



EPA OPTICAL GAS IMAGING STAKEHOLDER WORKSHOP

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# ADVANCEMENTS IN OGI TECHNOLOGY, TRAINING, AND REPORTING

TUESDAY, NOVEMBER 10, 2020

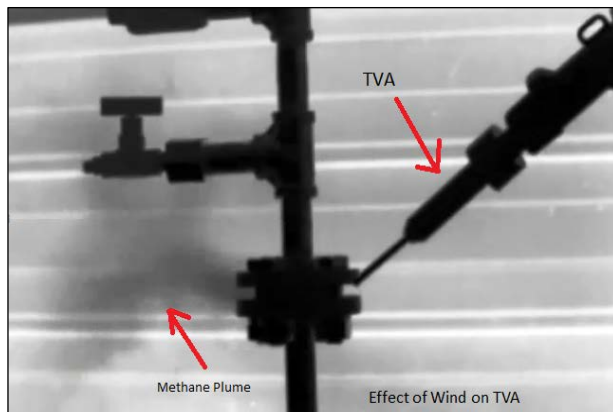
## PRESENTATION TOPICS

- ❖ In-camera quantification
- ❖ Geolocation mapping
- ❖ 3<sup>rd</sup> party reporting with file synchronization
- ❖ Virtual training offering

# CURRENT QUANTIFICATION METHODS

## TVA

- ❖ Legacy technology for Method 21
- ❖ Challenging to use on DTM equipment
- ❖ Operator in leak while in use



## QL320

- ❖ See the leak and quantify
- ❖ Quantify DTM components
- ❖ Safe distance to operate



## TDLAS

- ❖ Active laser technology
- ❖ Narrow FOV operation
- ❖ Cannot visualize leak source



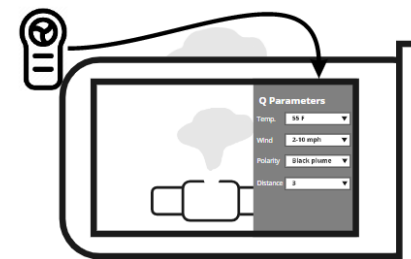
# CURRENT QOGI FLOW (WITH Q-MODE)



User finds leak with camera and chooses to quantify



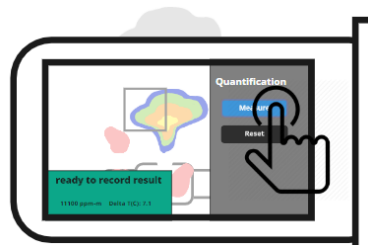
Use camera on a tripod



Necessary parameters are added in the camera



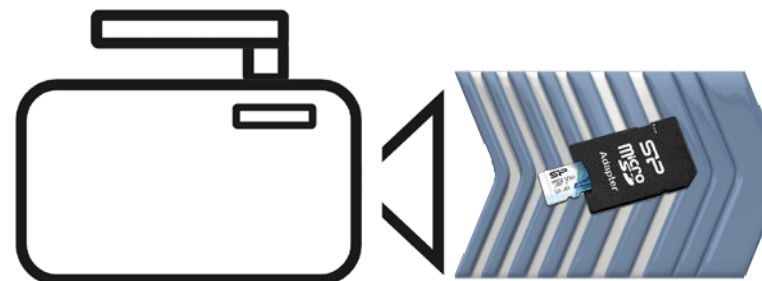
Turn on Delta T overlay if desired



Click "Measure" to start quantification



Record ~10 seconds of leak for result (Q-Mode)

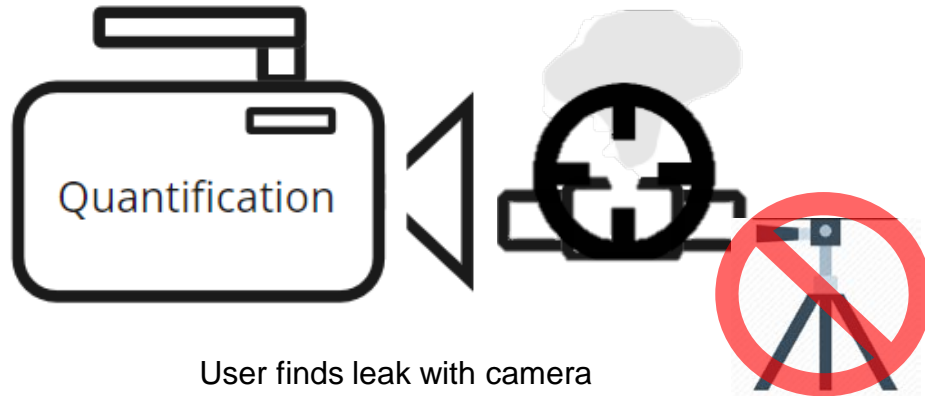


Transfer Q-Mode files to tablet via SD card

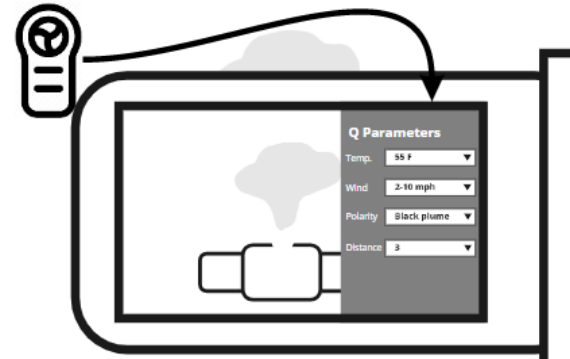


Process Q-Mode File in QL320 tablet

# QOGI IN CAMERA (PPM-M)



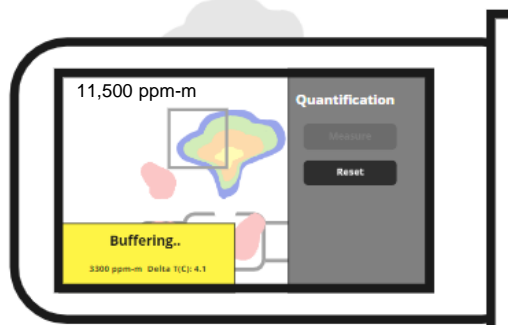
User finds leak with camera and chooses to quantify



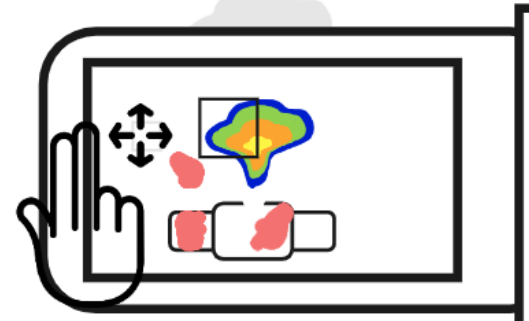
Necessary parameters are added in the camera



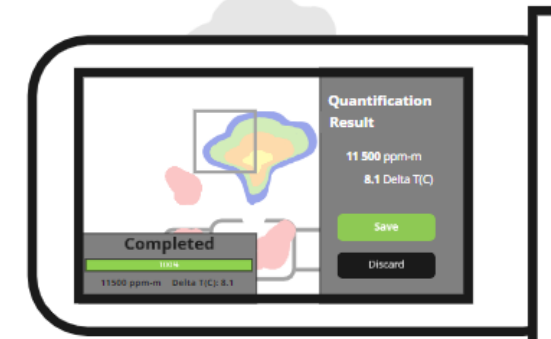
Overlays are added if desired



Camera shows reading with rolling result



Box is drawn over leak in frozen image

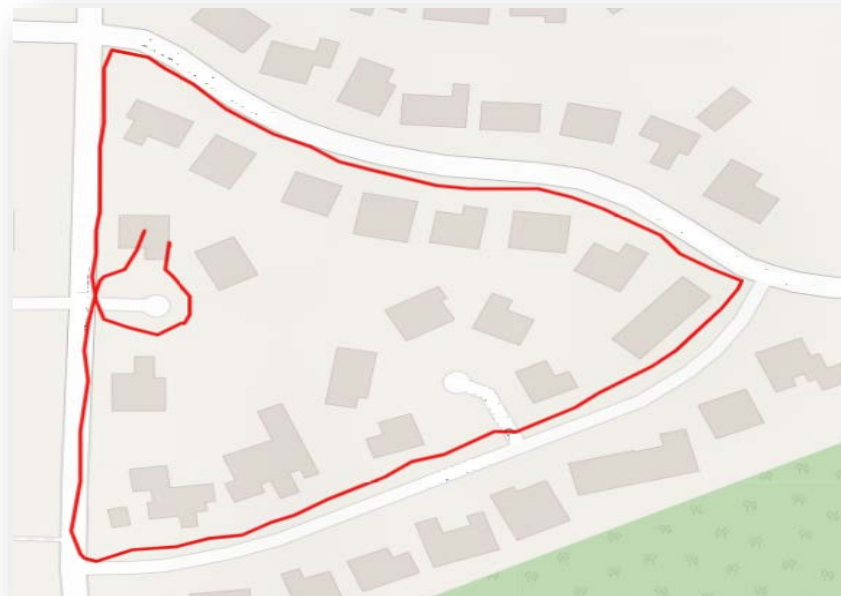


Display result and save file (if desired)

# GEOLOCATION MAPPING

- ❖ Ensure observation path is followed during survey
- ❖ Extracting GPS data directly from instrument
- ❖ Potentially removes need to record video of the entire survey
- ❖ Validate data with 3<sup>rd</sup> Party Mobile App

N 32°57.536'	W 96°58.594'	N 32°57.548'	W 96°58.604'
N 32°57.531'	W 96°58.593'	N 32°57.545'	W 96°58.596'
N 32°57.527'	W 96°58.66'	N 32°57.542'	W 96°58.597'
N 32°57.528'	W 96°58.61'	N 32°57.542'	W 96°58.597'
N 32°57.532'	W 96°58.61'	N 32°57.543'	W 96°58.597'
N 32°57.540'	W 96°58.61'	N 32°57.543'	W 96°58.597'
N 32°57.548'	W 96°58.61'	N 32°57.544'	W 96°58.597'
N 32°57.560'	W 96°58.66'	N 32°57.543'	W 96°58.598'
N 32°57.562'	W 96°58.66'	N 32°57.539'	W 96°58.599'
N 32°57.561'	W 96°58.66'	N 32°57.540'	W 96°58.597'
N 32°57.559'	W 96°58.66'	N 32°57.540'	W 96°58.599'
N 32°57.562'	W 96°58.61'	N 32°57.540'	W 96°58.600'
N 32°57.567'	W 96°58.61'	N 32°57.540'	W 96°58.600'
N 32°57.575'	W 96°58.61'	N 32°57.534'	W 96°58.604'
N 32°57.582'	W 96°58.66'	N 32°57.526'	W 96°58.600'
N 32°57.588'	W 96°58.66'	N 32°57.517'	W 96°58.598'
N 32°57.588'	W 96°58.66'	N 32°57.513'	W 96°58.592'
N 32°57.586'	W 96°58.66'	N 32°57.510'	W 96°58.588'
N 32°57.578'	W 96°58.66'	N 32°57.519'	W 96°58.584'
N 32°57.570'	W 96°58.66'	N 32°57.524'	W 96°58.583'
N 32°57.563'	W 96°58.66'	N 32°57.538'	W 96°58.584'
N 32°57.555'	W 96°58.66'	N 32°57.538'	W 96°58.582'
		N 32°57.538'	W 96°58.582'
		N 32°57.537'	W 96°58.584'



LEAKTRACKER PRO  
powered by Trihydro

# STREAMLINED DOCUMENTATION

Leak Details  
Crook 27-44 - Compressor

General Photos Repairs

COMPONENT TYPE  
Compressor

COMPONENT SUB-TYPE  
Grease Zerk

COMPONENT SIZE  
None

DATE  
9/28/2020 02:11PM

LDAR TAG  
116,071

LOCATION DESCRIPTION

LATITUDE  
40.53679

LONGITUDE  
-105.08584

Save

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General Photos Repairs

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## ❖ Leak Documentation

- ❖ Leak Details and Description
- ❖ LDAR Tag
- ❖ Pictures & Videos
- ❖ Quantification (QOGI)

## ❖ Repair Documentation

- ❖ Scan LDAR Tag
- ❖ View Leak (Photos & Video)
- ❖ Repair & Confirm



# EFFICIENT RECORDKEEPING

## ❖ Mobile App Upload

- ❖ Survey Details
- ❖ Leak Data
- ❖ Survey Path (GPS)

## ❖ OGI File Sync

- ❖ One-Click
- ❖ Pictures & Video
- ❖ Camera Path (GPS)

## ❖ Survey Completion

- ❖ Software Verified (GPS)
- ❖ Deviation Notes
- ❖ User Certified

Leak Details  
Crook 27-44 - Compressor

General Photos Repairs

COMPONENT TYPE  
**Compressor**

COMPONENT SUB-TYPE  
**Grease Zerk**

COMPONENT SIZE  
**None**

DATE  
9/28/2020 02:11PM

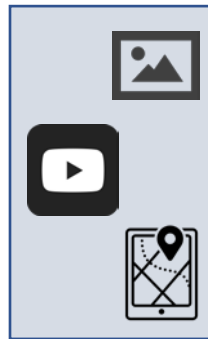
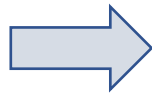
LDAR TAG  
116,071

LOCATION DESCRIPTION

LATITUDE  
40.53679

LONGITUDE  
-105.08584

Save



LEAKTRACKER PRO Monitoring Equipment Surveys Reports Support

**Covers**  
LDAR Tag: None | Not Repaired

Repair History

Edit Remove Leak

Leak Date  
08/27/2019 12:44 PM

Location Description

Coordinates  
41.2990045300 / -105.6106002500

Component Size  
None

Visible Photo File Name

Attachments

123.jpg 789.jpg



# VISUALIZATION & REPORTING

The screenshot displays the LEAKTRACKER PRO web application. The top navigation bar includes links for Monitoring Equipment, Surveys, Reports, and Support. The main area shows a map with several red dots indicating leak locations. A blue arrow points from one of these dots to a detailed view panel on the right.

**Thief Hatch** | Produced Water Tank 2, Enardo 660  
**LDAR Tag: TANK LEAK 1** | Not Repaired

[Repair History](#)

[Edit](#) [Remove Leak](#)

**Leak Date**  
 10/20/2020 12:20 PM

**Location Description**  
 Produced Water Tank 2, Enardo 660

**Coordinates**  
 40.1900317000 / -80.5900650000

**Component Size**  
 None

**Visible Photo File Name**  
 DC\_1255

**Attachments**  
 IR\_1255.jpg

[Add...](#)

- ❖ Dashboard (Map & KPI)
- ❖ Leak & Repair Workflow
- ❖ Compliance Reporting
- ❖ Notifications

Workflow /  
EAM  
System



# VIRTUAL TRAINING CURRICULUM

- ❖ Courses from the Infrared Training Center for OGI Certification (trained hundreds to date)
- ❖ Meeting the Oil and Gas Industry demands for expanded Optical Gas Imaging offerings
- ❖ Virtual Courses include:
  - ❖ Optical Gas Imaging Certification: Live Training via Zoom with Full Certification
  - ❖ OGI Fundamentals: 3-hour course with Certificate of Completion with Feedback from EPA and Industry
  - ❖ QOGI Training: Introduction to QOGI and QL320 Operation

