

OCEANSCIENCE

INNOVATIVE TOOLS FOR OCEANOGRAPHERS AND HYDROLOGISTS

Z-Boat 1800 Application Note #2

Oil Field Service Company Conduct Nine Pond Surveys in Two Days Using the Z-Boat 1800

Summary



An oil field service company increased productivity of their water management services by introducing the Z-Boat 1800 remote survey boat. Creating accurate bathymetric maps and volumes of industrial water holding pits generated significant credibility with their clients. Multiple pits can now be surveyed in one day, previously an unthinkable situation!

Background

Oil field production operations require substantial amounts of water, particularly when hydraulic fracturing is being undertaken. Often, this water is stored in holding ponds that are excavated in natural depressions giving a cost effective way to store large volumes of water. An accurate knowledge of the available water reserve and the water consumption is important to the pond owner. One oil field service company has introduced the latest Oceanscience Z-boat 1800 remote survey system to provide their customers with accurate and highly credible water volumes and pond maps.

Holding Pond Water Volume Estimation

The service company had no good way to accurately and quickly determine the exact water volume in their customers' holding ponds. Calling in a professional survey company was not an option as a result of the expense and time required to mobilize a conventional survey boat. Other attempts with "homemade" solutions did not build credibility with the

customer, crucial when the results directly affected water disputes and eventual profitability of the water reserve.

The Z-Boat Advantage

With the Z-Boat 1800, a single technician can survey several ponds in one day. The boat can be carried in the back of a truck and deployed without assistance. Real time data telemetry allows the operator to use the navigation display on the shore laptop to accurately guide the boat around the pond. Unlike a manned boat, the Z-Boat 1800 can reach the entire pond surface – even in only 18 inches of water depth, important as the ponds are often irregular in shape with shallow connecting lanes, as shown in the example below.



Unmatched Survey Efficiency

Contour maps and pond volumes can now be generated in the field and immediately reported to the customer. On a recent survey trip, **nine** holding ponds were surveyed in only **two days**, with the contour maps shown below. Needless to say, the service company and their customer were delighted with the huge productivity gains thanks to the **Z-Boat 1800**.

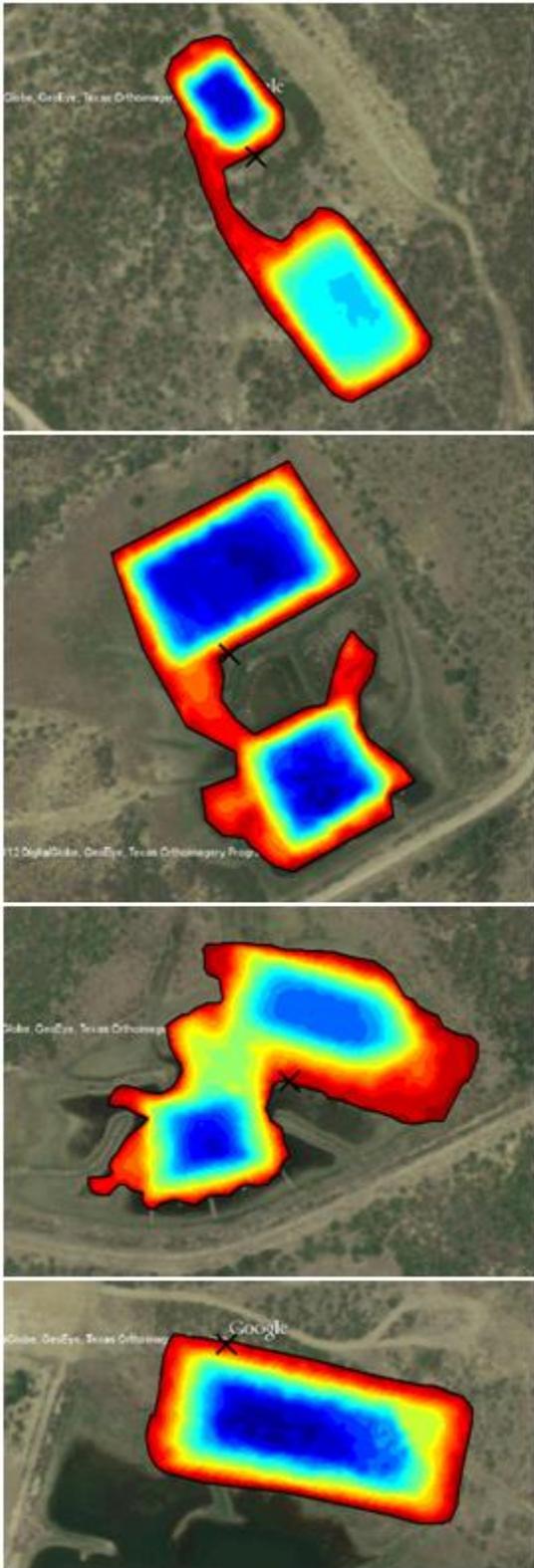


Figure 1. Holding pond bathymetric images, allowing accurate and instant calculation of the water volumes.