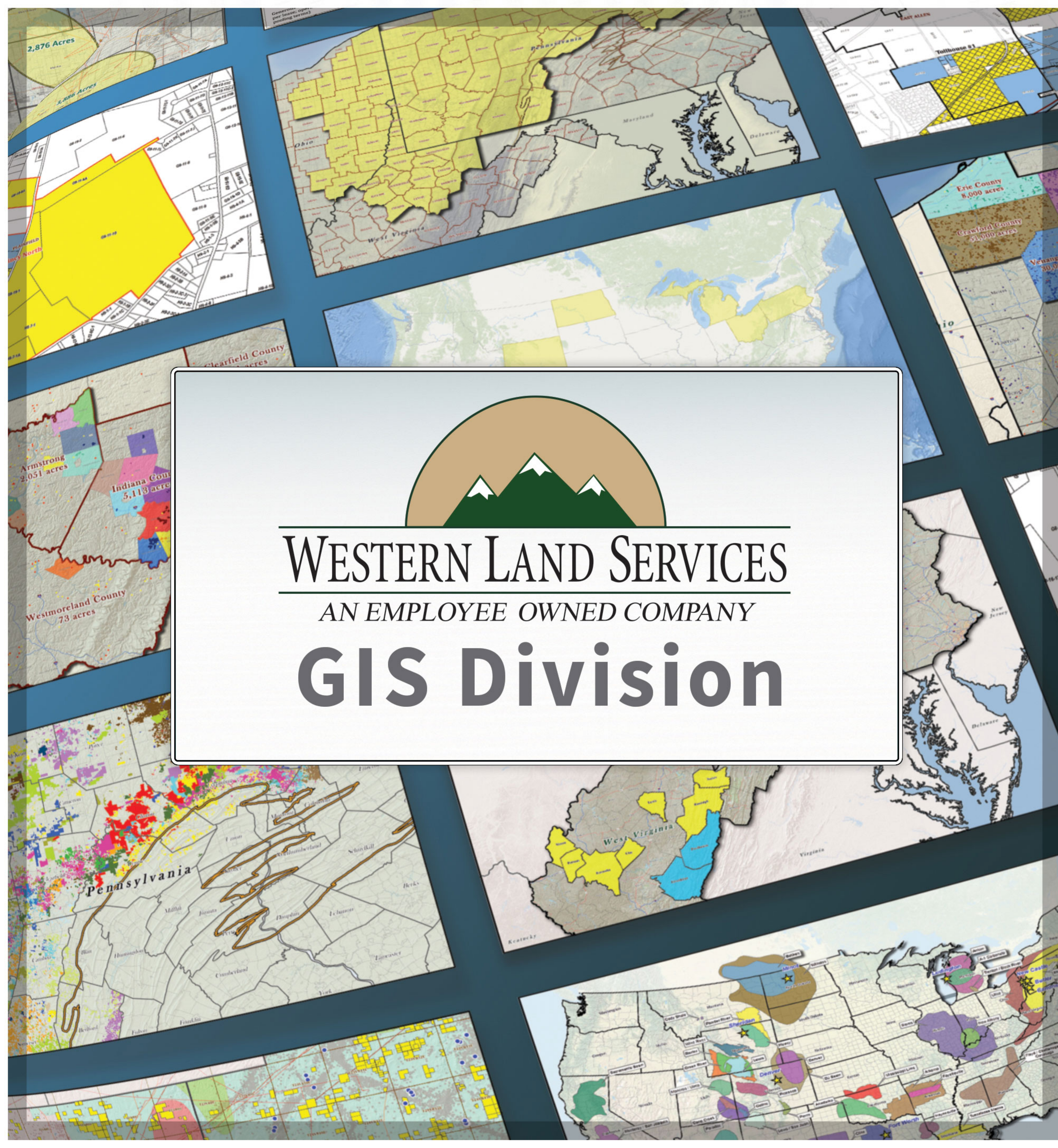




WESTERN LAND SERVICES

AN EMPLOYEE OWNED COMPANY

GIS Division



GIS at Western Land Services

LOOKING FOR A RELIABLE GIS TEAM TO SUPPORT YOUR PROJECT? Need readily available competitor lease data and/or maps to help evaluate an area for opportunities? Have a short or long term project requiring on-site GIS assistance? With a sizeable team of GIS Analysts positioned nationwide, the WLS GIS Department provides the ultimate location intelligence experience. Recognized for high quality maps, comprehensive data products, and an unparalleled responsiveness to client needs, our GIS department is best in class and will deliver the excellence you deserve.

Data

WLS researches and compiles data from a variety of sources, giving you instant access to a breadth of GIS resources.

GIS Mapping

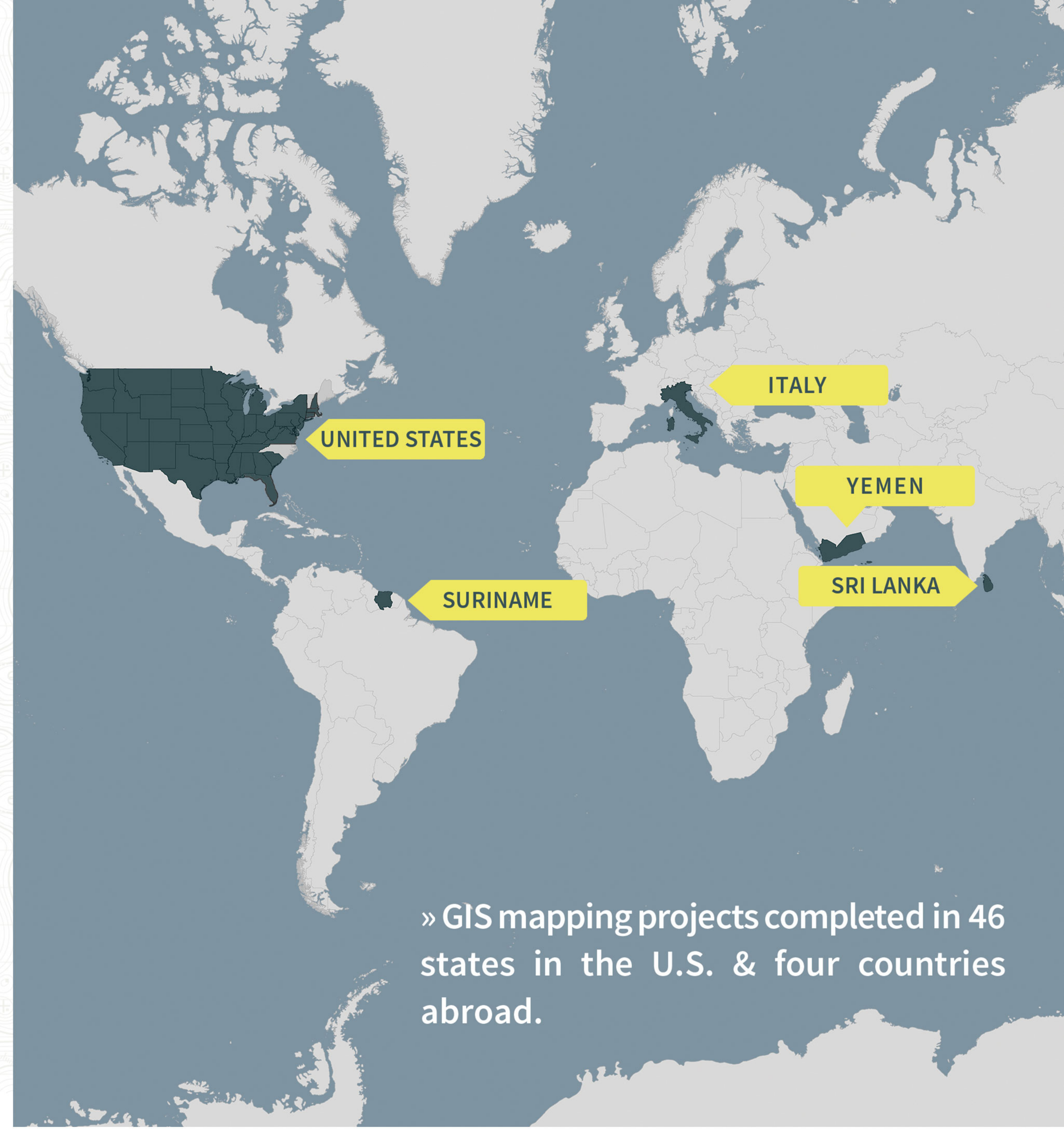
Project maps are customized to fit your needs, from small and large scale print maps to interactive web maps.

Decisions

Make more informative decisions through the location, evaluation, & identification of potential opportunities for project growth.

- » Lease, Mineral, & Legacy Mapping
- » Web Map Applications
- » Project Layout & Topographical Maps
- » Unit Proposition & Historic Overlay Maps
- » Well & Production Checks
- » Mapping of Pipeline Routes/Reroutes
- » Utility ROW Mapping
- » Customized Products
(Maps, Shapefiles, Layer Files, Reports)
- » Geodatabase Design & Development
- » KML Import & Creation
- » Esri ArcGIS 10.x & Geocortex Software
- » Site Analysis
- » Project Management

» GIS mapping projects completed in 46 states in the U.S. & four countries abroad.



COMPASS

ONLINE PROJECT MANAGEMENT PLATFORM

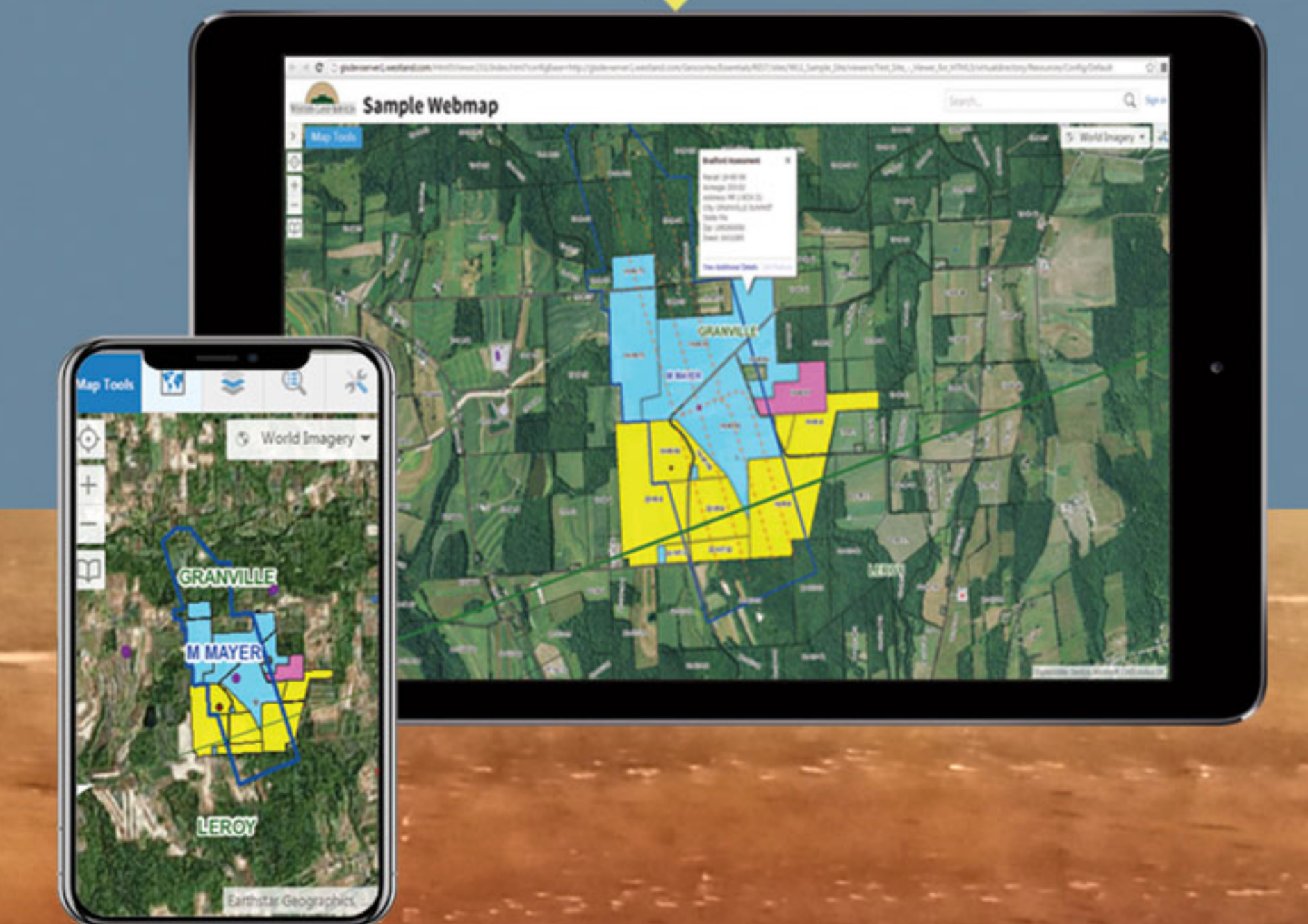
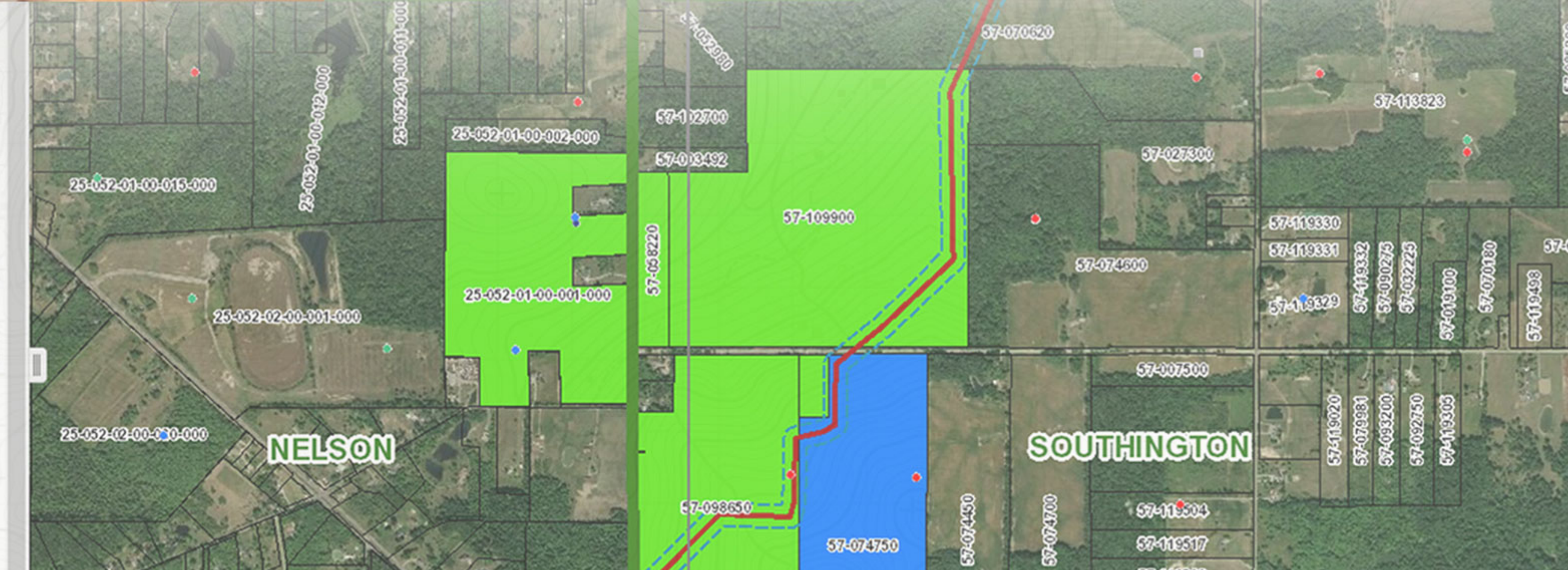
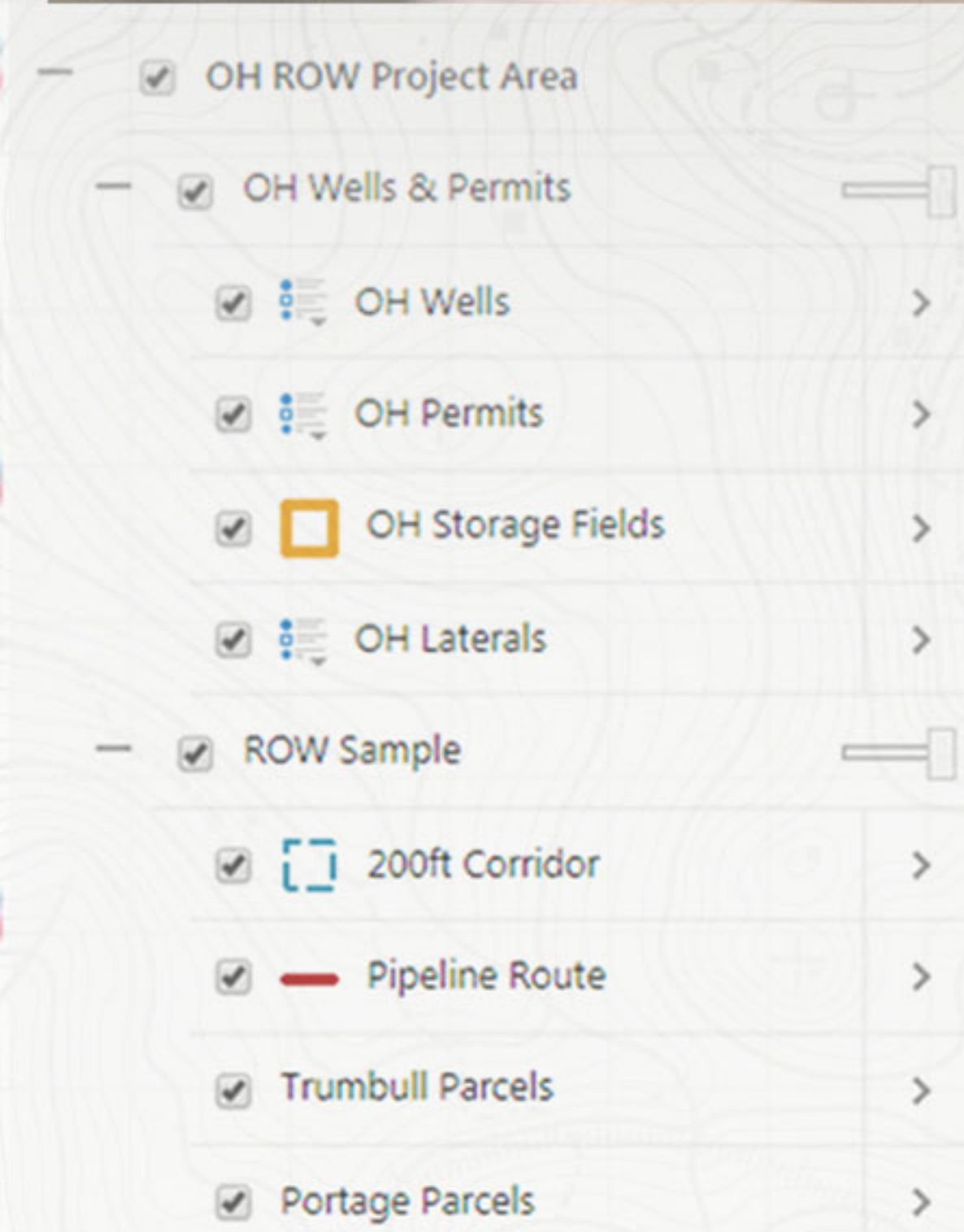
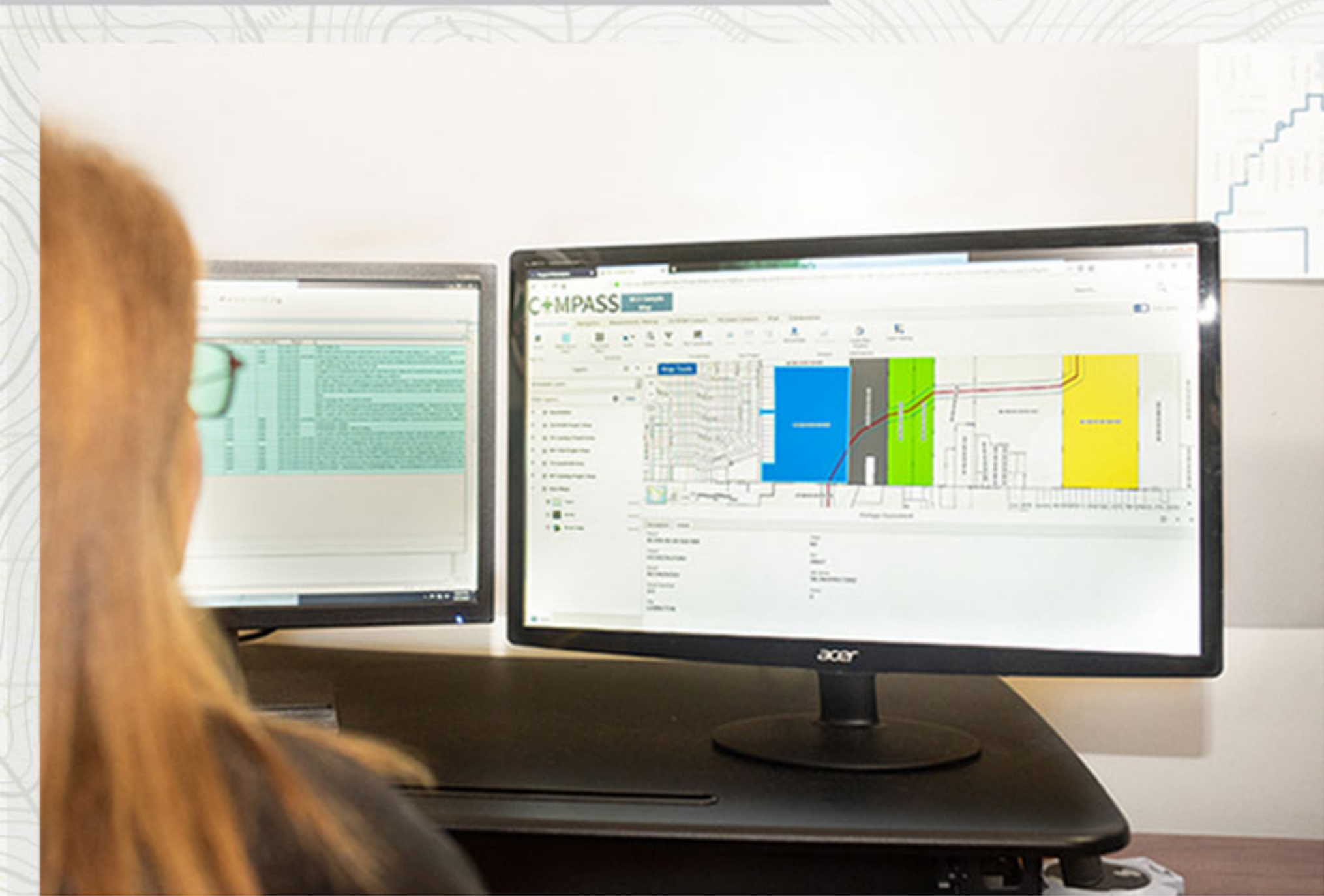
» Stay connected to your assets at all times.

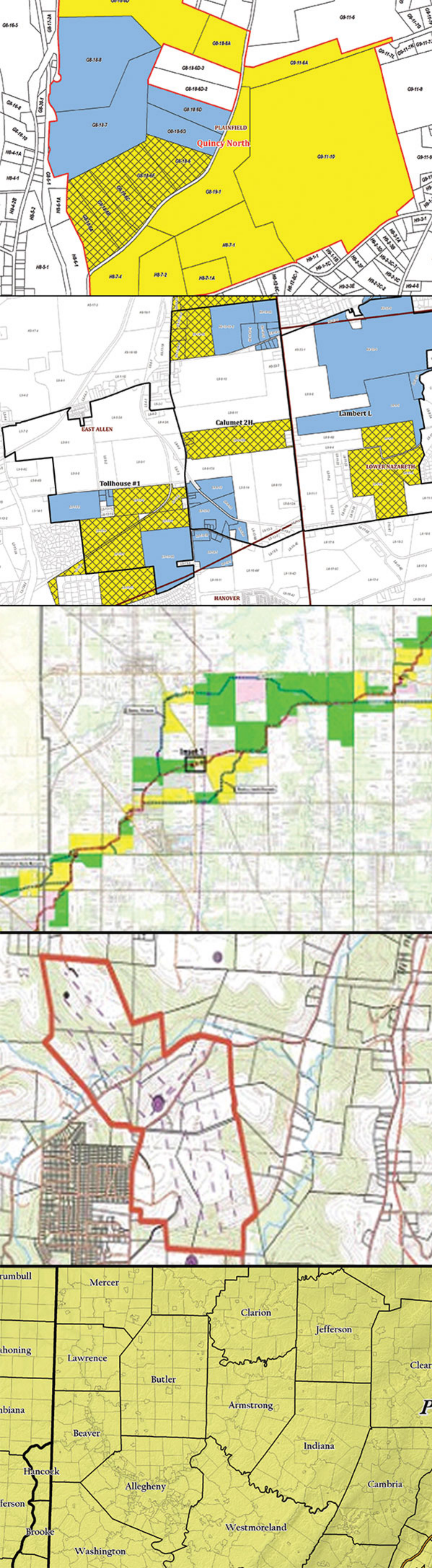
With **COMPASS** you can access data anywhere an internet connection exists. With the ability to extract data, generate reports, print maps, log contact reports, monitor overall project progress and more, this interactive platform promotes improved decision making and project management across the board.

COMPASS, our WebGIS based project management platform, brings together technology from Esri, Latitude Geographics, and Microsoft, generating a state-of-the-art system to support our projects. With 24/7 access to resources in a secure, user-friendly forum via internet, this centralized platform serves as a versatile management tool on all WLS projects, improving collaboration, communication, and coordination between stakeholders, and streamlining processes for cost efficiencies.

- » Real-Time Project Updates
- » Accelerated Research Capabilities
- » Navigate Seamlessly Between Projects
- » Track Acquisition, Title, Permitting, Etc.
- » Customizable & Automated Reports
- » Print PDF Maps
- » Attachment Capability
- » Secure Access

ACCESS PROJECT DATA ON YOUR **COMPUTER, PHONE, OR TABLET.**





Project Based GIS Services

GIS is a common thread between all service lines at WLS – providing continuous, reliable support to all project stakeholders via ad hoc mapping and 24/7 webGIS access. Our department has experience supporting internal AND standalone projects in relation to:

- | | |
|---------------------|--------------------|
| Right-of-Way | Title |
| Abstracting | Leasing |
| Curative / Heirship | Due Diligence |
| Seismic Support | Timber |
| Data Integrity | Operations Support |
| Wind | Permitting |
| Solar | Real Estate |

Diverse Mapping & Management



Competitor Data Services

WLS offers an invaluable resource to the oil and gas industry: accurate & inclusive 3rd party competitor leasehold data. Our fully attributed county-wide datasets represent the past 10-20 years' worth of oil and gas activity on a per tract level. The premise – transforming recorded leasehold documents, including leases, assignments, unit declarations, and more, into a GIS system for in-depth analysis and equipping you with information you need to make educated, timely decisions.

PROCESS

- » Document collection via physical or online courthouse system
- » Mapping of documents via ArcGIS to generate leasehold layers
- » Retention of attributes (lessee, lease date, term, acres, depth, etc.)
- » Creation of supplemental possible HBP & unit boundary layers

DELIVERABLES

- » Leasehold & unit shapefiles, file geodatabases, and/or Excel files
- » Web map, PDF map, and map/feature Services
- » Regular updates – monthly, quarterly, or yearly

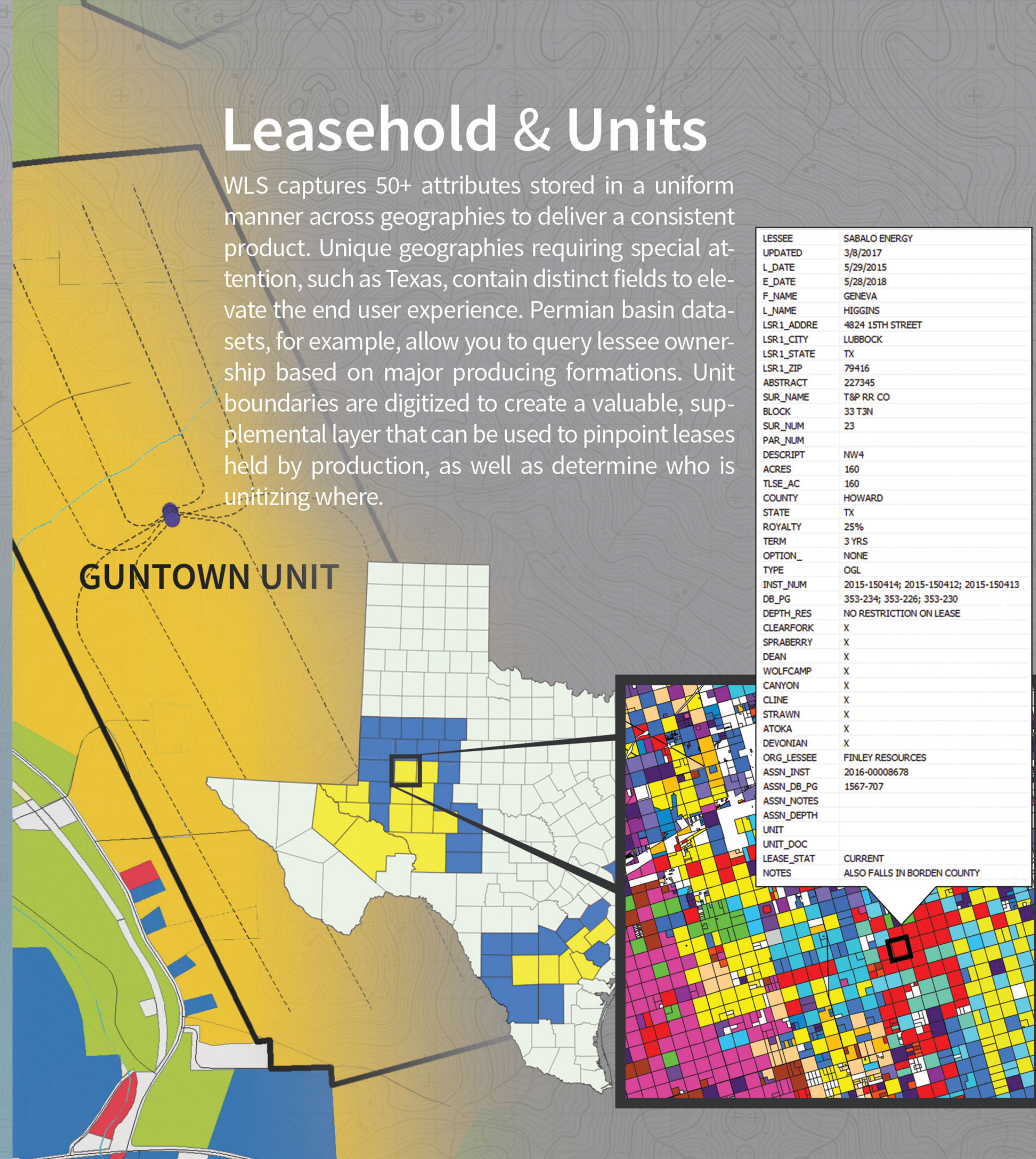
ADVANTAGES

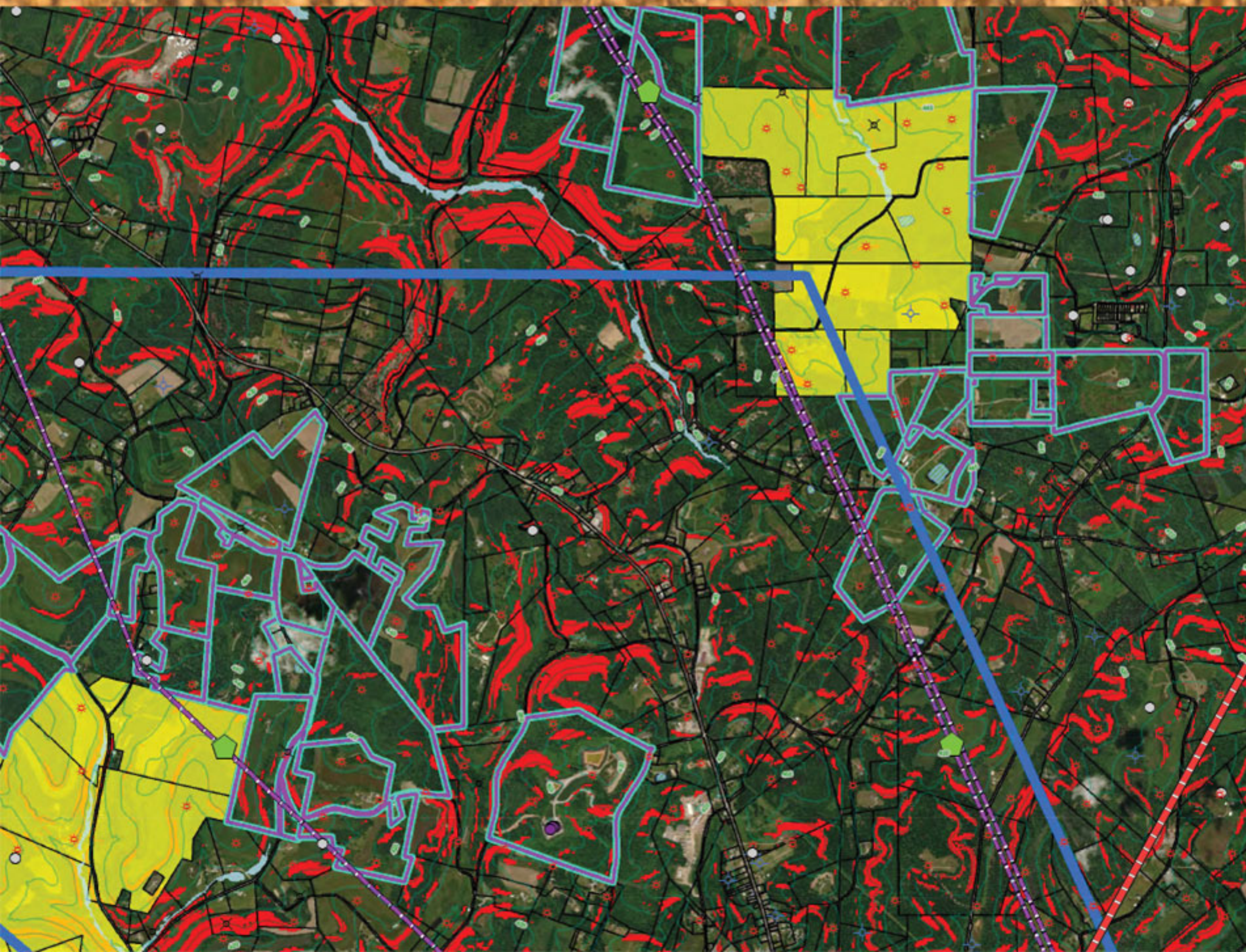
- » Locate open acreage or expiring leases for top leasing opportunities
- » Identify opportunities for acquisitions, divestitures, or JVs
- » Pinpoint lessees along existing & proposed routes
- » Accelerate title and due diligence research efforts
- » Save time and money – data is readily available

- » More than 90,000,000 acres
- » Over 30,000 unit boundaries
- » Over 2,000,000 leasehold records

Leasehold & Units

WLS captures 50+ attributes stored in a uniform manner across geographies to deliver a consistent product. Unique geographies requiring special attention, such as Texas, contain distinct fields to elevate the end user experience. Permian basin datasets, for example, allow you to query lessee ownership based on major producing formations. Unit boundaries are digitized to create a valuable, supplemental layer that can be used to pinpoint leases held by production, as well as determine who is unitizing where.





RENEWABLES

WLS offers a suite of services dedicated to the renewable energies sector, including: site selection analysis, site acquisition, document prep, payment, recording, and project management. By leveraging our GIS resources, clients can maximize efficiencies and turn-around time to seize opportunities as quickly as possible in this growing industry.

- *Connect to spatial resources via **COMPASS**, our webGIS project management platform.*
- *Expedite analysis and identification of suitable sites, consulting a number of spatial resources:*

- State, Federal, Private land ownership
- Slope, topography, and aerial imagery
- Timber Stands, soils, and wetlands
- Coal / strip mines, oil and gas wells / leases
- Zoning
- Proximity to substations or transmission lines

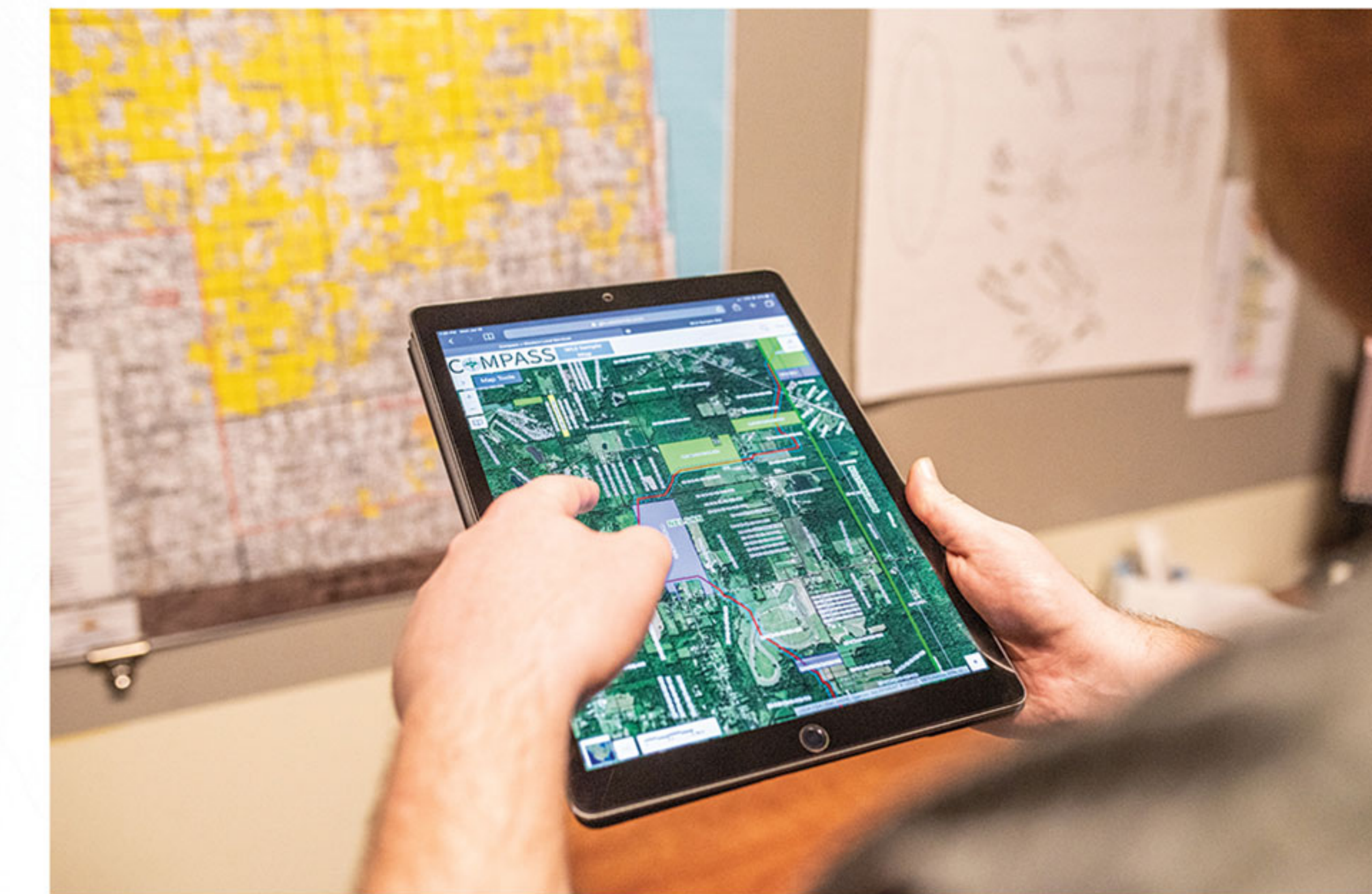
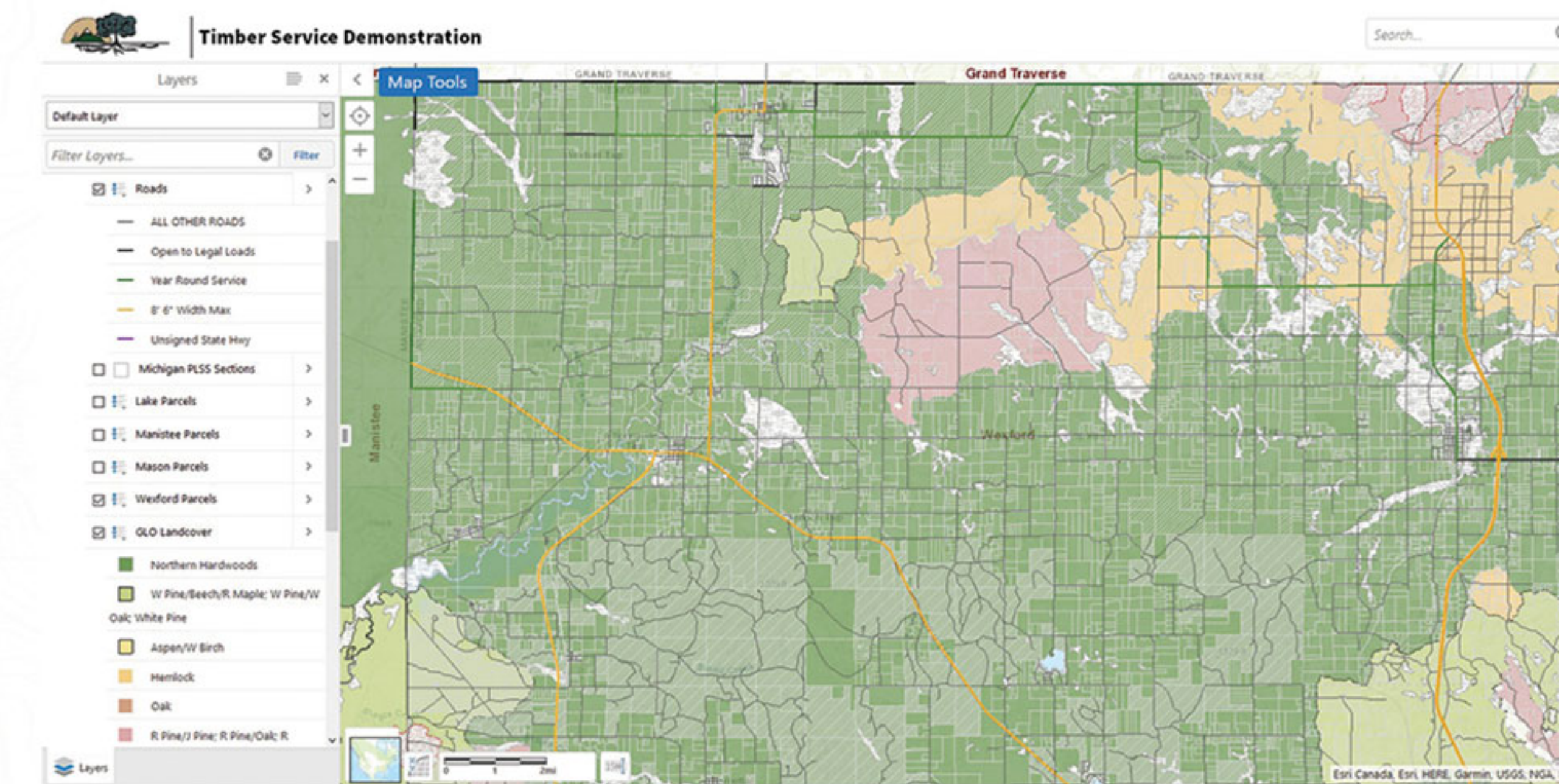
TIMBER ASSET MANAGEMENT

» **WLS** has an abundance of digital resources to aid in opportunity identification, contract management, asset mapping, and overall spatial analysis.

Use resources like those described below to coordinate field efforts with foresters and cutting crews; and, to assist with purchasing, property management, harvesting, and general planning.

- Town/Range/Section Boundaries
- Surface Boundaries & Ownership Detail
- Aerial Imagery & Topography
- Road Types, Trails, Wetlands, Zoning Boundaries, Soil Type
- Tree Species / Type Stands and Boundaries

With **WLS**, you will have more confidence in your assets, maximize process efficiencies, and reduce road time/door knocking for enhanced cost savings.



» PERFORM FORESTRY ANALYSIS
ANYTIME, ANYWHERE, ON ANY DEVICE

DATA INTEGRITY SOLUTIONS



WLS is comprised of team members experienced with large scale data integrity projects **AND** versed in industry leading land management systems, such as, but not limited to:

QUORUM » MINERALSOFT
LANDVANTAGE » ILANDMAN

- » Integrating a new land management system and need assistance with onboarding your assets spatially?
- » Already undergone a system integration, but need help auditing and performing quality control on what was imported spatially?
- » Need support verifying an asset staged for acquisition or divestiture?

...WLS is your solution!

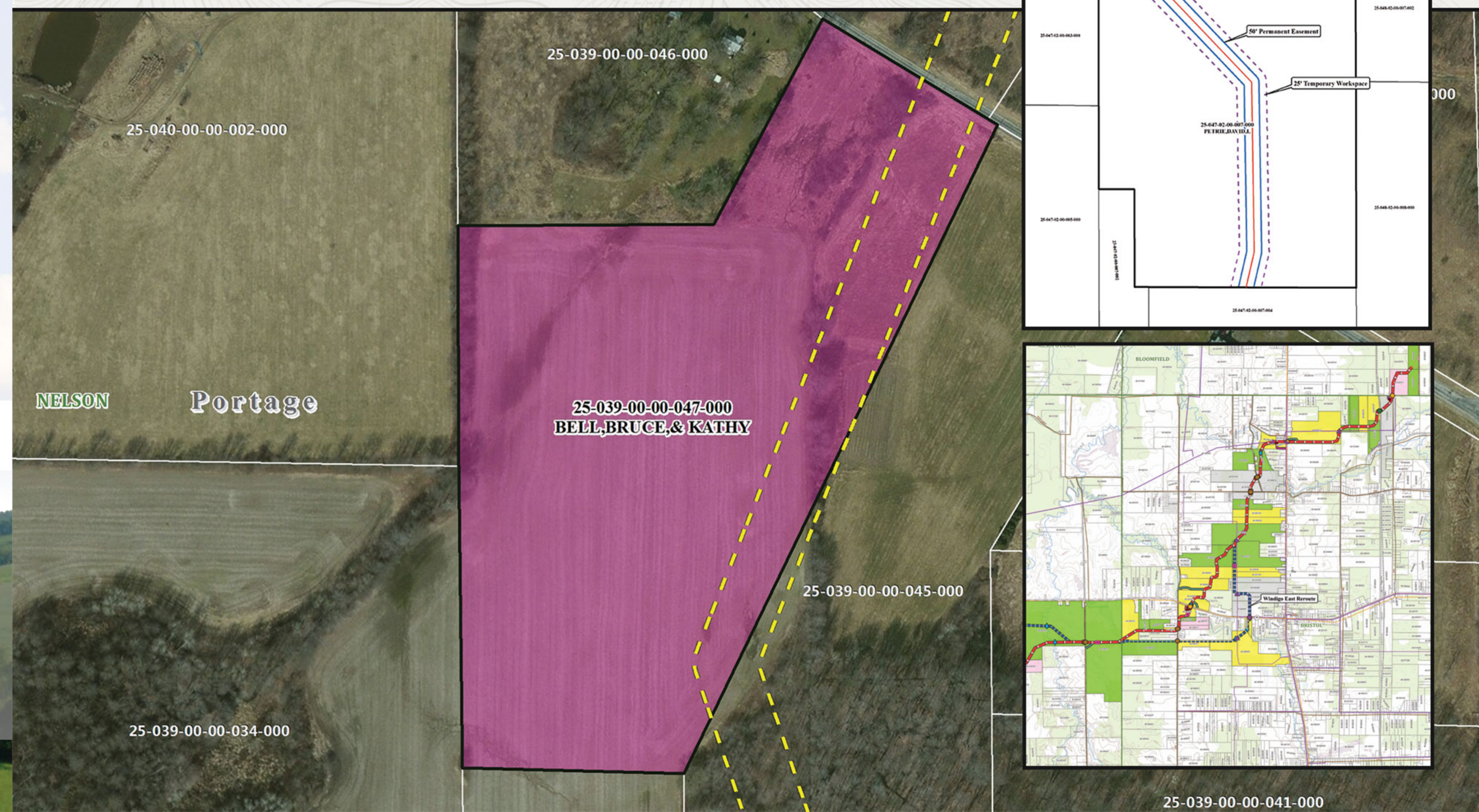
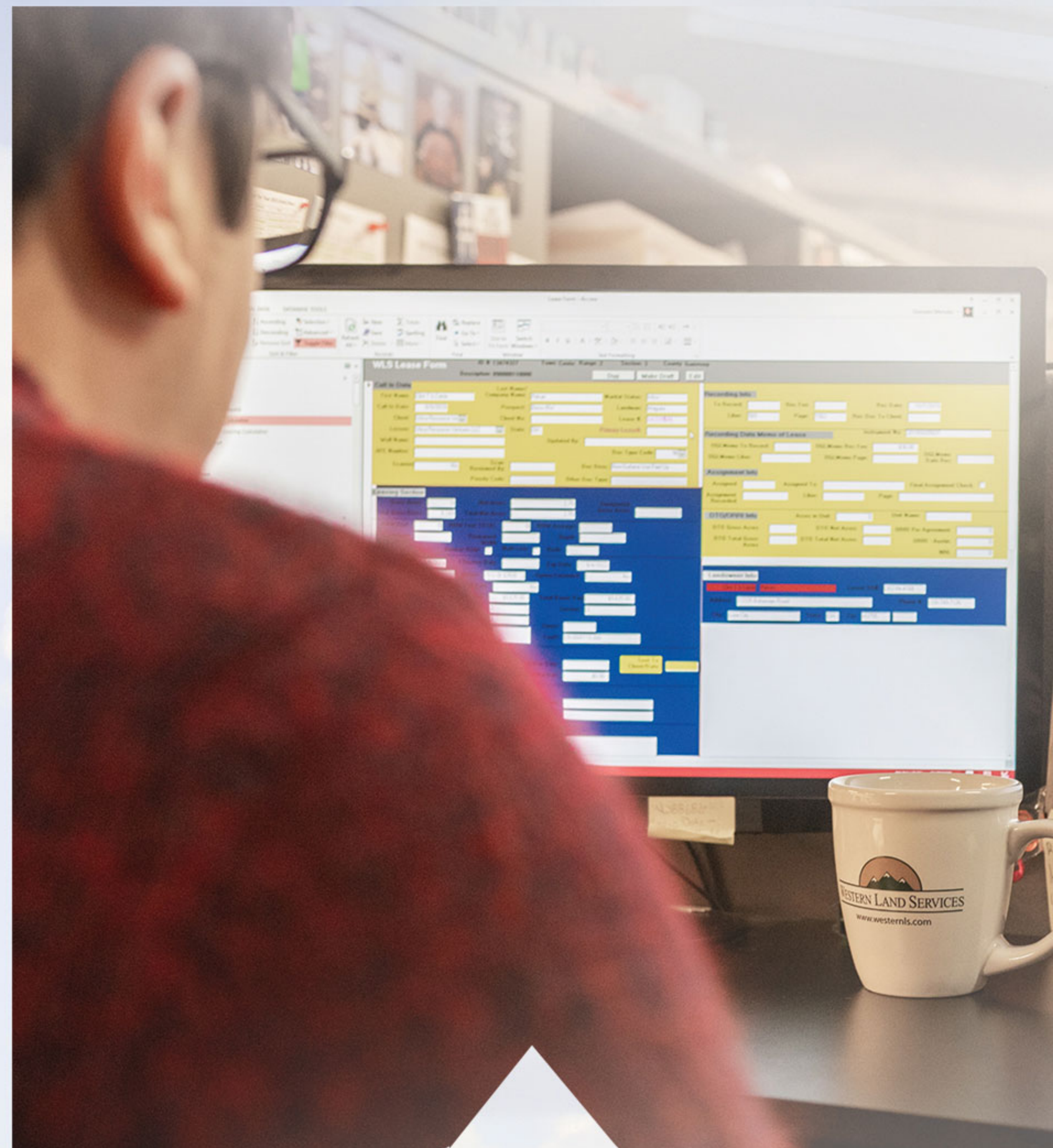
Right-of-Way GIS Services

Capabilities:

- » Creation & maintenance of line lists
- » Area maps and deed plotting for survey and title reports
- » Exhibit maps for land agents and recorded documentation
- » Construction maps with hazards and notes
- » Proposed, exhibit, & as-built infrastructure maps
- » Project monitoring via secure webGIS system
- » Mapping & tracking of routes, reroutes, survey permissions, ROW acquisitions, & surface restrictions
- » Tracking landowner provisions & construction items for client
- » Dedication Mapping

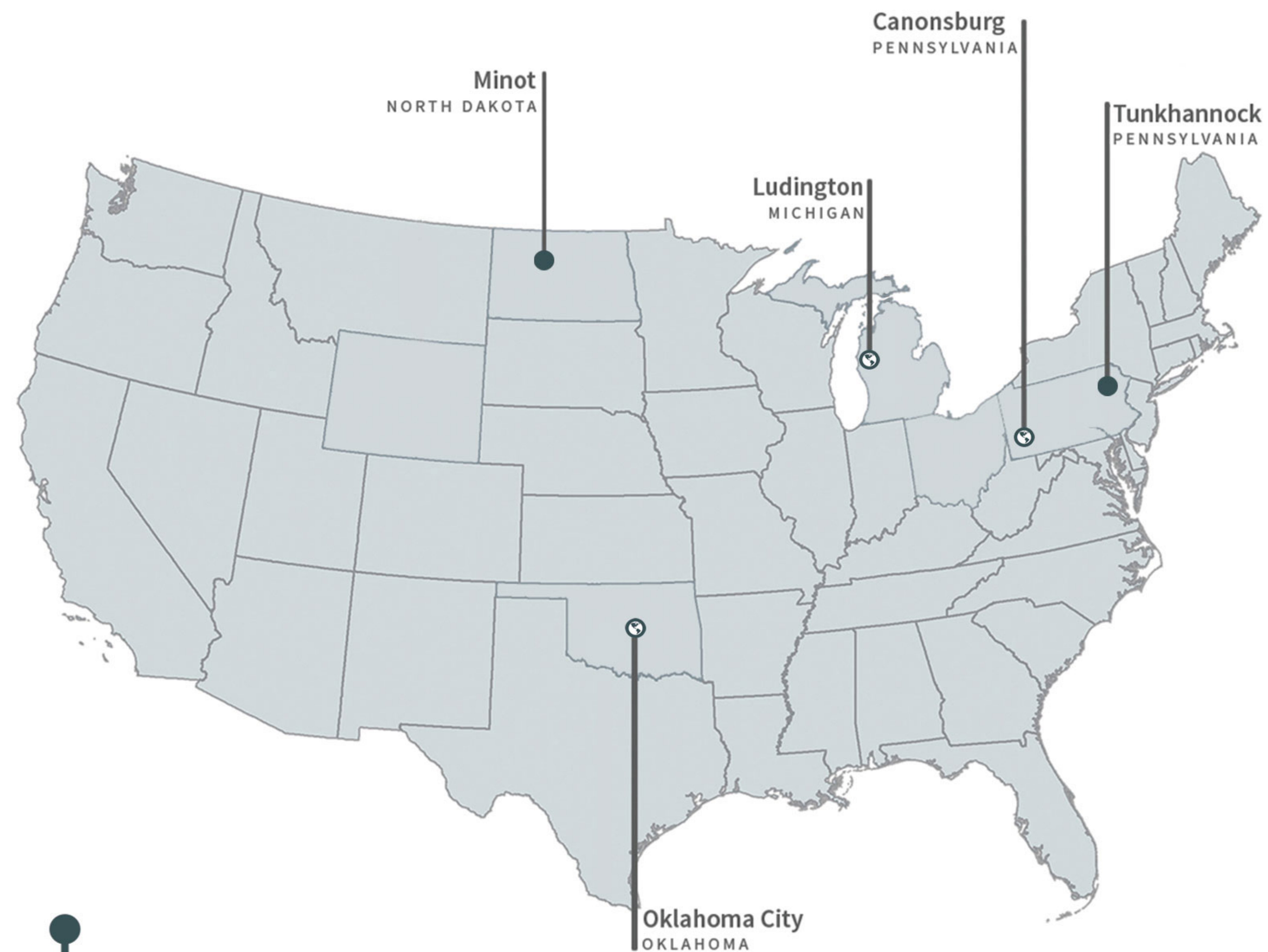
Direct Support to:

- » Clients
- » Project Managers
- » Land Agents
- » Title
- » Processing
- » Third Parties (e.g. Survey Crews)



» LET US BE YOUR ONE STOP SHOP!

Our GIS Locations



Contact Us

Interested in learning more about GIS at Western Land Services? Contact us today for:

- » On-Site Demonstrations
- » Web Demonstrations
- » Project Cost Proposals
- » Samples to Evaluate Independently



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WESTERN LAND SERVICES

AN EMPLOYEE OWNED COMPANY

EVERY SUCCESSFUL PROJECT BEGINS AND ENDS WITH A GREAT MAP.

WWW.WESTERNLS.COM