

155 Grand Avenue, Suite 800
Oakland, California 94612
United States
www.jacobs.com

Subject Addendum to Work Plan for Historical Water Supply Well Reconnaissance – Well #1; Area 1A, Topock Compressor Station, Needles, California

Prepared For Mr. Aaron Yue, Project Manager
Geological Services Branch
California Environmental Protection Agency, Department of Toxic Substances Control

Prepared By Jacobs Engineering Group (Jacobs) for Pacific Gas & Electric Company (PG&E)

Date 06 October, 2022

Pacific Gas and Electric Company (PG&E) reviewed the September 12, 2022 response from the Department of Toxic Substances Control (DTSC) regarding to July 19, 2022 document, *Work Plan for Historical Water Supply Well Reconnaissance – Well #1; Area 1A, Topock Compressor Station, Needles, California* (Work Plan). DTSC's comment letter is attached to this letter, which will serve as an addendum to the Work Plan. On behalf of PG&E, Jacobs Engineering Group (Jacobs) will incorporate the input from DTSC into the investigation as detailed in the following responses to DTSC's comments.

Response to Comments

General Comment A: The July 19, 2022 Work Plan for investigation at Area 1A was developed to expedite investigation on PG&E land. PG&E acknowledges the April 25, 2019 work plan, "*Revised Work Plan for Historical Water Supply Well Reconnaissance, Topock Compressor Station, Needles, California*", which includes plans for investigation at Area 1A and other historical well sites. The implementation of the Area 1A Work Plan will serve as a pilot case that will inform the approach utilized at other the other locations as authorization and access agreements are obtained.

Specific Comment 1: Concur. Area 1A is associated with a feature referred to as an "exploratory well" with names "#1" and "Well #1" as defined by item 10 on Table 1 of the July 19, 2022 Work Plan.

Specific Comment 2: This Work Plan excludes the area within the Transwestern metering station fence line as it is an active facility that PG&E does not control. This comment is noted, and should implementation of this Work Plan not yield the location of Well #1 (exploratory well), the area identified by DTSC will be addressed as part of the April 25, 2019 work plan.

Specific Comment 3: Concur.

Specific Comment 4: The initial survey outlined in the Work Plan will include assessment of the surface feature and the results will inform the understanding as to whether the feature is shallow or extends tens of feet into the subsurface (the latter case being more indicative of a well). If the feature is determined to be shallow it will be addressed as part of the preparation for the groundwater remedy and if it is determined to potentially be a well, it will be evaluated as part of a subsequent step in the implementation of this work plan.

Specific Comment 5: While the original 2019 work plan listed multiple surface geophysical methods that might be used at a given site, only ground penetrating radar (GPR) was proposed in this Work Plan because the single area included in this plan (Area 1A) is proximate to infrastructure that will likely interfere with

geophysical survey measurements and yield unreliable data sets. Nonetheless, the additional survey methods will be implemented to maximize the likelihood of detecting Well #1 in the investigation area.

Specific Comment 6: If the well is located and a drill rig is required to further assess its condition, this step will be incorporated into a work plan to assess and decommission this well. PG&E shares DTSC's perspective on the importance of efficiency in the field and the minimization of equipment mobilization.

Specific Comment 7: The geophysical survey work as defined in the Work Plan and modified by this Addendum will be conducted the week of October 10, 2022 and is expected to require 1-2 days in the field. Following demobilization, PG&E anticipates discussing the preliminary findings of the survey with DTSC the following week, particularly as it relates to next steps associated with the surface feature (see response to Specific Comment 4).

Specific Comment 8: Noted.

Specific Comment 9: If the geophysical surveys do not yield meaningful information with respect to the Well #1 location, care will be taken during the construction of groundwater remedy infrastructure in this area to identify buried infrastructure that might be associated with the exploratory well (e.g., buried pipelines or other debris associated with well operations). Further, per the response to Specific Comment 2, other portions of Area 1A will be investigated later.

Specific Comment 10: Noted.



Yana Garcia
Secretary for
Environmental Protection



Department of Toxic Substances Control

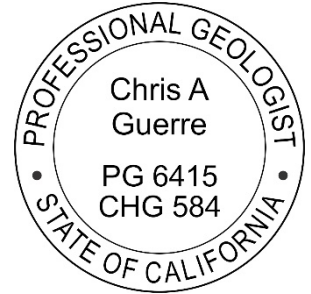
Meredith Williams, Ph.D., Director
5796 Corporate Avenue
Cypress, California 90630



Gavin Newsom
Governor

TO: Aaron Yue
Senior Hazardous Substances Engineer
Project Manager
Site Mitigation and Restoration Program

FROM: Chris Guerre, CHG
Senior Engineering Geologist
Geological Services Unit (GSU)



DATE: September 12, 2022

**SUBJECT: Work Plan for Historical Water Supply Well Reconnaissance
Well #1; Area 1A, Topock Compressor Station, Needles, California
(EPA ID NO. CAT080011729)**

PCA 22120 SITE CODE 540015 WP 48 MPC WDECplan

DOCUMENT REVIEWED

The GSU reviewed the July 19, 2022 document titled, *Work Plan for Historical Water Supply Well Reconnaissance – Well #1; Area 1A, Topock Compressor Station, Needles, California* (Work Plan). The Work Plan was prepared by Jacobs Engineering Group (Jacobs) on behalf of Pacific Gas and Electric Company (PG&E) and was received by the Department of Toxic Substances Control (DTSC) in August 2022.

BACKGROUND

The Work Plan proposes to search for one lost historical well, Well #1, that was installed circa 1950 as an exploratory water well related to construction of the Topock Compressor Station. The Work Plan defines the activities PG&E will undertake to try and determine if Well #1 is buried in the investigation area, and if located, activities that might be conducted to verify compliance with the Department of Water Resources, California Well Standards Bulletin 74-90. There are also several similar historical wells (e.g., Well #2, Well #3, Well #5, PGE-01, PGE-02) with unknown locations and well conditions that have been identified during record reviews. Jacobs Engineering had

prepared a work plan in 2019 on behalf of PG&E to search for those additional wells, but PG&E never implemented the plan and is currently focusing on Well #1 in this Work Plan.

GENERAL COMMENT

A. It is uncertain why PG&E is not implementing the Jacob's April 25, 2019 work plan titled, "*Revised Work Plan for Historical Water Supply Well Reconnaissance, Topock Compressor Station, Needles, California.*" to search for all known historical wells instead of the new Work Plan proposal with a single well investigation approach. Addressing only Well #1 does not seem to make sense from an efficiency standpoint and does not address the issue that other historical wells exist that might also create a conduit for contamination to groundwater unless properly decommissioned. It is suggested that all the lost historic wells be acknowledged and addressed as done previously. It is understood that each well might have separate landowner encumbrances, but it would be better to prepare a comprehensive plan to assess the potentially unique and varying land access agreements which may have separate, and potentially long lead time tracks (e.g., Caltrans access agreements). Nevertheless, if it is decided to go forward with this Work Plan for Well #1 reconnaissance, then the following Specific Comments have been prepared to improve the 2022 Work Plan. It is recommended that an understanding of the plan and process to address all the lost historical wells identified in the 2019 plan be specified in the current proposal.

SPECIFIC COMMENTS

1. Paragraph 1, Page 1: The section states, "*Based on previous well inventory assessments and estimations of historical well survey areas it is possible that Well #1 (also referred to as PGE Well 1, PGE-1, Well No. 1) is present in the subsurface of Area 1A (Figure 1).*" Please correct the terminology for Well #1. It is referred to as an exploratory well in Jacob's April 25, 2019 work plan and is only referred to as "#1" or "Well #1" in the 2019 plan. PGE Well 1/PGE-1 is a completely different well that was once the main water supply to the PG&E Topock Compressor Station and is located south of Area of Concern (AOC) 14 under the I-40 freeway.
2. Proposed Survey Area 1A, Paragraph 1, Page 1: The Proposed Survey Area (Area 1A) to be evaluated is identified on Figures 1 and 2 of the Work Plan and excludes the Transwestern area. The Transwestern area is referred to as the "Transwestern Disturbed Area" on Figures 1 and 2. It should be noted that both the Transwestern and Area 1A areas are quite disturbed and both occur due to significant earthwork including removal of prominent hills. While Attachment 1, prepared by DTSC's GSU, estimates that Well #1 is outside the Transwestern fence line, Figure 2 of the Work Plan (Attachment 2) shows that Well #1 plots within or adjacent to the Transwestern fence line. Therefore, geophysical surveys should also include the area within the Transwestern fence. GSU Figure 1 shows the station in 1951. The

Transwestern and Area 1A area can be seen with grading that has occurred on the southern portion of the bench similar to Figure 2 Work Plan drawings. Figure 2 drawings and the 1951 aerial photograph also shows the large hill on the Transwestern Bench area that was later removed to construct the Transwestern facility as can be seen in the October 2006 aerial (GSU Figure 2). The yellow highlighted area on Attachment 2 is supposed to represent the southern flat area within the Transwestern yard that would have been available to drill a well circa 1950.

3. Proposed Survey Area 1A, Paragraph 2, Page 1: Please change the following sentence as suggested below since the Transwestern facility was constructed sometime between 1983 and 1992 based on aerial photographs and the well was installed circa 1950, *“These drawings place Well #1 in the area of the site referred to as the Transwestern Bench and **likely** predate the facility constructed there.”*
4. Proposed Survey Area 1A, Page 2: The section states, *“A surface feature found in June 2022 is depicted in Figure 2 and is located within the proposed survey area. The feature has been described as a metal casing estimated to be about 16 inches in diameter with a cement apron around the outside and containing compacted soil. The feature will be investigated in the survey.”* It is requested that this feature be addressed immediately and examined (e.g., potholed) and potentially removed if it is not a well as part of groundwater remedy preparation. If a well is found, then the Work Plan should be significantly modified to gather information to aid in well decommissioning or rehabilitation. If the feature is not a well, then it could be removed and provide less interference for the proposed geophysical surveys.
5. 3.2 Non-Intrusive Geophysical Survey, Pages 2 and 3: In addition to the ground penetrating radar (GPR) proposed, a magnetometer and electronic terrain conductivity survey should also be conducted as proposed by Jacobs in the 2019 work plan. The magnetometer survey was the primary survey that identified well TCS-4 in the past when it was buried approximately four feet below ground surface. Trailers and storage units within Area 1A have been removed and the area is essentially barren in its current condition representing a good opportunity for minimizing geophysical interferences. It is understood that the chain link fence and Transwestern utility lines represent obstacles to geophysical surveys as the specific structure is approached. If possible, it is recommended that a portion of the chain link (e.g., south side) be temporarily removed during the survey. Handheld metal detectors and other tools should be available as well. A Schonstedt magnetic detector worked well at the TCS-4 area and was detecting a pipeline buried approximately seven feet below ground surface that was connected to the well.
6. 3.4 Well Condition Assessment, Page 3: The section states, *“If located, the condition of Well #1 will be evaluated to the extent practicable using equipment*

available at the site (e.g., backhoe) without the mobilization of a drill rig.” This is understood, but it is requested that the Work Plan also include a contingency for utilizing a drill rig should the well be filled with dirt, debris, sludge, etc. A drill rig might be needed to assess well conditions and obtain information such as depth, casing construction, etc. Historic well TCS-4 was cleaned out eventually, but the process of taking incremental steps to get there was not efficient, resulted in an excessively lengthy process that was actually more environmentally and culturally impactful than it needed to be.

7. 3.5 Reporting and Well Decommissioning Work Planning, Page 4: Please include a timely schedule for completing this work within this section.
8. Note: While searching for Well #1, please keep in mind that an underground storage tank (AOC 12) was reported buried somewhere potentially in the general vicinity of the Transwestern Bench and could not be located during previous investigations.
9. The Work Plan should specify next steps if geophysical surveys do not provide any meaningful information to locate Well #1.
10. The survey coordinate system(s) used historically to prepare historic contour maps and identify historic well casing elevations should be evaluated to determine if they can be compared directly to current surveys without correction.

RECOMMENDATIONS

The GSU requests that PG&E/Jacobs respond to the comments above and that the Work Plan be revised and improved. It is requested that Specific Comment 4 be addressed immediately.

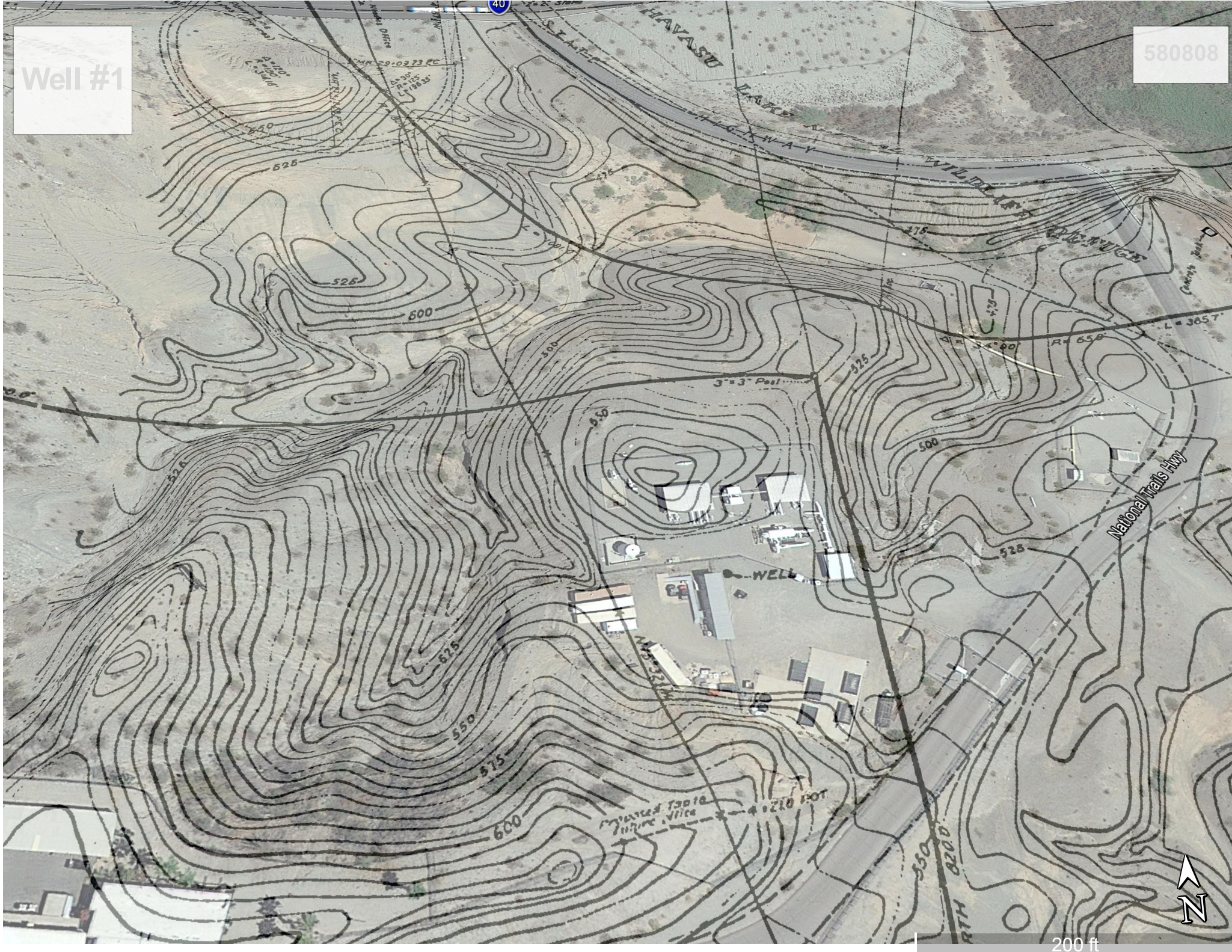
The GSU notes that the recommendations presented in this memorandum are site specific and should not be applied to other projects without consultation with the project geologist. If you have any questions or comments, please contact Chris Guerre at (714) 484-5422 or christopher.guerre@dtsc.ca.gov.

Peer reviewed by Greg Neal, PG

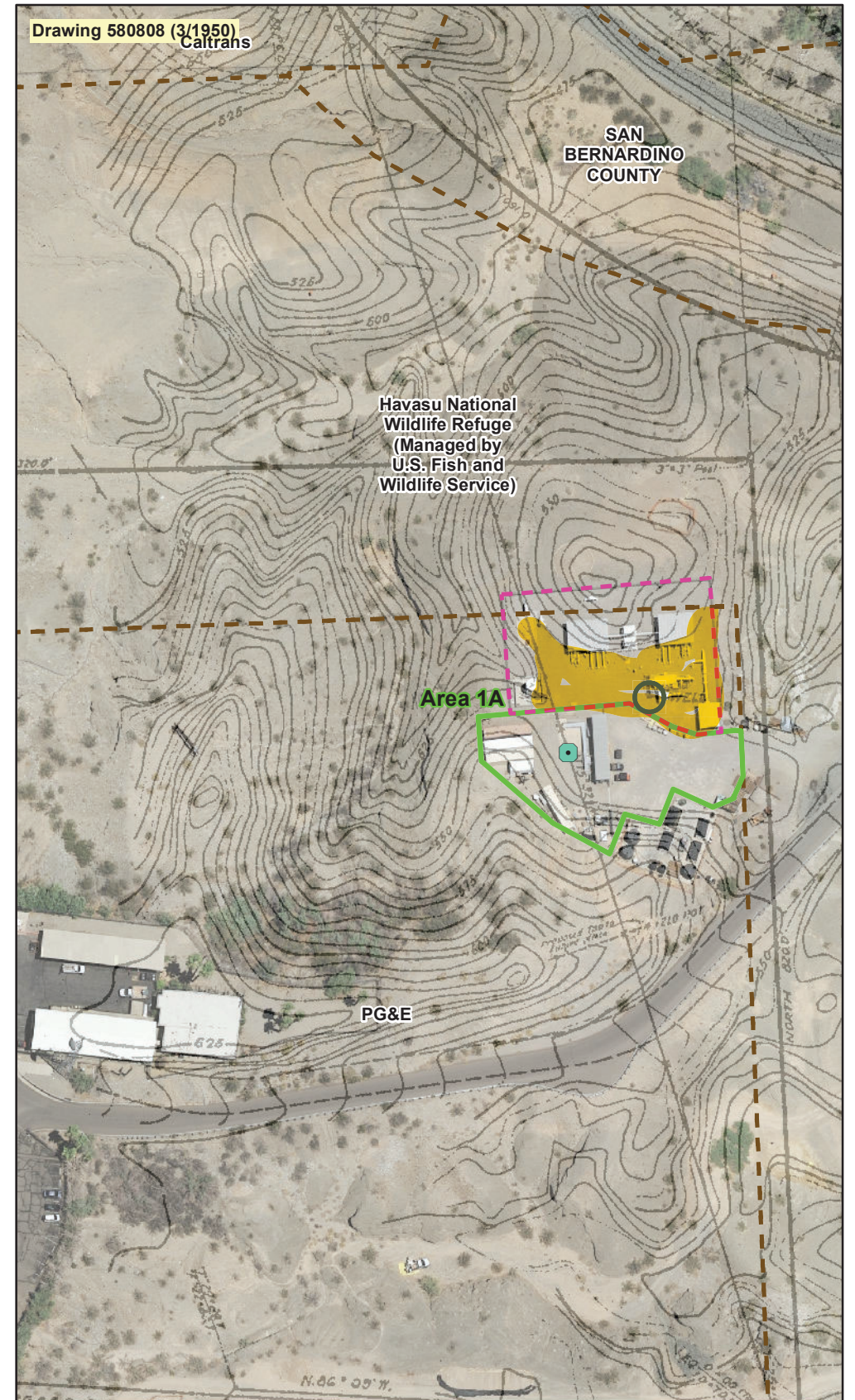
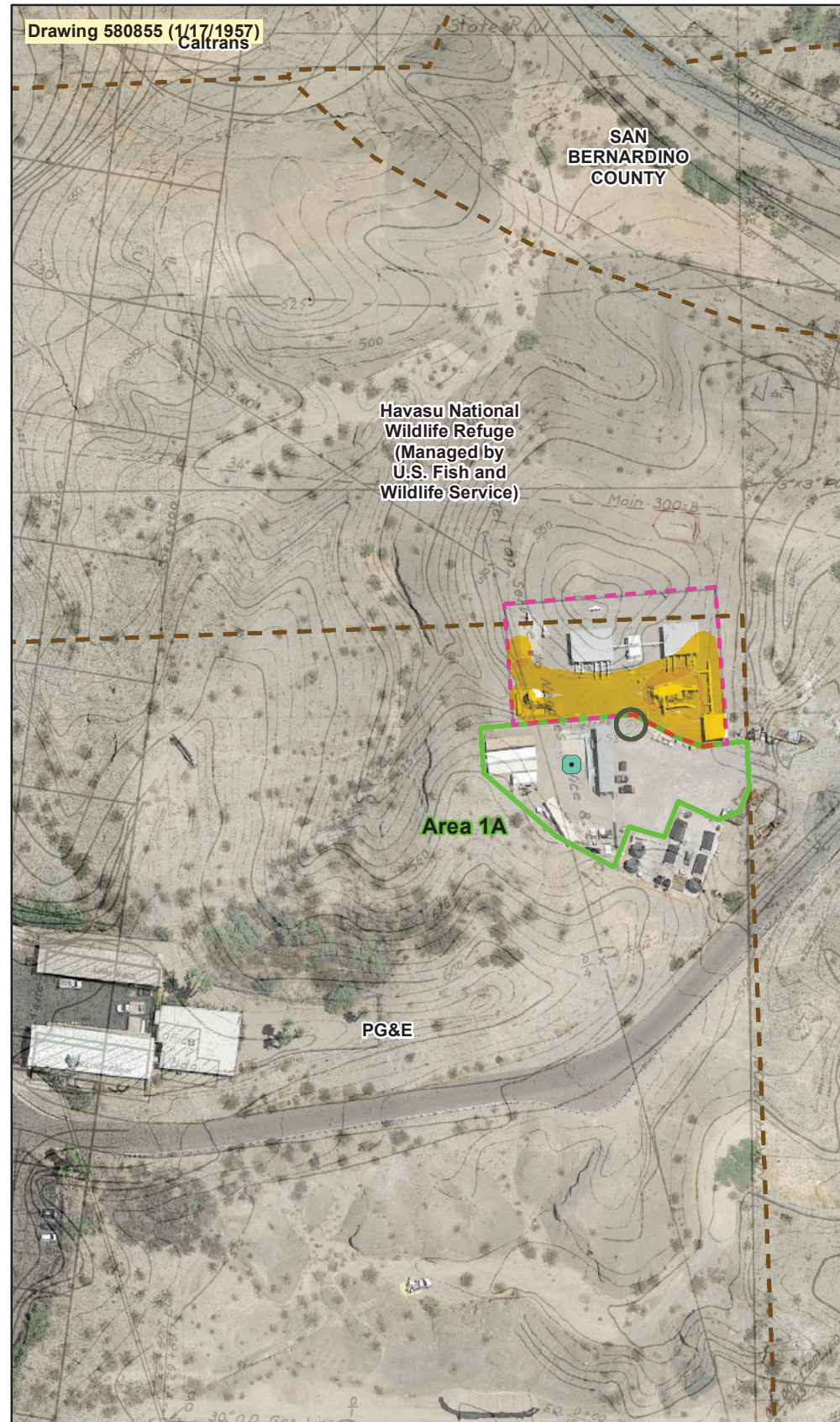
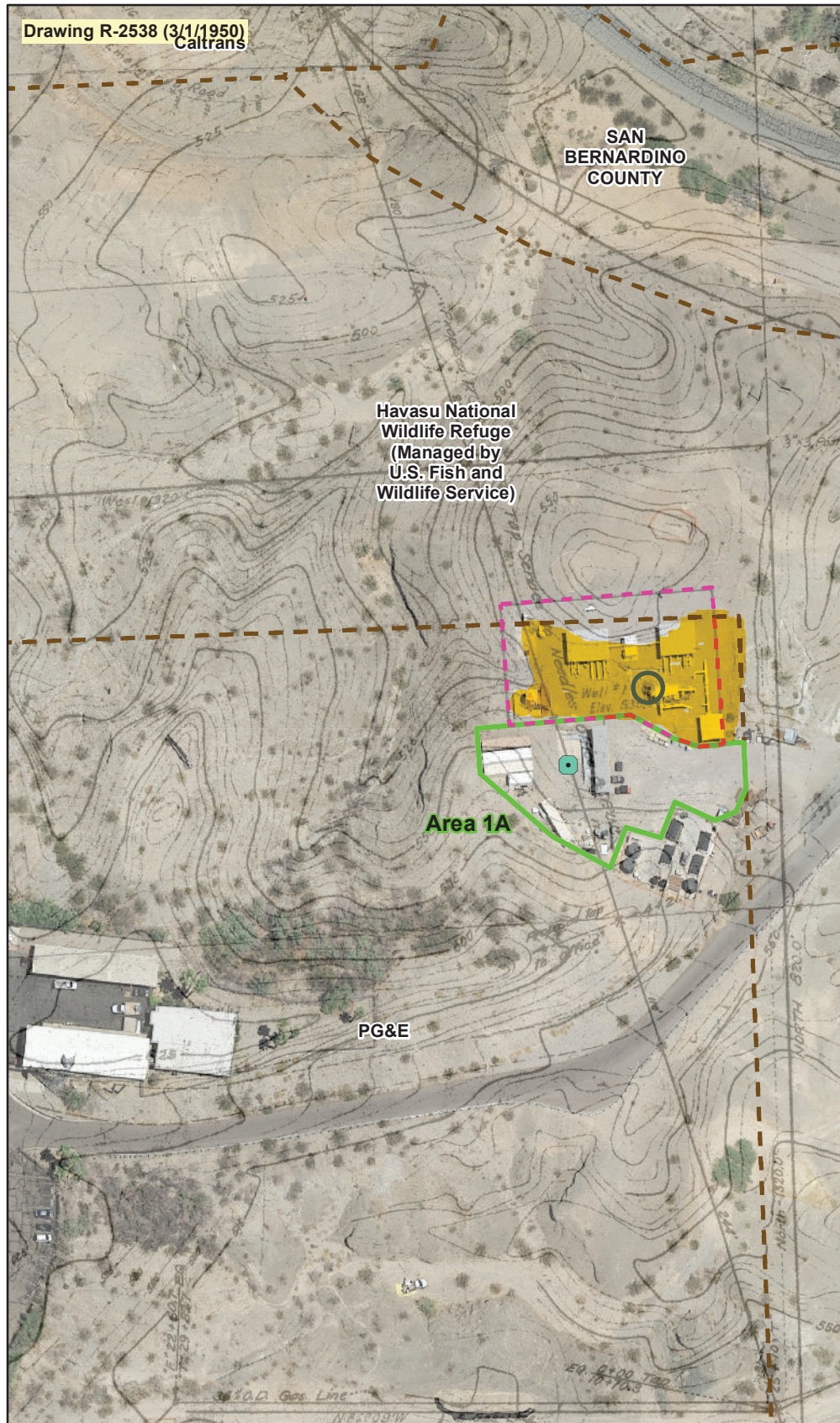
ATTACHMENTS / FIGURES

Well #1

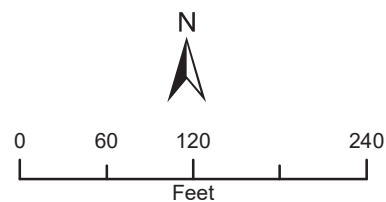
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200 ft

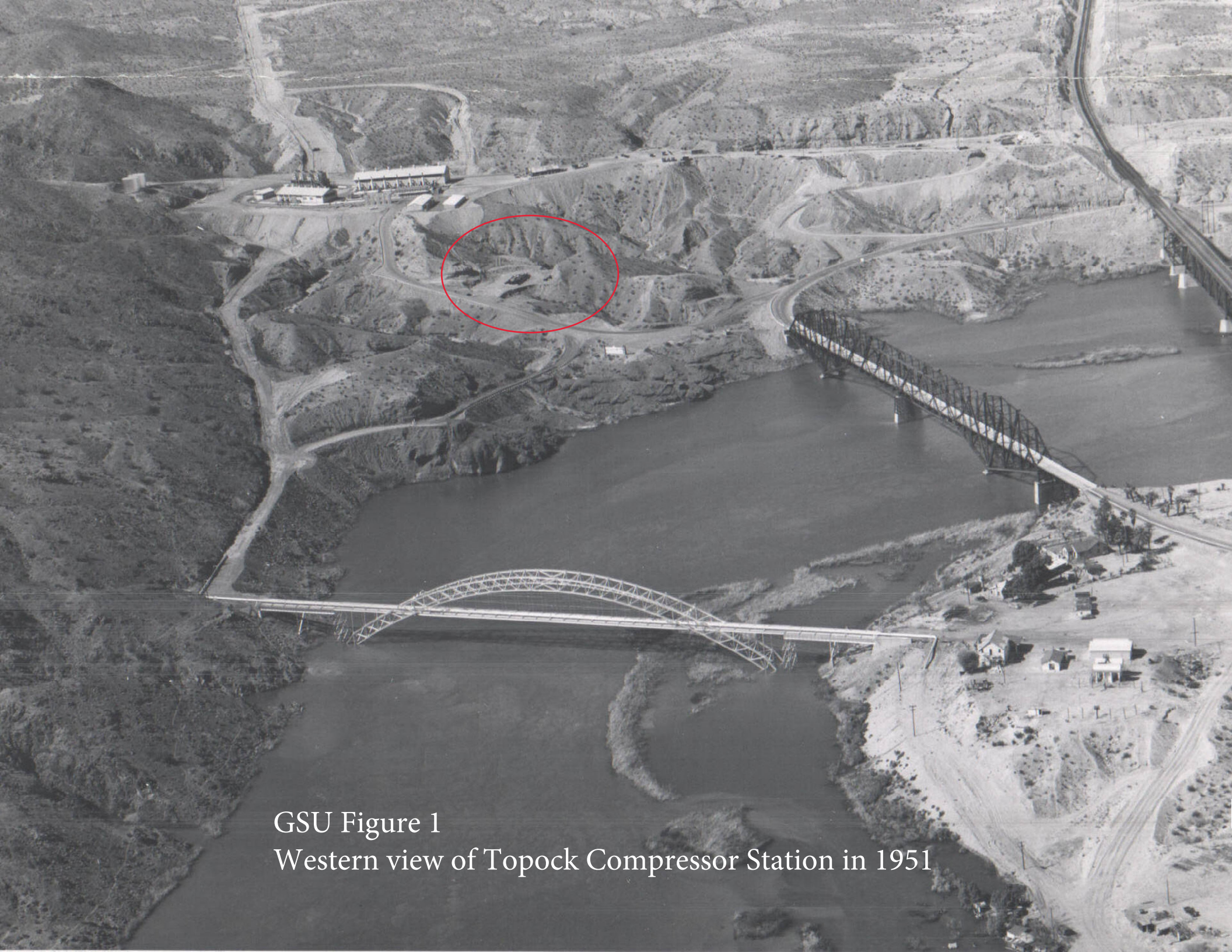


- Legend**
- Location of Well on Drawing
 - Surface feature found in June 2022
 - Transwestern Disturbed Area
 - Property Owner Area

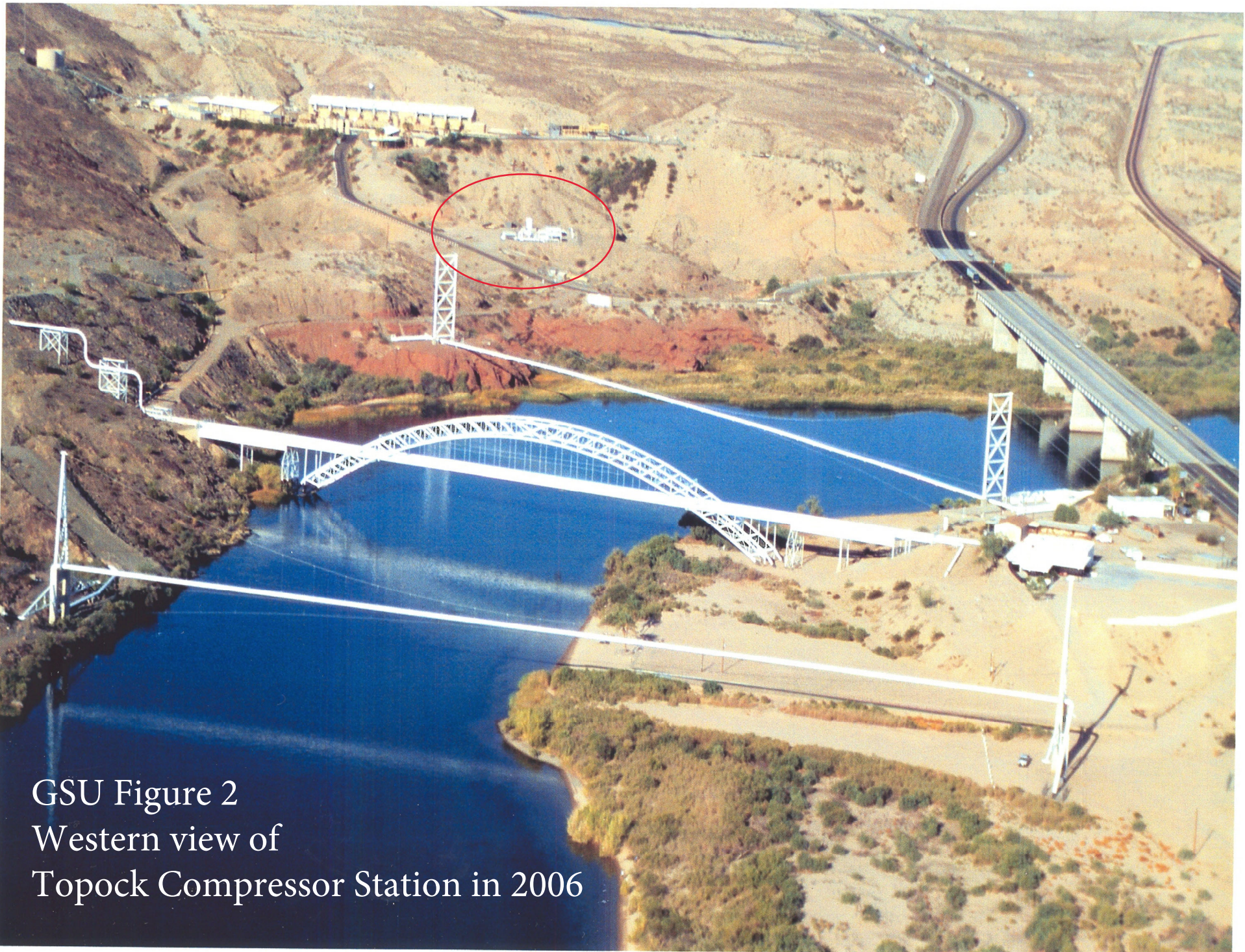


- Notes:**
1. Drawing R-2538 is dated March 1, 1950.
 2. Drawing 580855 is dated January 17, 1957.
 3. Drawing 580808 is dated March, 1950.

FIGURE 2
Well #1 Historic Map Overlays
 Historical Water Supply Well Reconnaissance
 Pacific Gas and Electric Company Topock Compressor
 Station, Needles, California



GSU Figure 1
Western view of Topock Compressor Station in 1951



GSU Figure 2
Western view of
Topock Compressor Station in 2006