



Public GIS Viewer Tool

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What We Do:

- We maintain the survey and well location GIS map layers by:
 - Editing or adding survey lines
 - Relocating or adding oil and gas wells
 - Adding or updating well API numbers

This is done through normal day-to-day research activities or requests from the public who provide documentation to support a research request.



What can you provide to support your API resolution request:

- All request for records research from the public needs to go directly to IMS@rrc.texas.gov
- Records helpful in resolving discrepancies
 - W-1 and Plats
 - W-2 / G-1
 - P-4 / P-6
 - W-3

GIS Updates

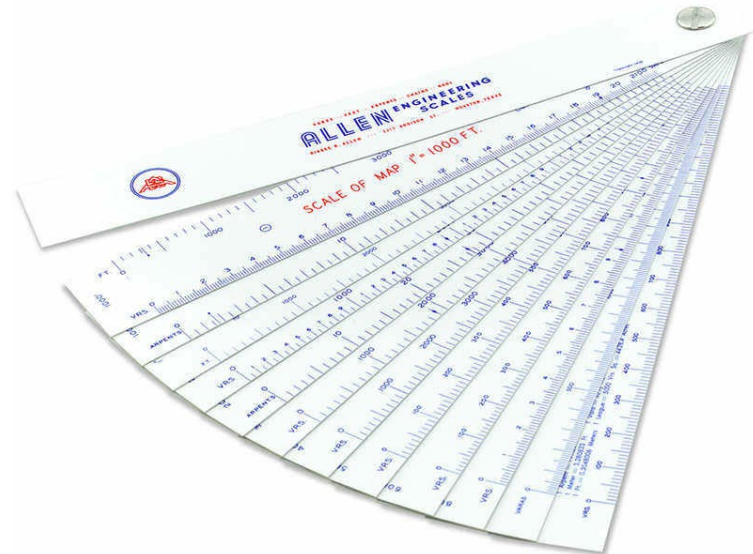


- Research historic General Land Office records for survey line placements.
- Work with Registered Land Surveyors to compare notes with on survey construction.
- Research Railroad Commission well records and maps and validate well location information API numbers.

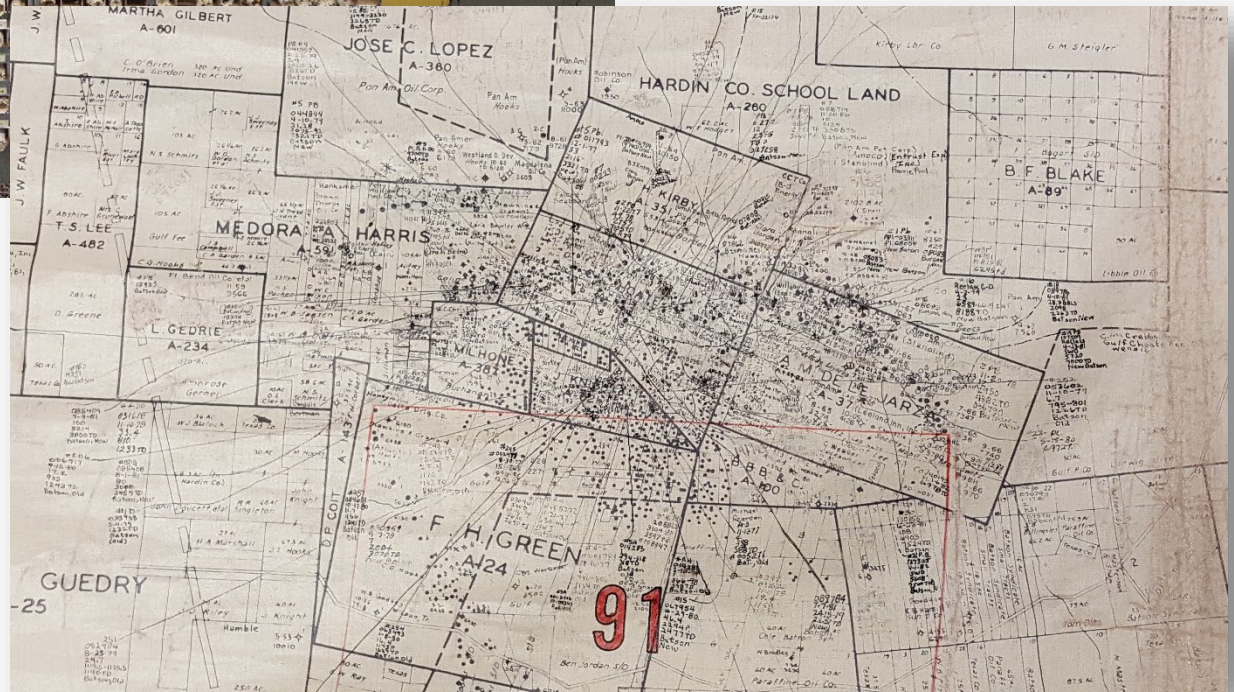
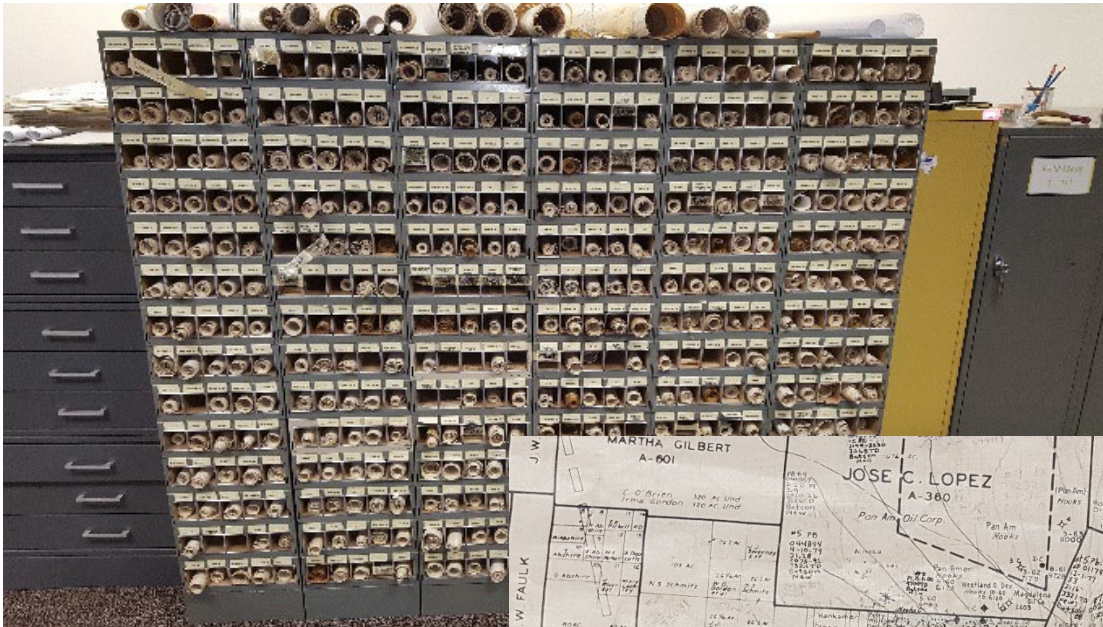
Before GIS (1 of 2)



- Cloth or linen maps
 - One or more maps for each county plus field maps
 - Typical scales
 - 1" = 2000'
 - 1" = 4000'
 - Hand posted wells



Before GIS (2 of 2)



Linens Maps to Computerized Maps



- 10 year digitization project
 - 1984 to 1995 with all layers created by RRC staff
- Survey information digitized from GLO records
- Well information digitized from linen maps
- Staff updates as needed


Linen Map Preservation



- Retained all linen maps
- Maps date back to 1930's
 - Oldest and most frequently used maps deteriorating
- Currently undertaking a map preservation project
 - Creating high resolution scans of all maps
- Hardcopy maps will be archived

Reliability Codes



<u>Reliability</u>	<u>Code</u>	<u>GIS Location Source</u>	
Lowest	10	Historic map	
	15	Commission's hardcopy map	
	16	Spotted from Reliability Code 15 wells	
	17	Location adjusted during survey maintenance	
	20	Mainframe WELLBORE distances	
	25	Hearing file - Plat and/or documentation	
	30	Operator reported location - Distances without plat or plat without distances	
	40	Operator reported location - Distances and plat	
	45	Field inspection by Commission personnel - Distances and/or plat	
	48	Spotted from Reliability Code 50 wells	
	50	U.S.G.S. 7.5-min. quadrangle or aerial photograph	
	55	Coordinates - Operator reported	
	Highest	60	Coordinates - Commission reported

Coordinates: Datums

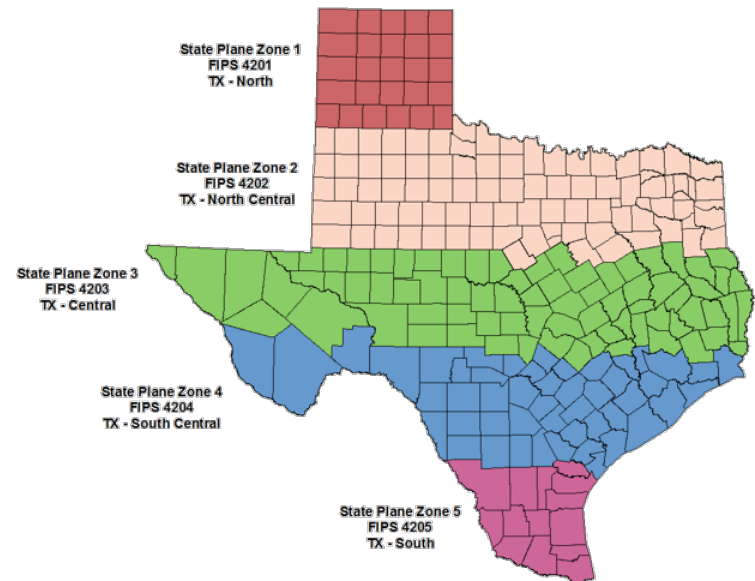


- **Datum** – A set of numbers which describe the shape, size, and position of an ellipsoid that approximates the surface of the Earth
- The datum can be Local or Global.
 - Local – Best matches the area of interest.
 - Ex. – NAD 27 and NAD 83.
 - Global – Can be used for any location.
 - Ex. – WGS 84

Coordinates: What We Accept



- Geographic Coordinate Systems
 - NAD 27, NAD 83, WGS 84
 - Degrees Minutes Seconds
 - Decimal Degrees
- State Plane Coordinate Systems
 - NAD 27 and NAD 83
 - 5 Zones in Texas



Accessing the Public GIS Viewer

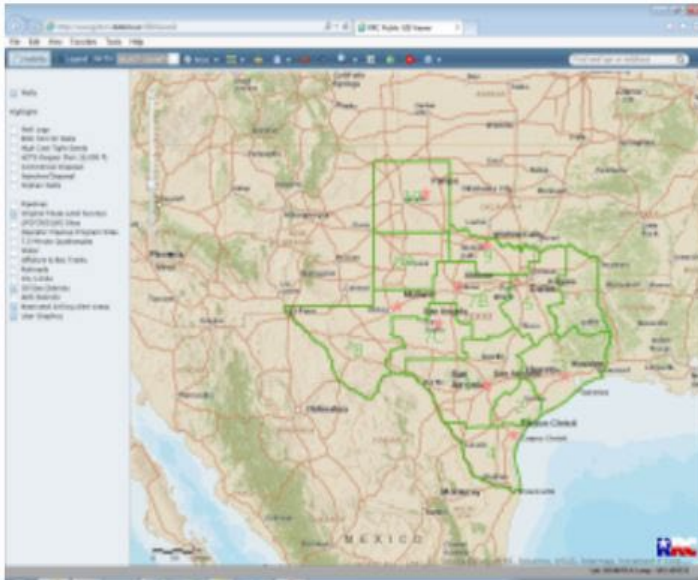


Home / Resource Center / Research

Public GIS Viewer (Map)

The Public GIS Viewer allows users to view oil, gas and pipeline data in a map view.

Public GIS Viewer



LAUNCH PUBLIC GIS VIEWER



User Guide

[GIS User Guide \(PDF\)](#)

Training Videos

The following training videos provide step-by-step instruction for new features of the Public GIS Viewer. The videos will open in a separate window, allowing you to toggle between the video and viewer.

Note: These videos do not contain audio.

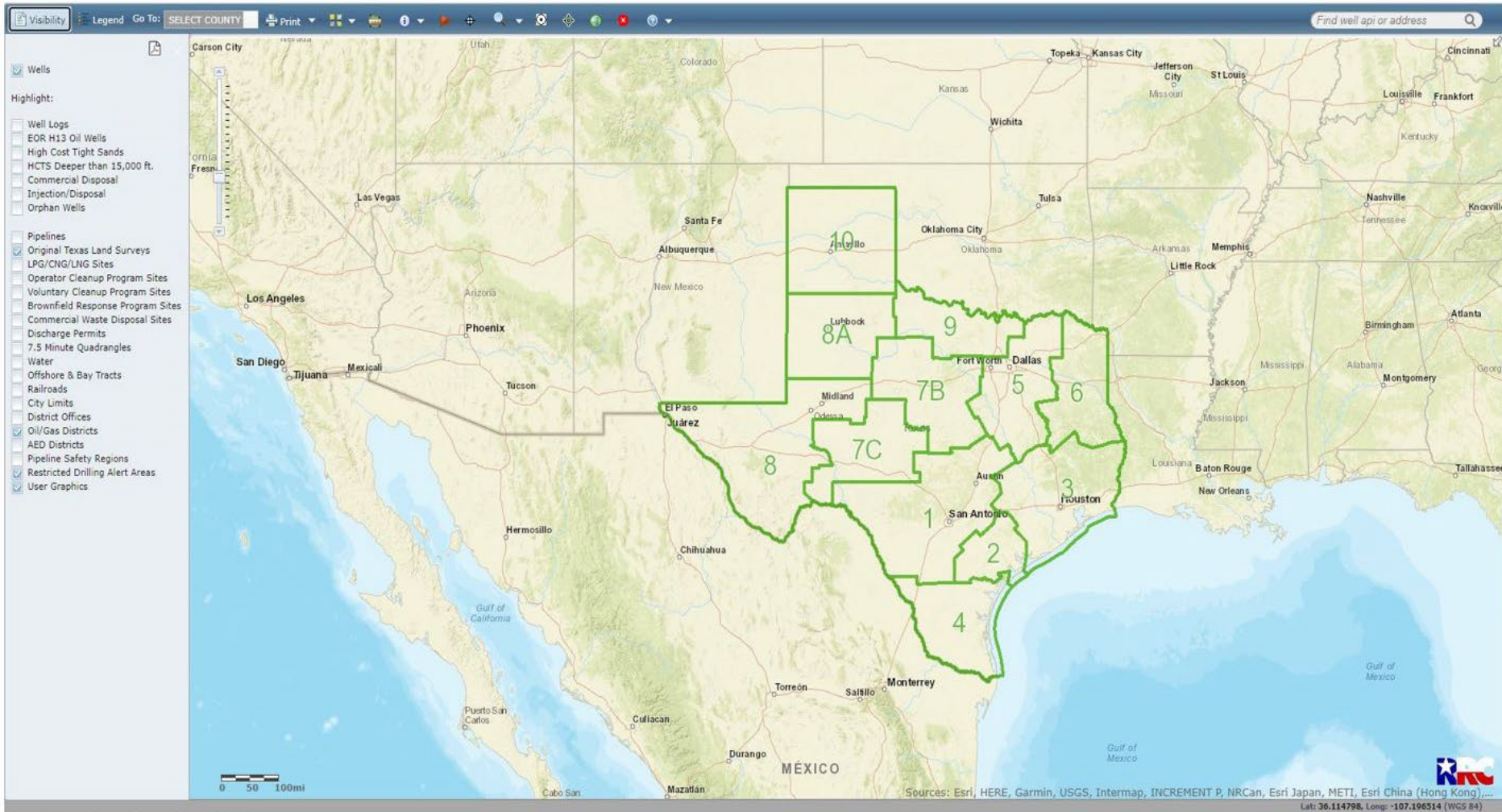
[API# or Address Search](#)

[Survey Search](#)

[Locating Pipelines](#)

[Viewing Coordinates](#)

GIS Viewer Load Screen





- Live Demo
 - <https://gis.rrc.texas.gov/GISViewer/>
 - GIS viewer load screen components
 - Toolbar – overview
 - Visibility
 - Legend
 - Basemaps
 - Help

Search and Navigation

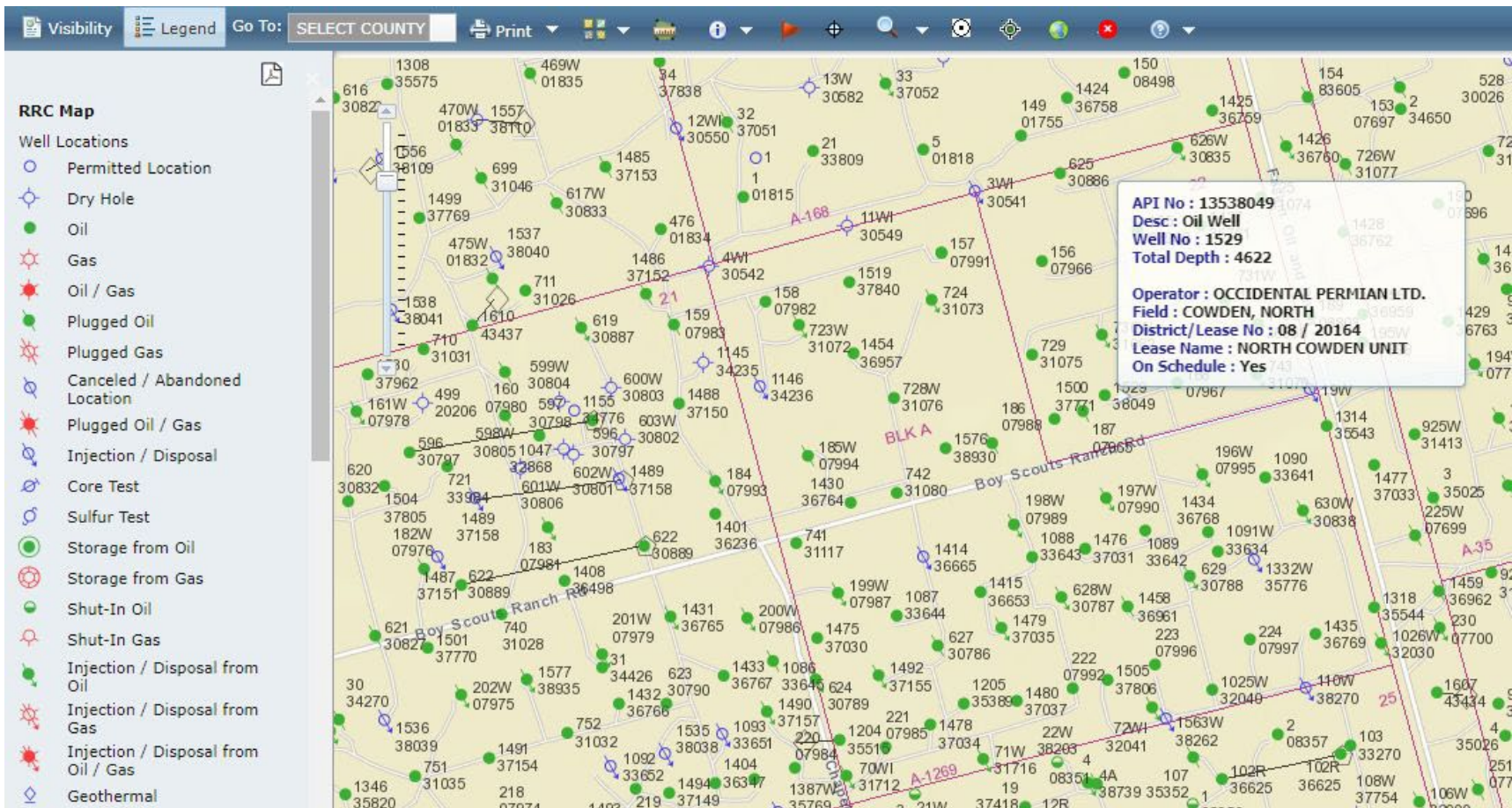


- API Number
 - Must include 8 digits, FIPS & Unique Identifier
- RRC Lease ID
 - 5 digit oil ID or 6 digit gas ID
 - Single gas well displays or all wells under oil lease ID displayed
- Survey Information
 - Not all attributes need to be entered
 - Spelling, punctuation and spaces are important and will affect results.



Hover

- Move the cursor over any well
 - Dialogue box appears with well information



Identify



- Click on the feature using the Identify tool
 - Additional information appears in the dialogue box window

The screenshot shows the RRC Map software interface. The map displays various well locations marked with different symbols. A dialog box titled "GIS Identify Results - Well Location Attributes" is open, showing the following information:

Number of identify results: 1

Result #1	
API	13537840
GIS WELL NUMBER	1519
GIS SYMBOL DESCRIPTION	Oil Well
GIS LOCATION SOURCE	Coordinates - Operator reported
GIS LAT (NAD27)	32.050043
GIS LONG (NAD27)	-102.504747
GIS LAT (NAD83)	32.050159
GIS LONG (NAD83)	-102.505174

[Well Logs](#) [Drilling Permits](#) [Disposal Permits](#)

OPERATOR/WELLBORE	
WELLBORE STATUS	OPEN
LAST PERMIT ISSUED	496118
LAST PERMIT OPERATOR NUMBER	617544
LAST PERMIT OPERATOR	OCCIDENTAL PERMIAN LTD.
LAST PERMIT LEASE NAME	NORTH CONDELL UNIT

Identify Results




- API
 - Geographic information
 - Links to Well Logs and Permits
- Operator/Wellbore
 - Information from most recent approved drilling permit
- Completion Record
 - Current *and* historical records
 - Links to production and hardcopy records

GIS Identify Results - Well Location Attributes	
Number of identify results: 1	
Result #1	
API	44133780
GIS WELL NUMBER	1
GIS SYMBOL DESCRIPTION	Oil Well
GIS LOCATION SOURCE	Operator reported location - Distances and Plat
GIS LAT (NAD27)	32.511745
GIS LONG (NAD27)	-100.041566
GIS LAT (NAD83)	32.511865
GIS LONG (NAD83)	-100.041941
Well Logs	Drilling Permits
	Disposal Permits
OPERATOR/WELLBORE	
WELLBORE STATUS	OPEN
LAST PERMIT ISSUED	744958
LAST PERMIT OPERATOR NUMBER	884527
LAST PERMIT OPERATOR	VENTEX OPERATING CORP.
LAST PERMIT LEASE NAME	IRVIN UNIT
TOTAL DEPTH	4750
SURFACE LOCATION	Land
ABSTRACT	366
SURVEY	T & P RR. CO.
BLOCK	18
SECTION	23
DISTANCE 1	851
DIRECTION 1	1217
DISTANCE 2	
DIRECTION 2	7B
COMPLETION RECORD	
PRORATION SCHEDULE	OIL
DISTRICT	7B
LEASE/ID	28082
OPERATOR NUMBER	884527
OPERATOR	VENTEX OPERATING CORP.
LEASE NAME	IRVIN UNIT
FIELD	CASADY (STRAWN)
WELL NUMBER	1
TYPE WELL	HISTORY
ON SCHEDULE	NO
Production Data Query(PDQ)	Oil/Gas Imaged Records for Lease/ID: 28082

Download Wells Within a Defined Radius



- Select the icon 
- Enter the radius (up to 2.5 miles) by typing in the number

The screenshot shows a web application interface for downloading wells. The main map displays Texas divided into 10 numbered regions (1-10) and sub-regions (7A, 7B, 7C, 8A). A green radius tool is overlaid on the map, centered on a point in the northern part of the state. A pop-up window titled "Download Wells Within a Defined Radius" is displayed, showing the following information:

- Number of Well Bottoms in Radius Area (Max 1000): 0
- Number of Well Surfaces in Radius Area (Max 1000): 0
- Enter Radius Distance (Max 2.5 miles):

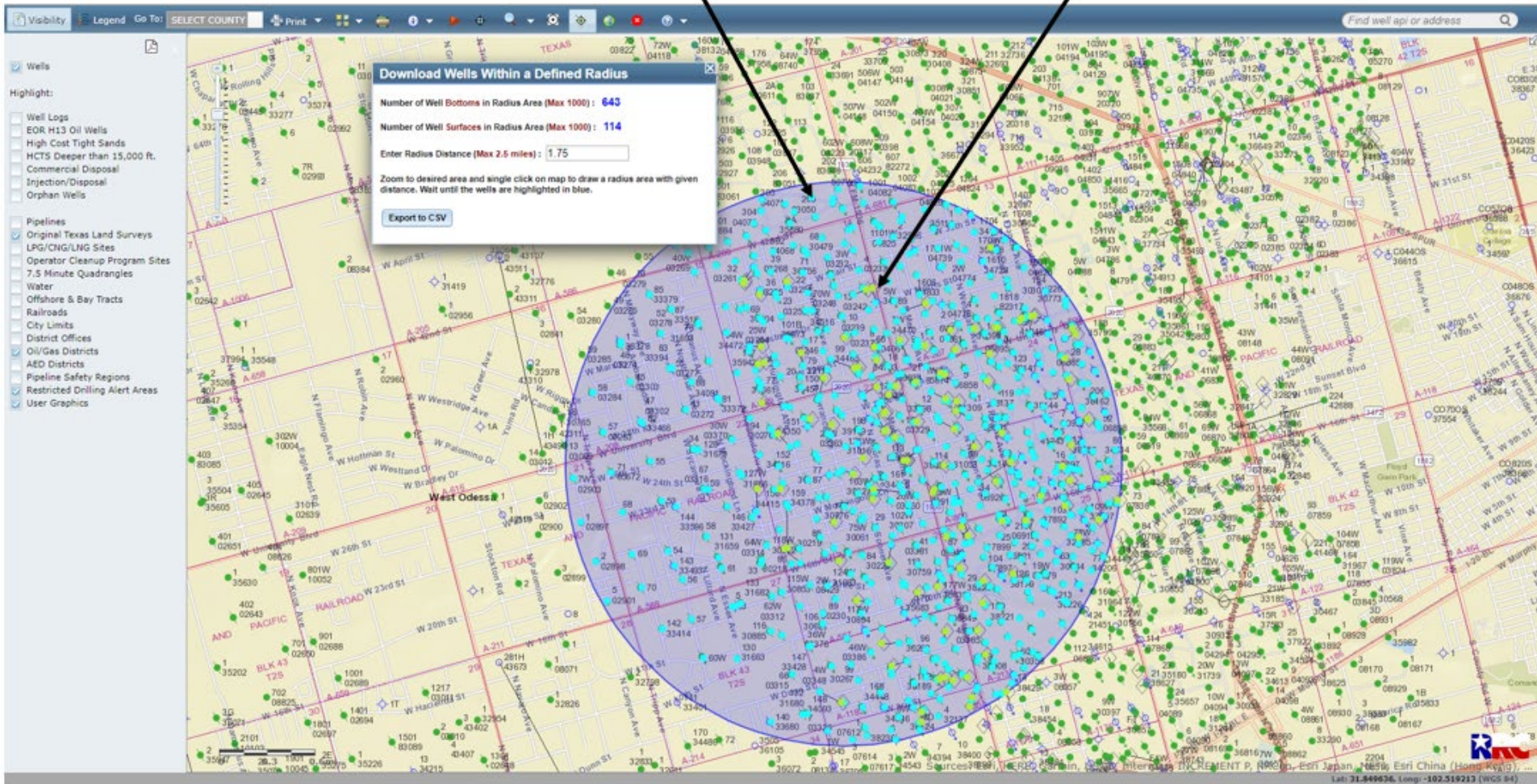
Below the input field, the text reads: "Zoom to desired area and single click on map to draw a radius area with given distance. Wait until the wells are highlighted in blue." The application interface includes a "Go To" field with "SELECT COUNTY" selected, a "Print" button, and a search bar for "Find well api or address". The NRC logo and coordinates are visible in the bottom right corner.

Download Wells Results



Cyan: Well Bottom Location

Green: Well Surface Location



More Than 1000 wells inside the Radius...



- The 'Too Many Results' dialogue box appears
 - The first 1000 wells are exported

The screenshot displays the RRC Public GIS Viewer interface. A large blue circular radius is drawn on a map of Odessa, Texas, containing a dense cluster of green well markers. A dialog box titled "Download Wells Within a Defined Radius" is open, showing options for "Number of Well Bottoms in Radius Area (Max 1000)" and "Number of Well Surfaces in Radius Area (Max 1000)", both set to 1000. The "Enter Radius Distance (Max 2.5 miles)" field is set to 2.5. A message box above the dialog states: "There are too many results to display on the map; not all of the selected wells will be highlighted." A "Page Unresponsive" error message is also visible, indicating the application is unresponsive. A text box with a downward arrow points to the error message, stating: "If this dialogue box appears, continue to wait, you will eventually receive the .csv download file".

www.gisp.rrc.texas.gov says
There are too many results to display on the map; not all of the selected wells will be highlighted.

Download Wells Within a Defined Radius

Number of Well Bottoms in Radius Area (Max 1000): 1000

Number of Well Surfaces in Radius Area (Max 1000): 1000

Enter Radius Distance (Max 2.5 miles): 2.5

Zoom to desired area and single click on map to draw a radius area with given distance. Wait until the wells are highlighted in blue.

If this dialogue box appears, continue to wait, you will eventually receive the .csv download file

Page Unresponsive
You can wait for it to become responsive or exit the page.

RRC Public GIS Viewer

Wait Exit page

Exported Well Results



- Export results are .csv file
 - Lat and Long are automatically generated by the GIS when well is created
 - Well location source document determines reliability
- Use lat and long to convert to geospatial data

API	Well Number	Symbol Desc	Symbol	Reliab	Location Source	Lat27	Long27	Lat83	Long83	Wellbore Status	Last Permit Issued
00342277	9	Oil Well	4	40	Operator reported location - Distances and Plat	32.08853566	-102.27372872	32.08865371	-102.27415121	OPEN	705543
00346959	3502	Oil Well	4	55	Coordinates - Operator reported	32.09076111	-102.26542778	32.09090586	-102.26586841	OPEN	801167
00346960	3503	Oil Well	4	55	Coordinates - Operator reported	32.08883607	-102.26849449	32.08895418	-102.26891688	OPEN	801174
00346961	3505	Oil Well	4	55	Coordinates - Operator reported	32.08966389	-102.25695556	32.0898087	-102.25739594	OPEN	813705
00346961	3505	Oil Well	4	55	Coordinates - Operator reported	32.08966389	-102.25695556	32.0898087	-102.25739594	OPEN	813705
00346963	3506	Oil Well	4	55	Coordinates - Operator reported	32.08788885	-102.26451393	32.08800698	-102.26493616	OPEN	813712
00346963	3506	Oil Well	4	55	Coordinates - Operator reported	32.08788885	-102.26451393	32.08800698	-102.26493616	OPEN	813712
00346964	3508	Oil Well	4	55	Coordinates - Operator reported	32.08710833	-102.25982778	32.0872532	-102.26026823	OPEN	801189
00346966	3504	Oil Well	4	55	Coordinates - Operator reported	32.09061111	-102.26093056	32.09075588	-102.26137106	OPEN	801203
00347002	2H	Permitted Location	2	55	Coordinates - Operator reported	32.07336708	-102.28298241	32.07348554	-102.28340475	LOCATION	802006
00347003	3H	Permitted Location	2	55	Coordinates - Operator reported	32.07390067	-102.28069413	32.07401916	-102.2811164	LOCATION	802009
00347004	4H	Permitted Location	2	55	Coordinates - Operator reported	32.07443455	-102.27840584	32.07455297	-102.27882806	LOCATION	802010
00347005	5H	Permitted Location	2	55	Coordinates - Operator reported	32.07496815	-102.27611755	32.07508658	-102.27653971	LOCATION	802013



- Live Demo
 - <https://gis.rrc.texas.gov/GISViewer/>
 - Search and navigation
 - Well highlights
 - Identify a well
 - Well log
 - Historic well records (Neudocs)
 - Download wells

Digital Map Data (1 of 3)



- Data is free to download
 - Click on Resources, Resource Center and Data Sets

A screenshot of the Railroad Commission of Texas website. The top navigation bar includes links for ABOUT US, RESOURCES, FORMS, EVENTS, COMPLAINTS, ACCIDENTS, and CONTACT US. A red arrow points to the RESOURCES dropdown menu, which is open to show options: Resource Center, Subscription Services, Rules, and What's New. Below the navigation is a large blue banner for "Texas Completions Statistics" with a sub-link "View Stats for May 2021". A red arrow points from this banner to a white box on the right side of the page titled "Data Sets". This box contains a database icon and the text: "Data Sets" and "Access and download information electronically generated or stored by the Railroad Commission of Texas". Below the banner are five circular icons representing different sectors: OIL & GAS, PIPELINE SAFETY, ALTERNATIVE FUELS, SURFACE MINING, and GAS SERVICES. At the bottom, there are sections for "RECENT ANNOUNCEMENT" (Attendance Policy for Alternative Fuel Safety Events) and "COVID-19 RESOURCES AND RESPONSE".

Digital Map Data (2 of 3)



- Choose your layer
 - Click on ArcView Shape File (Updated Nightly)
- Download zipped file by county
 - Counties are listed numerically by FIPS code.
- Open in GIS Software

Digital Map Data

Data Set Description	Download	Manual	Updated	
Pipeline Layers By County	ArcView Shape File	PDF FIPS Code	Nightly	Details
Survey Layers By County	ArcView Shape File	PDF FIPS Code	Nightly	Details
Well Layers By County	ArcView Shape File	PDF FIPS Code	Nightly	Details
Base Layers By County	ArcView Shape File	PDF FIPS Code	Nightly	Details
All Layers By County	ArcView Shape File	PDF FIPS Code	Nightly	Details
Statewide API Data	ASCII Format	PDF	Nightly	Details
Statewide API Data	dBase Format	PDF	Nightly	Details

A screenshot of a web-based file browser interface. At the top left is the "RC" logo with a star. Below it are "Refresh" and "Media Viewer" buttons. The main area shows a file list under the path "/ (Home)". The list has columns for "Name", "Last Modified", and "Size".

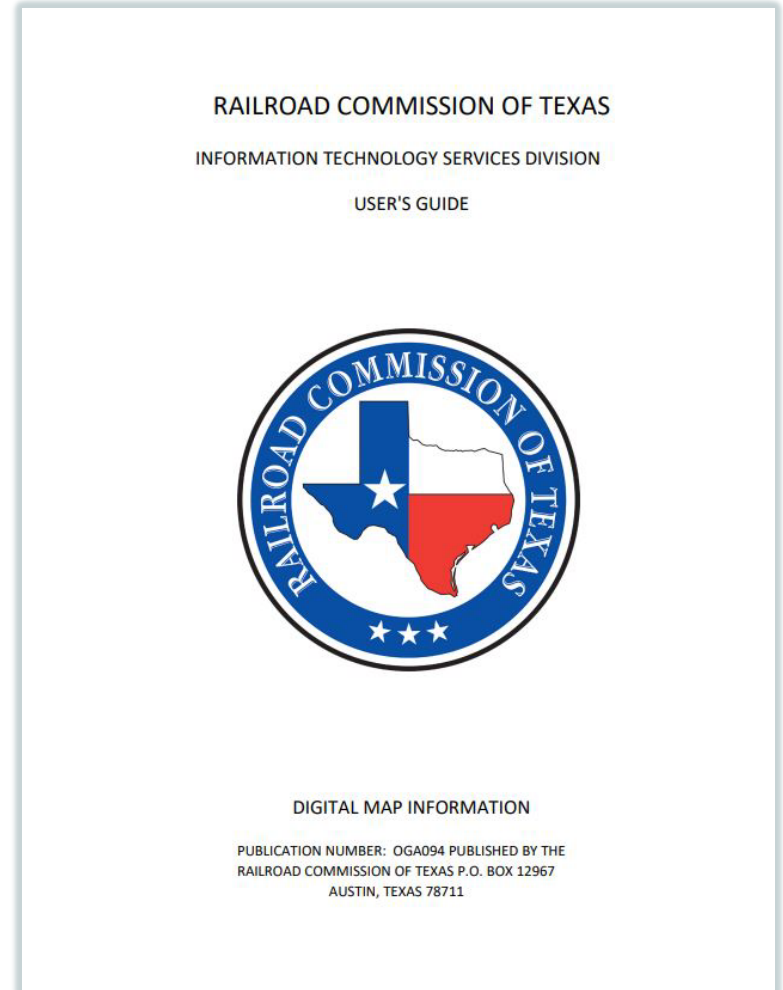
<input type="checkbox"/>	Name	Last Modified	Size
<input type="checkbox"/>	well001.zip	6/22/21 4:07:34 PM	591.09 KB
<input type="checkbox"/>	well003.zip	6/22/21 4:07:35 PM	3.21 MB
<input type="checkbox"/>	well005.zip	6/22/21 4:07:35 PM	84.85 KB
<input type="checkbox"/>	well007.zip	6/22/21 4:07:35 PM	199.01 KB
<input type="checkbox"/>	well009.zip	6/22/21 4:07:36 PM	4.07 MB

Digital Map Data (3 of 3)



Digital Map Information User Guide

- PDF Manual
- Projection Information
- Naming Conventions
- Attribute Descriptions
- FIPS Codes
- Reliability Codes



Request to Change Information











- Contact us with any questions
 - 512-463-6851
 - rrc.mapping@rrc.texas.gov
- Provide as much information as possible
 - Ex. – Well records, Plats, Maps, etc.
- You will be notified of the results of the research request.

Texas Open Data Portal (1 of 2)



- Official State of Texas repository for publicly accessible open data.

The screenshot shows the homepage of the Texas Open Data Portal. At the top left is the logo and URL "data.texas.gov". To the right is a search bar. Below the search bar is a navigation menu with links for "Home", "Catalog", "Stories", "Help", and "***NEW: User Guide***". On the far right of the navigation menu is a "Sign In" button. A blue banner below the navigation menu reads "New to the Open Data Portal? Click HERE!". The main content area features a large blue header with the text "Welcome to the Texas Open Data Portal" and a link "Click HERE for information on COVID-19 preparedness for Information Technology". Below this is a grid of eight data categories, each with an icon, a title, and a brief description:

 Blockchain Learn about the Texas Work Group on Blockchain Matters	 Permits & Licensing Data on Permitting and Licensing in Texas	 Business & Economy Economic and business data in	 Government & Taxes Explore the information on the
 Social Services Social service data for Texas citizens	 Transportation Transportation data for Texas	 Agriculture Agriculture, food and nutrition data for Texas	 Veteran Veteran data for Texas Veterans

<https://data.texas.gov/>



- Data sets, visualizations, Filtered view, stories.
- Open the catalog.
- Sort using key words or publishing agency.
- View, visualize or export the data.
- Use Contact Dataset Owner button with:
 - Questions, concerns or suggestions.



Questions?

Points of Contact



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