# Datapages
# Exploration Objects™

## User Guide
*Version 1.2.3*

**AAPG**
**Datapages**, Inc.
Knowledge from the Source

# Welcome.

**Datapages Exploration Objects™** – DEO – is a web-based search-and-retrieval system that enables exploration geologists to find geo-referenced, GIS-ready maps, cross-sections, seismic lines and other exploration objects faster and more easily than ever before.

**The key:** DEO mines a deep index of the AAPG Datapages Archives, which include all publications of the American Association of Petroleum Geology (AAPG) starting in 1917 and more than 55 allied geological organizations.

The continuously growing DEO index currently comprises over half a million entries – with some 385,000 captioned figures and 67,000 tables, and every map in the Archives published since 1989.

DEO puts it all at your fingertips – literally.

With DEO, exploration geologists can say goodbye to the time-consuming chores of search and retrieval – digging through piles of publications to find the maps, charts, tables and other exploration objects they need, extracting those objects, geo-rectifying them and making them ready for import into GIS.

DEO does all the spadework for you, with the power and speed of next-generation information technologies. With DEO, what used to take hours or days, you can now do in minutes – and with greater thoroughness than ever, bringing new levels of granularity to analysis and evaluation.

**The payoff?** Major savings in labor, time, and dollars. And better-informed decision-making – with less delay.

**Bottom line:** DEO can make help any organization involved in oil and gas exploration more competitive and more profitable.

This updated User Guide gives you an overview of how DEO works and how you can get the most out of DEO's wide-ranging capabilities.

Use the Guide as a walk-through, step-by-step. Or simply dive into DEO and give it a try, using this Guide as a look-up if you have questions. Built by petroleum geologists, for petroleum geologists, DEO is flexible, intuitive – and incredibly easy to use.

**Already familiar with the earlier DEO interface?** This updated User Guide covers all the enhancements in the current version. *For an index of major new features, see page 29.*

**Not yet a DEO subscriber?** Visit deo.datapages.com – and request a free Webinar or Test Drive

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## Feedback: Please!

Questions? Comments? Opportunities for improvement? Please let us know! Simply send us an email: aapgdata@aapg.org



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# The DEO **Interface**



**Tip:** Zoom-in on the DEO background map by using the Zoom-in/zoom-out slider – or by double-clicking on the Map Viewer.

**1** **Map Viewer – with the interactive DEO background map.** "Grab" the map with your mouse to move from one area to another.

**2** **Zoom-in / zoom-out slider.** Move the slider up to zoom in on the DEO Map Viewer. To zoom out, move the slider down.

**Tip:** Also zoom-in by double-clicking on the Map Viewer.

**3** **Restore initial map extent.** Click on this "world" icon to return the Map Viewer to DEO's default startup map coverage: the continental U.S.

**4** **Basemaps.** DEO allows you to view maps and other objects precisely located on a variety of background map types: Topographic (the DEO default), satellite Imagery, Esri Street Map, Oceans, Terrain, Physical, and more. To view an object on a background map type you find useful, click on the Basemaps icon. Then, click on the "thumbnail" image for the desired map-type in the dropdown Basemaps gallery. *Learn more. See Viewing Options, p. 25.*
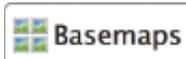
**5** **Selection Tools** allow you to search for objects within specific areas by "drawing" on the DEO background map. *Learn more. See Finding Objects: MapSearch, p. 13.*

**6** **Labelling overlay.** Click on this tool to see geographic labels overlaid on the DEO background map. This can be useful when using Basemap options that do not show country borders or other geographic labels. *Learn more. See Viewing Options, p. 25.*

**7** **Basins overlay.** Click on this tool to see the Tellus Basins map overlaid on the DEO background map. *Learn more. See Viewing Options, p. 25.*

**8** **WordSearch text box.** To search for objects in or related to a specific **location, basin** or **formation**, type the name of the location, basin or formation in this box. *Learn more. See Finding Objects: WordSearch, p. 15.*

**9** **Toggle search result list.** Click on this tool to view the list of search terms created the last time in each session you entered text into the WordSearch text box. To restore the list of results for a listed search term, click on that search term.

**10** **Help / About button.** Click on this button to get help in using DEO or information about DEO. *If you need more help, please let us know. Simply send us an email: aapgdata@aapg.org*

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# The DEO **Interface**



**Tip:** Pause your cursor over any DEO tool icon and a pop-up will identify the tool's function. Example: see below under "Pop-up tool help."

⑪ **Items and Cart tabs.** The Items tab lists items found in a DEO search. The Cart tab lists items you have selected for closer inspection or possible download. Click on the tab you want to view (the Items tab is the DEO default). The active tab will be darkened.

⑫ **Zoom to items.** Click on this "magnifying glass" tool to zoom the Map Viewer to the area on the background map that includes all objects listed on the active tab.

⑬ **Clear.** Click on this "broom" icon to clear items from the active tab. Note: Only the active tab is cleared when you click on the "broom" tool. If you clear the Items tab, the Cart tab will not be cleared – and vice versa.

⑭ **Step back / Step forward.** Click on the left-pointing arrow to restore the Search Results list from the immediately preceding search (if any) in your current DEO session. Click on the right-pointing arrow to restore the Search Results list from the immediately succeeding search (if any).

⑮ **Footprints Visible.** Click on this button and DEO will show in the Map Viewer the locations and/or footprints of all items in the current Search Results list – as wireframes, dots or lines. When activated, the Footprints Visible button is darkened.

⑯ **Filter Settings**. Click on this tool to drill down to items of interest, filtering the current Search Results by journal, map type, keywords, Point of Interest or map area (in kilometers). When filtering has been activated, the Filter Settings button will darken and a "Remove Filter" icon will appear next to it. To deactivate filtering, click on the Remove Filter icon. *Learn more. See Fine-Tuning Search Results: Filtering, p. 16.*

⑰ **Search Results list area.** On the Items tab, this is the area where DEO lists search results. For each listed item, the list includes in separate columns information on the source publication: Caption (if any), Article title, Author(s), the Journal, and publication Year. Item listings can be ordered alphabetically (ascending or descending: a - z or z - a) by Caption, Article, Author and Journal, and by Year (ascending or descending: oldest - newest or the reverse).

**Pop-up tool help.** Move your cursor over any DEO tool icon and a pop-up will identify what you can do with the tool.

• When you use a Selection Tool to "draw" an area of interest on the background map, a pop-up tool tip will remind you how to use the tool.

# How DEO **Displays Search Results**
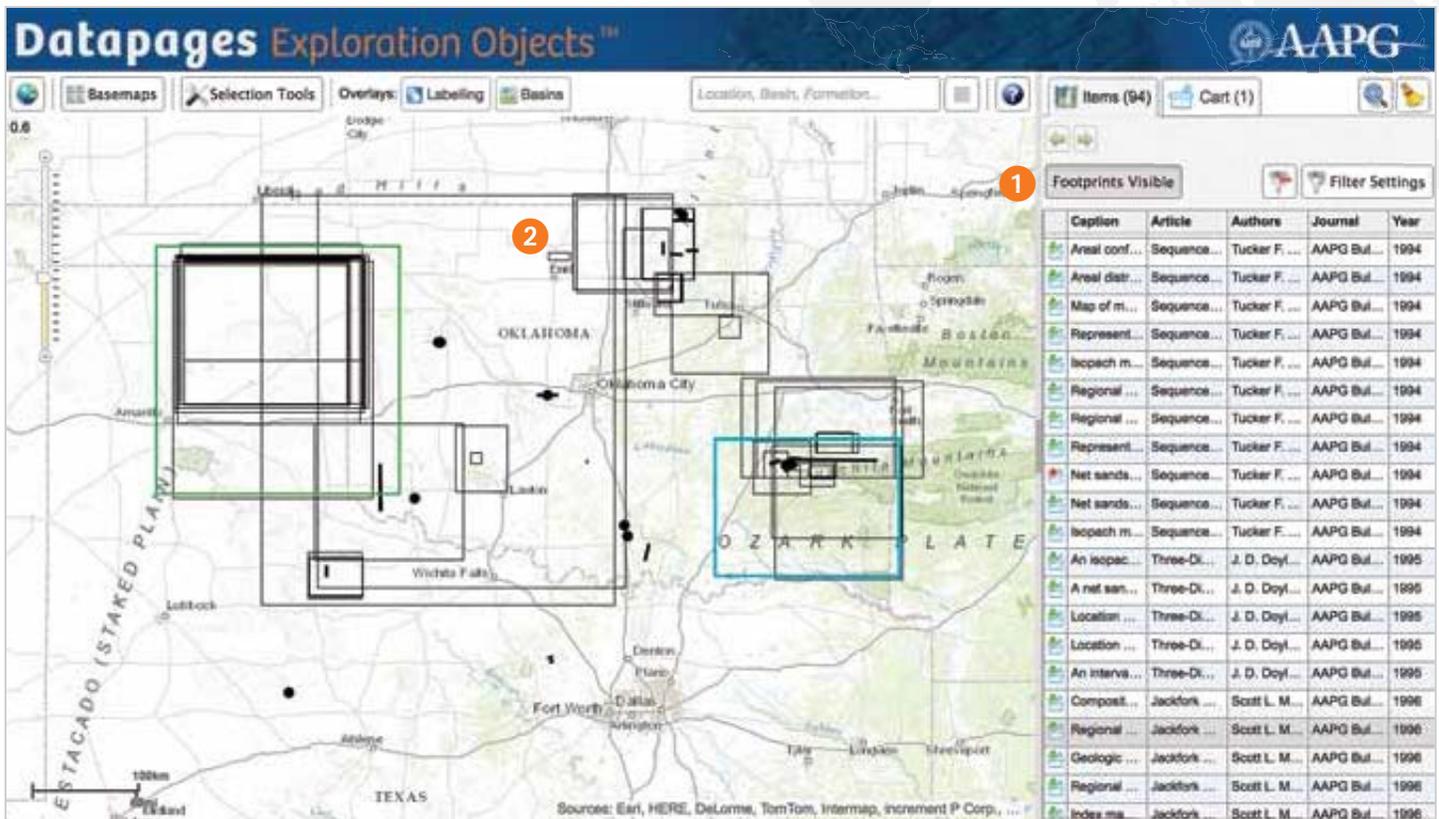


**Tip:** Mouse over any listing in the Search Results list. The corresponding wireframe, dot or line showing that item's geo-referenced location and/or footprint in the Map Viewer will turn from black or green to cyan.

**1** **Footprints Visible:** When Footprints Visible is activated, DEO displays in the Map Viewer the locations and/or footprints of all items in the Search Results list.

When activated, the Footprints Visible button is darkened.

To remove footprints from the Map Viewer – to "hide" them – click on the darkened Footprints Visib button. The deactivated button will be white.

**2** **Wireframes, dots or lines** show the locations and/or footprints of items listed in the Search Results list and in the Cart list.

- **Dots and lines** show the locations and/or foot prints of seismic lines and cross-sections that cover areas too small or too narrowly linear to be shown as quadrilateral wireframes in the DEO Map Viewer.



**Tip:** To select an item whose location and/or footprint is shown in the Map Viewer by a dot or a line, simply click on the dot or line.

# How DEO **Displays Search Results**



**Tip:** To select an item whose location and/or footprint is shown in the Map Viewer by a dot or a line, simply click on the dot or line.

**③** **Green** wireframes, dots or lines show the locations and/or footprints of all items currently in the Cart. These are displayed on both tabs, even when Footprints Visible s turned off – and even when the Search Results list has been cleared or replaced.
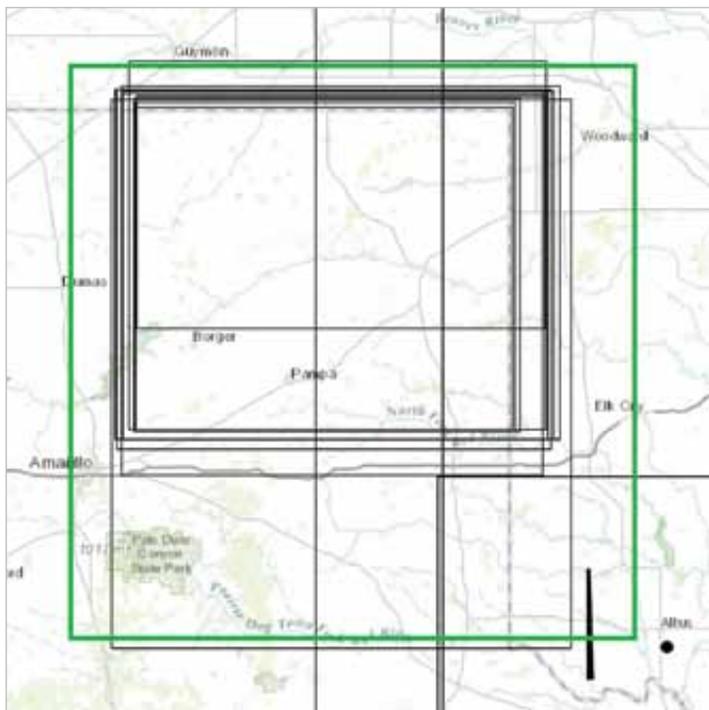
**④** **Cyan** wireframes, dots or lines show the locations and/or footprints of items you mouse over in the active tab.
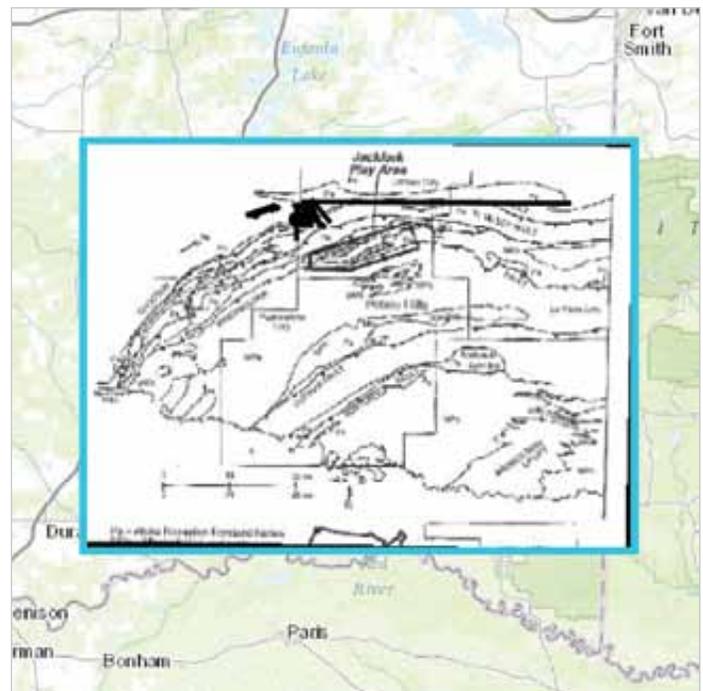
# How DEO **Lists Search Results**
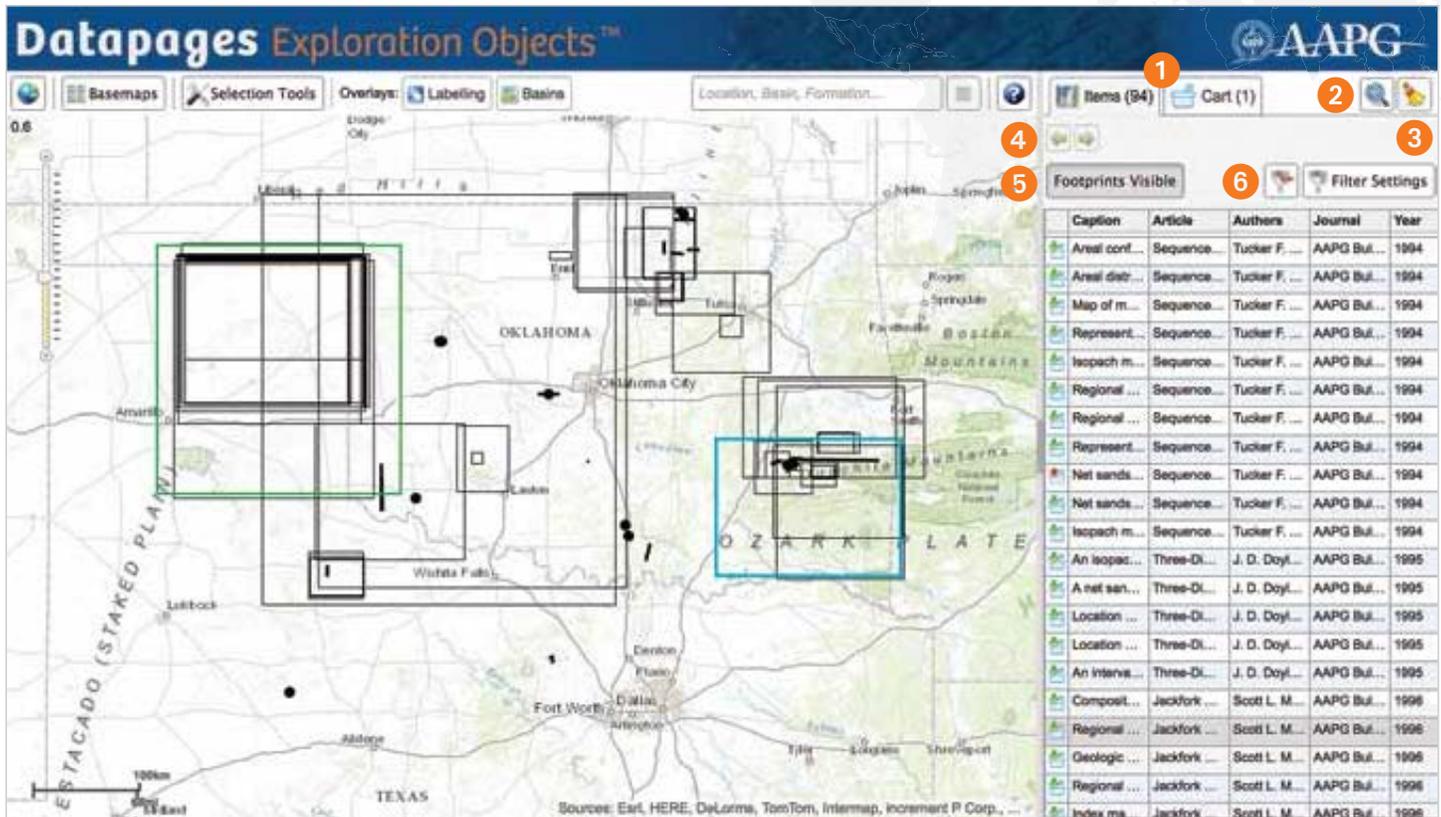


**①** **The Items and Cart tabs** indicate that in this example there are 94 items listed on the Items tab and one item in the Cart. The active tab is darkened.

**②** **Zoom to items.** Click on this "magnifying glass" tool to zoom the Map Viewer to the area on the background map that includes all objects listed in the active tab.

**③** **Clear.** Click on this "broom" icon to clear items from the active tab.

> *NOTE: Only the active tab is cleared when you click on the "broom" tool. If you clear the Items tab, items will not be cleared from the Cart tab – and vice versa.*

**④** **Step back / Step forward.** Click on the left-pointing arrow to restore the Search Results list from the immediately preceding search (if any) in your current DEO session. Click on the right-pointing arrow to restore the Search Results list from the immediately succeeding search (if any).

**⑤** **Footprints Visible:** When the Footprints Visible button is activated, the button darkens and DEO displays in the Map Viewer the locations and/or footprints of all items listed in the Search Results list. Footprints and/or locations are shown as wireframes, dots or lines.

To turn off – or "hide" – these wireframes, dots and lines, click on the darkened Footprints Visible button.
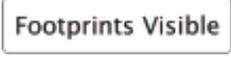
**⑥** **Remove Filter:** When displayed, the Remove Filter icon indicates that the current Search Results list has been filtered. (In this example, we used the MapSearch tool to retrieve items in the U.S. State of Oklahoma and then filtered the resulting list to include only items published in the AAPG Bulletin.)

To deactivate filtering and restore the unfiltered Search Results list, click on the Remove Filter icon.

*Learn more. See "Fine-Tuning Search Results: Filtering," p. 20.*

# How DEO **Lists Search Results**



## The Search Results list

The Search Results list supplies information on each listed item arranged in separate columns:
**Caption:** the caption (if any) for the item in the article from which the item was extracted
**Article:** the title of the article
**Authors:** the author(s) of the article
**Journal:** the publication in which the article appeared
**Year:** the year in which the article was published.



**Tip** "Hover" or pause your cursor over the information box in any column and DEO will display the full text of that information in a popup.



*Example: Pause your cursor over an information box in the "Caption" column and DEO displays the full text of the caption (if any) for the item in the article from which the item was extracted.*

**6** **Add to Cart:** Click on this icon to add an item to the Cart for closer inspection or potential download

To remove an item from the Cart, click on the "Remove from Cart" icon

# How to **Customize The DEO Search Results List**



Configure the DEO Search Results list to make it easier to find the items you need.

- **Adjustments affect only the active tab.** When you make adjustments to the Search Results list configuration on the active Items tab, the Cart list is unaffected – and vice-versa.

- **Customize per session.** Adjustments you make in the Search Results list will remain for the duration of a session, no matter how many separate searches you conduct in that session. But these adjustments will not carry over from one session to the next.

- **Restore default list configuration:** Reload the DEO website page (refresh your Internet Browser).

*NOTE: This will clear both your Items tab and your Cart.*

**Resize the Search Results list** to increase or reduce the space for contextual / source-article information.



To change the width of the Search Results list, place your cursor on the vertical bar at the left edge of the list. When the cursor turns into a resize slider icon, click and hold. To widen the list, move the slider icon to the left. To reduce list width, move the slider icon to the right.



**Resize columns** to make room for information of particular interest.

- Columns can be made wider or narrower.
- Increasing the width of one or more columns may push other columns off the Search Results list. Widen the list to accommodate wider columns. *See "Resize the Search Results list" above.*



To resize a column, move your cursor to the header box above that column and place it on the right border of the header box. When the cursor turns into a resize slider, click and hold. To widen the column, move the slider to the right. To reduce the column's width, move the slider to the left.

# How to **Customize The DEO Search Results List**

**Rearrange Search Results list columns** to make it easier to find items of interest.



To move a column, move your cursor to the column header box for the column you want to move. The cursor will turn into a "hand." Click and hold.

Below the column header bar, a red-and-white box will appear, indicating that you have not yet moved your cursor far enough to complete the column move.





Without releasing your cursor hold, move cursor left or right to the desired position for the column and release the cursor hold.

A green-and-white box will appear below the column header bar, indicating that you have moved your cursor far enough to complete a column move.



**Tip:** Do not release your cursor hold until you've completed the column move. If you click and release before completing the move, DEO will reorder the list. *See "Reorder the Search Results list" below.*



**Reorder / sort the Search Results list** to make it easier to find what you're looking for.

Item listings can be ordered alphabetically (ascending or descending: a - z or z - a) by Caption, Article, Author and Journal, and by Year (ascending or descending: oldest to newest or the reverse).



Move your cursor to the column header for the criterion by which you want to reorder the Search Results list: Caption, Article, Author, Journal or Year.

- **Click once to reorder the list in ascending order** by the criterion you've selected. The reordering will be shown by an upward-pointing triangle in the column heading you've clicked on.





- **Click twice to reorder the list in descending order** by the criterion you've selected. The reordering will be shown by a downward-pointing triangle in the column heading you've clicked on.





- **Toggle between ascending and descending order** by clicking again on the same column heading.

- **To switch from one criterion of reordering to another** click on a different column heading – once for ascending order, twice for descending order.

**Tip:** To undo or remove reordering, move the column. DEO will restore the original, unordered list.

# How DEO **Displays Selected Items**



For this example, we have used the MapSearch tool to select the area around Trinidad and Tobago by "drawing" the area on the DEO background map.

**1** **Select an object.** Click on an item in the Search Results list.

- If a **dot or line** in the Map Viewer shows the location of an item, simply click on the dot or line to select the item. You do not need to scroll the Search Results list to the item's listing.



**2** When you select an item whose location and footprint are shown in the Map Viewer by a **quadrilateral wireframe**, DEO zooms to the item in the Map Viewer and displays it in the Map Viewer in its precisely geo-referenced location.

**3** Below the Map Viewer, DEO displays a box containing information on the source of the selected item.

- When you select an item by clicking on a dot or a line showing the item's location in Map Viewer, the selected dot or line will turn from black to cyan and DEO will display source information in a box below the Map Viewer. DEO will not zoom to the selected item and will not display the item in the Map Viewer. Instead, DEO displays a "thumbnail" image of the item in the info box.
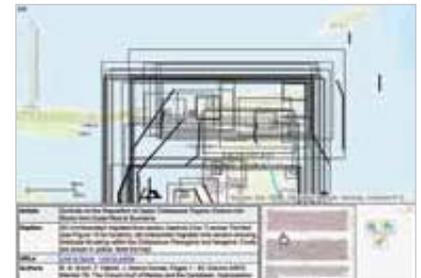


To view the item, click on the thumbnail in the info box.

DEO will display the item in a popup window covering the DEO interface.

# How DEO **Displays Selected Items**
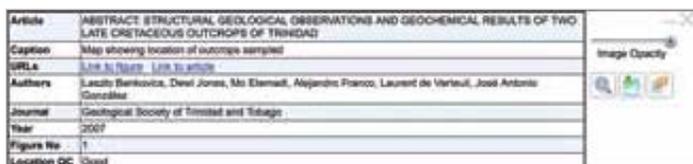




## Contextual Information

Below the Map Viewer, DEO displays complete information on the source of the selected item.

- **Title of the source article**

- **URLs**: clickable links that allow you to examine the selected item in its original, published context.

  – **Link to figure**: View the selected item in the AAPG Datapages Archives. The page of the source article on which the item was published will appear in a separate Browser window.

  – **Link to article**: View the article in the Archives from which the selected item was extracted. The article will appear in a separate Browser window.

> NOTE: *DEO subscription includes online access to the AAPG Datapages Archives. DEO Test Drive allows access to source articles and objects in the their original contexts if you are an AAPG Datapages Archives Subscriber or on a pay-per-view basis.*

- **Authors** of the source article

- **Caption** for the item (if any) in the source article

- **Journal** in which the source article was published

- **Year** of publication

- **Figure No**. of the selected item in the source article

- **Location QC**: qualitative assessment of geo-referencing accuracy.

You may need to scroll down in the source information box to view all of this information.
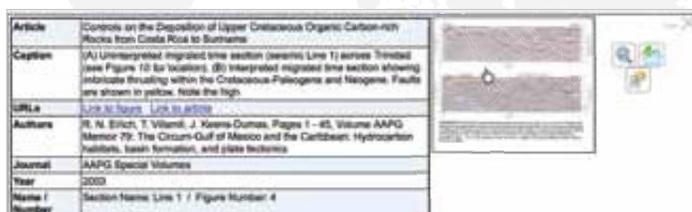
**Seismic lines & cross-sections.** When you select an item whose location is shown in the Map Viewer by a dot or a line, the source information box displayed below the Map Viewer includes a "thumbnail" image of the selected item.

When you select these items, their info boxes do not include an Image Opacity slider – since seismic lines and cross-sections cannot be displayed on the Map Viewer with accurate geo-location.

To view the item, click on the thumbnail in the source information box.

DEO will display the item in a popup covering the DEO interface
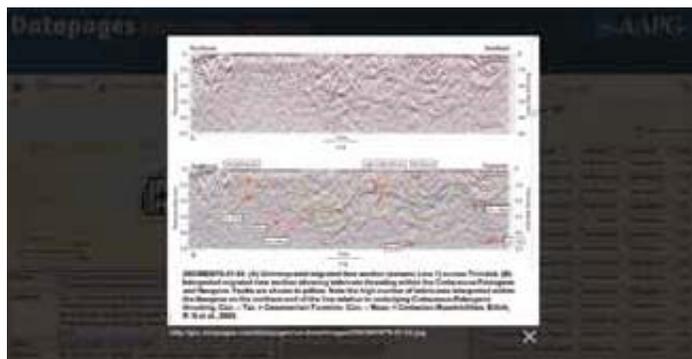


To close the popup, click on the "X" under the lower right corner of the item.

# How DEO **Displays Selected Items**



## Source Information Box Tools

The source info box for selected items contains a set of useful tools.

**1** **Opacity adjustment: selected item.** Use the info box opacity slider to adjust the opacity of the selected item – and see what's "behind" the item on the Map Viewer. *Learn more. See Opacity Adjustment, p. 27.*

**2** **Deselect** an item by clicking on the "X" in the upper right corner of the info box.

**3** **Zoom to this map image.** Click on this "magnifying glass" tool in the info box to zoom to the selected item.

You can also zoom to the selected object by clicking on the item's listing in the Search Results list.

NOTE: When you click on the "Zoom to items" tool in the Items or Cart tab – also a "magnifying glass" icon – DEO zooms to the area that includes all objects listed in Search Results or the Cart.

**4** **Add to Cart.** To add the selected item to your Cart for closer inspection and potential download, click on the "Add to Cart list" icon in the info box or in the item's listing in your Search Results list.

When an item is in your Cart, the green arrow pointing downward in the icon will change to a red, upward-pointing arrow. To remove the item from your Cart, click on the icon with the red, upward-pointing arrow located in info box or in the item's listing in your Search Results list or Cart.

**5** **Select all Objects from Article.** Click on this icon to retrieve all objects in the source article from which the selected item was extracted.

**6** To restore your original search results list, click on the left-pointing "step-back" arrow above the Search Results list.

# Finding Items: Two Methods

DEO gives you two easy, powerful ways to find the maps, cross-sections and other objects you need.

**MapSearch**, via the Selection Tools button in the DEO toolbar, allows you to

 Selection Tools

search for maps and other objects within specific areas by "drawing" on the DEO background map.

**WordSearch** lets you search for objects in

Location, Basin, Formation...

or related to a specific **location, basin** or **formation** by typing the name of the location, basin or formation into the WordSearch text box.

## Finding Objects: MapSearch

With MapSearch, you can search within specific areas by "drawing" on the DEO background map.

- Move the background map in the Map Viewer so that it shows the area you're interested in. Zoom in or zoom out as needed. (In this example, we've moved to the northwest "shoulder" of South America.)

**1** Click on the Selection Tools button in the DEO toolbar.

DEO will show you three options:
– "Draw area of interest"
– "Draw line & buffer by __ km"
– "Select large maps / Set point to select maps"

## MapSearch: Select large maps

To retrieve very large maps (> 1,000,000 km$^2$) that cover a point of interest, click on "Set point to select maps" in the Selection Tools box. Then,click on a point of interest in the Map Viewer.
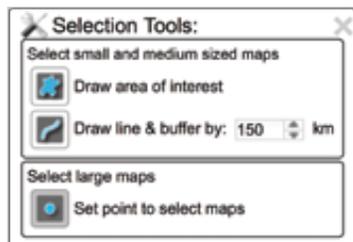
## MapSearch: Drawing an area of interest

Search for objects within a specific area by "drawing" a perimeter on the DEO background map.

**2** Click on "Draw area of interest in the Selection Tools box.
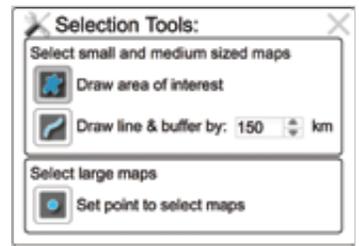
**3** Move your cursor to the DEO background map. Then, click and hold – and move the cursor to "draw" the perimeter of the area you're interested in.

- In the Search Results list, DEO displays a list of items found within the specified area. If Footprints Visible is activated, wireframes, dots and lines will show item footprints and/or locations in the Map Viewer.

# Finding Items: Two Methods
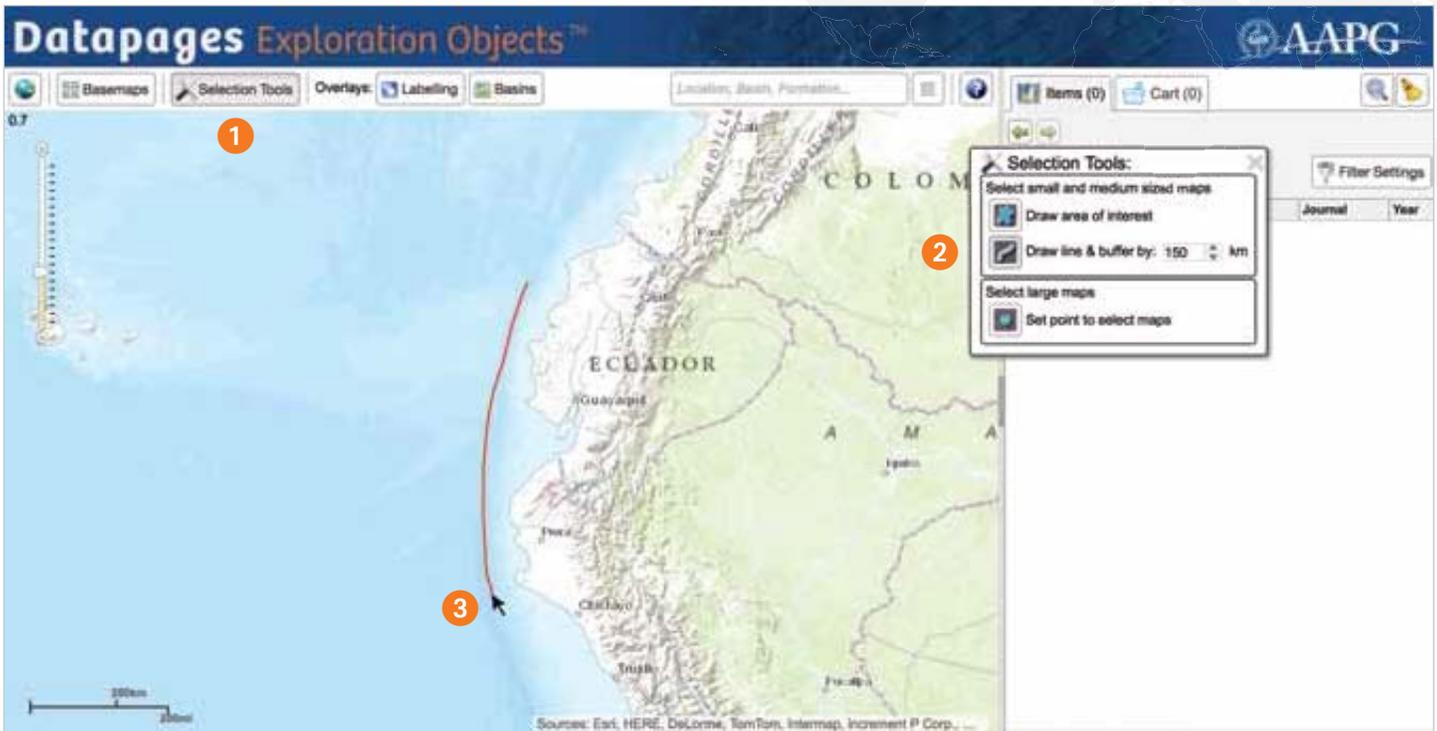


## MapSearch: Searching along a line

Suppose you want to search for maps or other objects in an area along a line – within a certain distance from a coastline, a topographic feature, a roadway or the like.

- Move the DEO background map so that it shows the area you're interested in. Zoom in or zoom out as needed.

**1** Click on the Selection Tools button in the DEO toolbar.

**2** Click on "Draw line and buffer by ___km" in the Selection Tools box.
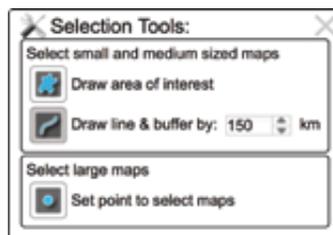
- Set the "buffer distance" – the distance from your line within which you want DEO to search: 50 to 300 km. The default distance is 150 km. Click on the fill-in box and type in the number of miles, or use the clickable toggle to increase or decrease the distance in 50-km increments from the 150-km default.

**3** Move your cursor to the DEO background map. Then, click and hold – and move the cursor to "draw" the line along which you want DEO to search. DEO will darken a perimeter around the line you draw according to the buffer you've specified.
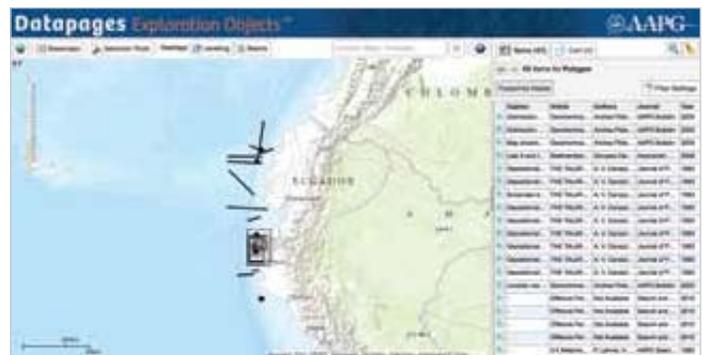




- In the Items list, DEO lists items found within the specified area. If Footprints Visible is activated, wireframes, dots and lines on the background map show item footprints and/or locations.

# Finding Items: Two Methods

## WordSearch: Search by Text – Location, Basin, Formation

**To search for objects in or related to a specific location, basin or formation,** type the name of the location, basin or formation in the WordSearch text box in the toolbar at the top of the DEO interface.

`Location, Basin, Formation...`

**WordSearch search terms may include:**

- Country name
  "Afghanistan" to "Zambia"

- Region name
  i.e. geological regions: "Altay-Sayan Folded Region," "Volga-Ural Region"

- State / Province
  "Colorado" "Alberta, (Province in Canada)" "AAPG-CSD Geologic Province," "Zhejiang Province"

- Field
  "Abadi Field" to "Zuunbayann Field"

- Basin
  "Aaiun-Tarfaya Basin" to "Zumba Basin"

- Formation
  "Abelgas Formation" to "Zuunbayann Formation"

As soon as you've keyed in two or more letters, DEO will list search terms that *start with what you've entered*, showing in parentheses how many objects DEO has found for each of these search terms.

*Example:* When you type in "Co" DEO returns a list of all terms that start with "Co" – "Coahuila Platform (43)" to "Cozzette Sandstone Member (2)"

Continue typing – adding specificity – and the list will shorten accordingly.

In parenthesis after each listed search term, DEO gives the number of items retrieved for that term.



```
Co                          ✕
Coahuila Platform (43)
Coahuila Province (1)
Coal Basin (4)
Coal Gulch Field (7)
Coalinga Field (1)
Coalspur Formation (10)
Coast Range (10)
Coban Formation (5)
Cobia Field (1)
Cochrane Formation (6)
Cocinetas Basin (1)
Cockfield Formation (1)
Cocobeach Group (1)
Cocos Plate (8)
Cod Field (1)
```

*Example:* If you type in "Colorado," DEO will give you the following list:

Colorado (State in United States) (1203)

Colorado Basin (19)

Colorado Formation (3)

Colorado Group (25)

Colorado Plateau Province (2)

Colorado Province (2)

Colorado River Stage (1)

Colorado-Wyoming Kimberlite Province (1)

This means that DEO has found 1203 items for the search term "Colorado (State in United States)," 19 for "Colorado Basin," 3 for "Colorado Formation," and so on for the other terms listed.

**Click on any search term in this list**. DEO will list all items found for that search term – with wireframes, dots and lines on the DEO background map showing the footprints and/or locations of listed items if Footprints Visible is activated.



In this example, we've clicked on the WordSearch search term "Colorado (State in United States) (1203)."

**To return to the list of search terms** created the last time you entered text into the WordSearch text box in your current session, check the "Toggle search result list" tool next to the WordSearch text box.

**To clear search results**, click on the "broom" icon on the right at the top of the Items tab.

# Fine-Tuning Search Results: **Filtering**
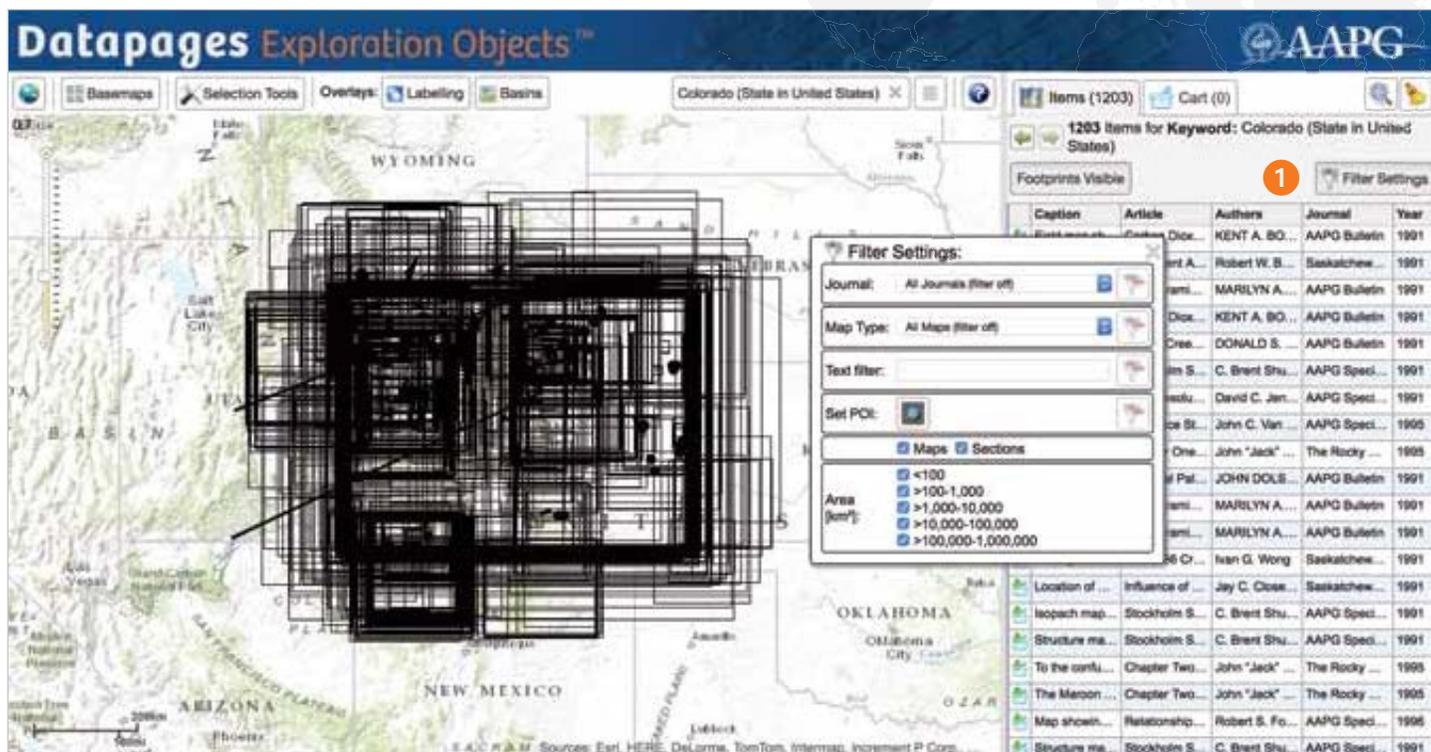


With DEO's Filtering tools, you can quickly and easily narrow search results to a manageable set, relevant to your needs and interests.

Most DEO searches retrieve hundreds – often thousands – of items. For example, a WordSearch for "Colorado (State in the United States)" returns a list of 1203 items – namely, every indexed object in whose title or caption the U.S. State name "Colorado" occurs.

Sorting through these items one-by-one to find what you're looking for would be far too time-consuming.

That's where DEO Filtering comes in.

## Filtering Options

DEO Filter Settings operate on your current Search Results list, reducing the number of items listed and, accordingly, the number of wireframes, dots and lines showing in the Map Viewer the footprints and/or locations of items listed in the Search Results list when "Footprints Visible is activated.

**1** To view filtering options, click on the Filter Settings button on the Items tab.
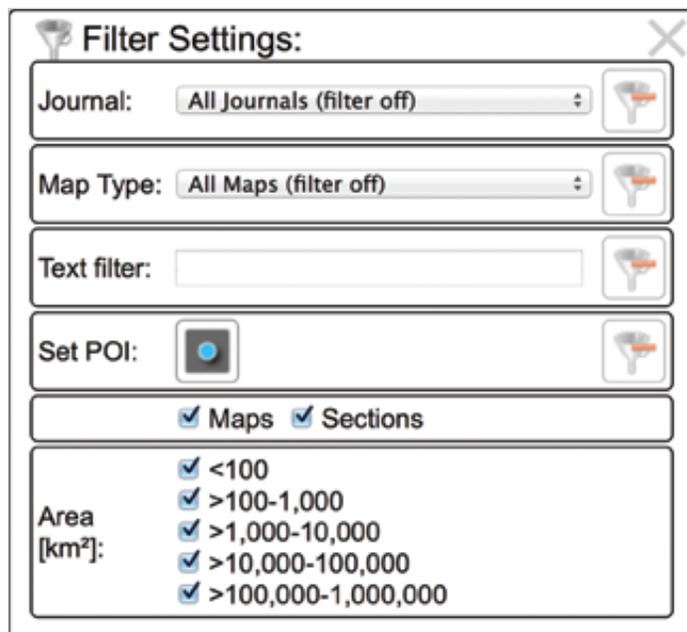
# Fine-Tuning Search Results: **Filtering**

## Journal

When you click on the Journal dropdown menu in the Filter Settings box, DEO displays a list of all – and only – publications from which items listed in the current Search Results list were extracted.
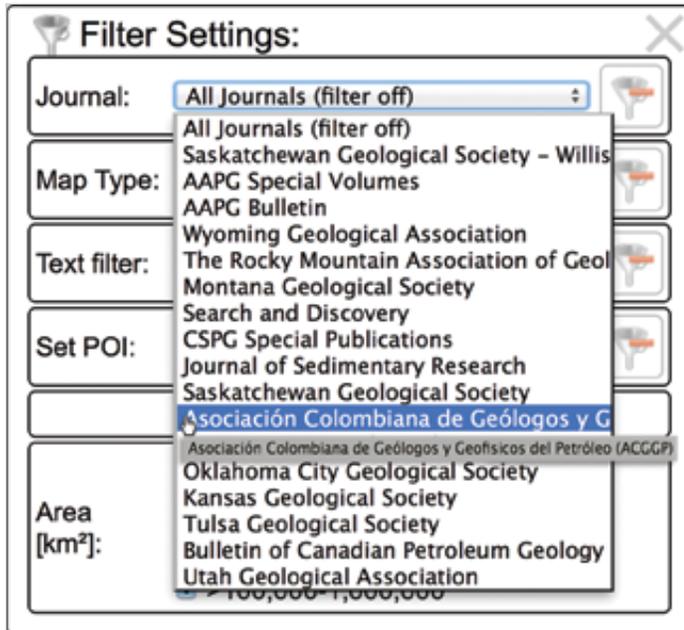
**Tip:** Hover over any listed publication and DEO displays the full name of the publication in a popup.
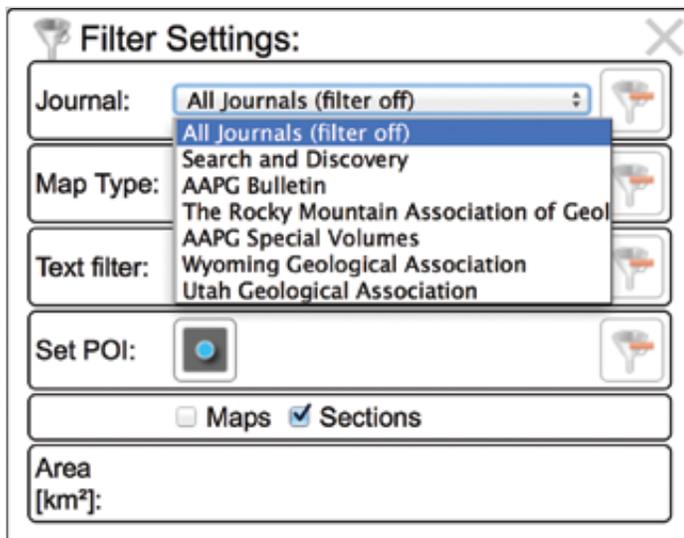
When you shorten a list of search results via other filtering options, DEO shortens the Journal list accordingly. Here we have filtered our original State of Colorado results list to include only "Sections" (as opposed to "Maps"). Accordingly, DEO has shortened the Journal list from 17 publications to six

publications – namely the six publications from which the items remaining in the filtered list were extracted.

- Click on the Filter Settings button.
- Click on a publication listed in the Journal dropdown menu. DEO will eliminate from the Search Results list items that were not extracted from the selected publication.
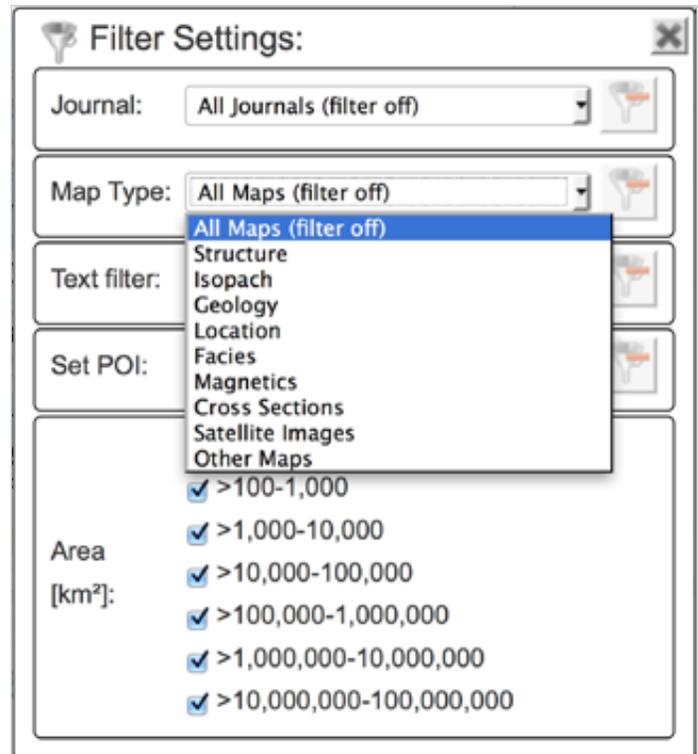
## Map Type

When you click on the Map Type dropdown menu in the Filter Settings box, DEO displays a list of all – and only – map types of items listed in the current Search Results list.

Map types *not* found among items in our State of Colorado search results – Bathymetry or Magnetic, for example – are not shown in the map-type list.

Here again, when you shorten the list of items in your Search Results list via other filtering options, DEO shortens the map-type list accordingly.

- Click on the Filter Settings button.
- Click on a map type in the dropdown menu. DEO will eliminate from the Search Results list items that are not of the selected type.

# Fine-Tuning Search Results: **Filtering**



## Text filter

When you type a keyword or phrase into the Text filter box. DEO will restrict the current Search Results list to items whose titles, captions or supplementary metadata added by AAPG Datapages geologists include the keyword.
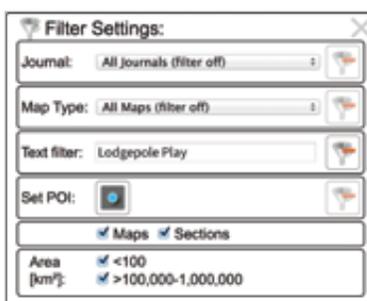


- Click on the Filter Settings button.
- Type a keyword or phrase in the Text filter box.



In this example, typing "Lodgepole Play" into the Text filter box reduces our State of Colorado search results from 1203 items to 5 items – namely, the 5 items in our original list in whose titles, captions or supplementary data the phrase "Lodgepole Play" occurs. The Filter Settings box also shows that the areas of these 5 remaining items fall into just two ranges: < 100 km$^2$ and >100,000 - 1,000,000 km$^2$.

## Set POI (Point Of Interest)

**Tip:** It is often helpful to turn off "Footprints Visible" before locating and setting your Point Of Interest. Then, when you've filtered results via "Set POI," click on "Footprints Visible" again to display footprints and/or locations of the items remaining in your filtered Search Results list.

With this filter setting, DEO restricts search results to items in, near or covering a point of interest you specify on the DEO background map.

1. Click on the Filter Settings button.

2. Adjust the Map Viewer as needed to make it easier to find a point of interest. Move the DEO background map, zoom in or out as needed, turn off Footprints Visible, etc. *In this example, we have turned off Footprints Visible.*

3. Click on "Set POI" in the Filter Settings box.

4. Move your cursor to your point of interest and click. *In this example, we set a POI in the southwestern corner of the U.S. State of Wyoming.*

In this example, DEO reduced our State of Colorado search results from 1203 items to 208 items in the selected area of interest.

# Fine-Tuning Search Results: **Filtering**

## Maps vs. Sections

DEO Filter Settings allow you to exclude Maps or Sections from search results. "Maps" are objects whose footprints are represented by quadrilateral wireframes in the Map Viewer. "Sections" are represented in the Map Viewer by dots or lines because their areas are too small or too narrowly linear to be accurately shown in the DEO Map Viewer by quadrilateral wireframes; these include cross-sections and seismic lines.

- Click on the Filter Settings button.
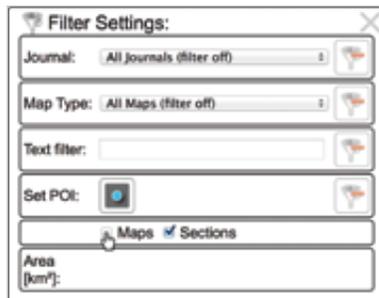
  If both Maps and Sections are listed in your current Search Results list, both "Maps" and "Sections" will be checkmarked in the Filter Settings box.



- Click the checkbox for the object-type you want to *exclude* from your search results – either "Maps" or "Sections." (Move your cursor to the checkmark to the left of the object-type you want to exclude; click to "uncheck" that object-type.)

  DEO will eliminate all items in the "unchecked" category from the Search Results list.



In this example, excluding "Maps" and restricting search results to "Sections" reduces our State of Colorado search results from 1203 items to 204 items – namely, all and only those items included in our original unfiltered Search Results list whose locations are shown in the Map Viewer by dots or lines.

## Area

This filter setting allows you to exclude from search results objects whose footprint sizes do not fall within ranges you specify.

- Click on the Filter Settings button.

  DEO shows all – and only – size-ranges for objects included in the current Search Results list.

  Each size range is checkmarked (the DEO default) when you open the Filter Settings box.



- To *exclude* one or more size-ranges from your filtered search results, click-off the checkmark next to the corresponding items in the size-ranges list. DEO will display a list of all – and only – objects that fall into size-ranges that remain checkmarked in the Filter Settings menu.



In this example, restricting search results to items whose areas are in the range >100,000 - 1,000,000 km$^2$ reduces our State of Colorado search results from 1203 items to 291 items.

# Fine-Tuning Search Results: **Filtering**

## Combining Filter Settings

You can combine as many filter settings as you like to drill down to object lists matching more specific criteria.
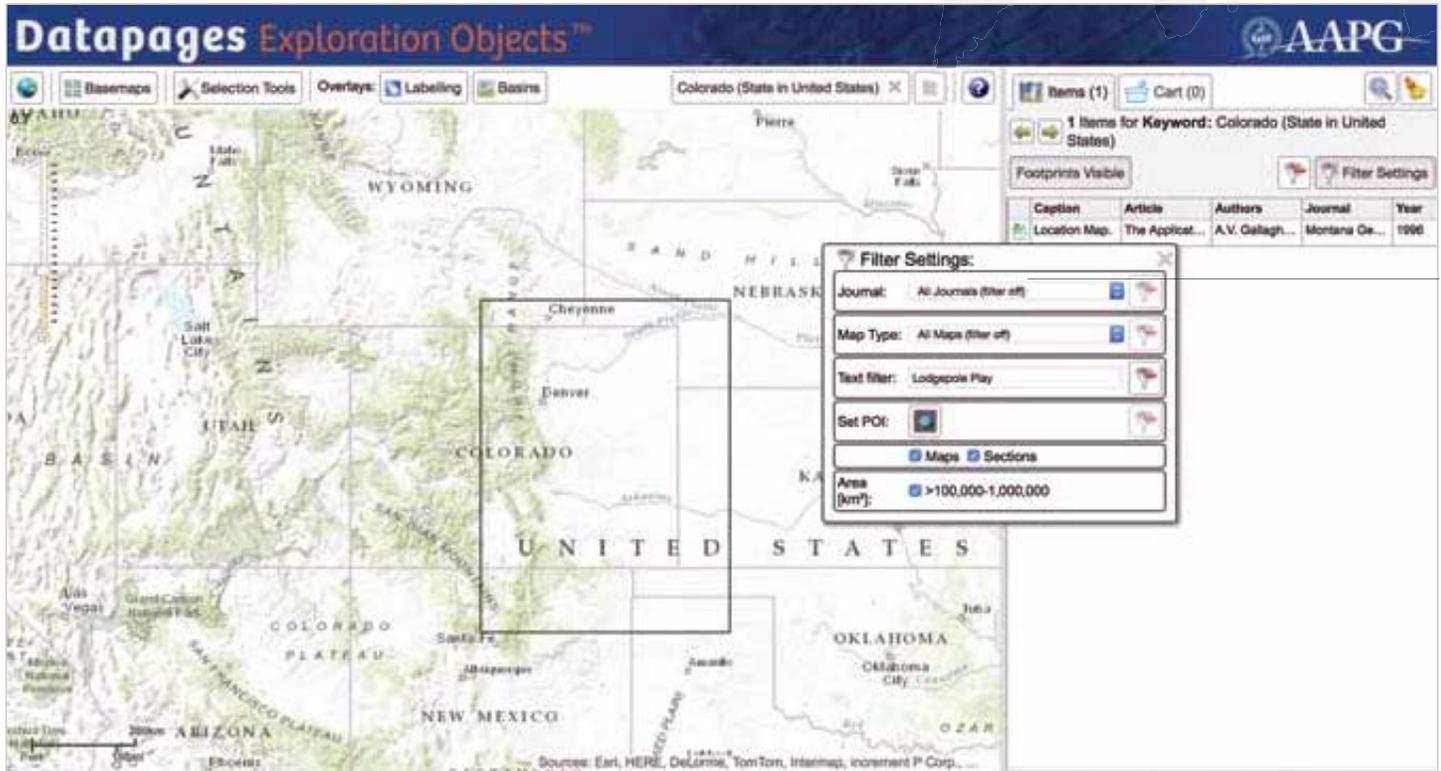


In this example, we've filtered our State of Colorado search results by entering "Lodgepole Play" in the "Text filter" box *and* restricting object Areas to >100,000 - 1,000,000 km² . This has reduced our original State of Colorado search results from 1203 items to 1 item.

## Removing Filters

Whenever a filter setting is activated, DEO highlights a "Remove filter" icon at the right of the setting in the Filter Settings box.



- Click on this icon to turn off the filter.

- To remove *all* filtering and restore the unfiltered Search Results list, click on the Remove Filter icon next to the Filter Settings button above the Search Results list.

# The **Cart**



The Cart is the "holding area" for objects you select as candidates for downloading.

**1** **The Cart tab** indicates how many items are in your Cart list. (In this example, 5 of the 200 items in the Search Results list have been added to the Cart.)



**To add selected items to the Cart**, select an object on the Items tab and click on the "Add to Cart" icon either in the item's source info box or to left of the item's listing in the Search Results list.
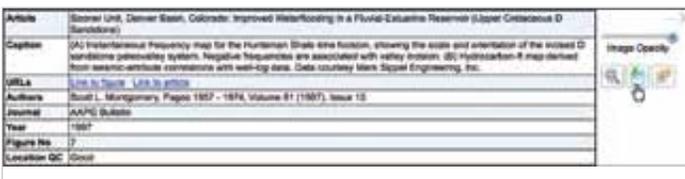


**2** **Zoom to items.** Click on this "magnifying glass" tool to zoom the Map Viewer to the area on the background map that includes all items in the Cart.

**3** **Clear:** Click on the "broom" icon to clear your Cart. *This will not clear the Items tab.*
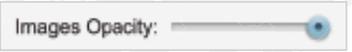
**4** **Images Opacity slider.** Use this tool to adjust simultaneously the opacities of all items in your Cart displayed in the Map Viewer. To reduce opacity, slide the Image Opacity slider to the left.

**Tip:** The DEO default is to display all items in the Cart at full opacity. To "hide" items in the Cart list – displaying on the Map Viewer only wireframes, dots and lines indicating the footprints and/or locations of Cart list items – slide the Image Opacity slider all the way to the left.

When you select an item in the Cart list with the Cart tab's Images Opacity slider "hiding" items in the Cart, DEO displays the selected item in the Map Viewer, zooming to that item's location. With the Images Opacity slider moved all the way to the left, only green wireframes, dots or lines will be visible in the Map Viewer for items other than the item you've selected.

*Learn more. See "Viewing Options: Opacity Adjustment," p. 27.*

**5** **Download.** Click on this button to download to your computer all items in your Cart list.

- Before downloading, select from the dropdown menu to the right of the Download button the image format you prefer: .jpg, png or .tif.

- All items in the Cart will be downloaded in the selected image format with compete support files for easy import into GIS.

- "Downloading busy" will indicate that your download is in progress.
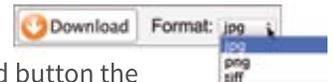
  *Learn more. See "Downloading Items" p. 28.*

**NOTE:** *Object downloading is available only to DEO subscribers.*

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# The **Cart**



## The Cart List

The Cart list is similar to the Search Results list on the Items tab and can be customized in the same ways.

**Resize the Cart list**. Move your cursor to the vertical bar at the left edge of the Cart list; click and hold. Move the resize slider left to widen the Cart list; move right to reduce Cart list width.

**Resize columns.** Move your cursor to the right border of the column header for the column you want to resize. When the cursor turns to a resize slider, click and hold. Then, move the slider right to widen the column; move left to reduce column width.

**Move columns.** Click and hold on the column header for the column you want to move. Move left or right to the desired position for the column. *Do not release your cursor hold until the move has been completed.*

**Reorder the Cart list**. Move your cursor to the column header you select as a reordering criterion. Click once to reorder the Cart list in ascending order. Click twice for descending order.
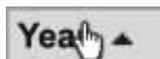
*Learn more: See How to Customize the Search Results list, p. 8.*



In this example, Cart list columns have been rearranged, column widths have been adjusted, and the list has been sorted by Year (descending order).

## The Cart: Source Info For Selected Objects

**1** To select an item in the Cart list, click on the item's listing.

*NOTE: When you select an item listed on the Cart tab, it will also be selected on the Items tab – and vice versa (if the item is listed on both tabs).*

**2 Source Information Box.** In a box below the Map Viewer, DEO will display complete information on the source of any item you select in your Cart list. This is the same info box that appears when you select the item on the Items tab.

*Learn more. See How DEO Displays Selected Items / Contextual Information, p. 11.*

# The **Cart**

## Adjusting Selected Image Opacity

Use the source info box Image Opacity slider to adjust the opacity of a selected item whose location and footprint are shown in the Map Viewer by a quadrilateral wireframe – and see what's "behind" the selected item on the Map Viewer.

*Learn more. See Adjusting Map Opacity, p. 27.*
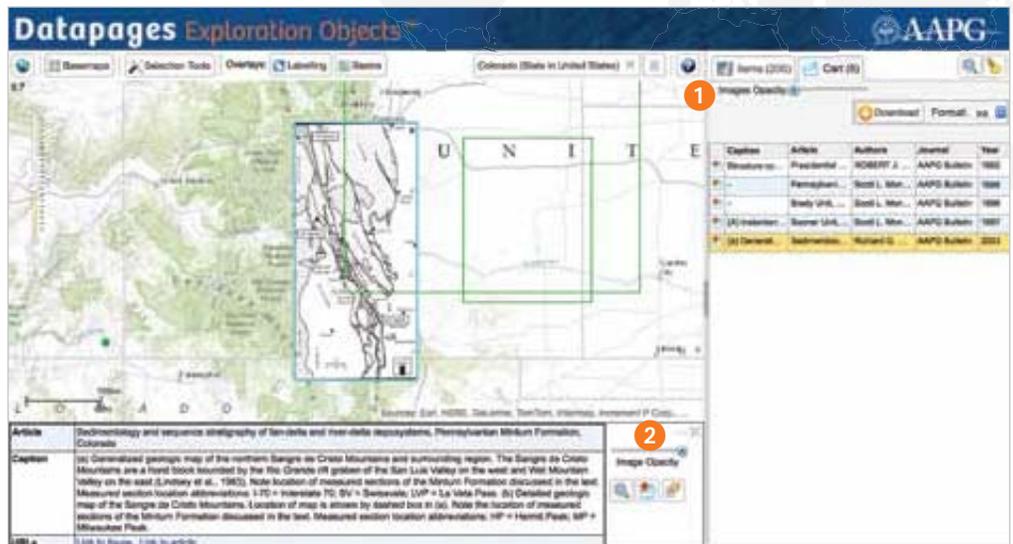
**1** To adjust the image opacity of an item selected from the Cart list, use the Images Opacity slider on the Cart tab to reduce to less than full opacity *all* items in the Cart list.

**2** Then, in the source info box, move the Image Opacity slider to the left to reduce the selected item's opacity as needed.

**Tip:** To see *only* the background map and overlapping wireframes, dots or lines for other items in the Cart list (if any) "behind" the selected image, move the Images Opacity slider on the Cart tab all the way to the left (reducing to zero the opacity of all items in the Cart list).

Then, use the Image Opacity slider in the selected item's source info box to make the selected image semi-opaque.

*Item selected from the Cart list: full opacity.*

*Item selected from the Cart list: reduced opacity with background map visible "behind" the item.*

**Tip:** To see "behind" the selected item an overlapping object whose footprint DEO displays in the Map Viewer as a quadrilateral wireframe, move the Images Opacity slider on the Cart tab to the left to reduce the image opacity of all items in the Cart list.

Then, use the Image Opacity slider in the source info box for the selected item to adjust the selected item's opacity as needed to see it and the overlapping item "composited" in the Map Viewer.

*Item selected from the Cart list: reduced opacity with background map and overlapping map visible "behind" the item.*

**NOTE**: *When you adjust Image Opacity for an item selected from the Cart, the same opacity adjustment will carry over to that item's display on the Items tab – and to the display of any other item you select on either the Items tab or the Cart tab. You may readjust image opacity at any time, following the steps outlined above.*

# The **Cart**



**1** **Deselect.** To deselect an item, click on the "X" in the upper left corner of the selected object's information box. This will not remove the item from your Cart.

**2** **Zoom to this map image.** Click on this "magnifying glass" tool in the source info box to zoom to the selected object if you have zoomed out or moved the background map.

**3** **Remove from Cart.** To remove an item from your Cart, click on this icon in the item's source information box – or on the same icon in the item's listing in the Cart list

**4** **Select all Objects from Article.** Click on this icon to retrieve all objects in the source article from which the selected item was extracted. A list of items from the same article will replace your Search Results list *on the Items tab*. It will not affect your Cart list.

To restore your original Search Results list, click on the left-pointing "step-back" arrow on the Items tab.

**How The Cart Displays Selected Cross-Sections & Seismic Lines.** When you select a cross-section or seismic line, represented in the Map Viewer by a dot or a line, the source info box displays a "thumbnail" image of the selected item. Click on the thumbnail to view the image displayed as a larger overlay over the DEO interface.
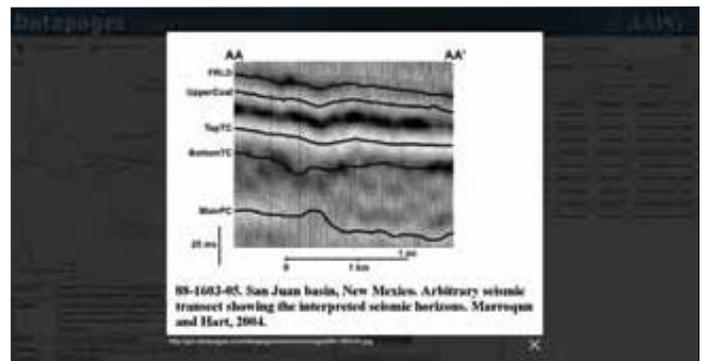
Image Opacity cannot be adjusted for these images, since they are not displayed on the Map Viewer.

# Viewing Options



DEO gives you a wide, flexible array of viewing options to make it easier to find and evaluate the maps, cross-sections and other objects you need.

Here are just a few examples of how you can put various viewing options to work.

## Using Basemaps and Overlays

**Tip:** Click on the Basemaps tool – then pause your cursor over any map type in the Basemaps box. In a popup, DEO will display full information about that map type .
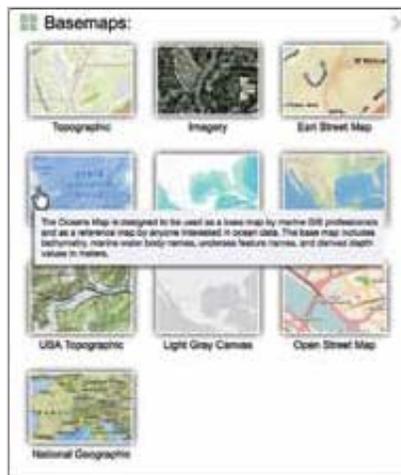


Using DEO basemaps and overlays helps you home-in on useful objects in your searches – and adds useful contextual information as you evaluate candidates for downloading. A few examples:

- Search within national or basin boundaries – and make sure results fall within those boundaries.

- Determine the distance of objects from roadways, cities or physical / topographic features.

- Check object geo-rectification against reliable background reference maps (Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, OpenStreetMap and the GIS User Community).



A portion of the U.S. Gulf Coast displayed on DEO's default Topographic basemap.
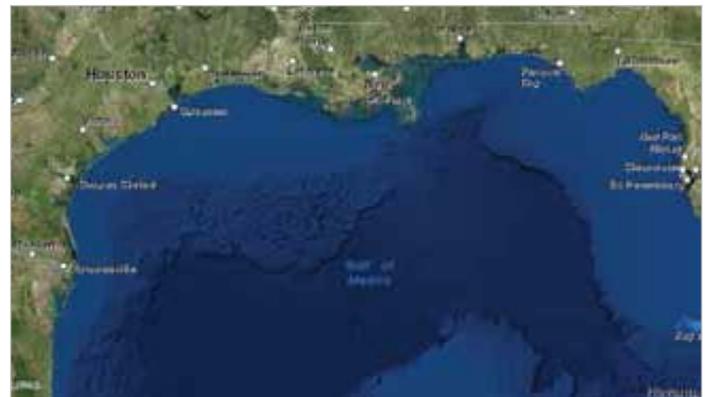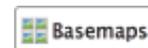




The same area on the satellite Imagery basemap with the Labelling overlay activated.
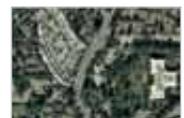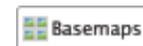




The same area on the satellite Imagery basemap with the Labelling and Basins overlays activated.
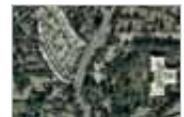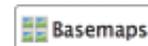
# **Viewing** Options

## Basemaps and Overlays

*Examples*:



A portion of the West African Gulf of Guinea displayed on DEO's default Topographic basemap.
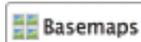




  The same area on the Physical basemap.



The same area on the Physical basemap with the Labelling overlay activated.





The same area on the Physical basemap with the Labelling and Basins overlays activated.

# **Viewing** Options

## Image Opacity Adjustment

Use DEO opacity sliders to you to see what's "behind" maps whose footprints are shown as quadrilateral wireframes in the Map Viewer.

Combining map opacity adjustment with other viewing options gives you a variety of ways to evaluate objects before you download them:

- View objects "composited" with various basemaps and overlays visible "behind" them

- View pairs of maps as "composited layers."

**Adjusting Map Opacity**

- Select from either the Items tab Search Results list or the Cart list an item whose footprint is shown in the Map Viewer as a quadrilateral wireframe.

- **If you've selected an item from the Search Results list**, use the Image Opacity slider in the selected item's source info box to adjust the item's opacity in the Map Viewer – and see what's "behind" the selected item in the Map Viewer.

  To see footprints and/or locations of other items "behind" the selected item, click on the Footprints Visible button on the Items tab. To "hide" wireframes, dots and lines, deactivate Footprints Visible.

- **If you've selected an item from your Cart list,** use the Images Opacity slider on the Cart tab to reduce to less than full opacity *all* items in the Cart list.

- Move the Image Opacity slider in the selected item's source info box to the left to reduce the item's opacity. Move the slider to the" right to increase the selected image's opacity.

**Tip:** To see *only* the background map and overlapping wireframes, dots or lines for other items in the Cart list (if any) "behind" an image selected from the Cart list, move the Images Opacity slider on the Cart tab all the way to the left.

Then, adjust the Image Opacity slider in the selected item's source info box to make the item semi-opaque.

- **View an item listed in the Cart "behind" another item selected from the Cart list.** If there is a pair of items whose quadrilateral footprints overlap and you wish to see these objects "composited" in the Map Viewer, make sure both items are in your Cart.

  Move the Cart tab's Images Opacity slider to the left to reduce the opacity of all items in your Cart.

  Select one of the overlapping items. Click on the item's listing in the Cart list.

  Use the Image Opacity slider in the selected item's source info box to reduce the item's opacity as needed to make the other item in the overlapping pair visible "behind" the selected item.

*Examples:*

An item at full opacity, with Footprints Visible on the Items tab deactivated (clicked off and not darkened).

The same item with opacity reduced, allowing you to see the Topographical background map "behind" the item in the Map Viewer.

An overlapping pair of items in the Cart. One has been selected and the Image Opacity slider in the selected object's source info box has reduced the item's opacity. The opacity of the other item "behind" the selected item has been reduced by the Cart tab's Images Opacity slider – to show the Topographical background map "behind" both items in the Map Viewer.

The same pair of items "composited" on the Physical basemap, with the Labelling overlay activated.

# Downloading Items

**1** Make sure all items you wish to download in this set are listed in your Cart – and that you wish to download all items in the Cart list.

- Remove from your Cart any item you do NOT wish to download. Click on the "Remove from Cart" icon in the item's listing.

**2** Use the dropdown menu to the right of the Download button to select the image format you prefer for downloaded DEO objects: .jpg, .png or .tif.

**3** Click on the Download button.

DEO will download to your computer all items listed in your Cart.

"Downloading busy" will indicate that your download is in progress.

DEO creates a compressed .ZIP file and downloads it to your computer.

For each item listed in your Cart, the .ZIP file will contain a set of files that will allow you to import the items you've downloaded directly into ArcGis or similar GIS environments:

| Name | Size | Kind |
| --- | --- | --- |
| 48836_Fig14.jpg | 1.3 MB | JPEG image |
| 48836_Fig14.jpg.ovr | 2.5 MB | Unix Executable File |
| 48836_Fig14.jgw | 83 bytes | Unix Executable File |
| 48836_Fig14.jpg.aux.xml | 46…ytes | eXtensible…document |
| 48836_Fig14.jpg.xml | 56…ytes | eXtensible…document |

**Maps**

- Image file in the format you've selected: .jpg, .png or .tif
- "Coordinate World File" (Esri .jpw containing the location, scale and a rotation of the item downloaded as a JPEG image)

- A pyramid file (.Esri OVR) allowing you to import the item as an information layer / overlay in ArcGIS or similar GIS environments
- Metadata file (industry-standard XML).

| Name | Size | Kind |
| --- | --- | --- |
| 2013SD-80343-15.jpg | 444 KB | JPEG image |
| 2015-02-10@062049_sectionsPoint.dbf | 2 KB | Micr…ment |
| 2015-02-10@062049_sectionsPoint.fix | 25 bytes | Ado…ment |
| 2015-02-10@062049_sectionsPoint.prj | 21…ytes | Unix…File |
| 2015-02-10@062049_sectionsPoint.shp | 12…ytes | Unix…File |
| 2015-02-10@062049_sectionsPoint.shx | 10…ytes | Unix…File |

**Sections & Seismic Lines**

- Image file in the format you've selected: .jpg, .png or .tif
- Shapefile (.shp) with feature attributes (.dbf), shapefile index (.shx) and projection metadata (.prj).

**4** When you've confirmed that your download is complete, use the "whisk broom" icon at the top of the Cart tab to clear your Cart – to prevent downloading the same items again.

This will not clear your current Search Results list.

# What's New In This DEO Update?



## MapSearch: Select by Basin

In addition to drawing on the map, exploration objects may be selected by clicking a basin displayed on the map.

- Move the DEO background map so that it shows the area you're interested in. Zoom in or zoom out as needed.

**1** Click on the Selection Tools button in the DEO toolbar.

**2** Click on "Select Basin by Map" in the Selection Tools Box.



- Clicking the tool will turn the Basins on if they are not on already. Once the tool is selected the basin outlines will change from white to green.

**3** Move your cursor to the DEO backgound map. As the cursor is possitioned over a basin a pop-up will display the basin name. Click the desired basin.

**NOTE:** *The Robertson Tellus Sedimentary Basins are provdied by CGG Data Services as part of the Datapages GIS Open Files. More information regarding CGG products may be found at www.cgg.com.*

Once a basin has been selected. a shaded polygon is created slightly larger than the basin. Any objects within the polygon will be selected.



- ONLY objects completly contained wihtin the selection bounday will be selected.

**TIP:** Use the Search by Location, Basin, Formation tool to select all objects associated with a basin regarless of location. *See "Finding Items: WordSearch" p. 15*



- In the Items list, DEO lists items found within the specified area. If Footprints Visible is activated, wireframes, dots and lines on the background map show item footprints and/or locations.

# Feedback: Please!

Questions? Comments? Opportunities for improvement?
Please let us know! Simply send us an email:
aapgdata@aapg.org

**AAPG**
**Datapages**, Inc.
Knowledge from the Source