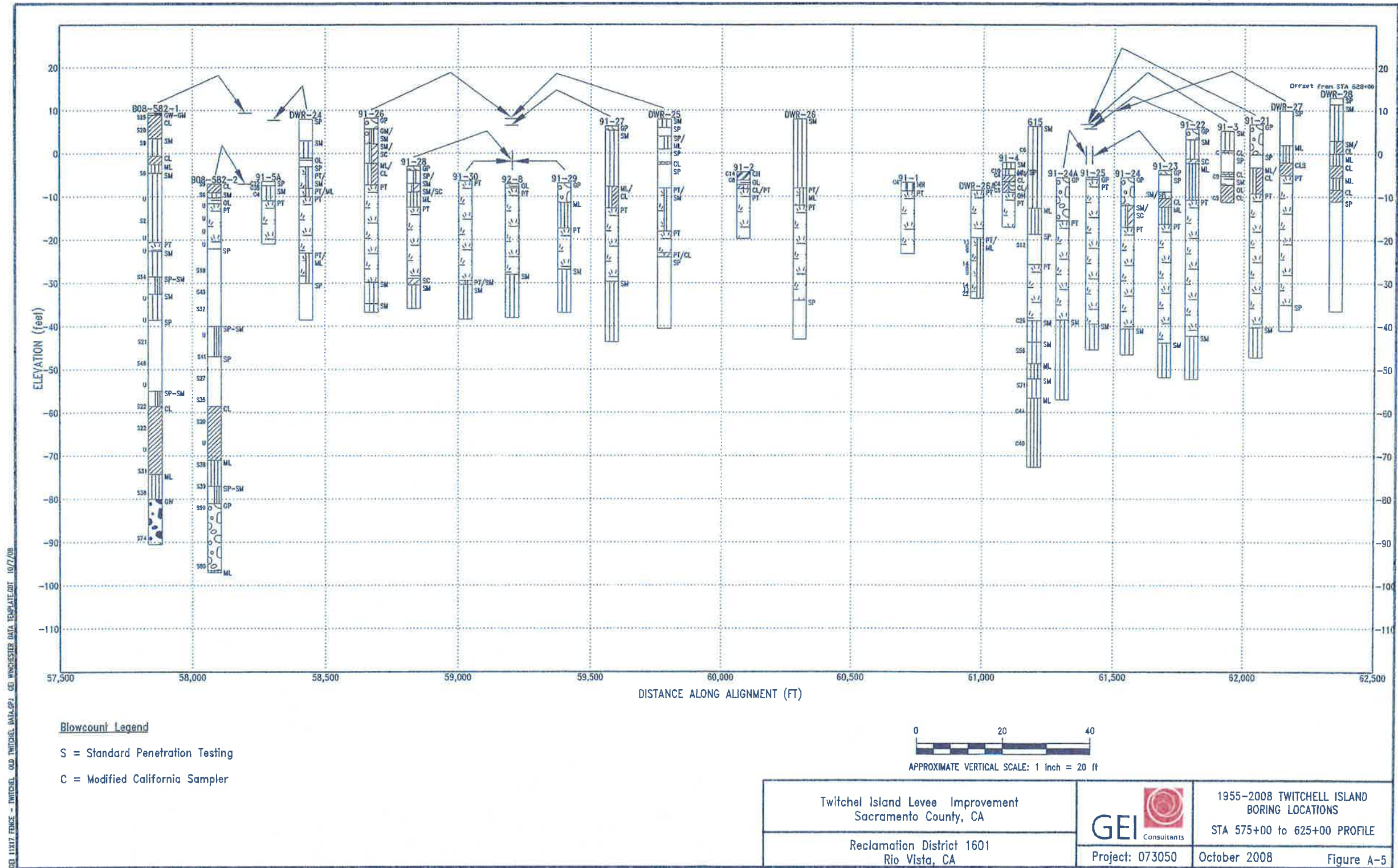
GEI 11117 FENCE - TWICHELL - OLD TWICHELL DATA.GPJ GEI WINCHESTER DATA TEMPLATE.DWT 10/7/08



**Blowcount Legend**  
 S = Standard Penetration Testing  
 C = Modified California Sampler

Twitchell Island Levee Improvement Sacramento County, CA		 1955-2008 TWICHELL ISLAND BORING LOCATIONS STA 525+00 to 575+00 PROFILE
Reclamation District 1601 Rio Vista, CA		
Project: 073050	October 2008	Figure A-4

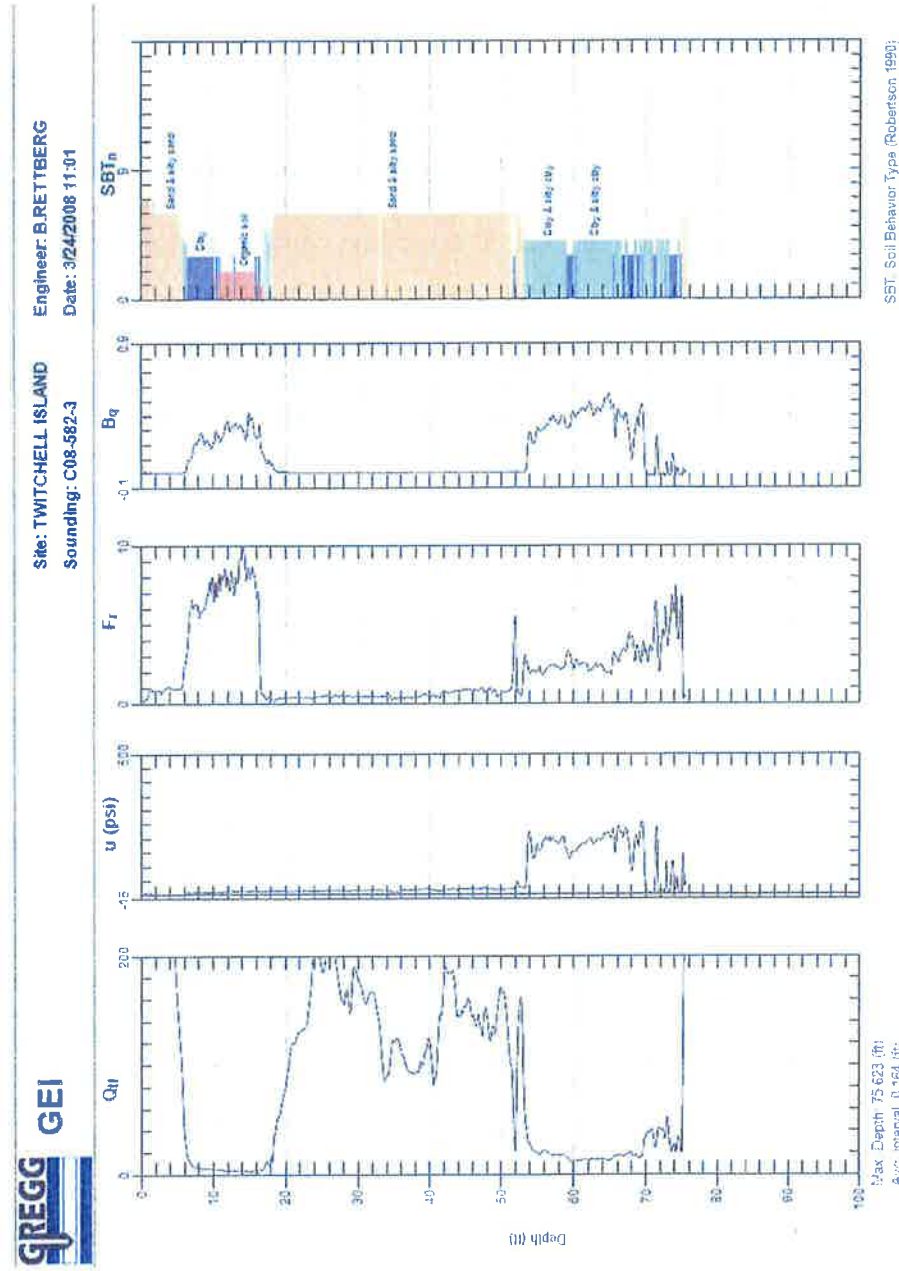
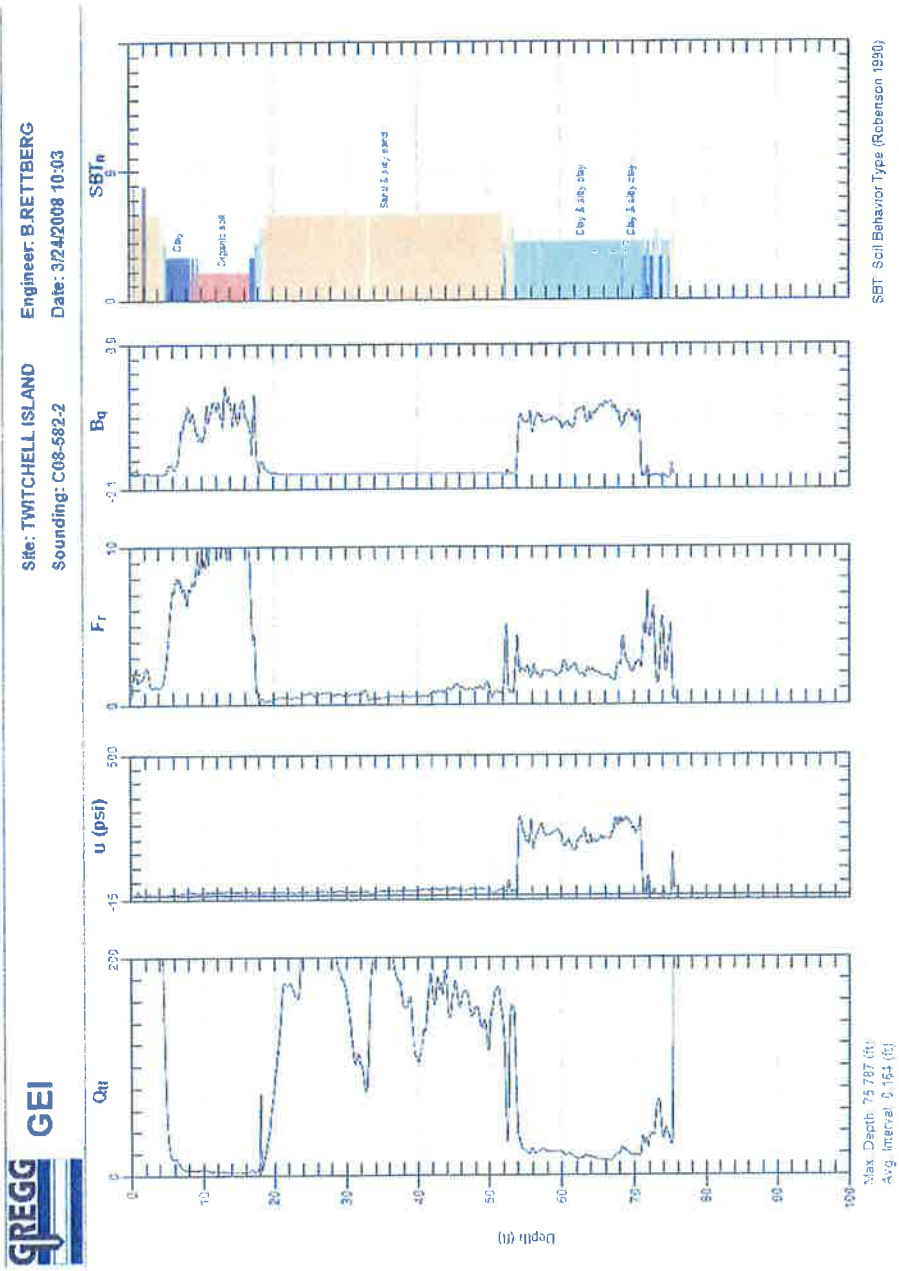
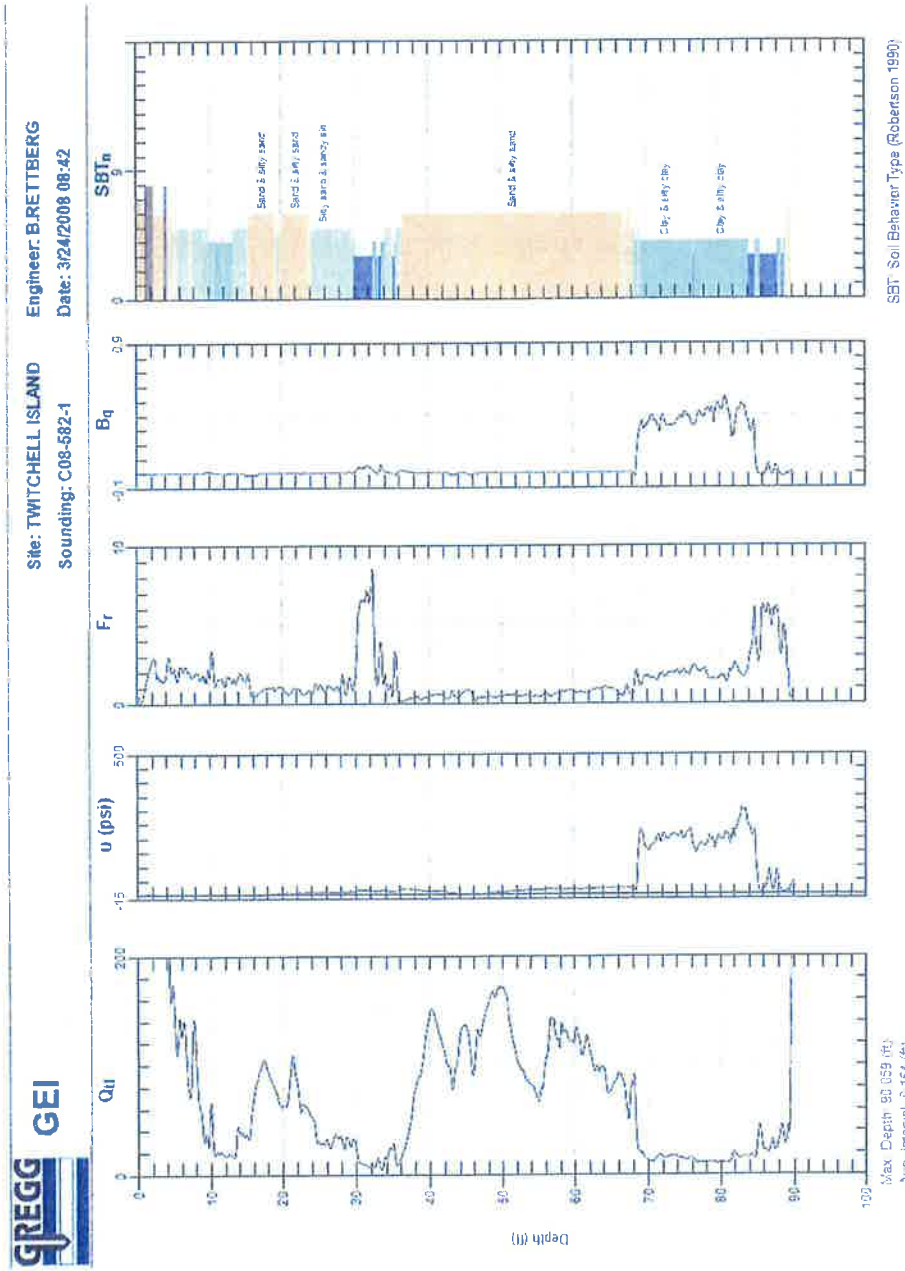




2. Do you have the actual 1991 boring logs (Foote and Associates) that are shown in the red squares below (approx. 582+00 and 574+00). I couldn't find any logs in Appendix 4 that correspond to these locations.



3. Do you know the specific locations of these three CPT soundings (Appendix 4 pgs 53-55) taken near marker 582+00? What is the reason for the differences between the three soundings? Levee crest vs toe?



4. What are the locations of the 1990 Foote and Assoc. CPT tests shown in Figs A-9 to A-27 at the end of Appendix 4 (pgs 159-175)?

We greatly appreciate whatever additional information you can provide. Please let me know if you need clarification regarding any of my questions.

I hope you eventually get to enjoy a bit of a break from your heavy workload.

Cheers,  
Jem

# Exhibit C

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## Christopher H. Neudeck

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**From:** Christopher H. Neudeck  
**Sent:** Thursday, August 12, 2021 7:56 AM  
**To:** Erdem, Jemile E  
**Cc:** 'Mercado, Juan@DWR'; Jesse Barton; Carter, Linda (rd1601@frontiernet.net)  
**Subject:** RE: [EXTERNAL] RE: Twitchell Island pore pressure site selection  
**Attachments:** Twitchell Footprint.zip; 210812\_Twitchell Footprint.pdf

Jem,

Attached please find shape files of our levee setback line incorporating our future levee footprint, ditch, pole line and appropriate setbacks along the San Joaquin River covering the District's Future Levee Improvements. Provided you stay outside of this line you will be OK. I have included a pdf view for your quick reference at the Oulton Point site that you are considering. As for your additional questions related to the geotechnical data that we have provided you, what we currently have and any other requests for more would be an extensive search that I am unable to perform at this juncture.

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**From:** Erdem, Jemile E <jerdem@usgs.gov>  
**Sent:** Tuesday, August 3, 2021 3:20 PM  
**To:** Christopher H. Neudeck <cneudeck@ksninc.com>  
**Subject:** Re: [EXTERNAL] RE: Twitchell Island pore pressure site selection

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FILE SPEC: P:\1110\_Twitchell\_Island\0571\_SUR\_Levee\_Improvements\0010\_Phase-L\_Berm\_Improvements\05\_Civil\100\_Coordination\OutputBox\210812\_Project Footprint\210812\_Twitchell Footprint.dwg  
PLOT DATE: Aug 12, 2021 - 7:27am



NOTES:  
1. WIDTH OF PROJECT FOOTPRINT FROM EDGE OF LEVEE PATROL ROAD TO EASEMENT LIMITS VARIES (250' TO 320').

 NORTH ORIENTATION	 KJELDSEN SINNOCK NEUDECK INC. CIVIL ENGINEERS & LAND SURVEYORS www.ksninc.com	711 N. Pershing Avenue Stockton, CA 95203 209-946-0268 1550 Harbor Blvd., Suite 212 West Sacramento, CA 95691 916-403-5900	DRAWING SCALE 1" = 50'	EXHIBIT NO. <b>1</b>
			ORIGINAL DRAWING SCALE 0 1/2 1" 	PAGE NO. <b>1</b>

RECLAMATION DISTRICT NO. 1601  
TWITCHELL ISLAND  
SAN JOAQUIN RIVER SETBACK LEVEE  
TYPICAL PROJECT FOOTPRINT