

From: [John Bond](#)
To: [DBEDT OPSD Environmental Review Program](#); [Neupane, Deepak](#); [Nakamoto, Craig K](#); [Soares, Tommilyn](#); [Sasaki, Garet A](#); [John Whalen](#); [DBEDT HCDA Contact](#); [DBEDT Director](#); [Rogelio Huerta](#); [Neal Payton](#); [Lillie Makaila](#); [Winston Welch](#); [Hawaii's Thousand Friends](#); [Malama, Tesha](#)
Subject: [EXTERNAL] DHHL Kalaeloa solar project has ancient Hawaiian karst water pond
Date: Monday, August 30, 2021 1:13:51 PM

Aloha,

RE: Arion Energy LLC -DHHL solar project

I did research on Ewa Plain karst ponds several years ago after obtaining 1927-28 Army Air Corps photos in which several ponds really stood out in the undeveloped plain- nearly all used for ranching at the time in the 1920's.

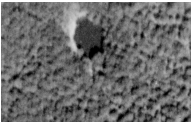
After looking at other government maps I was really surprised that this one particular pond on the proposed solar farm site shows up as late as 1943 on a map of NASBP- airfield not shown likely due to wartime censors - but hangars are shown for reference.

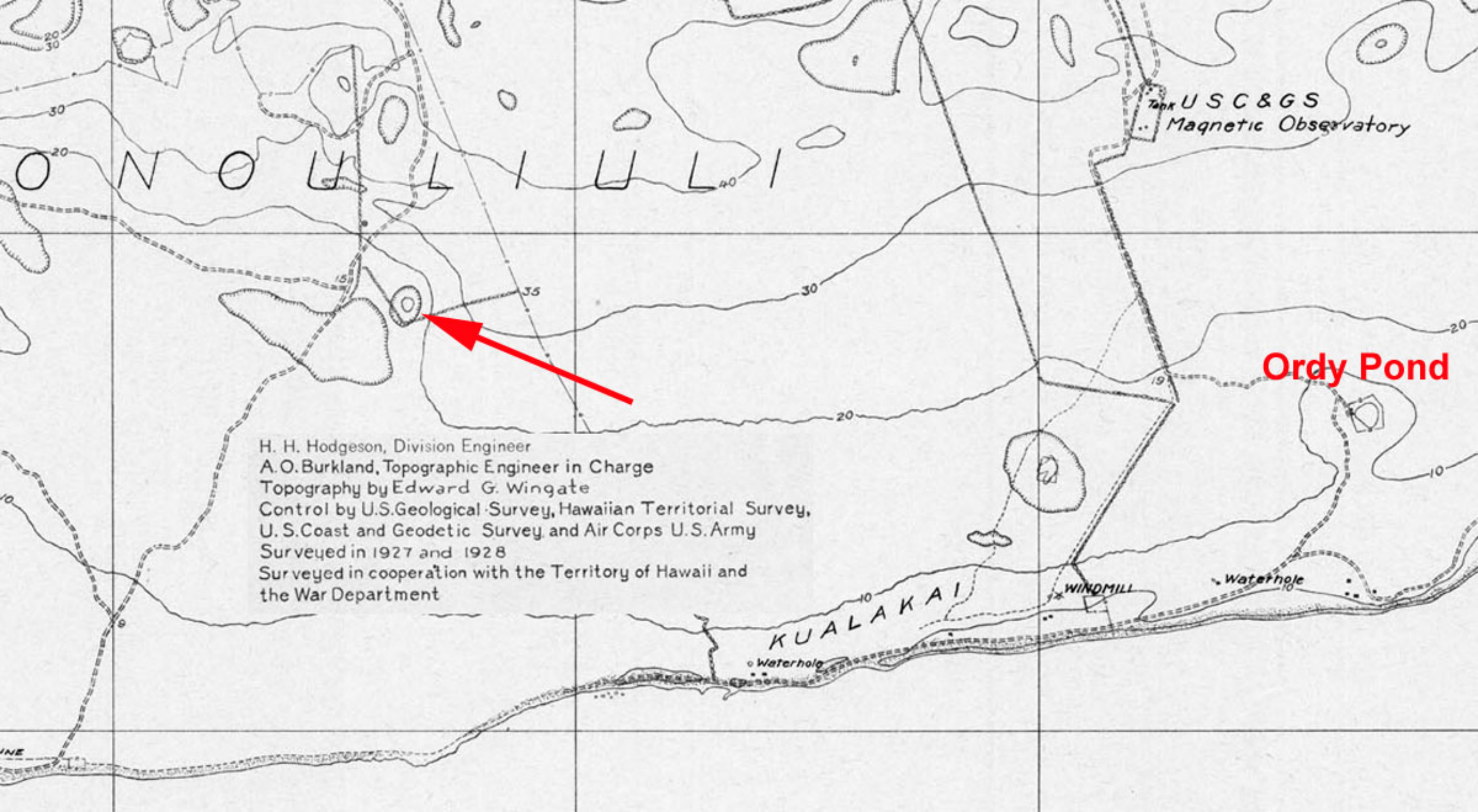
These ponds are/were important because they were major places for Hawaiians to habitat near due to abundant fresh water that flowed underground from the Waianae volcano. The Ewa Plain is a 50 square mile ancient coral reef that is perched on the side of the volcano. UH studies estimate the coral grew and accumulated over hundreds of thousands of years with the rise and fall of sea level and has a depth of around one mile near the shoreline. That means a LOT of subsurface freshwater caves and waterways.

Old maps show that it was also likely used as a cattle watering hole in the 1920's. Recent Google air photo shows trees still growing there. Big trees always indicate subsurface water. Why it dried up is most likely due to the carving of a huge long straight waterway drainage ditch nearby that lowered the ground water table significantly. Exactly who and when this project was done is another mystery but likely in the early 70's when Campbell was planning their Ewa Plain developments.

Today this site is still an important archeological site that would likely reveal ancient bird bones, Hawaiian habitation artifacts, ranching artifacts and likely WW-I and WW-II military artifacts (as did the other DHHL solar site.) The inside and perimeter of the pond should be carefully studied for what is likely still there as it has seen very little modern development over hundreds of years.

John Bond
Kanehili Cultural Hui





Tank USC&GS
Magnetic Observatory

Ordy Pond

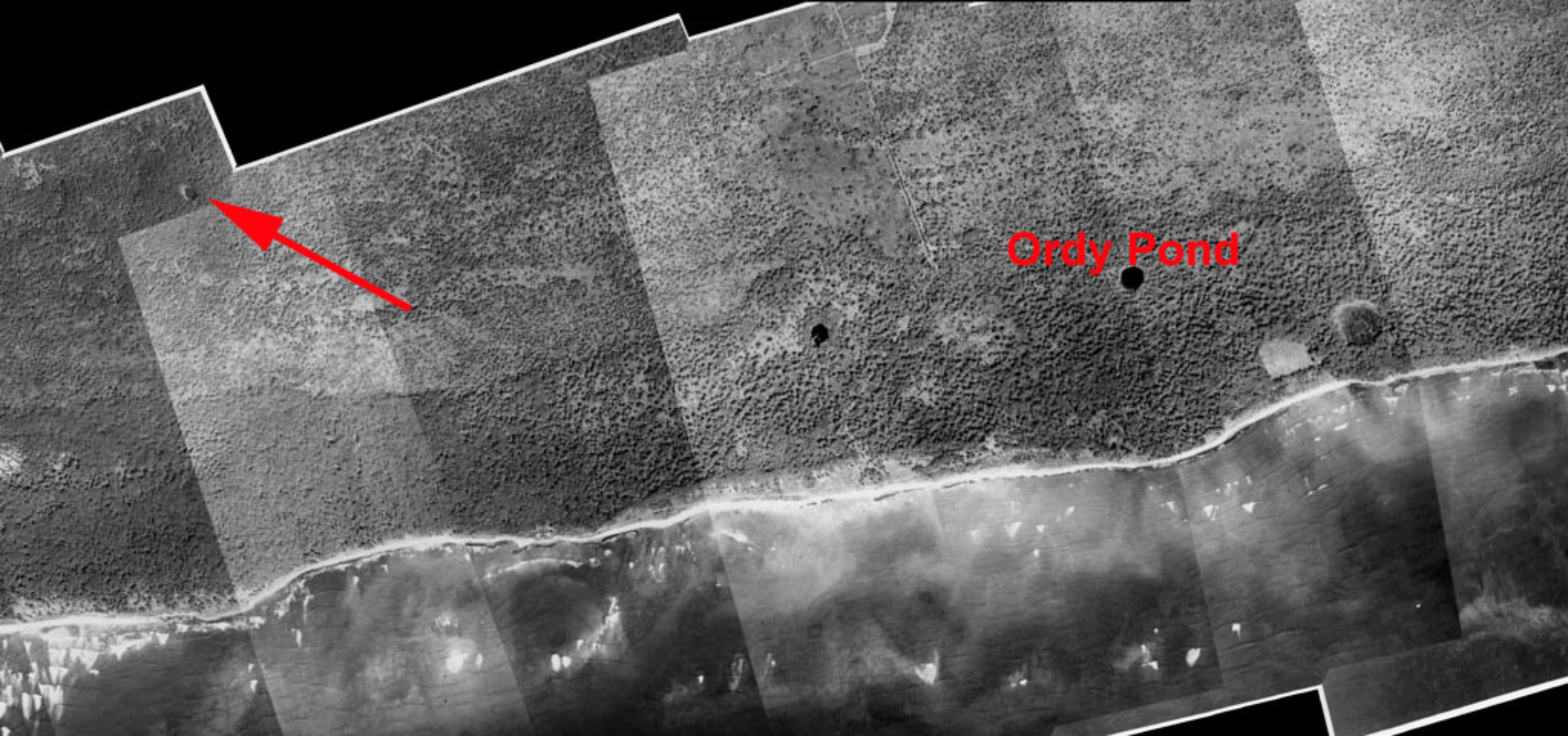
H. H. Hodgeson, Division Engineer
A. O. Burkland, Topographic Engineer in Charge
Topography by Edward G. Wingate
Control by U.S. Geological Survey, Hawaiian Territorial Survey,
U. S. Coast and Geodetic Survey, and Air Corps U. S. Army
Surveyed in 1927 and 1928
Surveyed in cooperation with the Territory of Hawaii and
the War Department

KUALAKAI

WINDMILL

Waterhole

Waterhole



Ordy Pond

2/2013

Trees indicate
water source

Karst Sinkhole
Pond



