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# Mineral Parcel Mapping

Methods and Procedures



WV GIS Technical Center  
WEST VIRGINIA UNIVERSITY

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## Summary

The West Virginia Property Tax Division (WVPTD) and WV Geological & Economic Survey (WVGES) contracted the WV GIS Technical Center (WVGISTC) at West Virginia University to assist in mapping unmapped mineral parcels for select counties in the state to further complete the existing state Mineral Parcel Database. This project investigated and validated innovative methods of identifying and mapping un-mapped mineral parcels. For this pilot study, the WVPTD stressed the importance of producing accurate, quality matches in mineral parcel ownership discovery and location over the quantity of parcels mapped. Three pilot counties were chosen for this project based upon their mix of oil and gas well development, and coal mining development. The three pilot counties are Monongalia, Ohio, and Wirt. During this initial performance period, work has also been performed on Brooke, Hancock and Marshall Counties. This document outlines the resources and methodologies used for the identification and mapping of mineral parcels. The companion document “Mineral Parcel Final Report” summarizes the performance of the project.

## Introduction

The overall approach to mapping mineral parcels begins with existing un-mapped mineral parcel records from the WVPTD Integrated Assessment System (IAS) and cross-references information from other data supplementary sources. This includes reference material from scanned mineral ownership maps, surface tax parcel boundaries, oil and gas well location and plats, farm line maps, and other available data. WVGISTC performed a multi-step, iterative approach to mapping mineral parcels due to the lack of data or information using a single method. Mapping parcels was performed using best practices and data quality standards, for example, using surface tax parcel boundaries that aligned with mineral records to ensure accurate linework. In addition, best practices for geometric topology was observed where appropriate, which results in clean, coordinate boundaries. Due to the complex nature of mineral ownership data, overlapping and gaps are not easily enforced.

## Data Description

Extensive resources are available to assist in the completion of this project. One goal of this project is to identify which datasets and supplementary resources are necessary to map the mineral parcels. What has been discovered as the most useful data resources will be outlined in the following sections:

[WV PTD Source Data Delivery](#) of data is coordinated between WVGISTC and WVPTD and is requested on a county basis. To facilitate data delivery, WVPTD has requested blocks of 4 counties data. This assists in processing the data.

### [WVGISTC Source Data Processing](#)

WVGISTC is using an enterprise Geodatabase stored in SQL Server for this project. Using the enterprise geodatabase allows the WVGISTC to have a versioned database, which allows for multiple workers to simultaneous editing. It also allows for ease of an automated backup system and advanced data queries.

The data has been delivered by WVPTD in various formats, such as txt, excel or geodatabase tables. Upon receipt from WVPTD, this data is imported into the enterprise geodatabase.

[Unmapped Mineral IAS Records](#): WVPTD has provided a priority listing of the unmapped mineral IAS records. This is a complete listing of all unmapped mineral parcels for the target counties. These records contain descriptive information related to the mineral parcel such as acreage, ownership, any parcel ID information, and deed book and corresponding page number. Unmapped mineral parcels typically contain information to locate the parcel to a specific county and tax district, but not to a specific parcel.

[Unmapped Mineral and Well API Records](#): WVPTD has provided a list of mineral parcels that have been cross-referenced with oil and gas well API numbers to determine if well plats or well permits can provide information pertinent to locate the unmapped parcel. This data is often a sub-set of the total unmapped parcels for a county as it does not include mineral (coal) related parcels.

*API Number (Well ID)*– American Petroleum Institute number refers to a unique Identifier assigned to all wells. The format typically refers to a 2 digit state code, followed by a 3 digit county code and then a sequential number.

[Well Plats](#): A well plat is a formal plot of the drilling unit prepared by a professional surveyor. It typically outlines the parcel geometry in relation to the well and other references such as county roads. A typical plat identifies the acreage included in the drilling unit as well as surface and mineral ownership of each parcel in the drilling unit, and includes information about adjacent parcels. Each plat is referenced by an API number, which is referenced in the data provided by WVPTD and/or included in the legal description of some mineral records.

Well plats are typically retrieved from the WVDEP website linked below. WVGES has also provided well plats stored digitally or hardcopy from their facility. Not all records are available digitally, so it is important to look at both sources. If neither WVGES or WVDEP has a digital recorded plat, it may be necessary to retrieve paper copies manually from the WVGES. Well plats and other WVGES records can be found at:

<http://www.wvgs.wvnet.edu/pipe2/FileRepository.aspx>

Well Locations/Well and Coal Permit Applications: WVGISTC will retrieve well location points (GIS data), and well and coal permit applications (digital scans) to be used in this project. The WV Department of Environmental Protection (WVDEP) provides authorized users access to permit information via their online web application. The main source for finding well plats and other documentation can be found at:

<https://documents.dep.wv.gov/AppXtender/DataSources/DEPAX16/account/login?ret=L2RhGFzb3VyY2VzL0RFUEFYMTYvYXBwbGljYXRpb25zLzM5>

Username: DEP

Password: DEP

<https://dep.wv.gov/oil-and-gas/databaseinfo/Pages/OGD.aspx>

## Parcel Discovery and Mapping

**Well Plat Location** - Un-mapped mineral records that have an associated well API, the location and geometry of unmapped records are discovered by locating the well using the well dataset and its corresponding plat. The well plat is then typically georeferenced to assign coordinate system, which allows a quick lookup and easy reference for subsequent parcels.

Information obtained from well plats and permit applications may include mineral owner, surface owner, adjacent ownership, surveyed polygons, adjacent wells with APIs, or other reference information. The location of wells on plats is often correct, but is verified against the DEP well dataset and visually confirmed using the latest available aerial photography. Technicians verify the well location to ensure it is positionally accurate and matches the existing mineral or surface parcels.

Other data from oil and gas plats may include metes and bounds showing property boundaries, latitude/longitude marks, and other reference locational layers. The compiled, relevant data will then be cross-referenced with the unmapped mineral records. WVGISTC will look for common owner names, parcel size (acreage), and other indicators to give a location to the unmapped parcel.

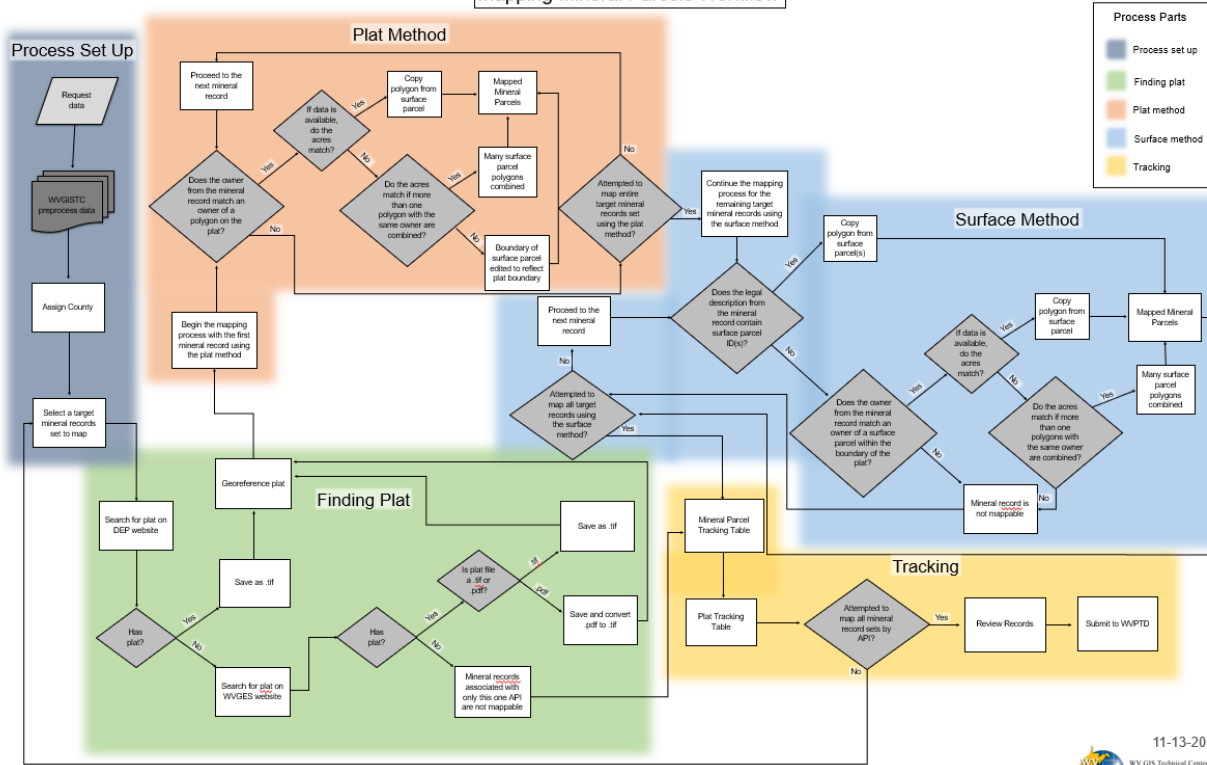
Once a candidate parcel has been identified, the parcel polygon is copied to the mineral deliverables from the existing mineral and/or surface parcel data or extracted from the source reference data (plat or permit) if available. Mineral parcels provided with well APIs may be able to be digitized directly from well plat or permit application maps. If the mineral parcel information matches the well plat information, then the parcel may be drawn from the plat. Additionally, surrounding mineral parcels may help to fill in the blanks and provide indicators to the exact location of that parcel in relation to existing mineral parcels.

However, they may alternatively need to be discovered through connections made from legal information. Parcels not identified through these reference materials will require subsequent research and their final location will not be included in the deliverables for this pilot project. WVGISTC will record any attempted match strategies that have failed, and these parcel records will be annotated as un-mapped. Additionally, WVGISTC will annotate how each mapped parcel has been mapped and what source(s) were used to locate it. This data will then be sent to WVPTD for final review and determination.

### General Workflow

This flow chart displays the workflow for mapping mineral records. Steps have been summarized. A poster size version of this workflow chart is available in supplemental documentation.

# Mapping Mineral Parcels Workflow



11-13-2019

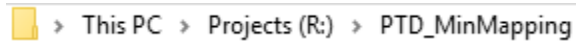


## Processing Steps

### ArcMap Project Setup

There are a few preparatory tasks that must be completed before mapping can begin. The steps for ArcMap environment setup can be found in Appendix A.

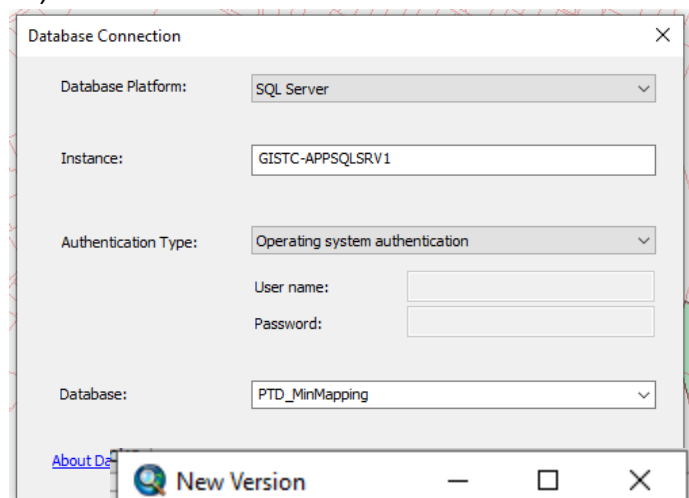
All data and information pertaining to this project is stored on the server under the R drive, and all work must be done in ArcMap 10.7.

 > This PC > Projects (R:) > PTD\_MinMapping

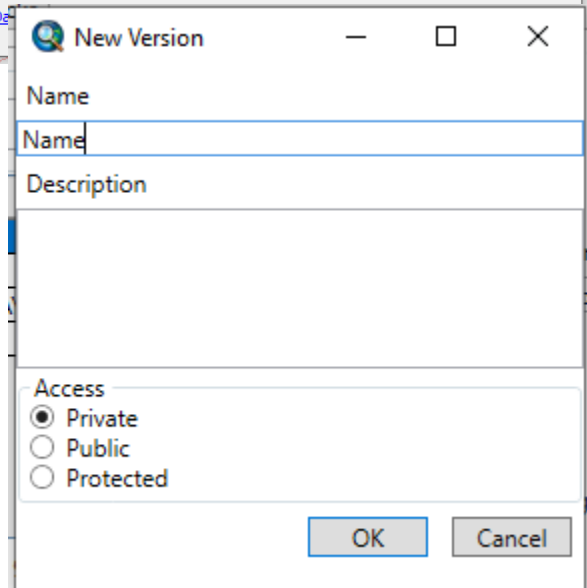
First, a geodatabase must be created to store the unique version of the datasets that will be used to create, edit and store parcels. A new version must be created for each user,

1. Navigate to ArcMap and create a project called 'MinParcels\_YourInitials'.
2. Open ArcCatalog and create a new connection to the default PTD\_MinMapping geodatabase (gisc-appsqlsrv1.sde).

- a. In the ArcCatalog sidebar, double click Add Database Connection.
- b. Type 'GISTC-APPSQLSRV1' in the instance field.
- c. Choose PTD\_MinMapping as the database and click OK.



3. Create a version of your own which you will work from:
  - a. Right click the gisc-appsqlsrv1.sde database connection.
  - b. Administration > Administrator Database.
  - c. Right click DEFAULT, then click New Version.
  - d. Type your name into the "Name" Field and click OK.





4. Add the following layers from the MinMapping APPSQLSRV database:
  - a. PTD.MinMapping.DBO.CountyBndy\_24k from within the PTD\_MinMapping.DBO.Reference feature dataset
    - i. Provides county boundaries.
  - b. PTD.MinMapping.DBO.wells
    - i. Contains all oil and gas wells throughout the state
  - c. PTD\_MinMapping.DBO.laterals
    - i. Lateral tracts for horizontal wells
  - d. PTD.MinMapping.DBO.Districts
    - i. District boundaries
  - e. PTD.MinMapping.DBO.Surf\_parcel\_Tomin
    - i. Surface parcel geometries
  - f. PTD.MinMapping.DBO.Min\_Mapped
    - i. The database that contains all mineral parcels mapped thus far
  - g. PTD.MinMapping.DBO.Mineral\_Parcels\_Master
    - i. Mineral parcels mapped before the start of the project
  - h. PTD.MinMapping.DBO.MinPar\_Tracking
    - i. Record tracking
  - i. PTD.MinMapping.DBO.PilotIASmin (newest version)
    - i. List of records and their associated information (legal description, owners, acreages, etc.)
  - j. PTD.MinMapping.DBO.API\_Parcels
    - i. List of unmapped records with their associated API numbers
  - k. PTD.MinMapping.DBO.Plat\_Tracking
    - i. Well plat tracking table
5. Create relationships between the following:
  - a. Wells and API\_Parcels using api\_relate fields
  - b. API\_Parcels and IASmin using ROOTID field

## Assigning County Data

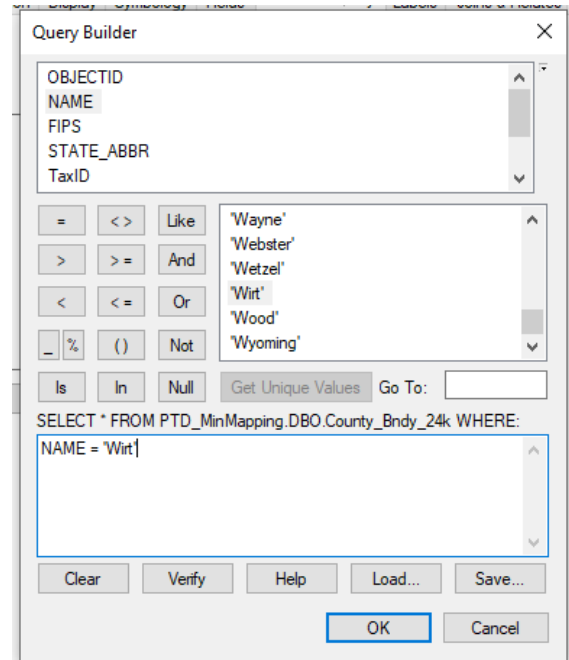
The first step towards mapping mineral parcels is to isolate your target county for each data layer by using a definition query using the county code. It is important to note that this number differs between each data layer. For example, in the table for oil and gas well permits, the API county code for Wirt is 105. However, in the surface parcel (Tax ID) data, the county code for Wirt is 53. The code for each county can be found in the table below.

County Codes					
County	Surface Tax ID	Well API	County	Surface Tax ID	Well API
Barbour	01	001	Mineral	29	057
Berkeley	02	003	Mingo	30	059
Boone	03	005	Monongalia	31	061
Braxton	04	007	Monroe	32	063
Brooke	05	009	Morgan	33	065
Cabell	06	011	Nicholas	34	067
Calhoun	07	013	Ohio	35	069
Clay	08	015	Pendleton	36	071
Doddridge	09	017	Pleasants	37	073
Fayette	10	019	Pocahontas	38	075
Gilmer	11	021	Preston	39	077
Grant	12	023	Putnam	40	079
Greenbrier	13	025	Raleigh	41	081
Hampshire	14	027	Randolph	42	083
Hancock	15	029	Ritchie	43	085
Hardy	16	031	Roane	44	087
Harrison	17	033	Summers	45	089
Jackson	18	035	Taylor	46	091
Jefferson	19	037	Tucker	47	093
Kanawha	20	039	Tyler	48	095
Lewis	21	041	Upshur	49	097
Lincoln	22	043	Wayne	50	099
Logan	23	045	Webster	51	101
Marion	24	049	Wetzel	52	103
Marshall	25	051	Wirt	53	105
Mason	26	053	Wood	54	107
McDowell	27	047	Wyoming	55	109
Mercer	28	055			

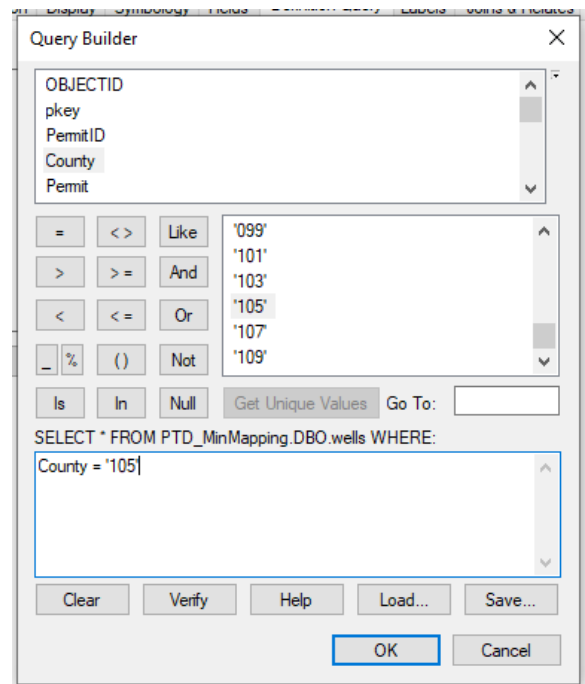
6. To isolate data for the selected county, set queries for each layer. Right click on the layer and select properties. Choose the definition query tab. Click query builder.

- a. For the county boundary layer use the name of the county.
- b. Use the expression:

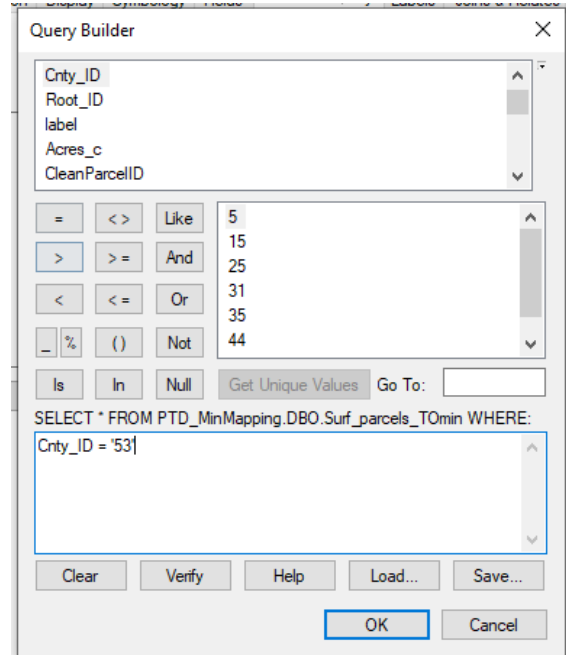
NAME = 'yourcountyname'.




- c. For the wells layer, use the county code from the above table.
- d. Use the expression: County = 'XXX'.



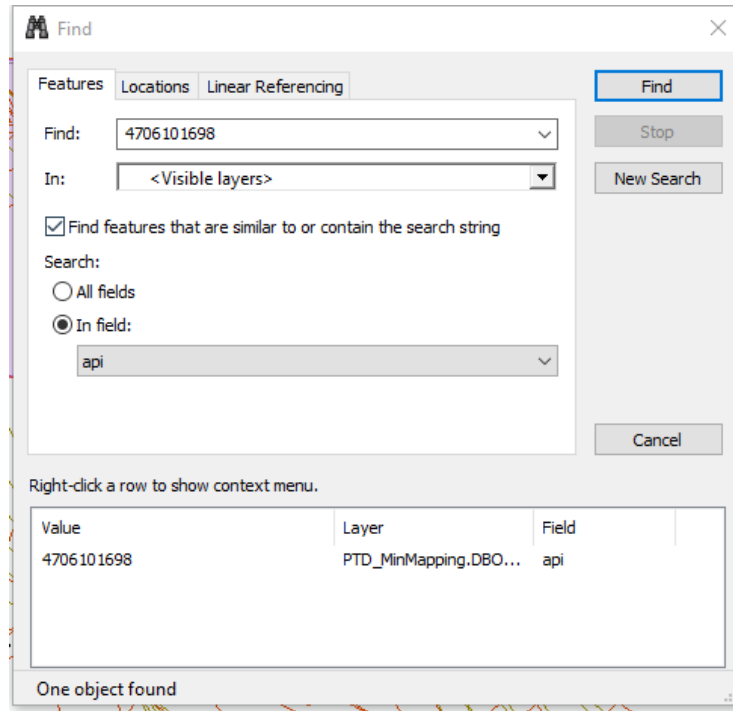
- e. For the surface parcels layer, use the field Cnty\_ID and the code from the above table.
- f. Use the expression:  
Cnty\_ID = 'XX'.



## Retrieve Plat

6. Start by looking at the API\_Parcels table. This table contains the list of unmapped records and their associated API numbers. If a record is associated with multiple APIs, it will be listed multiple times, in accordance with the number of APIs. Thus far, it has been found that the easiest way to begin to map parcels is to sort ascending by API.
7. Choose the first API number in the list and check to see which records are associated with it. For example, the API 4706100101 has 5 records. Records will be noted by a ROOTID. This number always starts with the county number, district number, and 9999 (which is how unmapped records are denoted)
8. Using the “Find” Tool , search for the API in the “Find:” field. Make sure “In:” is set to PTD\_MinMapping.DBO.wells. Click the “In field:” bubble and choose “api” from the drop-down list. Click “Find.”

9. Right click on the API in the list the appears. Click “Zoom To”



10. In an internet browser, navigate to the following site and sign in:  
<https://documents.dep.wv.gov/AppXtender/DataSources/DEPAX16/account/login?ret=L2RhdGFzb3VyY2VzL0RFUEFYMTYvYXBwbGljYXRpb25zLzM5>

- User Name: DEP
- Password: DEP

- a. Select the blue “New Query” box.
- b. Type your API number plus “0000” into the Primary ID field (example: 47061001010000) and press “Run.”
- c. A list of documents will appear:


PERMITSOOG > New Search > Query Results

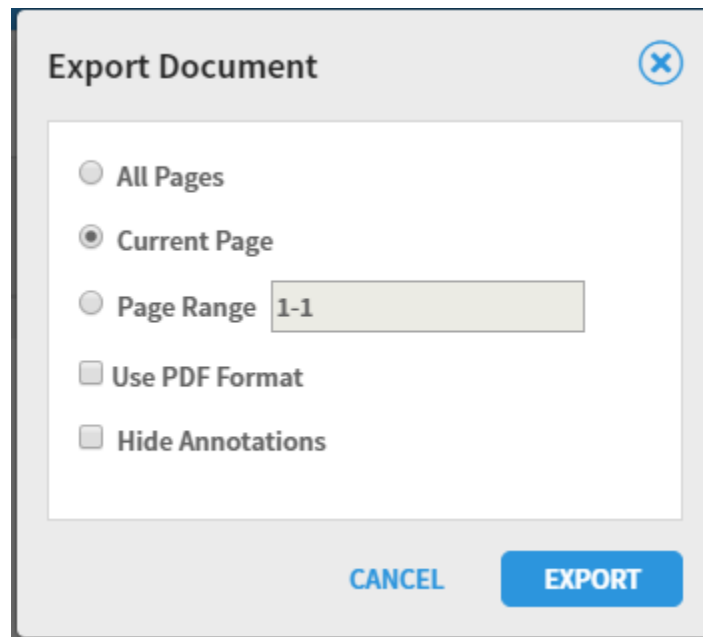
	PRIMARY ID	SECONDARY ID	RESPONSIBLE PARTY NAME	COUNTY	PERMIT TYPE	PERMIT STATUS	DOCUMENT DATE
<input type="checkbox"/>	47061001010000		NOUMENON CORPORATION	MONONGALIA			12-31-2099
<input type="checkbox"/>	47061001010000		NOUMENON CORPORATION	MONONGALIA			01-01-1901
<input type="checkbox"/>	47061001010000		NOUMENON CORPORATION	MONONGALIA			01-01-1900

- d. Click on the page icon  for the first record.

- e. Search through the documents until you find the plat. To advance to the new document, select “next” in the top right corner of the page:

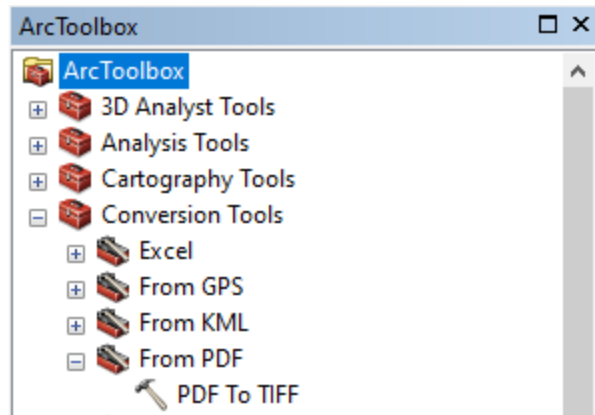
Document 1 of 3 < PREVIOUS | NEXT >

- f. When you have located the plat, select  EXPORT in the top right corner. Make sure the page that contains the plat is selected.
- g. The following pop-up will appear:

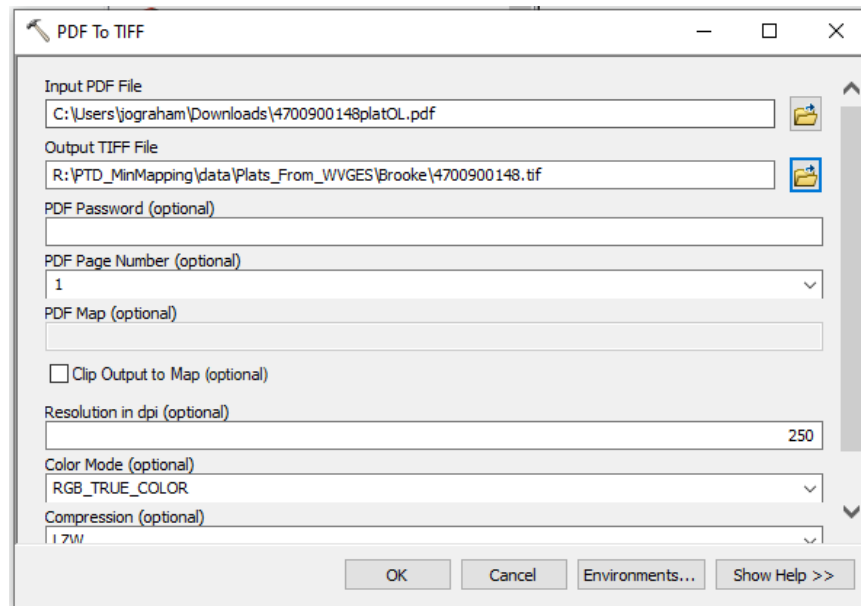


Be sure to choose “Current Page” and uncheck the box for “Use PDF Format”

11. When your plat has been exported, rename it within the “downloads” location in File Explorer. Rename it the API number without “0000” (4706100101).
12. Move the file to R:\PTD\_MinMapping\data\Plats\_From\_DEP\YOURCOUNTY.
  - a. If a plat is not present on the DEP website, check the following site:  
<http://downloads.wvgs.wvnet.edu/BatchInfo/>.
    - i. Choose your county and use Ctrl+F to search for the API number.
    - ii. Click through the records to find the plat and click on the link to open the plat in a new window. Then, click the download button in the top right corner to download the PDF.
    - iii. Sometimes the plat is available as a .tif, but it is usually a .pdf file. To convert the file from a PDF to TIFF, go to ArcMap and navigate to the ArcToolbox. Expand conversion tools and from PDF.



- iv. Double click PDF to TIFF. In the window that opens, click on the folder to choose the input file. Navigate to the downloads folder and chose the downloaded plat. Then click on the folder to choose the output file. Navigate to R:\PTD\_MinMapping\data\Plats\_From\_WVGES\YOURCOUNTY and name it the API number with .tif at the end. Click OK. The TIFF file will automatically be added to the ArcMap document and it can then be georeferenced.





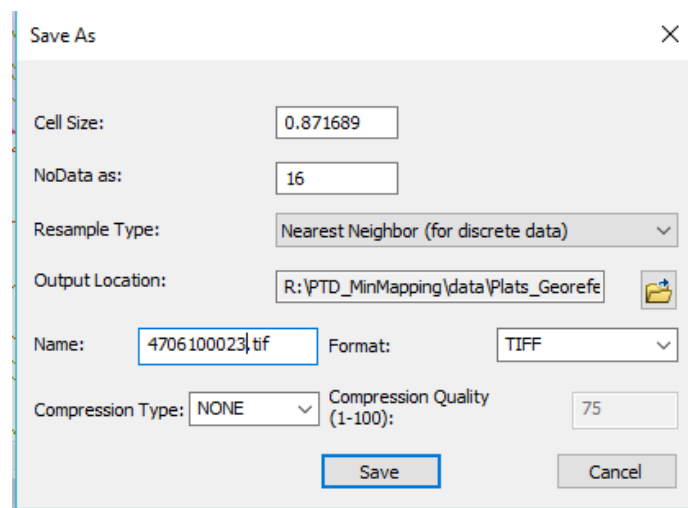
- 13. If a plat isn't found, the mineral records that are associated with this API only are not mappable using these methods.
  - a. Check the MinPar\_Tracking table to see if there are any other APIs associated with the mineral record.
  - b. If not, fill in the MinPar\_Tracking table for each target mineral record with only one API
    - i. Mult\_API: 'No'

- ii. Mapped: 'No'
  - iii. Not\_Mapped: 'No Plat'
- c. If any of the mineral records from the target mineral record set have other associated APIs, do not edit them in the tracking table at this point. They will be processed later when the API is chosen for the target mineral records set.



## Georeference Plat

14. Once you have the file in the YOURCOUNTY folder, click and drag it into your ArcMap project. An “Unknown Spatial Reference” message will appear. Click OK.
15. Proceed to georeference the plat:
  - a. Make sure your “georeferencing” toolbar is active
  - b. Zoom to a scale that covers the area slightly surrounding the selected well
  - c. From the georeferencing toolbar, click **Georeferencing** then “Fit to Display”
  - d. When the image appears, use the  dropdown to shift, scale, and rotate the plat until it is roughly lined up with the surface parcels
  - e. Add control points  by clicking on the plat, then on the related location of the surface parcels. Do this until the plat is lined up (as well as it can be) with the surface parcels
  - f. Select Georeferencing > Rectify
  - g. The following pop up will appear:

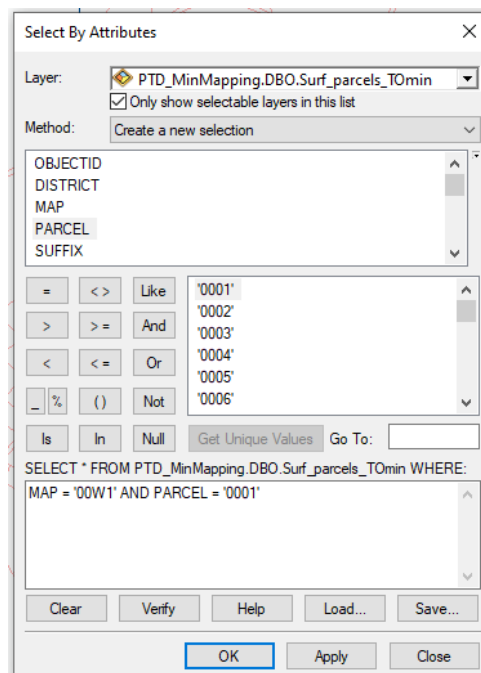


Remove the “1” from the end of the API in the “Name:” field, and set the “Output Location:” to  
R:\PTD\_MinMapping\data\Plats\_Georeferenced\YOURCOUNTY

## Map Records

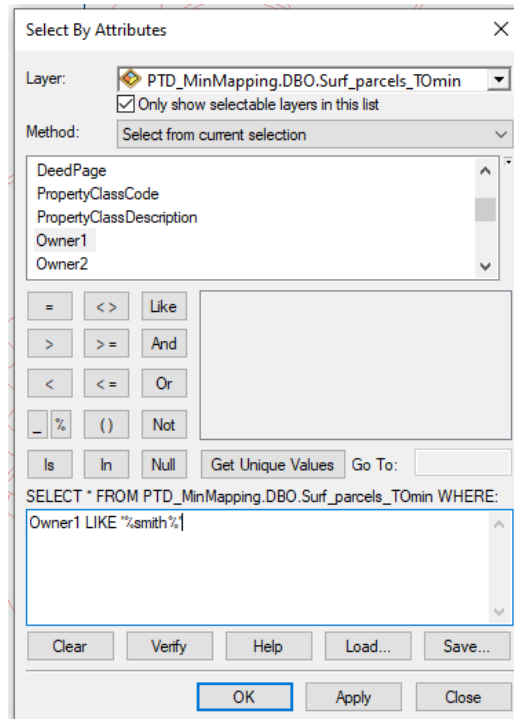
### Mineral Record Location Confirmation

16. Once the plat has been georeferenced, attempt to map all records associated with the API by using the method below.
  - a. First, look at the parcels on the plat for the owner name to see if there is a match.
  - b. Second, look at the parcels on the plat for any similar acreages and legal descriptions.
  - c. If there is a match, select all the surface parcels that should be mapped to the record.
  - d. The legal description may contain the surface parcels it corresponds with. If it does, right click on the PTD\_MinMapping.DBO.Surf\_parcel\_Tomin layer and click Selection> Make This The Only Selectable Layer. Select by attributes and make sure the layer is PTD\_MinMapping.DBO.Surf\_parcel\_Tomin. In the box, write an expression to select the map and parcel. The expression will be similar to MAP = 'XXXX' AND PARCEL = 'XXXX'. If the legal description lists more than one surface parcel, follow the above steps to select the first one. While the first parcel is still selected, begin the process again, making sure to change the selection method to 'Add to current selection.'





- e. Lastly, look for any owner matches in the area surrounding the plat. Right click on the surface parcels layer and click Selection> Make This The Only Selectable Layer. Select all the surface parcels in the plat area. Select by attributes and make sure the layer is

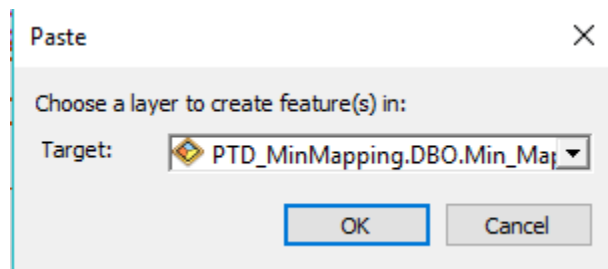
PTD\_MinMapping.DBO.Surf\_parcel\_s\_TOmin. In the box, write an expression to select parcels with a specific owner's last name. The expression will be similar to OWNER1 LIKE '%smith%' Choose Select from current selection. If any parcels are selected, look at them in the attribute table and see if any full names match the record that needs to be mapped.




- a. **If there is doubt about which parcel to map the record to (i.e. if there are multiple acreages/owner names that are not conclusive), change the “9999” in the Min\_ParID to an “8888” after you have merged the parcels.**

#### Map Parcel Geometry

17. At this point, right click on the Min\_Mapped layer and select Edit Features > Start Editing.
18. Select Copy  and then Paste . In the pop up that appears, Min\_Mapped should be the only layer available to paste into. Select OK.




19. More than one surface polygon may match the mineral parcel. If you copied and pasted more than one surface parcel, merge them together by selecting Editor > Merge from the Editor toolbar. Select OK in the dialog box that opens.
  - a. If you need to further adjust your newly mapped parcel, click Edit Vertices  on the Editor toolbar. Move the vertices until they generally match the geometry shown on the plat.

#### Map Related Parcels

20. If you have more than one ROOTID that matches the surface parcel (they all would have the same owner, legal description and/or acreages), copy and paste that number of polygons. Make sure to do this step after merging, if applicable.
21. Using the “Find” tool, select “wells” as the layer to find in and search for the API. Right click on the API in the results and select “Select”
22. Now that the well has been selected, open the “wells” attribute table and show only selected records.
23. Using your relationships that you built, navigate from wells > API\_Parcels > IASmin.
24. The IASmin table will show all records that are associated with that well. Begin by searching through the legal descriptions in this table to see if there is any information you can use to confirm the parcel. For example, sometimes the legal field will contain acreage or owner information which may match acreages or names on the plats.
25. Open a Notepad document.
26. Navigate to the end of the IASmin table to find the CleanParcelID field.
27. Copy all of the mapped CleanParcelIDs into the Notepad document, then into the Min\_Mapped table (Min\_ParID field), or directly into the Min\_Mapped table (Min\_ParID field).
28. Fill out the MP\_Method, MP\_Time, API\_1, API\_Relate, and MP\_Notes fields.
  - a. MP\_Method – the method through which the parcel was mapped. Will almost always be “oil and gas plat”.
  - b. MP\_Time – how long it took (in minutes) to map the parcel, split up between the number of records for the API. For example, if you mapped five copies of the parcel for API 4706100101, and it took you 20 minutes overall, you would put “4” in this field.
  - c. API\_1 – the API number with “0000” on the end.
  - d. API\_Relate – the API number without “0000”.
  - e. Notes – any supplementary information about the record should be stored here. This may include extra APIs associated with the record, a note about a well being located outside of the parcel, etc.

## Track Mapped Parcels

29. Once you have mapped the parcel, open the MinPar\_Tracking table.
30. Navigate to the ROOTIDs and APIs you just finished mapping.
31. Proceed to fill out the table for these selected records:
  - a. Mapped – Yes or no field to indicate whether that record associated with that API was mapped.
  - b. Mult\_API – indicates whether or not the record is associated with multiple APIs.
  - c. Not\_Mapped – if you do not map the records, indicate the reason you were unable to map it using the drop-down menu.
    - i. No Plat – no plat was found for the API.
    - ii. Not enough info to map
    - iii. Not in correct county – sometimes APIs do not get mapped to the correct county, and thus cannot be mapped
    - iv. Plat unreadable – some plats may have text that has become unreadable or the scanning process could have resulted in a poor quality document.
    - v. Super record – these are records which were created to hold information on multiple locations and are used to consolidate ownership for tax purposes.
    - vi. Plat/surface different – used when the plat and surface parcels are different enough that they cannot be connected.
  - d. MinPar\_Source – the method through which the record was mapped. This will almost always be “Plat”
  - e. Match\_owner – check the owner field in the IASmin table to see if the last name matches the last name in the Surface Owner, Oil and gas Owner, or Well Operator fields on the plat. Make note of these and mark the records in the tracking table accordingly.
  - f. Match\_legal – used to denote whether there is any useful information in the legal field. This can include acreages, owner names, or API numbers (usually only the last three or four digits).
  - g. Match\_acreages – use the measure tool  (make sure area is set to acres by choosing the down arrow next to the sum sign  $\Sigma$  ) to measure the area of the parcel you mapped and compare it to both acreage field on the plat. Acreages often don't match exactly. As long as they are relatively close, mark the match\_acreages field with Yes.
  - h. Notes – any supplementary information about the record should be stored here. This may include extra APIs associated with the record, a note about a well being located outside of the parcel, etc.

#### Track Mapped API/Plat


32. Next, navigate to the Plat\_Tracking table. Find the API you just mapped and fill out the fields accordingly.
  - a. Mapped minparcel – Whether or not you mapped a parcel associated with that API.
  - b. Has Plat – Whether or not a plat was found (on the DEP or WVGES websites) for that API.
  - c. Has DEP Doc – Whether or not any documents were found on the DEP website for that API.
  - d. Georeferenced Plat – whether or not you georeferenced a plat for that API.
  - e. Plat Source – Where you obtained the plat (WVDEP or WVGES).
  - f. Plat Different from surface – whether or not the plat and surface have different geometries.
  - g. In correct County – whether or not the well is in the correct county.
  - h. Readable plat – whether or not the plat is readable.
  - i. Plat well location matches point – whether or not the location of the well on the plat matches the location of the well in ArcMap, within the parcel geometry.
  - j. Stacked API – occasionally, several APIs will be stacked on top of each other that have very different plats or no plats at all. If this occurs, select “Yes” for this field.
  - k. Notes – any supplementary information about the well/plat.

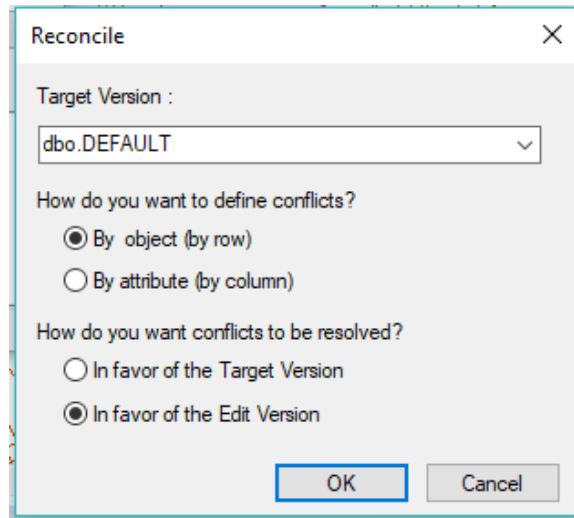
#### Review Records


33. Periodically, go through your Min\_Mapped table and check to make sure you do not have any duplicate records mapped. If you do have duplicates, and they match separate API/parcel geometries, merge them together, retaining the information for the parcel with the lowest API number, i.e. if you have two copies of record 31049999000474740000 where one is linked to 4706101658 and one to 4706101698, make sure to put “4706101698” in the notes field of the record for 4706101658 and merge the two polygons together, retaining 4706101658.
  - a. If the two polygons share edges, one large polygon will be created. Make a note of this in the notes field (“4706101698, two distinct parcel geometries, polygons share edges”)
  - b. To avoid mapping duplicates, before beginning on a set of records from one API, check the PTD\_MinMapping.DBO.MinPar\_Tracking table for each ROOTID to see if it has already been mapped because it was associated with an earlier API. If it has, it does not need to be mapped again. The table should have all associated APIs in the notes field. If it was unable to be mapped, check the new plat for information that could allow it to be mapped.
34. After mapping records and filling out the tracking tables, be sure to save edits.

35. Verify MinPar\_Tracking table is complete for assigned county.
  - a. Check Mult\_API field
    - i. If no, Notes field should not contain any APIs.
    - ii. If yes, Notes field should not be null.
  - b. Check Mapped field
    - i. If no, Not\_Mapped field should not be null and MinPar\_Source, Match\_owner, Match\_legal, Match\_acres fields should be null.
    - ii. If yes, Not\_Mapped should be null, and MinPar\_Source, Match Owner, Match Legal, Match acres should not be null.
36. Verify Plat\_Tracking table is complete for assigned county.
  - a. Check Mapped minparcel field
    - i. If not null and Has Plat is yes, the following fields should not be null: Has DEP doc, Georeferenced Plat, Plat Different from surface, In Correct County, Readable Plat, Plat source, plat well location matches point, and Stacked API.
    - ii. If not null and Has Plat is no, the Has DEP doc field should not be null and the rest of the fields should be null.

Reconcile Edits to the Geodatabase

37. At least once a week, you should reconcile and post your edits to the default version.
  - a. Make sure you are in editing mode.
  - b. Turn on the versioning toolbar.
  - c. Reconcile 



- d. Post 
- e. You can save your MXD at this time.