Webinar will begin at 7 p.m.

ENERGY TRANSFER

Virtual Community Meeting

July 31, 2025

ENERGY TRANSFER

General Updates

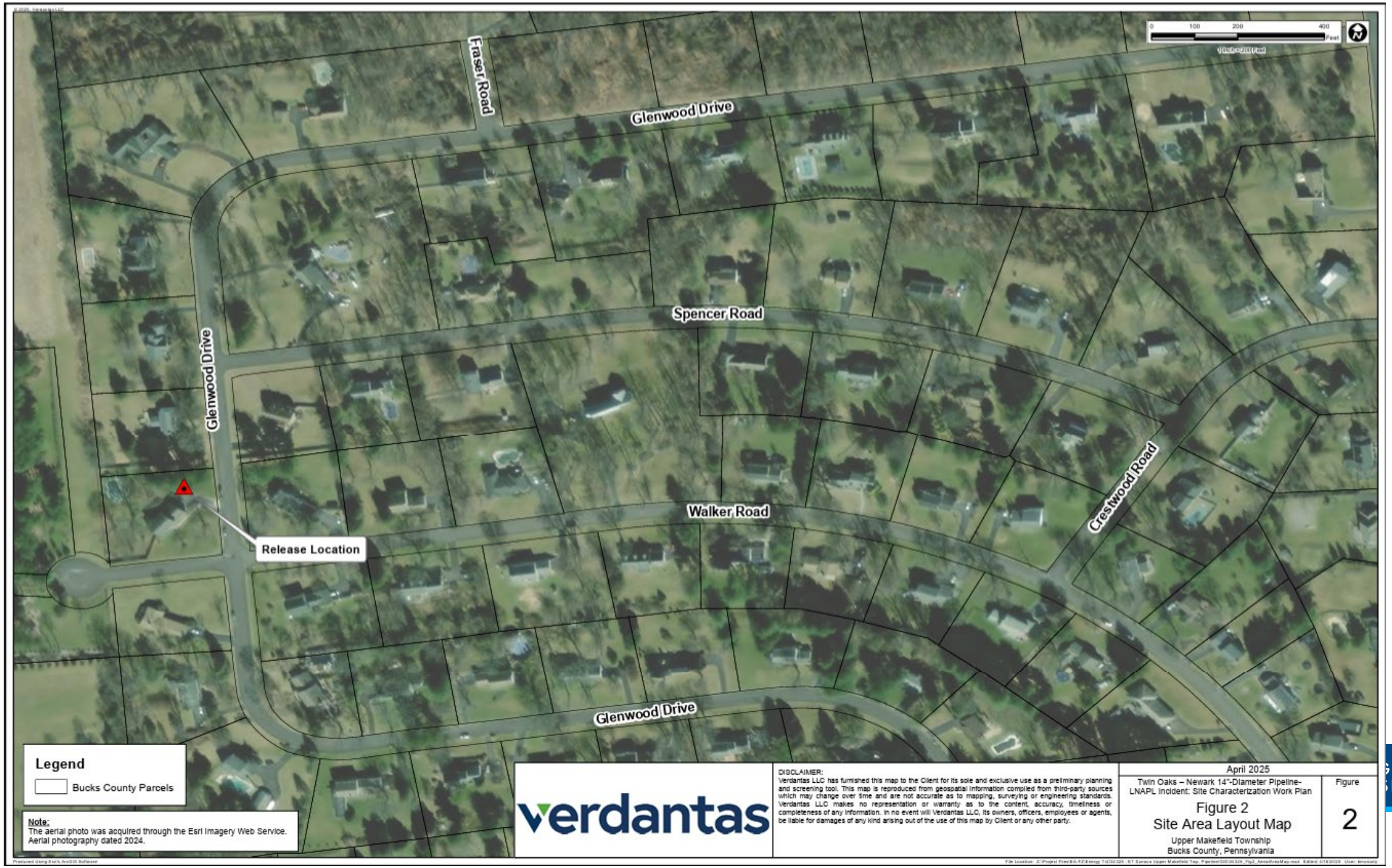
General Updates

- Process update
- Pipeline updates

Environmental Updates

Environmental Updates

- Recovery wells – installation, investigation/studies
- Product recovery
- Monitoring wells
- Additional soil investigation
- Sub-slab soil gas sampling


Fraser Road
Glenwood Drive
Spencer Road
Glenwood Drive
Walker Road
Crestwood Road
Glenwood Drive
Release Location
0 100 200 400 Feet
1 Inch = 200 Feet
Legend
Bucks County Parcels
Note:
The aerial photo was acquired through the Esri Imagery Web Service.
Aerial photography dated 2024.
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DISCLAIMER:
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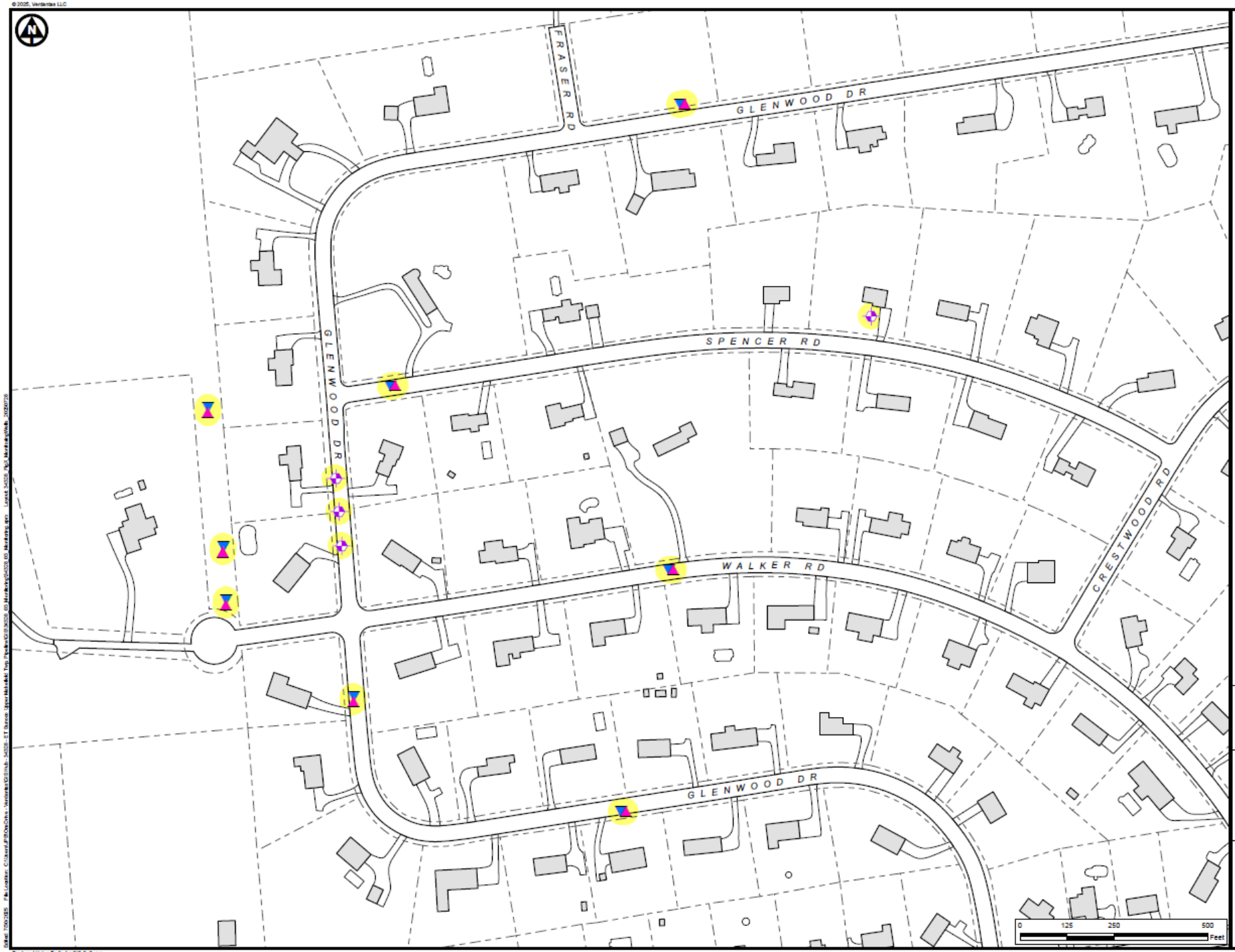
April 2025
Twin Oaks – Newark 14"-Diameter Pipeline-
LNAPL Incident: Site Characterization Work Plan
Figure 2
Site Area Layout Map
Upper Makefield Township
Bucks County, Pennsylvania
Figure
2



LEGEND

- Shallow Monitoring Well
- Deep Monitoring Well
- Recovery Well
- Parcel Boundary (approx.)
- Existing Building
- Edge of Roadway (approx.)

NOTE: Proposed locations are tentative, based on current information, and the location of each monitoring well will be finalized as new information is obtained.

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Twin Oaks - Newark 14" Diameter Pipeline
LNAPL Incident: Site Characterization Work Plan

Monitoring Well Location Map

Upper Makefield Township
Bucks County, Pennsylvania

Project Number	006.0000034328
Date	07/2025
Author	JPB
Scale	1 in = 250 ft
Figure	

Site remediation activities performed	
Activity	**Gallons Recovered Cumulative**
Removed product entrained in soil during excavation	**644**
Recovered Free Product From Wells	
1XX Glenwood Dr	10
1XX Glenwood Dr	13
1XX Spencer Rd	3
1XX Spencer Rd	14
1XX Walker Rd	115
RW-1	0
RW-2	100
RW-3	62
RW-4	0
Total Free Product Recovered From Wells	**315**
Product Recovered Grand Total	**959**

Environmental Updates

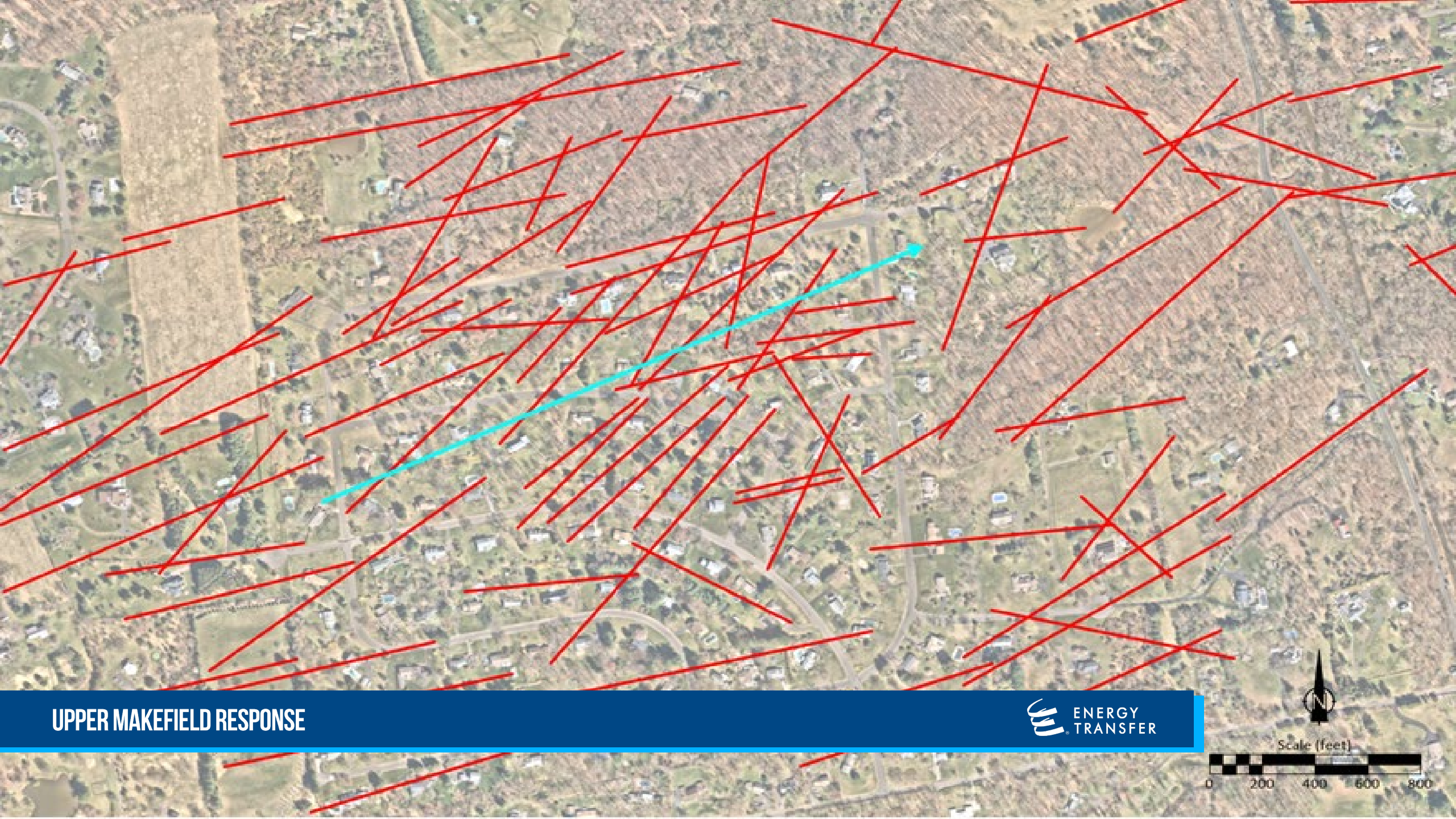
- Revised Site Characterization Work Plan
- Act 2 report: Interim Site Characterization Report
- 90-day Remedial Action Progress Report

Geophysical/Remote Sensing Investigation

- Literature Review
- Remote Sensing/Aerial Analysis
- Electrical Resistivity Imaging
- Seismic Profiling
- Borehole Logging and Imaging

The Lockatong Aquifer (from PA and US Geologic Survey Reports)

- Little primary porosity and permeability. Instead, water resides and moves along bedrock fractures.
- One fracture set is parallel to bedding, striking roughly North 50^{o} East and dipping approximately 10^{o} Northwest. These fractures reportedly dominate at shallow depths.
- A second fracture set, dominant at greater depths, has the same strike and a near-vertical dip.
- Groundwater flow is reportedly controlled more by the presence and orientation of these fractures than by water elevation and pressure.
- Wells in the Lockatong tend to tap multiple fractures, each of which may have different hydraulic head.
- Wells along strike are hydraulically connected. Those separated across strike tend to be unconnected – even if the hydraulic gradient is strong. Pumping wells develop a drawdown cone that is highly elongated parallel to strike.



UPPER MAKEFIELD RESPONSE

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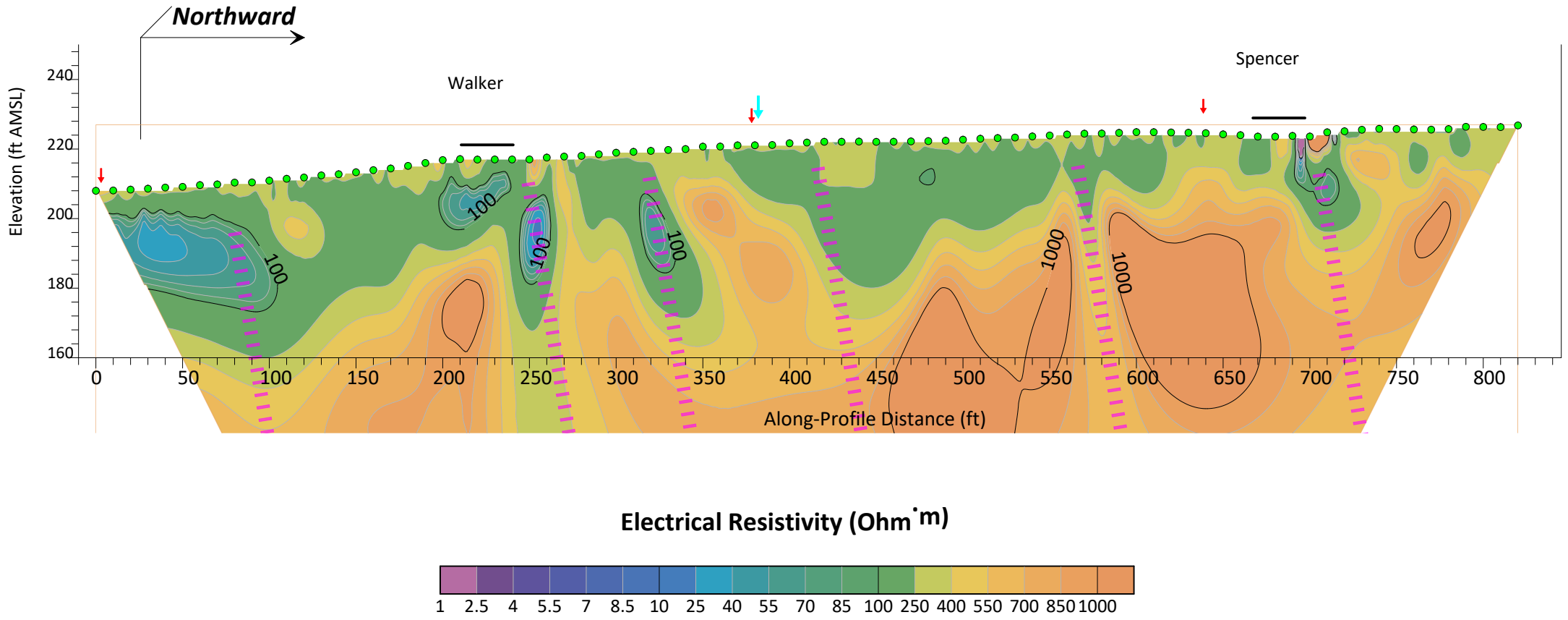
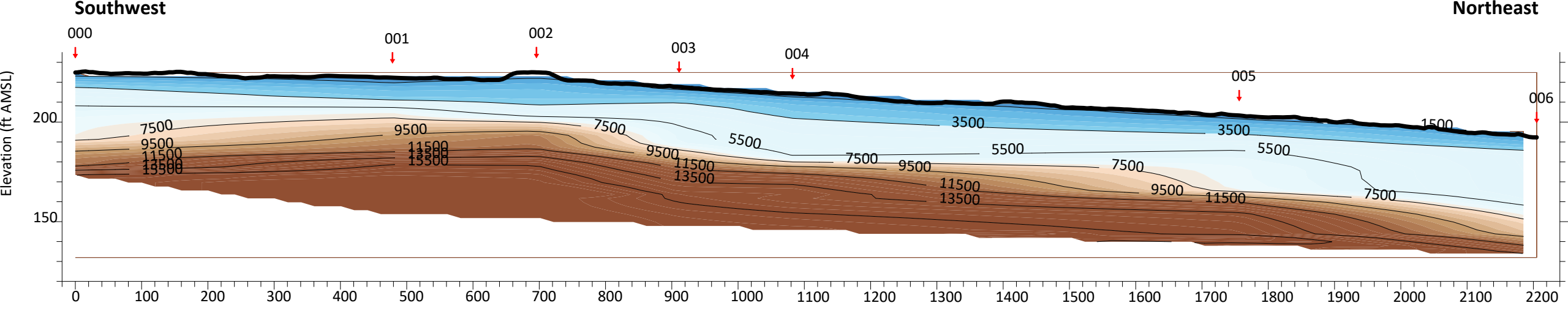


UPPER MAKEFIELD RESPONSE

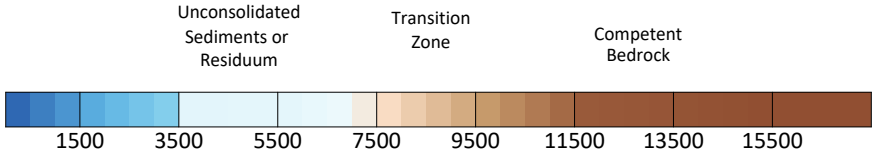
ENERGY TRANSFER

UPPER MAKEFIELD RESPONSE

ENERGY TRANSFER

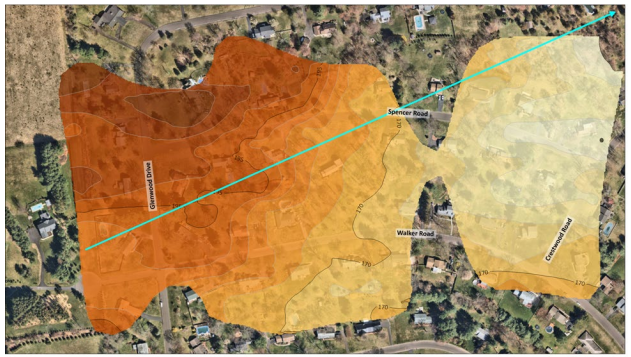


Relative P-Wave Velocity (fps)

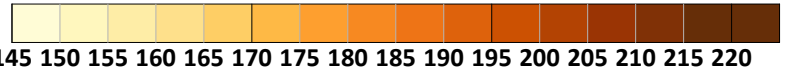


Legend

↓ Seismic Profile Crossing Points

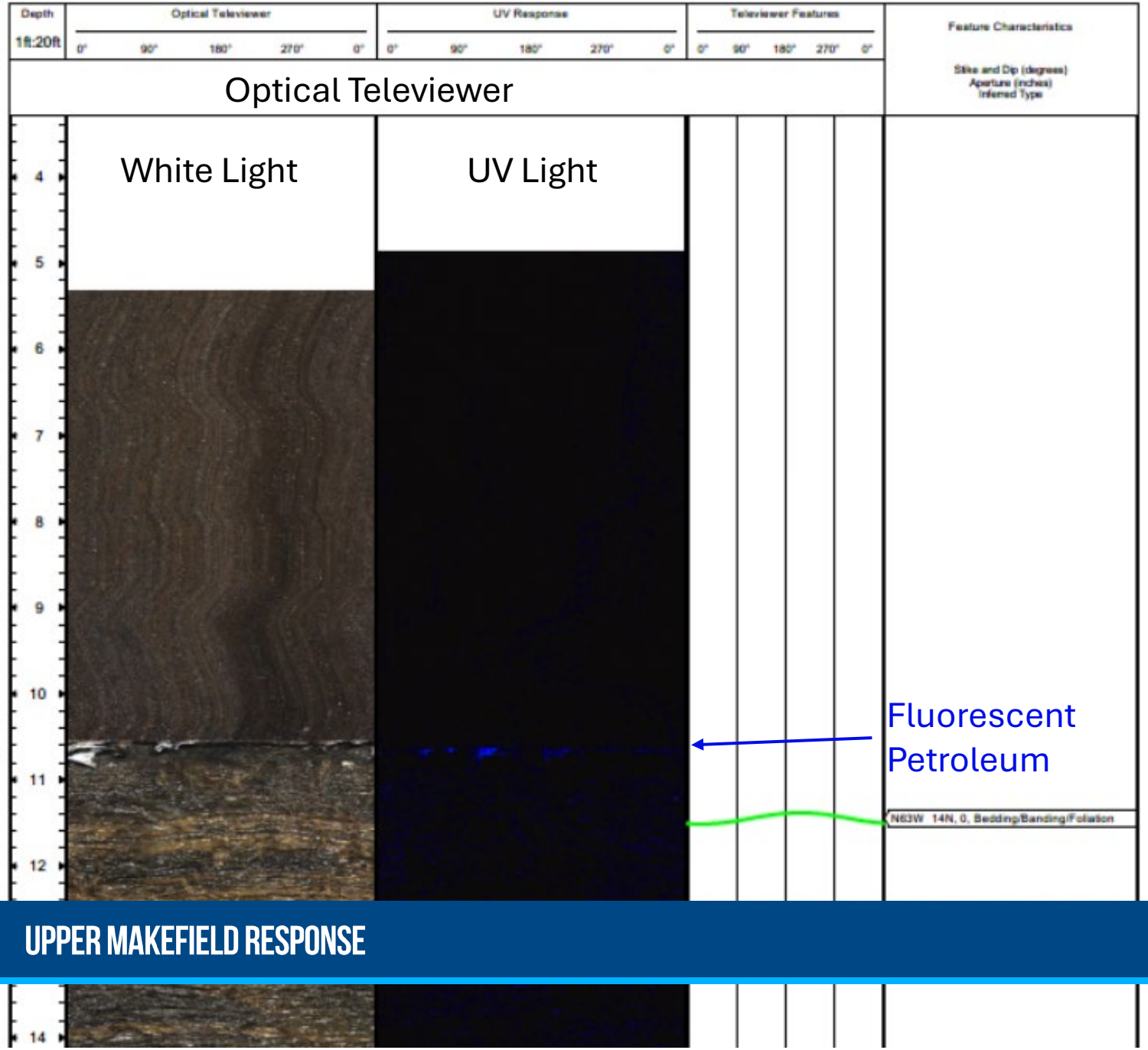


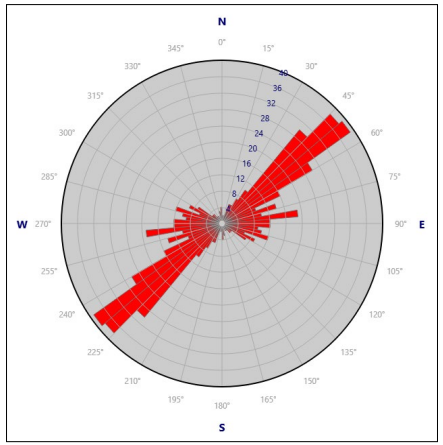
Inferred Bedrock Elevation (ft



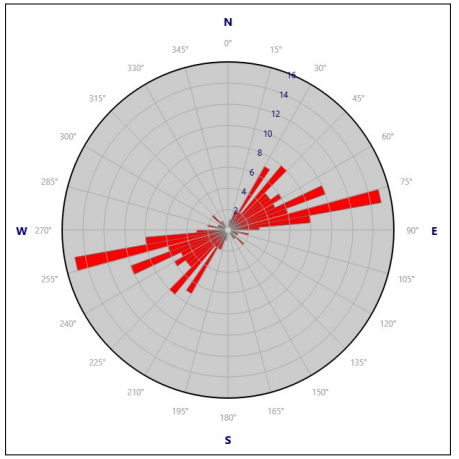
UPPER MAKEFIELD RESPONSE

ENERGY TRANSFER

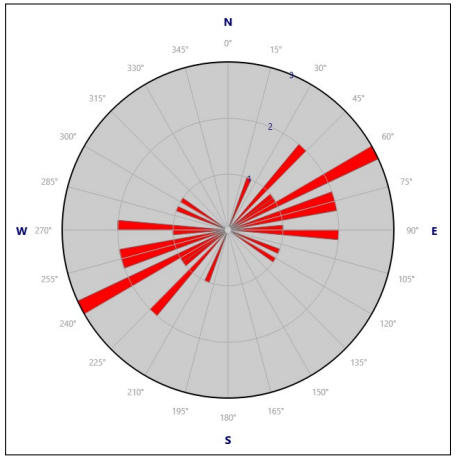




Planar Features from Borehole Logs



Photo/Topo Linears



ERI Fracture Traces

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Q&A

FOR MORE INFORMATION CALL

1-877-397-3383

OR VISIT

uppermakefield.incidentupdates.com