



VersaIMAGE-GOLD

Version 6.4 March 2005

Preliminary Users Guide

For new Additions and Features:

**TWAIN Scanner Support
Color Image Management (.jpg)
Digital Camera Image Import
Full Page OCR/ICR
Full Text Retrieval
PDF image and CD Distribution
Distribution Folder Management
Versa Job Separator Search for Book Chapters**

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VersaIMAGE-GOLD INTRODUCTION:

VersaIMAGE-GOLD 6.4.xxx is a major new release of VersaIMAGE Software. In addition to color TWAIN scanning and color / grayscale image management, VersaIMAGE-GOLD has a superb built in OCR/ICR engine that allows full text search and retrieval of scanned images.

The VersaIMAGE-GOLD system allows standard VersaIMAGE database field searches coupled with full image text search capability. This means that a standard database search provides electronic file folder retrieval with automatic subsequent OCR text searching of all images within one or multiple files to locate specific documents. This usually very sophisticated approach to information retrieval has been reduced to the ultimate level of simplicity that is the reason for VersaIMAGE's worldwide popularity.

VersaIMAGE features easy application setup and customization, import/export of index data, OCR and image files. Digital color camera picture input via TWAIN and the use of distribution folders greatly simplify filing and retrieval tasks. The VersaIMAGE folder files allow Tiff, bmp and JPG images to reside within the same indexing structure.

VersaIMAGE-GOLD supports the three main standard Imaging options available within VersaIMAGE:

- Single Image Tiff, JPG, BMP – Folder Files
- Multi Image Tiff
- Single Image Tiff – no Folders

Note: In addition to this preliminary User's Guide the VersaIMAGE-GOLD Quick guide is available to users including an expanded HELP file within the software.

Minimum Systems requirements:

Pentium 4 or equivalent with 1.0 GHZ processor
Windows 98 or higher
512MB RAM
10GB hard drive

Installation:

Please see the VersaIMAGE-GOLD Installation Guide. VersaIMAGE GOLD with Crypkey licensing over the telephone (call 810-225-9720) coupled with OCR licensing which requires a separate license number.

Web access for download of VersaIMAGE-GOLD: www.versasoftware.com

SUPPORT UPDATES: For additional Service Packs go to the **SUPPORT TAB** and download the self installing update .exe file.

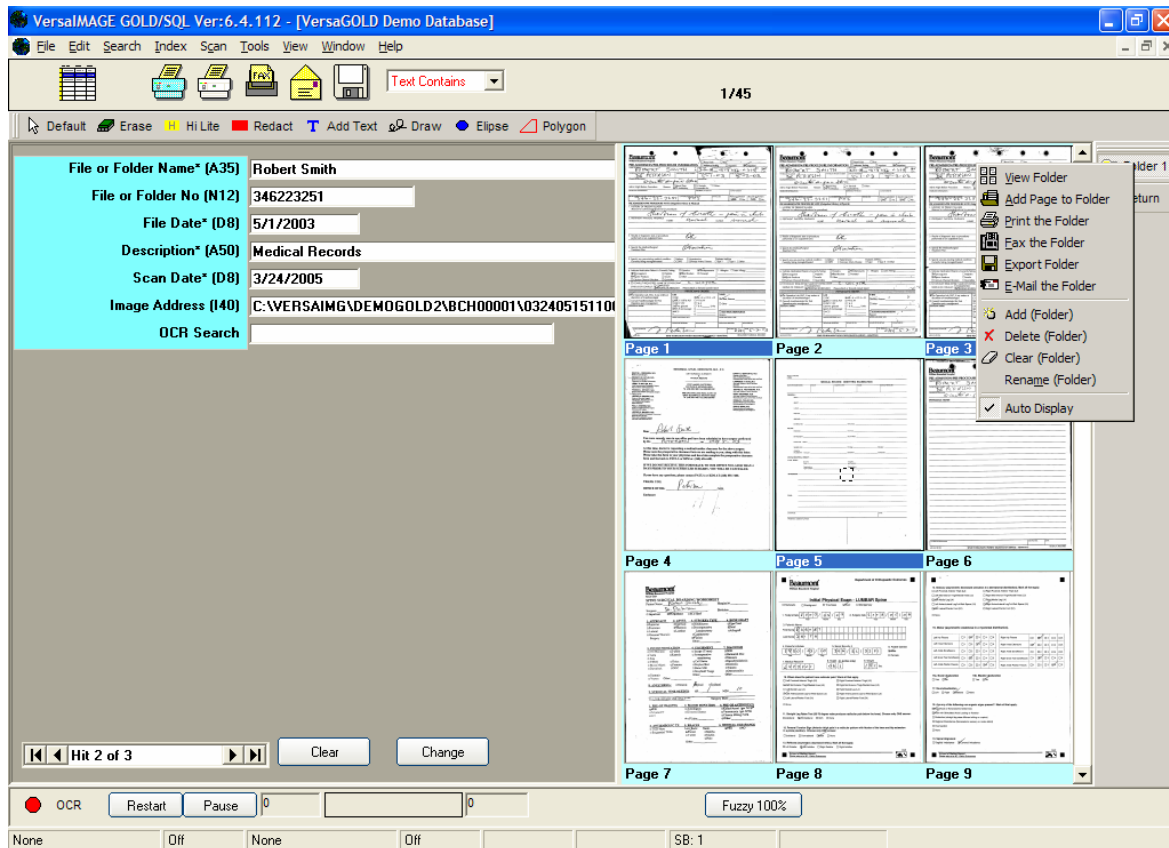
COLOR SCANNING:

Switch the scanner to COLOR mode. 24 bit is best for faster throughput. VersaIMAGE creates a B+W tiff image for the OCR process from each color scan in the background and allows for the OCR to provide better OCR read rates and improved output quality. Because of the larger file sizes involved this process is very CPU intensive and may be paused automatically by VersaIMAGE when scanning is active.

How to use VersaIMAGE Distribution Folders:

You may search for files in the database, display images on the screen and then "mark or tag" them for inclusion into a specific, operator defined distribution folder for later distribution via fax, e-mail, print or file transfer.

To select a distribution folder (i.e. Folder 1) click on the folder **once**. This opens the folder without displaying the contents. Then search for images in the database that need to be copied to this distribution folder. After a database search displays images in thumbnail size on the screen press the Control key and left mouse click on each image you wish to "mark" for inclusion into the opened distribution folder. A dark highlight bar will be visible underneath all "marked" images.



Tagged images (3) ready for insertion into open (Insurance) distribution folder.

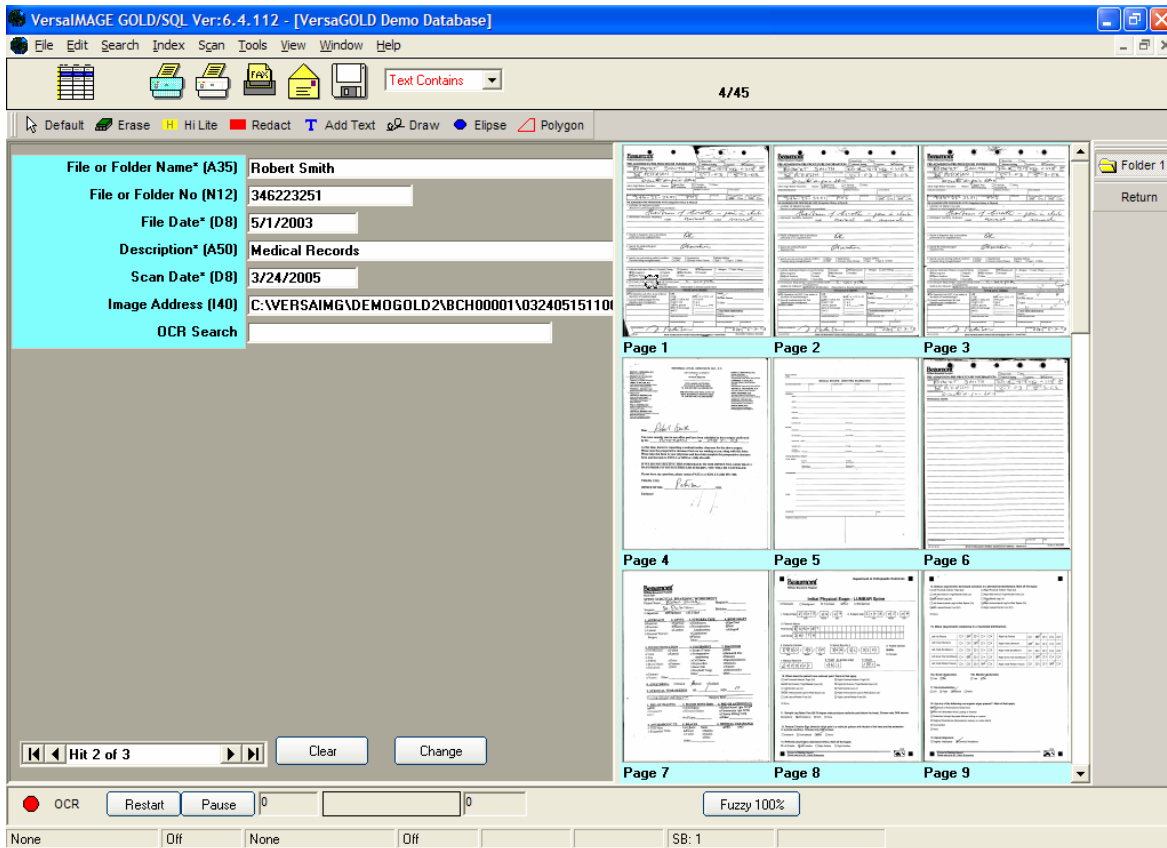
Adding selected (marked or tagged) images to a distribution folder:

Right mouse click on the open distribution folder to see the available menu. Add a new Folder if you wish. Click on ADD PAGE TO FOLDER

Deletion of images in a distribution folder:

"Tag, mark or highlight" images via control/left click on images in a folder and press the DELETE key on the computer keyboard.

Note: The folder OPENS (YELLOW folder color) on one mouse click and shows its content only on a second (double click from start, RED folder color) mouse click. This feature allows you to open a folder and add images into it without having to wait for all images to paint on the screen saving valuable operator time. When a distribution folder is opened the display will close images and data from a previous database search in order to eliminate user confusion. Images shown on the desktop will be the folder contents only. Click on the **Return** button below the distribution folders to return to the originating database searched folder.



VersaIMAGE-GOLD MOUSE CONTROLS:

Mouse control for Image viewing:

Left click on thumbnail image enlarges image to single page size.
 Click and drag split screen border to either increase or decrease the image display area.
 Left double click on single page size image to enlarge image to fully fit display size.
 Vertical scroll bars are now active allowing image scrolling.
 Double click on image to go back one step in image size (to single page size) or RIGHT mouse click on full image to reduce image directly back to thumbnail size.

Mouse control for OCR / Image viewing:

Middle mouse-click (or Control right mouse click) on an image to view the OCR page.
 Middle mouse-click (or Control right mouse click) on OCR image again to transfer text to Windows clipboard or your default text editor like Word, WordPad, WordPerfect, etc.
 Right mouse click on OCR text image, to switch it back to Tiff single page size image.
 Right Mouse click on image to return to thumbnail Tiff image.

Mouse control for Quick OCR Text export

Middle mouse click (or Control right mouse click) on OCR image.

OCR Engine Instructions: (For best performance use with 3-button mouse!!)

General:

The OCR engine is activated upon each image scan command. For example, the EXIT command, after a folder is scanned using the batch scan window (i.e. via F5), triggers the OCR engine. Special OCR scan commands to OCR a specific image, record, batch or queue can be issued from the Tools/OCR selection menu. The VersaIMAGE-GOLD system will OCR translate all scanned images and build an OCR text file in the background mode. Images imported into the system may be OCR'd on demand using the Tools OCR menu.

To upgrade existing VersaIMAGE 32 users that have many scanned image files already in their system with VersaIMAGE-GOLD capability the OCR engine may be set to OCR each individual file folder as searches are made for folders. Thus, the OCR text conversion of existing files becomes a background conversion effort over time because OCR text conversions are done only on files that are actively used. Typical OCR BACKGROUND image conversions range from 4 to 10 seconds per image. Naturally the "cleaner" the image appears the better the conversion rate and OCR accuracy. This is why it is important to experiment with scanner settings via the TWAIN scanner setup window to adjust image brightness, contrast, background, character smoothness etc.

The OCR Status Bar:

The OCR engine conversion progress is visible in a slider progress bar at the bottom of the screen in the OCR status bar. Shown at the left side of the status bar is a color-coded circle that is either **GREEN** for OCR running, **RED** for OCR stopped and **YELLOW** for OCR on PAUSE. The OCR **Restart** button may be used when displays are RED or YELLOW. The OCR may be paused automatically by the system at any time to allow computer processor intensive tasks to complete faster if a less powerful computer is utilized. (Pentium 4 or Athleon with 2.0 GHZ minimum speed recommended) Thus OCR conversions are moved to "off" hours for lower performance computer systems.

For networks with high speed scanners the OCR engine can be installed on a separate OCR PC workstation on the network. This PC will perform only one function which is to OCR images created from one or more scanners. Please contact the VersaIMAGE Support department for configuration instructions.

The Multi-page Tiff Page Number displays the page that is being processed within a given Multi-page tiff image (File/Preferences/Imaging Options/Multi-image Tiff selected). The progress bar window lists the current Tiff batch and last completed image address if the mouse pointer is moved over this OCR progress bar. The progress slide indicator shows the conversion progress visually and lists the total number of pages in the OCR queue and the total numbers of pages left to OCR in standard VersaIMAGE folders. If the color circle display switches from green to RED the OCR action has been finished or terminated and may be restarted. Press the RESTART button to reactivate the OCR or select a specific OCR command from the Tools/OCR menu.

OCR view capability:

Any image in thumbnail display may be switched to show its OCR content with a **Middle** mouse click (or Control/right mouse click) on the desired image in thumbnail display. A simple right mouse click will then switch to the TIFF image in full-page display. Right mouse click on this Tiff image and the image will reduce back to thumbnail Tiff display size.

SEND OCR to text editor:

To send the completed OCR to your computer's default text editor such as Word or WordPad Middle mouse click (or control/right mouse click) on the OCR text image and click on the "send to Editor" command. In case you want only certain part of the OCR text, highlight it first and use the "send (selected) text to Windows clip board" feature using the same middle mouse click command.

Searching with the OCR feature:

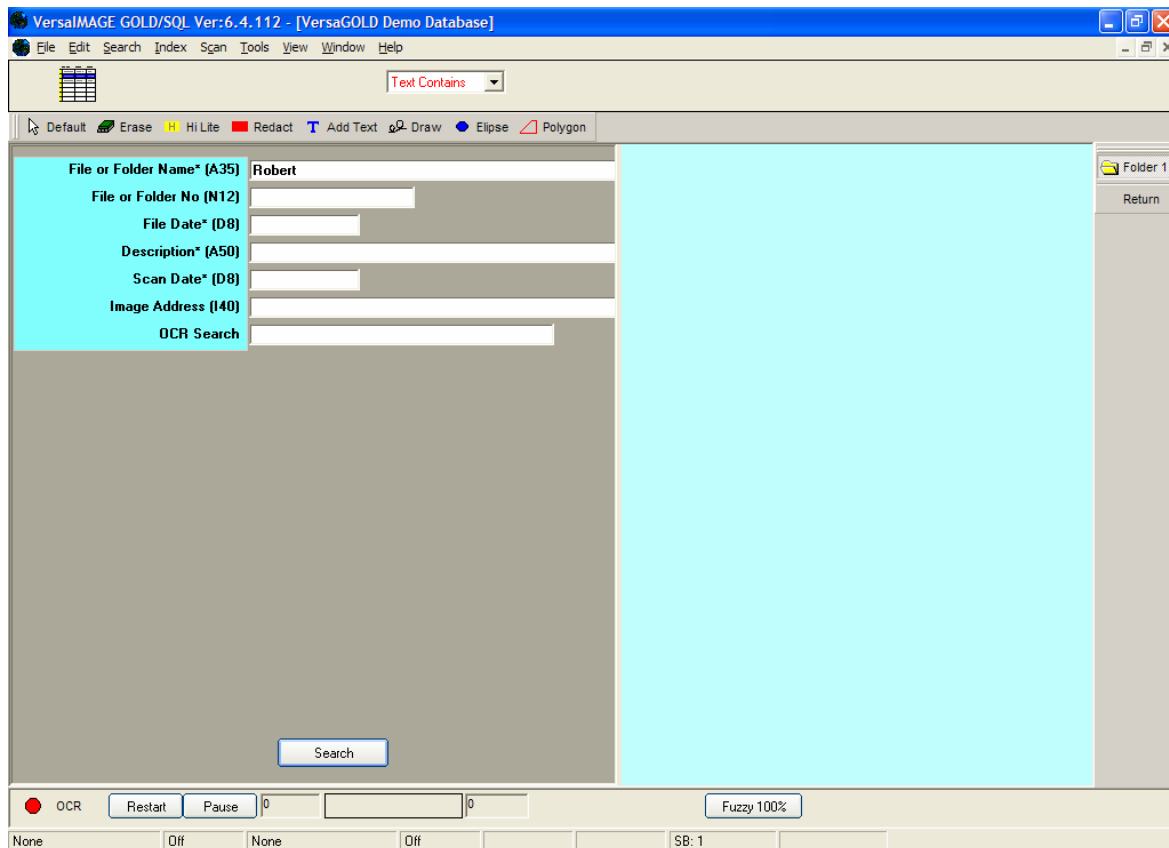
You must combine OCR search words with a minimum of ONE database index search field in the VersaIMAGE database. You may use a scan date range search with an OCR search command to locate images within a group of documents, i.e. search for "Firestone" in the scan range 3/1/02 – 5/1/02

Image display modification, a new feature in VersaIMAGE:

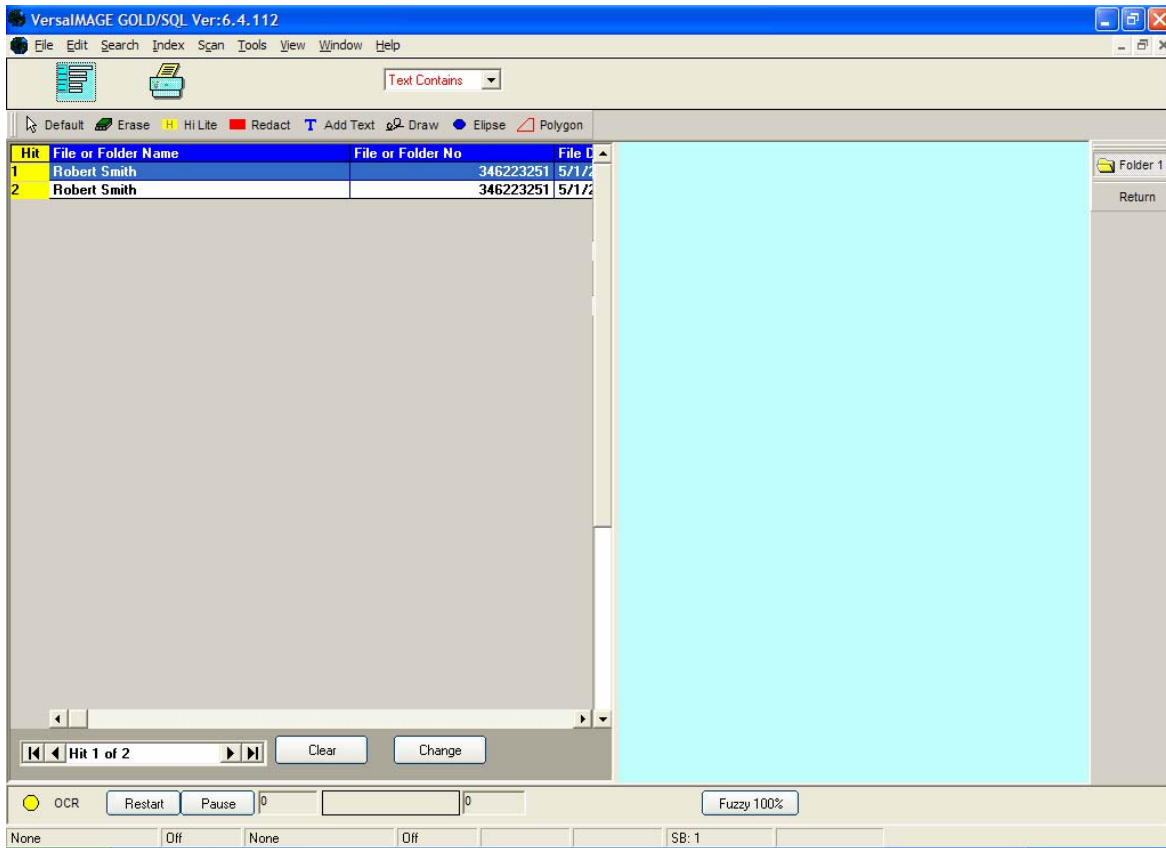
VersaIMAGE version 6.2 and above allows tabular database HIT record views to co-exist with thumbnail images (and OCR views) immediately to the right of the tabular display. (Previously one had to switch to single record view in order to see the thumbnail images). Movement of the vertical separator line (bar) enables the user to place as many thumbnail images in the right hand display as possible while still displaying the database fields in tabular format on the left side. Click on any database record in the tabular list and the appropriate thumbnail images appear on the right side of the viewing monitor.

For example:

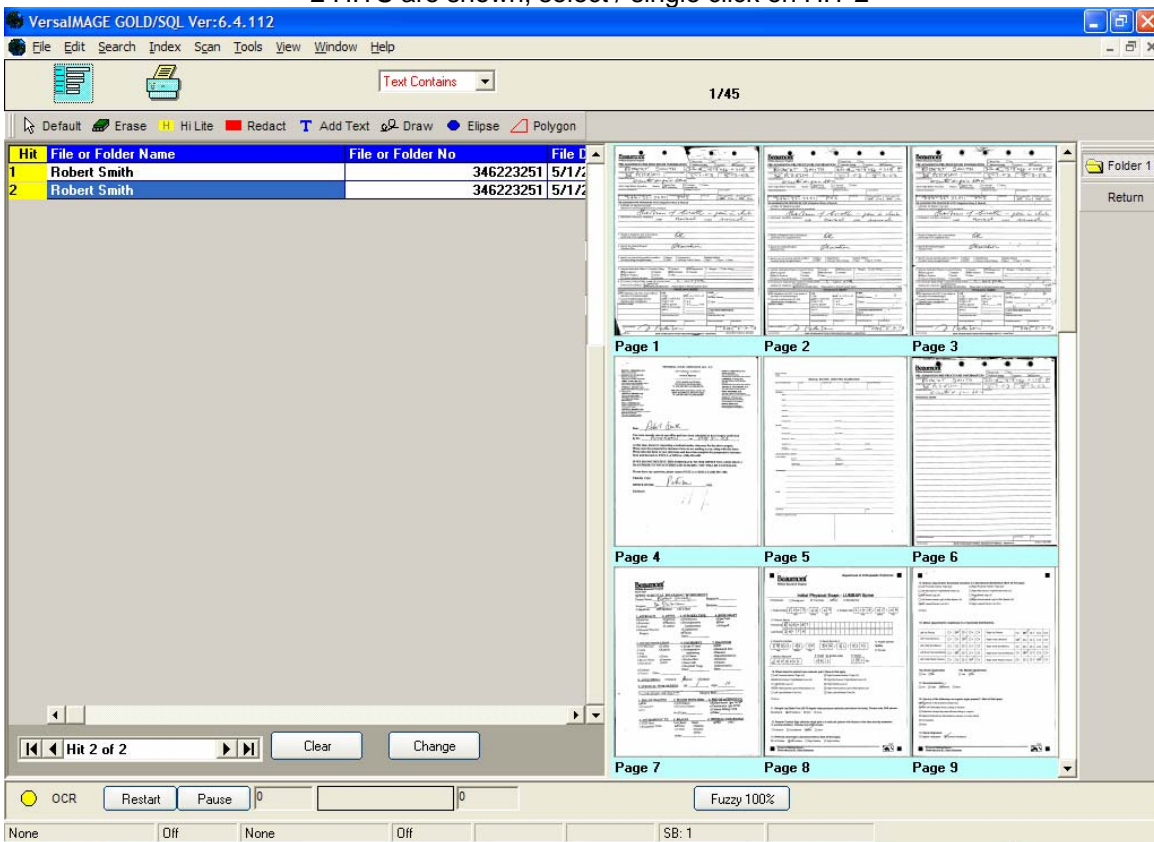
Either search for the exact name "Robert Smith" or just "Robert" in the DEMOGOLD 2 database name field using either "exact" "starts with" or "contains" commands as available in the VersaIMAGE selection box above the database fields.



Select "Contains search", enter Robert into the name field and click Search...

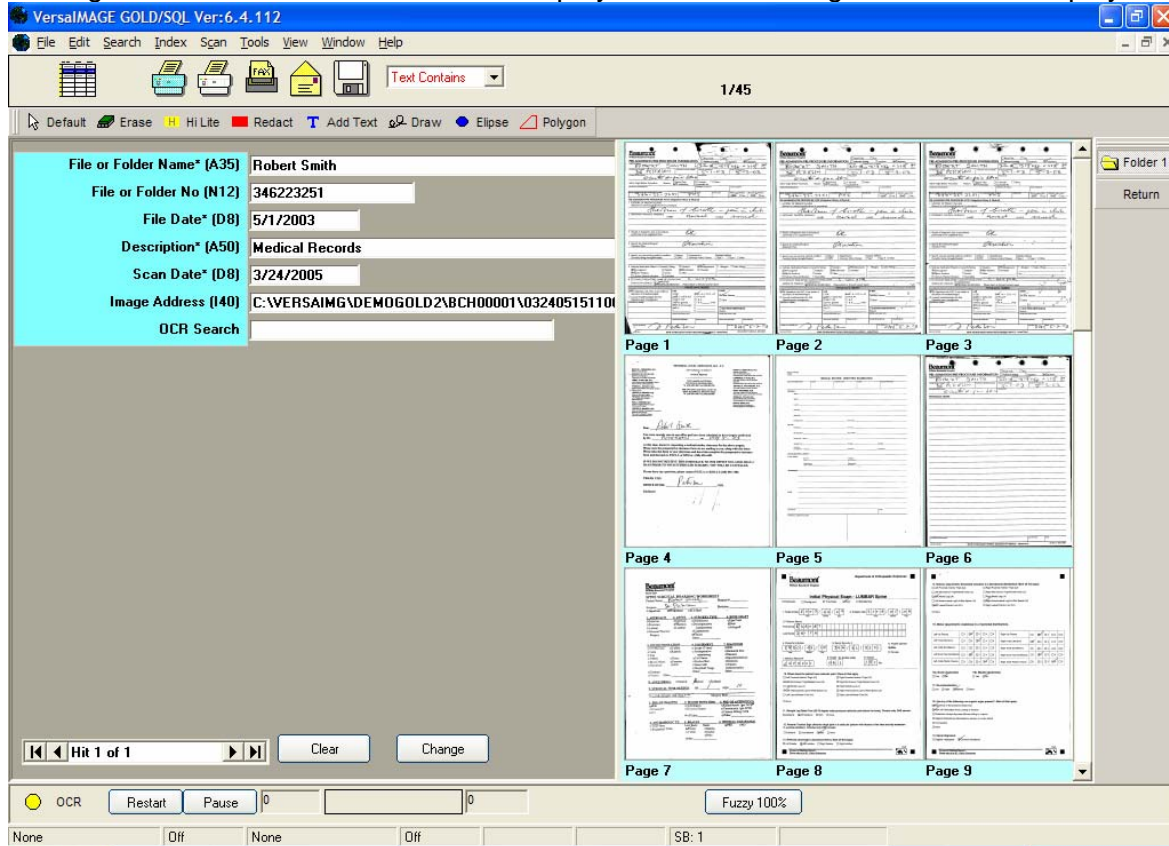


2 HITS are shown, select / single click on HIT 2

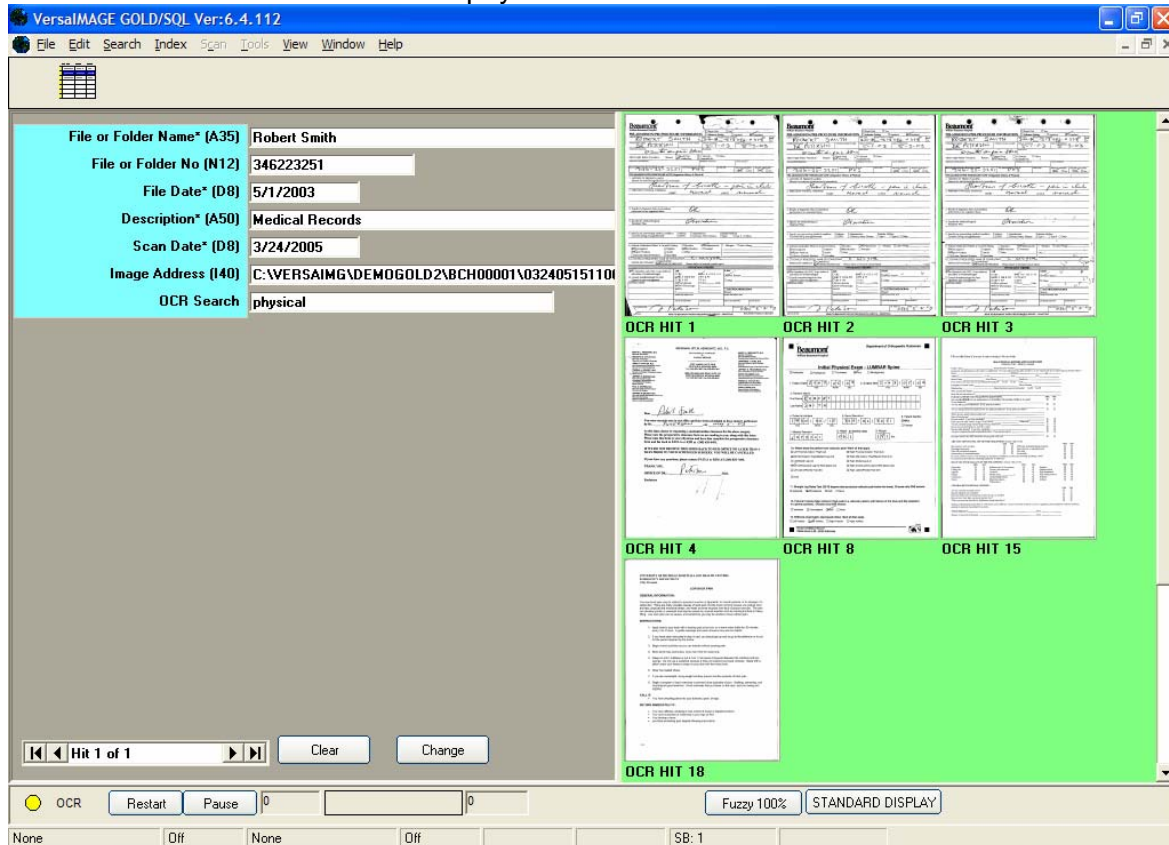


All folder Images for HIT 2 appear on the desktop. Search thumbnails for desired document image or get ready for an OCR search for the desired document by double

clicking on the HIT 2 record The table display will switch to single data record display:

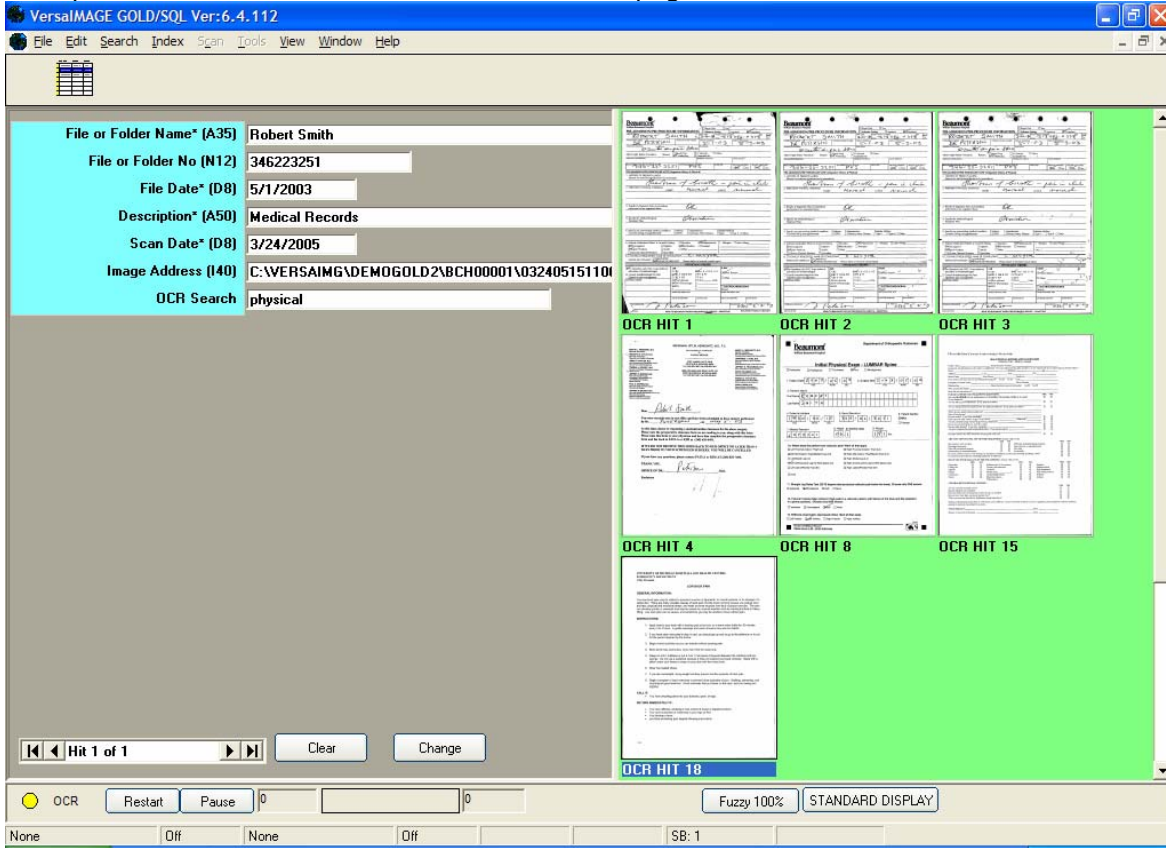


Now enter the word "physical" into the OCR text field. This way ONLY this single folder will be text searched for the word "physical". Click SEARCH at the bottom of the screen.

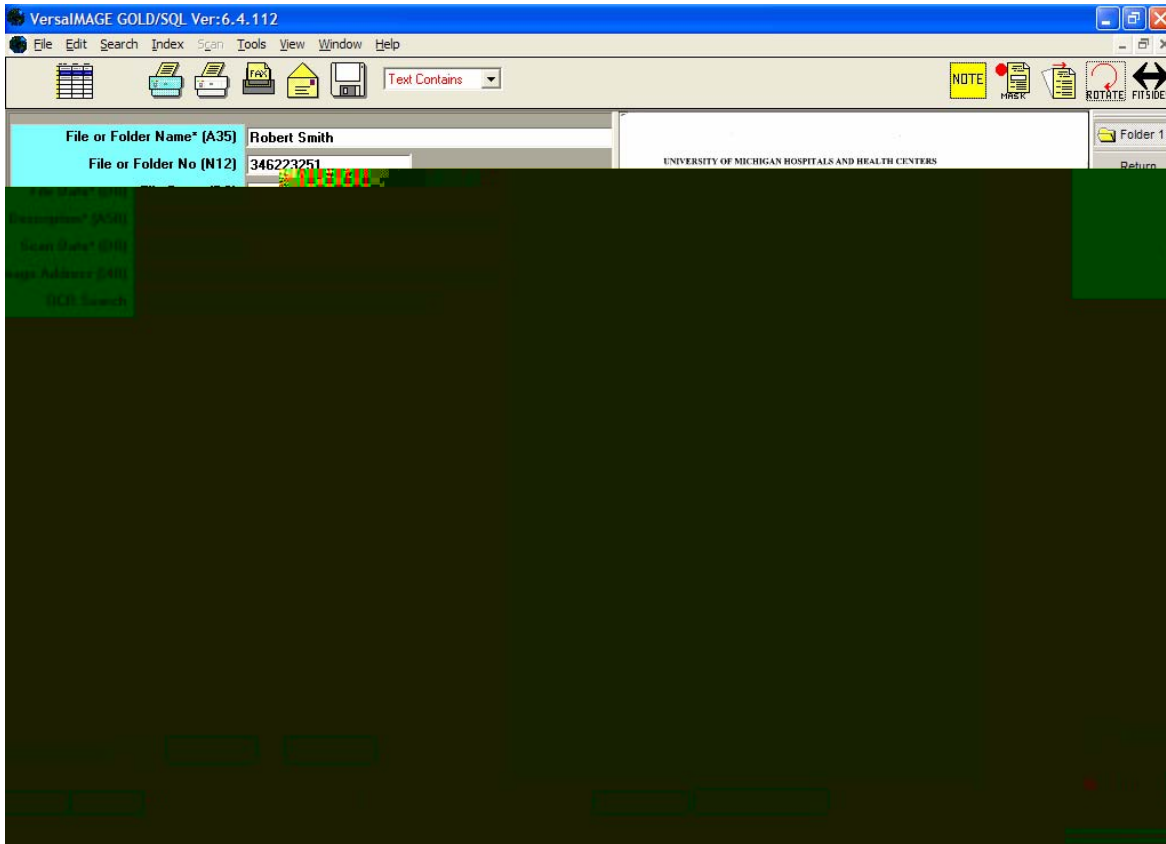


7 OCR HIT images appear labeled OCR HIT with corresponding Page numbers on a GREEN OCR background from the main folder file. Look at the images and select the desired page image.

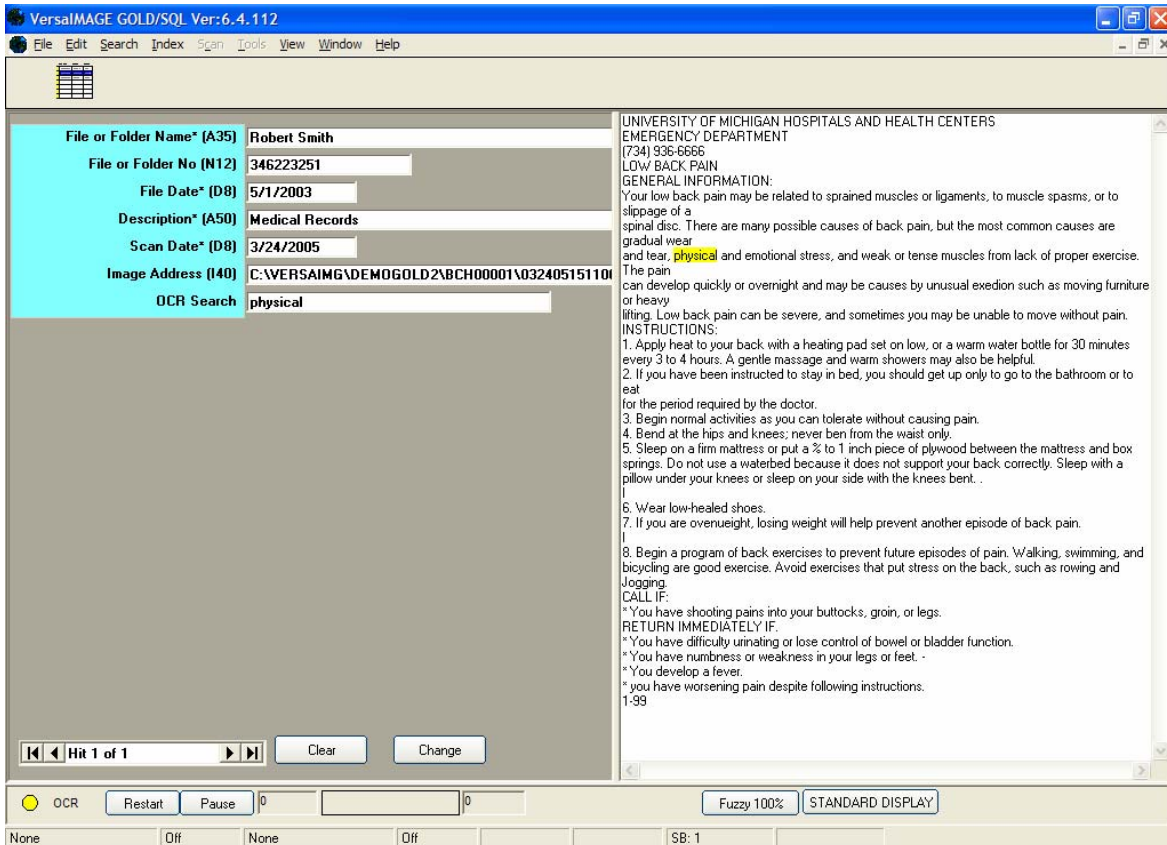
Example: Select OCR HIT 18, which means that it is page 18 in the main folder file.



Left click on the image to bring it to full page view:

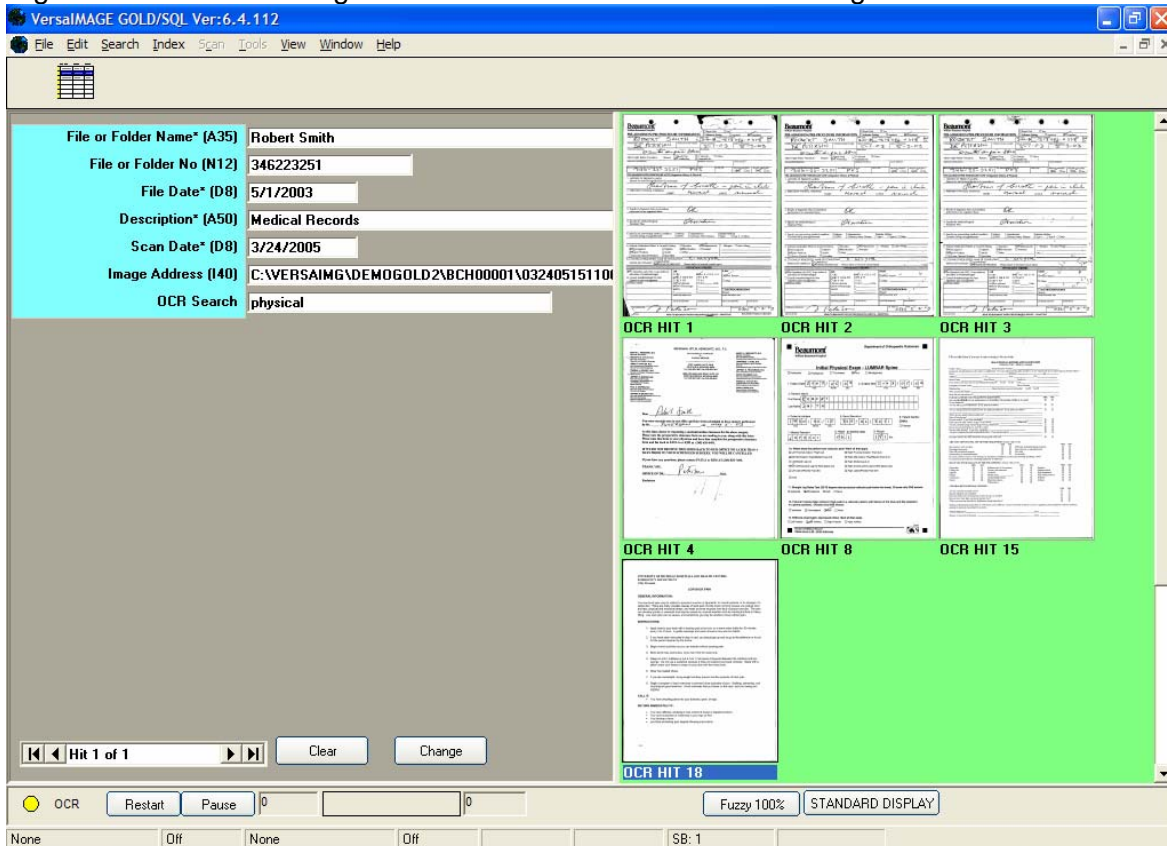


Middle mouse click or control / right click on the image to view the OCR text for Page 18 and view the yellow highlighted TEXT HITS (matches)

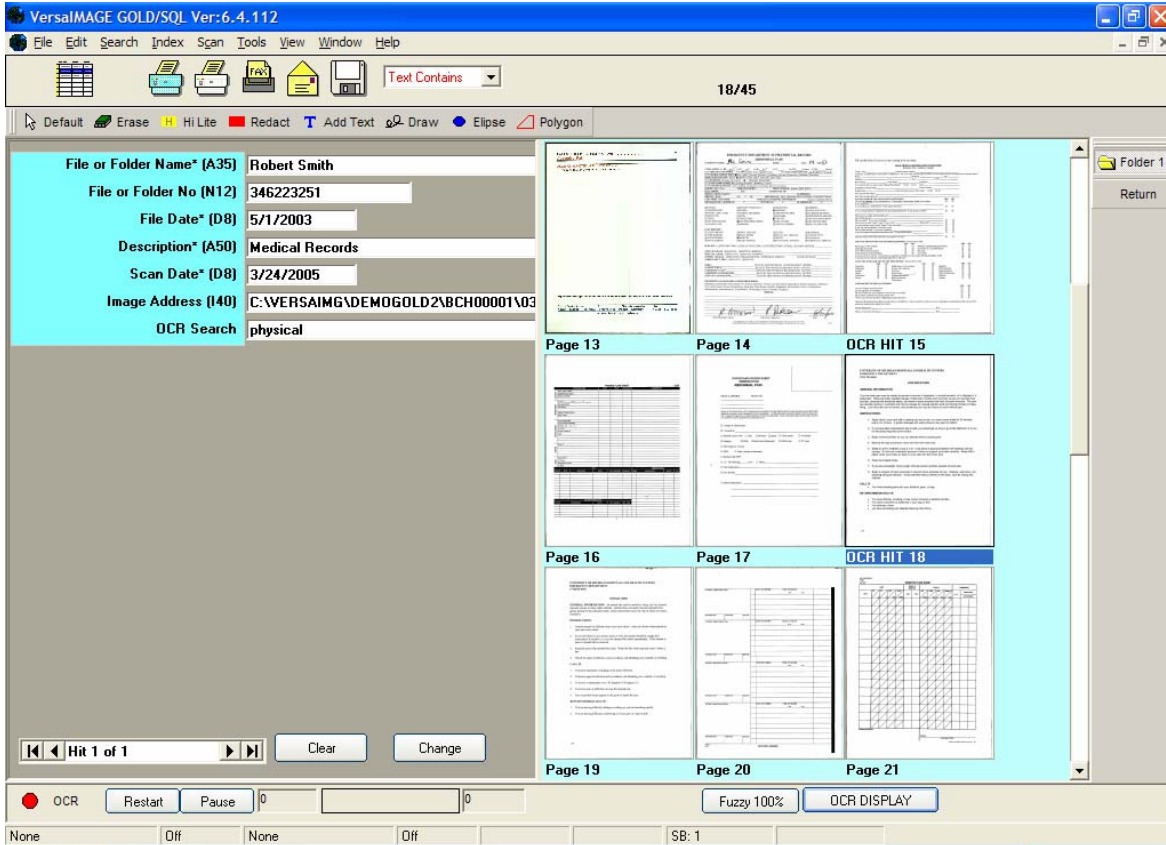


Right click on the image to see the Tiff image of OCR HIT Page 18 again.

Right-mouse click on image to reduce it back to thumbnail size again.



Let's look at the "found" image #18 within the full file folder. Click on the blinking **STANDARD** button in the OCR Status line (see it on the previous image).



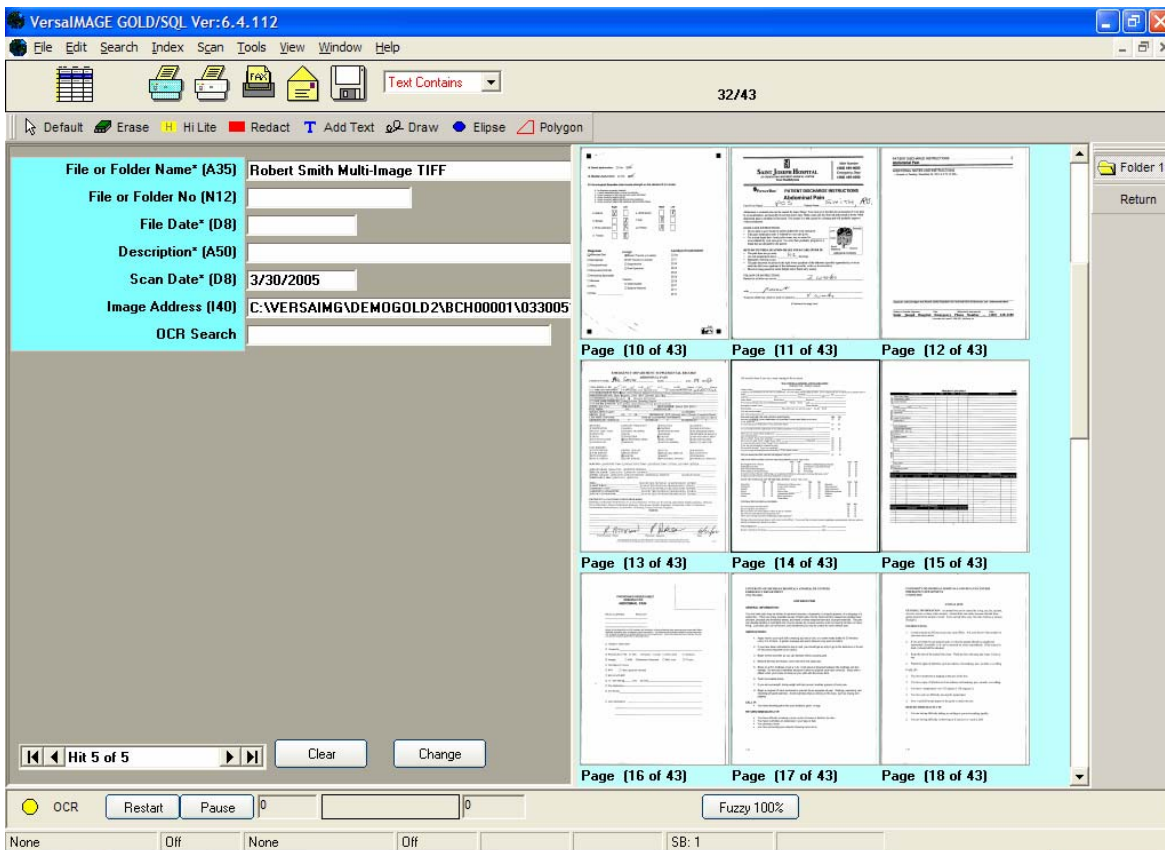
The full file folder is now displayed with the OCR HIT page 18 highlighted and visible on the normal viewer screen on BLUE BACKGROUND.. This feature allows the user to view the OCR matched image in its actual surrounding within the file folder. (Sometimes additional related pages may also be required that do not have the keyword i.e. "physical" in their body or are of poor quality so the OCR might not have been able to read the required word).

Toggling back to the OCR HIT file may be accomplished easily by clicking on the OCR button in the OCR Status bar.

Multi-image Tiff Files:

The OCR search method is the same for Folder or Multi-image Tiff files. The images are however labeled differently on the thumbnail viewer screen. The image page numbers are shown in {brackets} to indicate the fact that a multi-image file is used. The OCR process indicator in the OCR status bar indicates the page number that the OCR has processed so far after scanning.

A typical HIT screen for Multi-image tiff images is shown below:

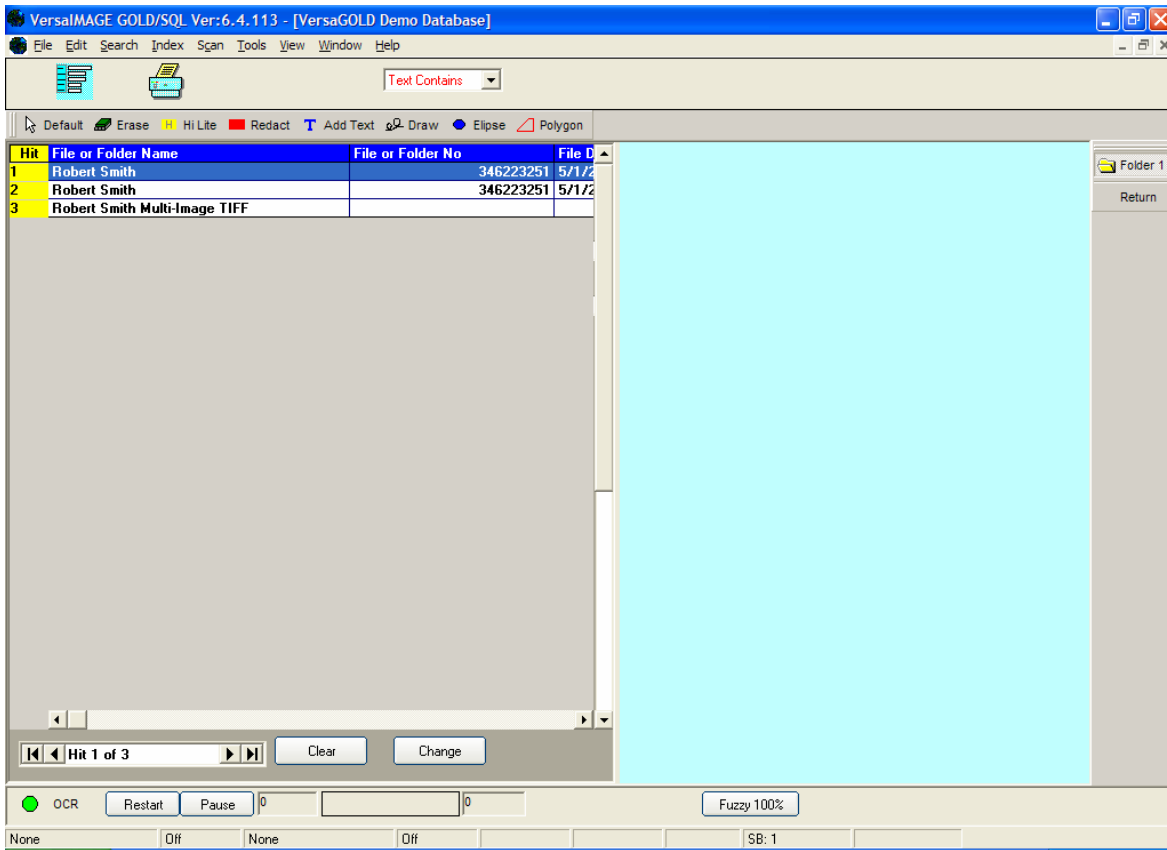


Multi-image folder thumbnails will display with {brackets} for page numbers.

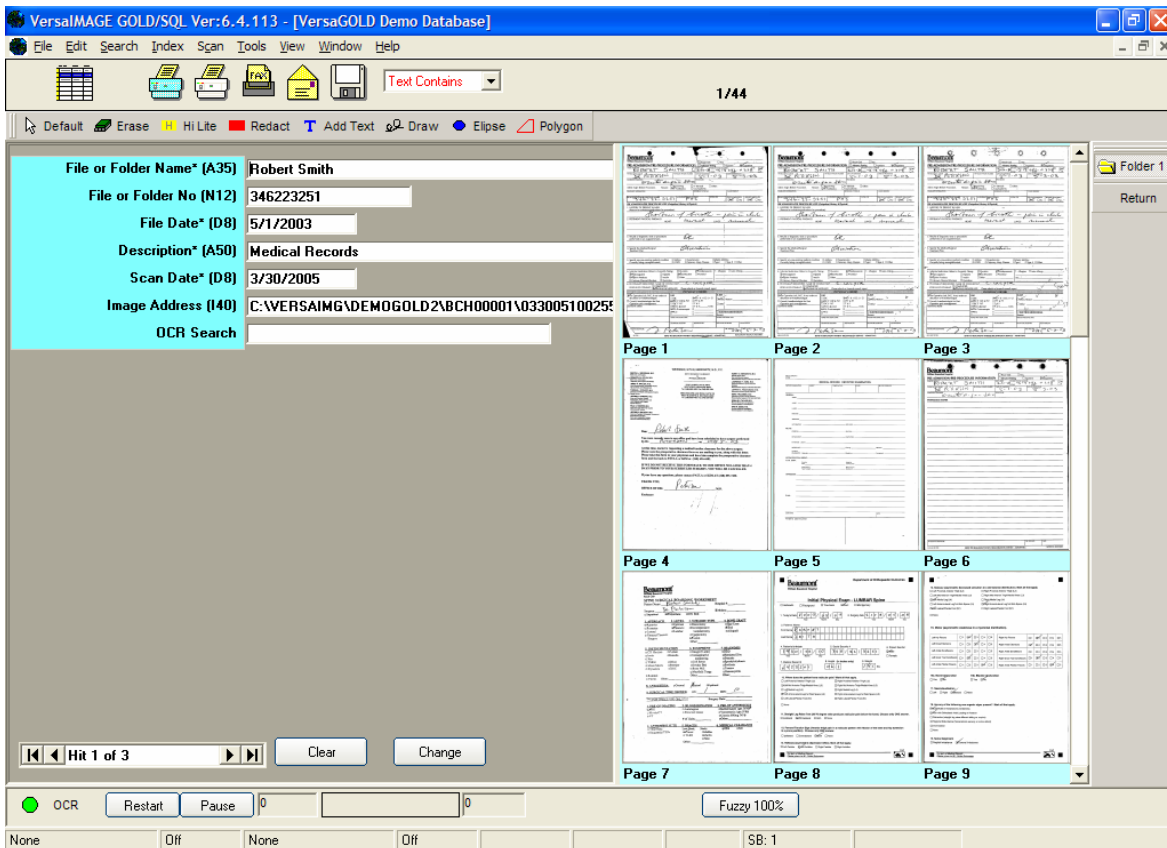
OCR TEXT Searching for Multiple Folders within a group of database Hits:

The sample given in the previous section showed a database search for “Robert Smith” that resulted in two database hits and ONLY ONE hit was selected from that list (Page 8) The subsequent OCR search for the word “physical” yielded Hits for that single, selected record only. Toggling between the OCR hits and STANDARD using the button in the OCR status line allows convenient verification of needed images.

The following example will show how OCR searches can be made for all Smith database HITS, yielding multiple OCR HITS for each Smith folder that contains the required OCR word:

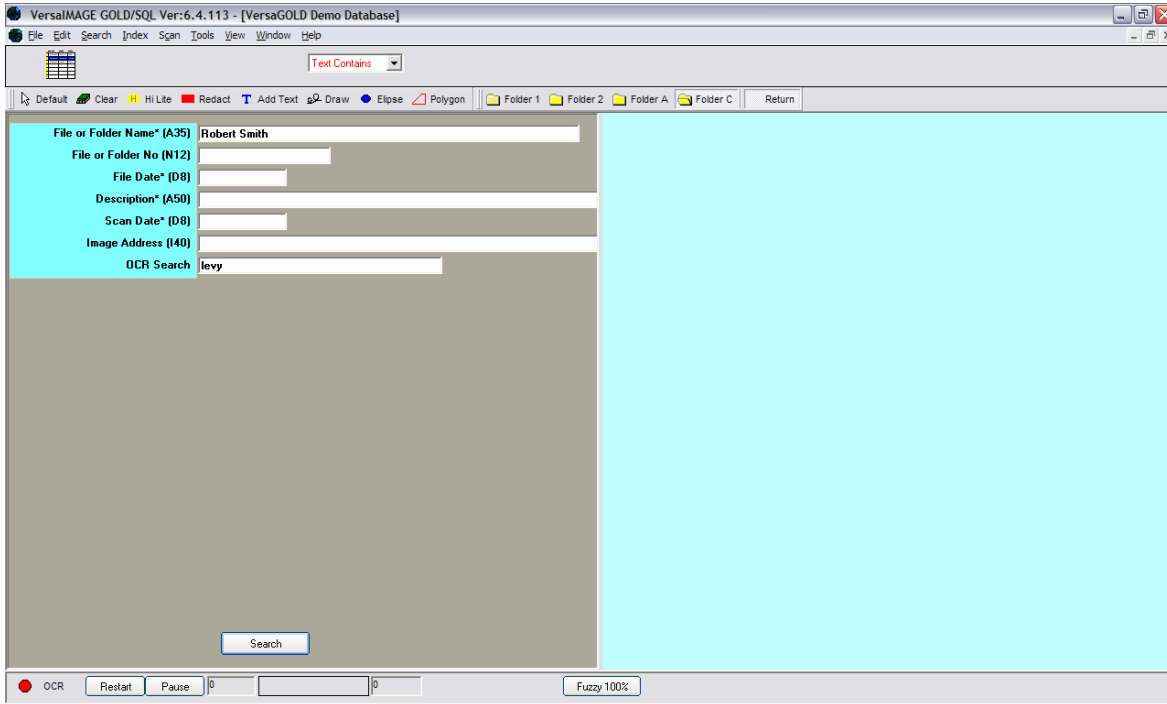


Search for Smith yields 3 database HITS. Next double click on Hit 1

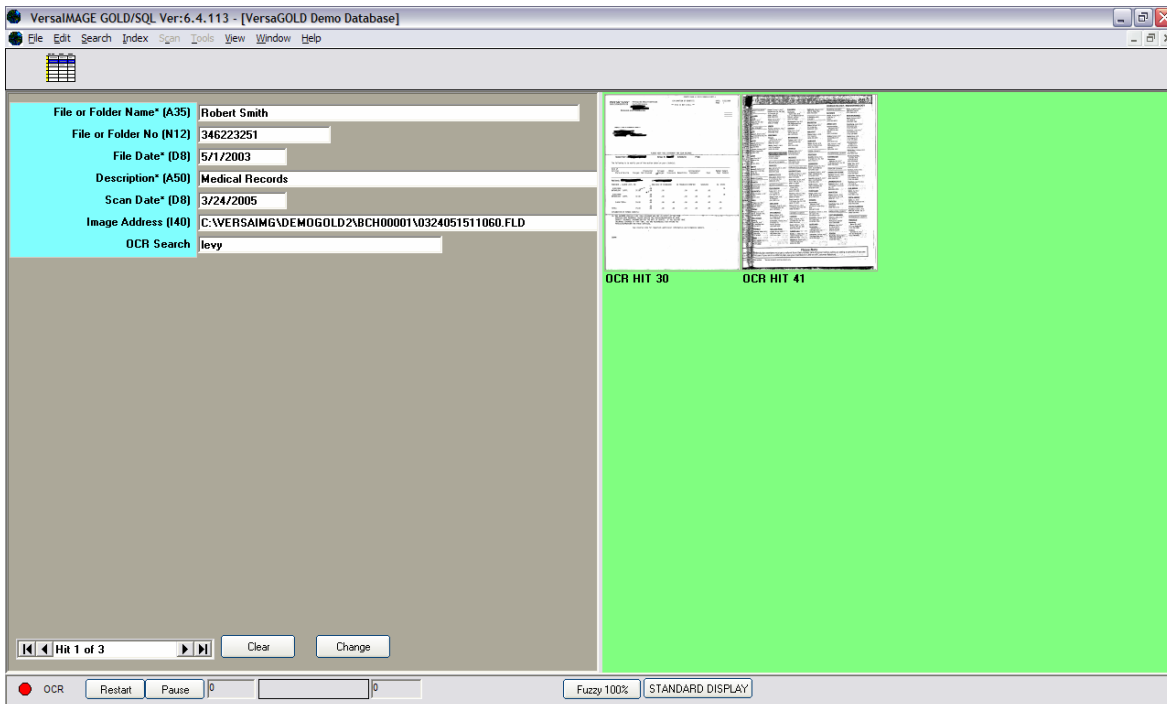


Database Hit 1 of 3 is displayed in single view. Now click on the Name (Robert) in the Name Field

to get ready to make a second search for the name “Robert Smith” and enter the word “levy” into the OCR search field as shown below:



Click SEARCH: This causes an OCR search for the word “levy” in all “Robert Smith” folders.



There are 3 RECORD HITS (3 File folders) with the name Robert Smith in which the OCR found the word “levy”. In each record the OCR hits are displayed as OCR hits. In record 1 of 3 there are 2 OCR HITS that are pages with the name “levy” in the content as shown.

Middle mouse click on any image to see the actual OCR text with OCR Hit (the word “levy”)

highlighted in yellow. Use the left and right arrows (next to the Hit 1 of 3 window) to switch between files or records. Use the STANDARD/ OCR button in OCR STATUS field to switch between OCR hits and the full file folder content.

(Remember to highlight a page in the OCR hit display and then click on the STANDARD button and this page will be shown in its actual position in the entire file folder).

Clicking on the STANDARD button shows the full contents of the file. The button label switches to OCR with blue borders around it to allow switching back to the OCR HIT display if needed.

OCR TEXT SEARCH COMMANDS:

1. TEXT search strings required for the OCR field:

Enter a single word for a search of this word in the OCR text files for each image. This search is NOT CASE SENSITIVE.

i.e. search for: **robert**

Enter a two-word search matching exactly the case and spelling for an exact search:

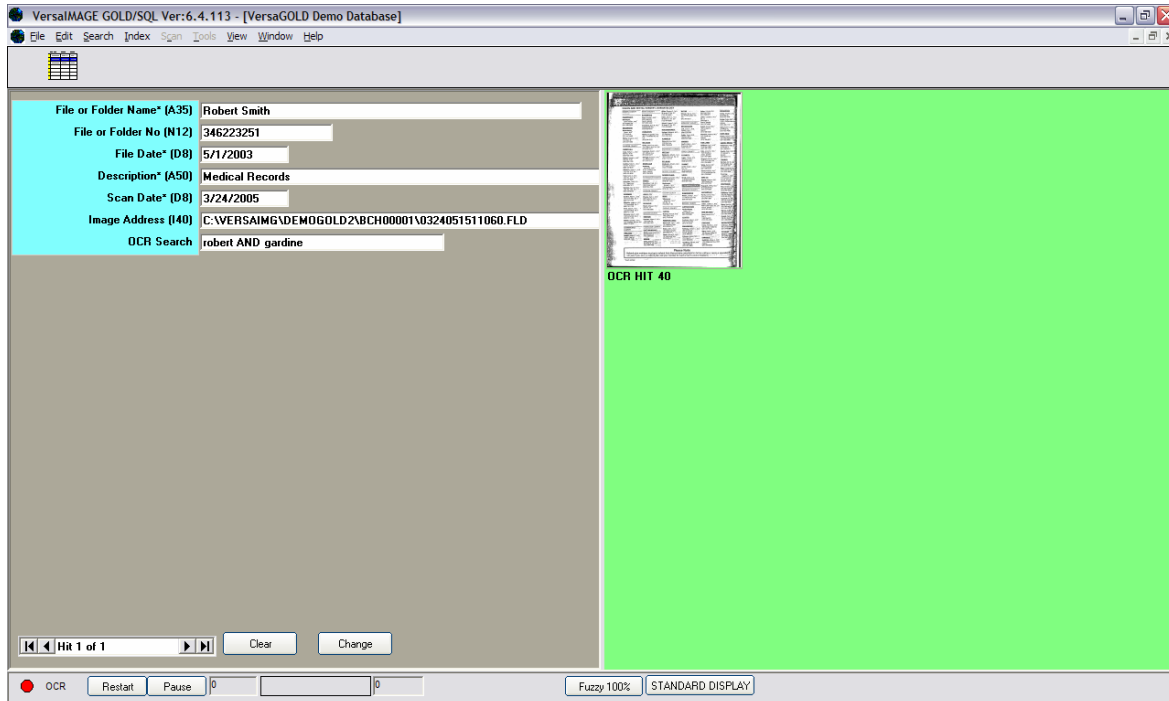
i.e. search for: **Robert Gardine**

The screenshot shows the VersaIMAGE GOLD/SQL software interface. The window title is "VersaIMAGE GOLD/SQL Ver:6.4.113 - [VersaGOLD Demo Database]". The interface includes a menu bar (File, Edit, Search, Index, Scan, Tools, View, Window, Help) and a toolbar. The main area is divided into a left sidebar and a right main display. The sidebar contains search criteria: File or Folder Name* (A35) Robert Smith, File or Folder No (N12) 346223251, File Date* (D8) 5/1/2003, Description* (A50) Medical Records, Scan Date* (D8) 3/24/2005, Image Address (I40) C:\VERSAIMG\DEMOGOLD\2\BCH0001\0324051511060.FLD, and OCR Search robert gardine. The main display shows eight OCR hit images arranged in a 2x4 grid, labeled OCR HIT 34 through OCR HIT 43. Each image shows a document page with text, and the search results are highlighted in yellow. At the bottom of the interface, there is a status bar with "Hit 1 of 1", "Clear", "Change", "OCR" status, "Restart", "Pause", "Fuzzy 100%", and "STANDARD DISPLAY" buttons.

There are 8 hits because this search allows Robert OR Gardine on any image. Control right mouse click on images to verify the OCR text (yellow highlights) if you like.

Enter the words again with a capital letter AND as shown:

Robert AND Mary



The result is one image that has both names on the same page. Note that the same search could have been designated as

"Gardine, Robert"

The OCR feature should not be used to search for text items in the full text database without a simultaneous database field search! The larger the number of files and images the longer the OCR text search may take. It may take a few minutes if you have many images in the system and you did not specify a reasonable range of files, i.e. from 1/1/03 - 1/1/04 (a full year's file volume!). You may cancel this action anytime by clicking on the STOP OCR Engine via the Tools/OCR menu. Use the database search capability to "narrow" the search to one or multiple folders and then use the additional OCR search capability to locate individual images in the file(s).

Failed OCR search indicator and image rescanning for OCR improvement:

Should an image not OCR properly due to a variety of causes such as poor contrast, a poor color or black and white picture, etc. an error message is displayed: "OCR recognition failed"

You may rescan (F6) the image after using the F4 command to change scanner settings such as intensity, exposure, character smoothing, background removal etc. After the rescan is completed middle mouse click (Control/right mouse click) on the image and the OCR will ask you if you would like to OCR that image, click yes or select the appropriate action from the Tools/OCR command.

Note: The OCR HIT markings of images in a file stay active until a new OCR search is made in the file or the application is terminated.

INDEXING FOLDERS with ZOOM Zones:

Zoom Zone indexing with F2 key activation:

If the first page in a file is always the same document type one may set **zoom zones** to define and enlarge image-indexing fields for easy key entry.

Put a file into the scanner. Press F2. The first page will be scanned and it appears on the screen. The cursor will blink on the first index field. Look at the image find the information that belongs in the first index field (i.e. the Name). Click and drag the mouse to draw a box around the Name. When you let go of the mouse button the image will be zoomed in on the Name. Enter the Name into the data field using the created zoom view then TAB to the next field. Again look for the information on the image that you must key for this second field. Draw a zoom box around this area and key from the enlarged area. Continue until all data fields have been zoom zoned.

Press F5 and finish scanning of the folder. Now take a new folder that has the same first page layout and scan it with F2. The zoom zones will repeat for every data entry field as established in the previous step.

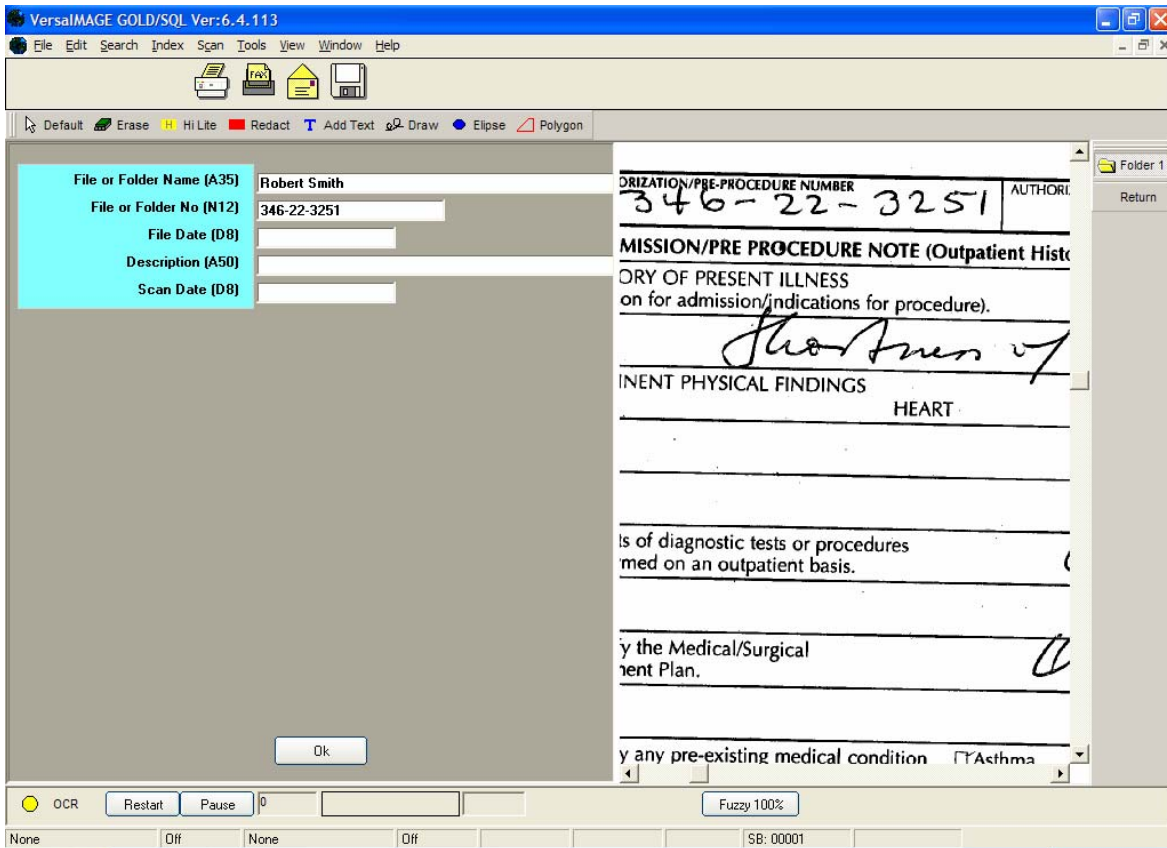
Note: You may correct zoom zones any time by rezoning the box for a given data field before you index that field. (Right click on the image to convert it to full-page view!)

The screenshot shows the VersalIMAGE GOLD/SQL software interface. The main window displays a document with a form titled "RE-ADMISSION/PRE-PROCEDURE INFORMATION". The form contains the following fields and text:

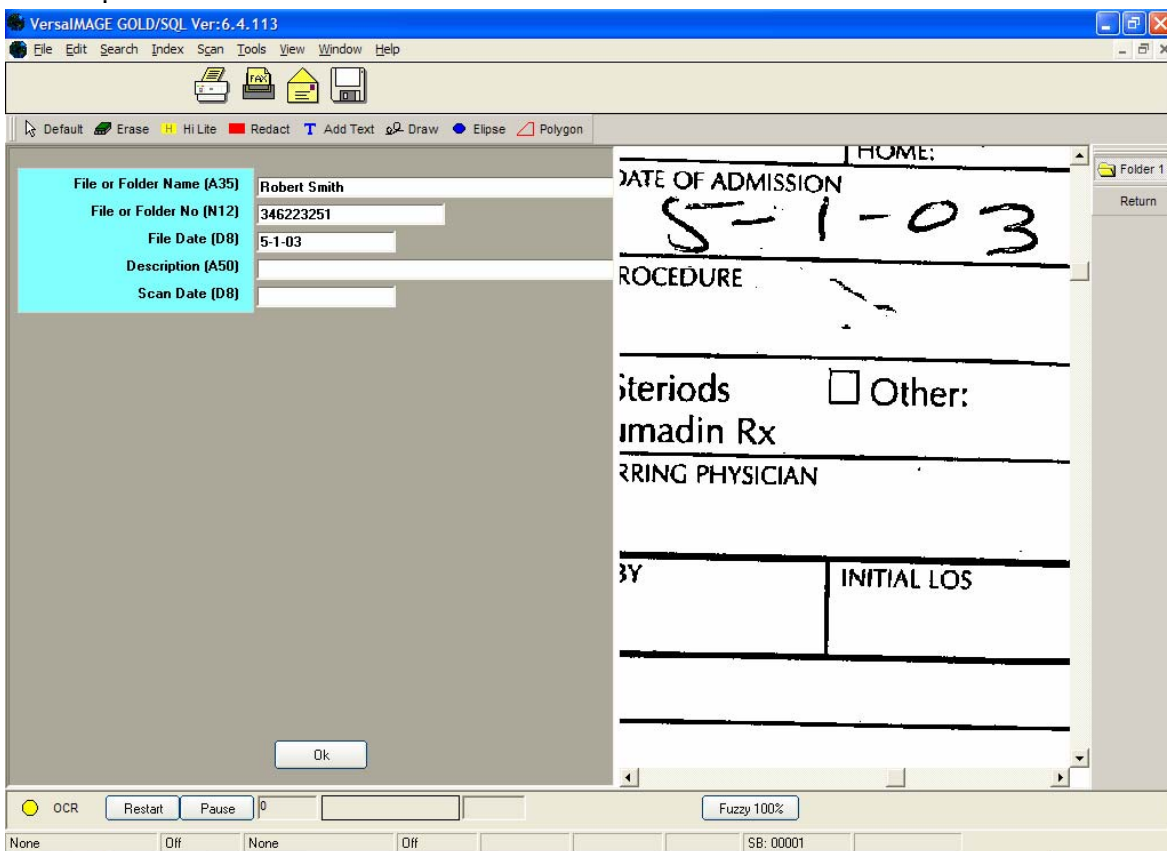
- NAME OF PATIENT: ROBERT SMITH
- PHYSICIAN FULL NAME: DR PETERSON
- PHYSICIAN PHONE NUMBER: (blank)
- VISION DIAGNOSIS: acute angina
- Limit Night Before Procedure: (checkbox) Bowel Prep, (checkbox) IV Antibiotics
- AUTHORIZATION/PRE-PROCEDURE NUMBER: 346-22-3251
- AUTHORIZATION NO: Pe
- RE-ADMISSION/PRE PROCEDURE NOTE (Outpatient History & Ph): HISTORY OF PRESENT ILLNESS, Reason for admission/indications for procedure.
- PERTINENT PHYSICAL FINDINGS: HEART, no
- results of diagnostic tests or procedures performed on an outpatient basis: Ok

The software interface includes a menu bar (File, Edit, Search, Index, Scan, Tools, View, Window, Help), a toolbar with icons for various functions, and a status bar at the bottom with fields for OCR, Restart, Pause, Fuzzy 100%, and SB: 00001.

Zoom zone indexing the Name field.



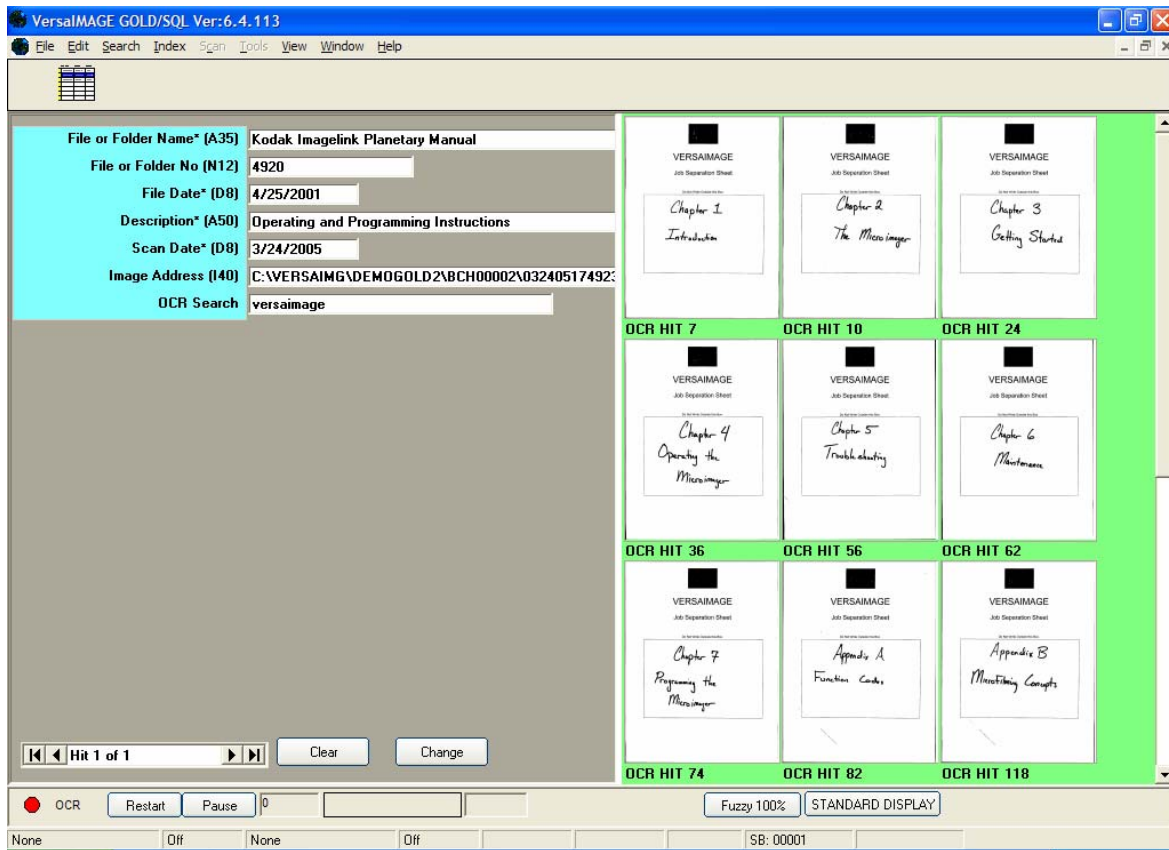
SSN indexing via a zoom zone



Date indexing from the zoom zone

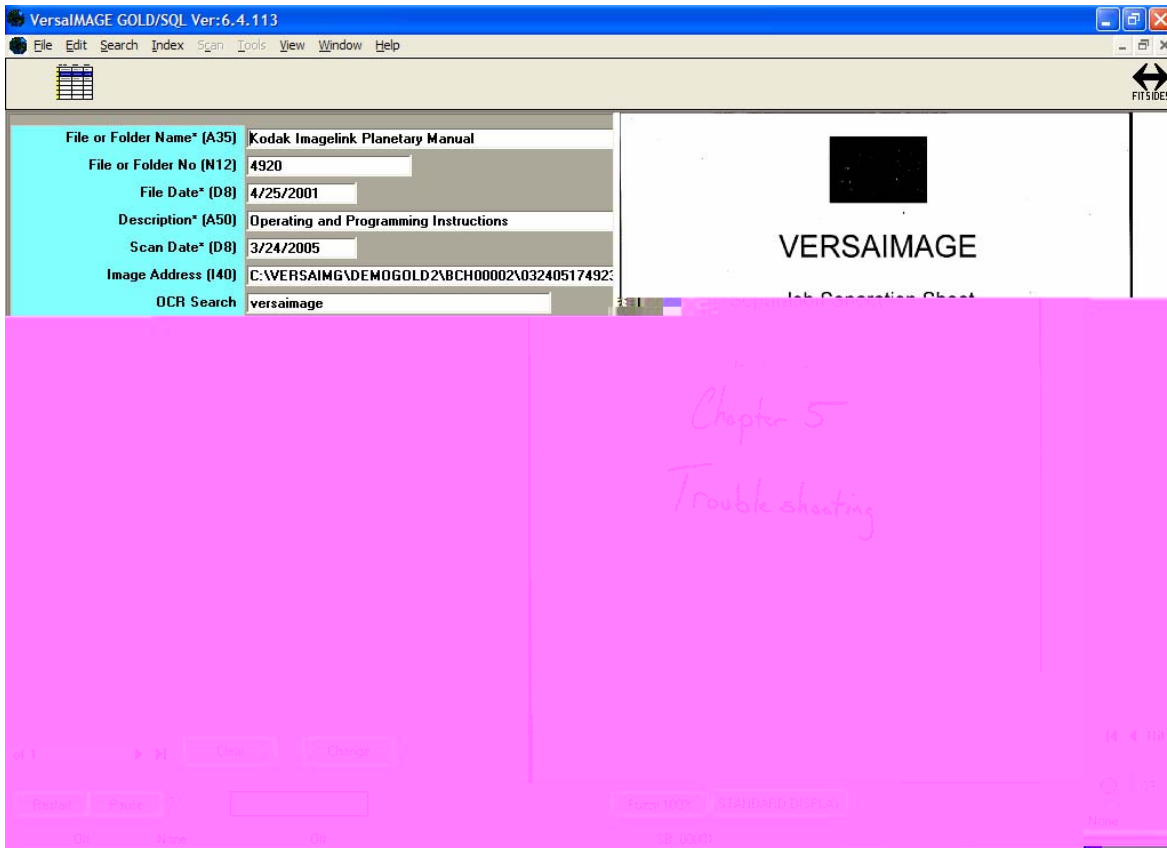
BATCH SCANNING OF BOOKS and FILES for OCR Search of VERSAIMAGE Job SEPERATOR SHEETS:

When scanning books and chapters or files with divider tabs one may use an easy indexing method using VersalIMAGE Job Separator Sheets. Simply insert a VersalIMAGE Job Separator sheet where a divider must be placed in the file, such as the beginning of each book chapter. Manually write the chapter number and name into the text box on the VersalIMAGE Separator sheet. This way every chapter has a Versa Separator sheet that can be searched for automatically by placing the word “versaimage” into the OCR Search field as shown below. It is requested that the search for the word versaimage is made at a fuzzy 80% (medium) setting in order to allow OCR misreads as shown in this document. Perform OCR searches using Kodak in the database name field and versaimage in the OCR field. Note that there is a difference of two images in the result between THE 100% and 80% FUZZY SETTINGS! (Right click on images

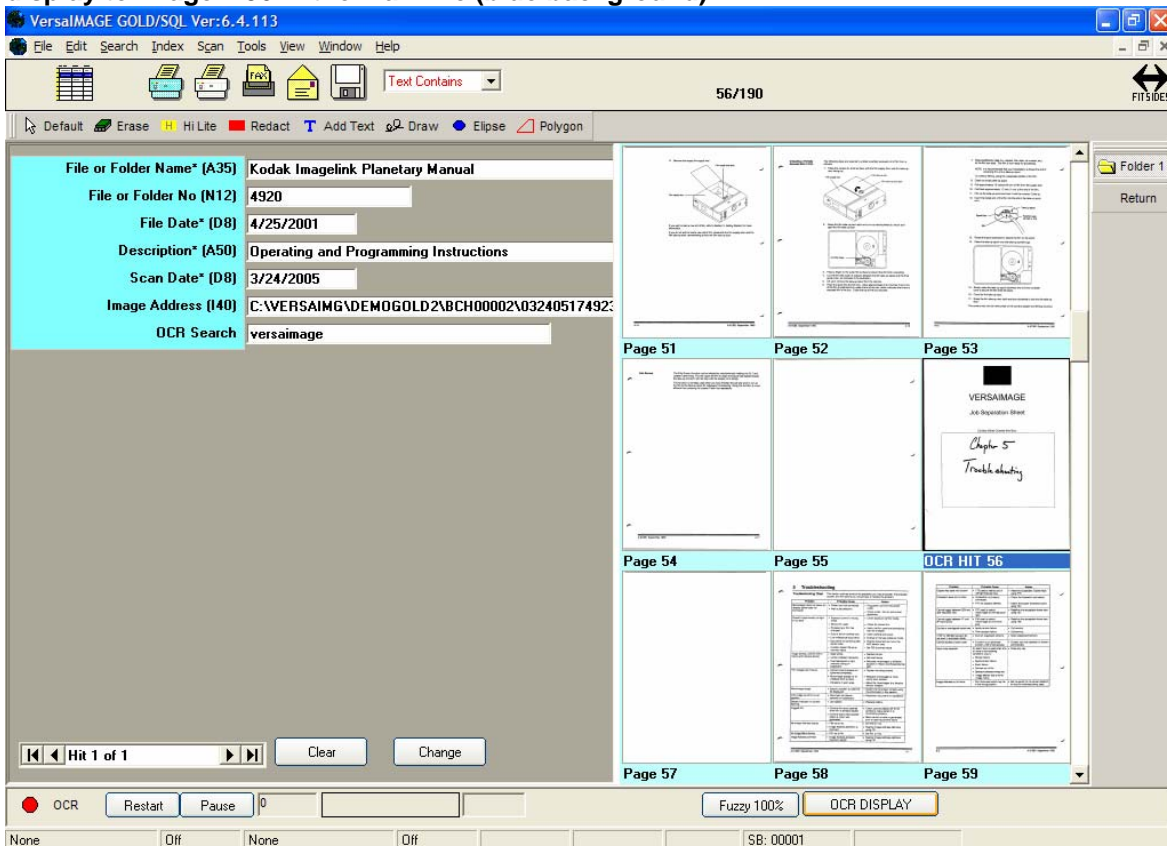


Note: make sure that you deselect the “delete Versa Separators” in the Batch Scan window before scanning the book or file! (Usually VersalIMAGE Separator sheets are used to automatically create a new file while batch scanning and the separator sheet is removed automatically so it does not appear as an image in the new file.

From the green OCR background select the desired chapter i.e. Chapter 5 by clicking on OCR HIT 56. The image is enlarged to full size as shown below.



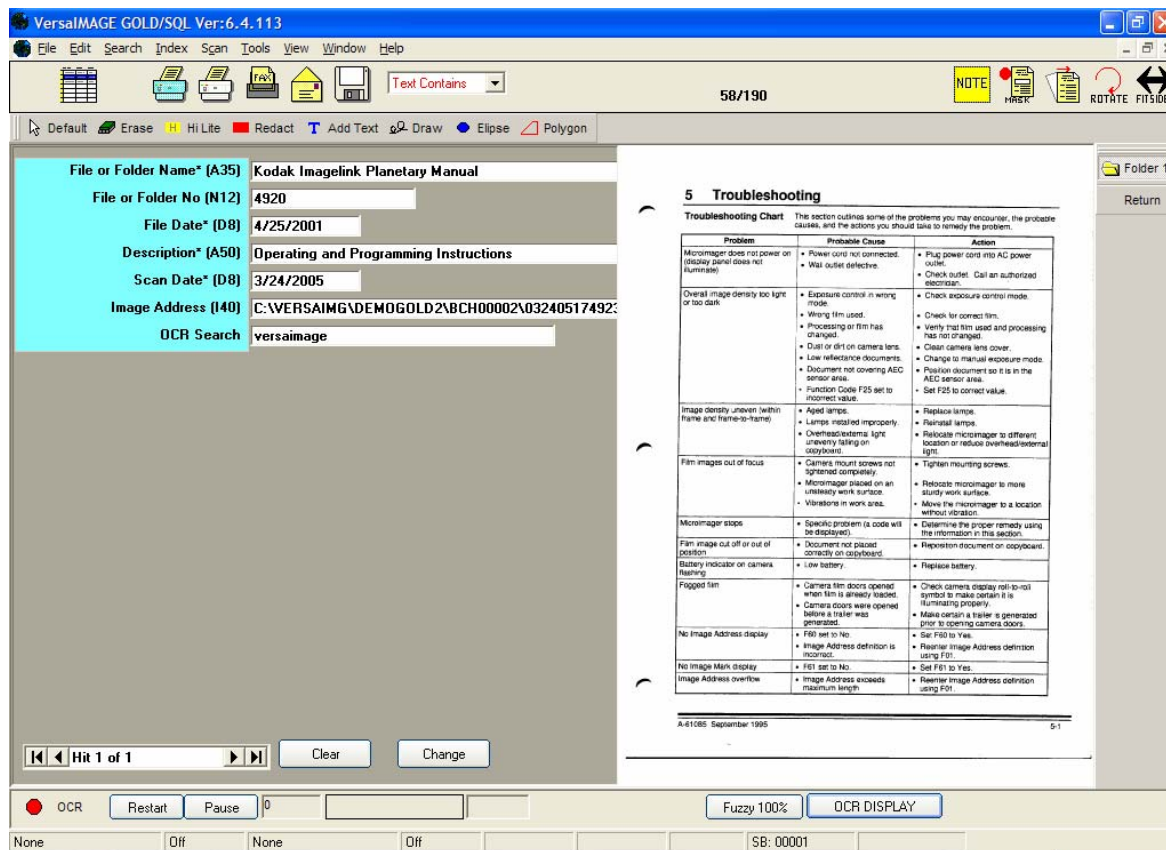
Now click on the flashing STANDARD button at the bottom of the screen to move the display to image # 56 in the main file (blue background).



The actual chapter page follows the VersalIMAGE Separator sheet and can be located visually in the thumbnail display as image 58. Click on 58 to see Chapter 5 Troubleshooting page.

Want to send all images in Chapter 5 via PDF e-mail to a requestor?

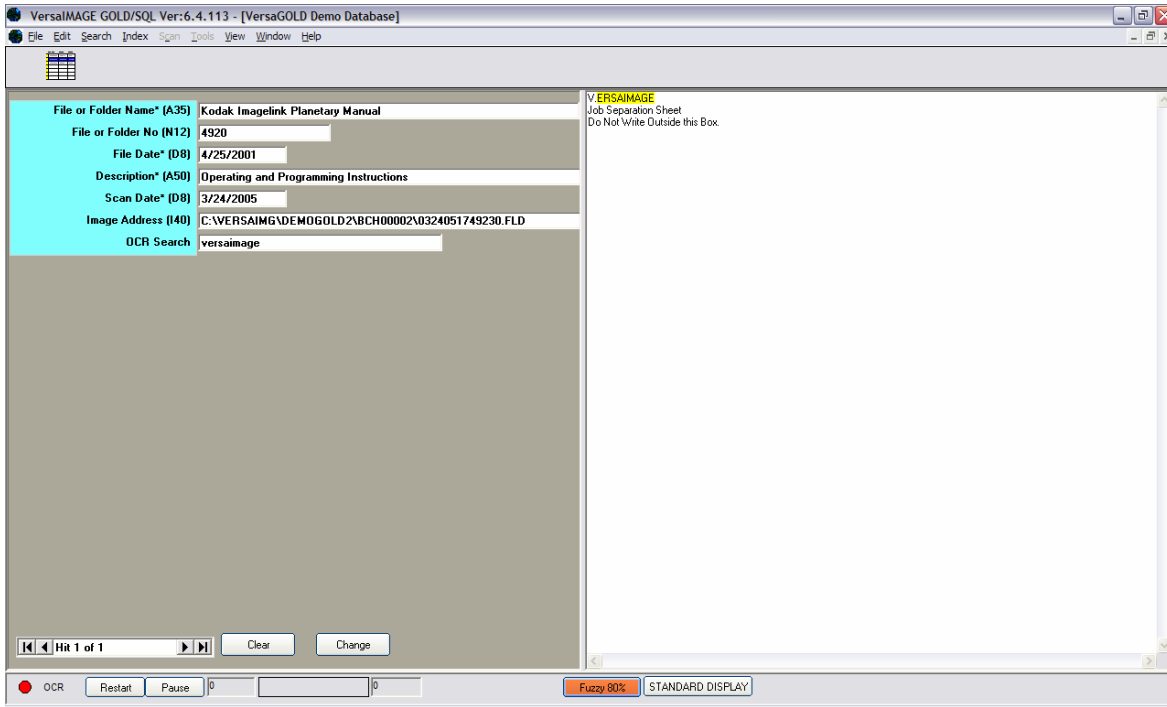
In thumbnail mode click on image number 58 and hold the shift key down. Go to the last image in chapter 5 and click on the image. This will highlight all images in chapter 5. Now select Convert images to PDF from the TOOLS menu. Answer the pop-up question with YES if you wish the database information to be added as the first image and the PDF conversion is complete. You may now e-mail the file conventionally.



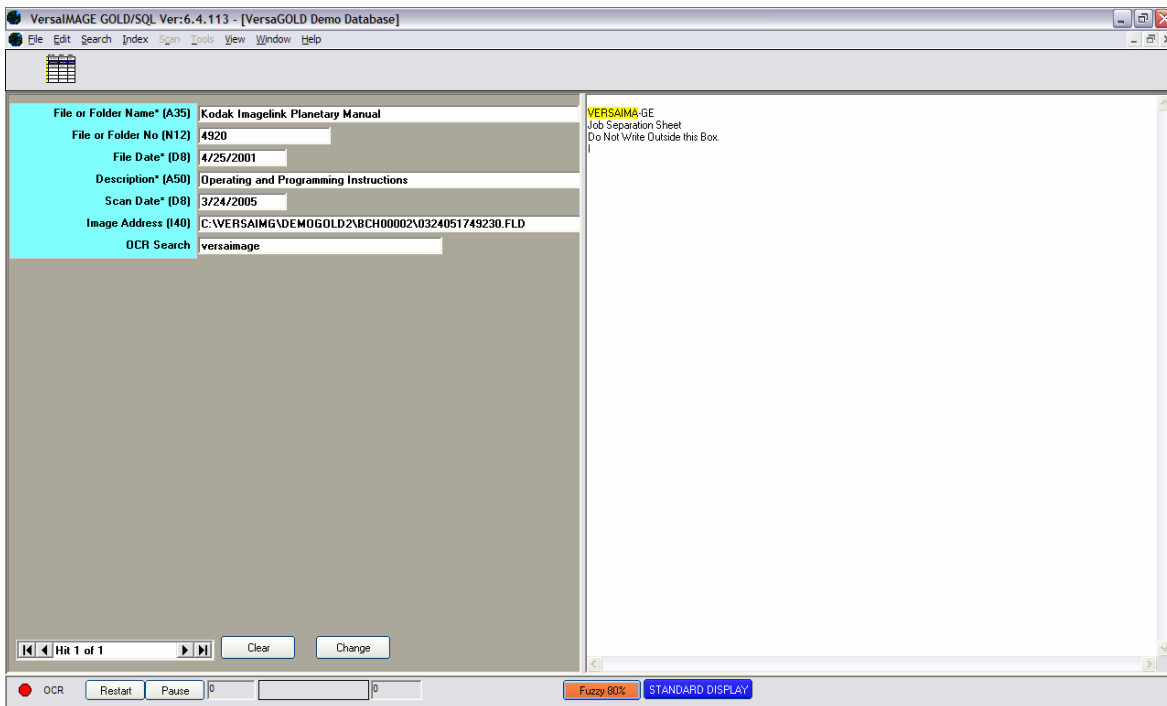
See Note on Fuzzy search logic below;

NOTE: The following VersaIMAGE targets can be found looking for Kodak in the name field and for versaimage in the OCR field but ONLY with the fuzzy search set to 80%

The image below (OCR HIT 186) will not be found if the OCR search is done for versaimage with the fuzzy setting at 100% There is an extra dot between the V and the e in v.erasimage. Set the fuzzy to 80% for full accuracy for this application!

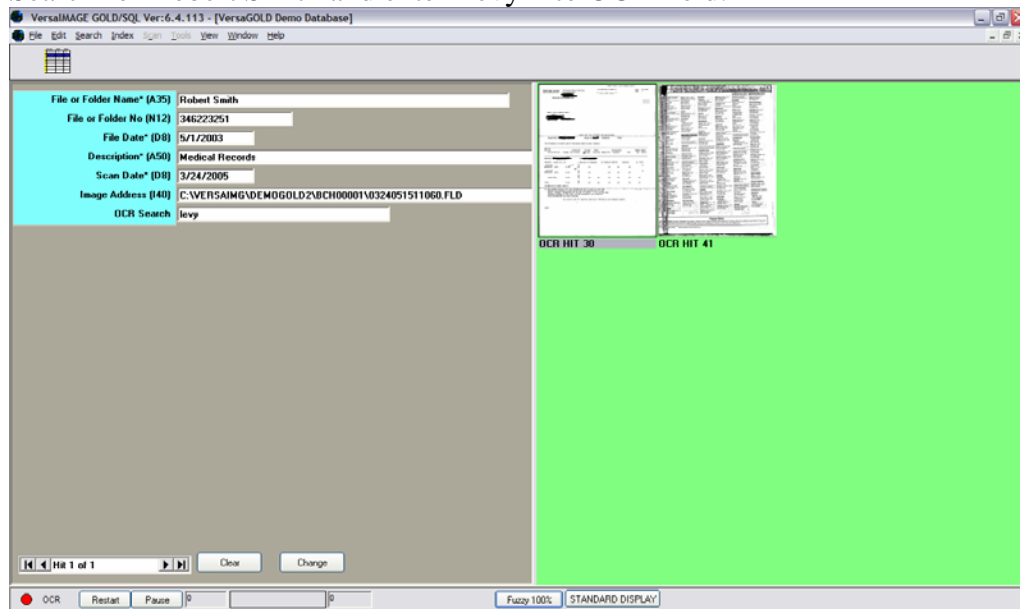


This image OCR HIT 138 will also only be found if the fuzzy is set to 80%. Look at the OCR translation on image 138 and see: versaima-GE

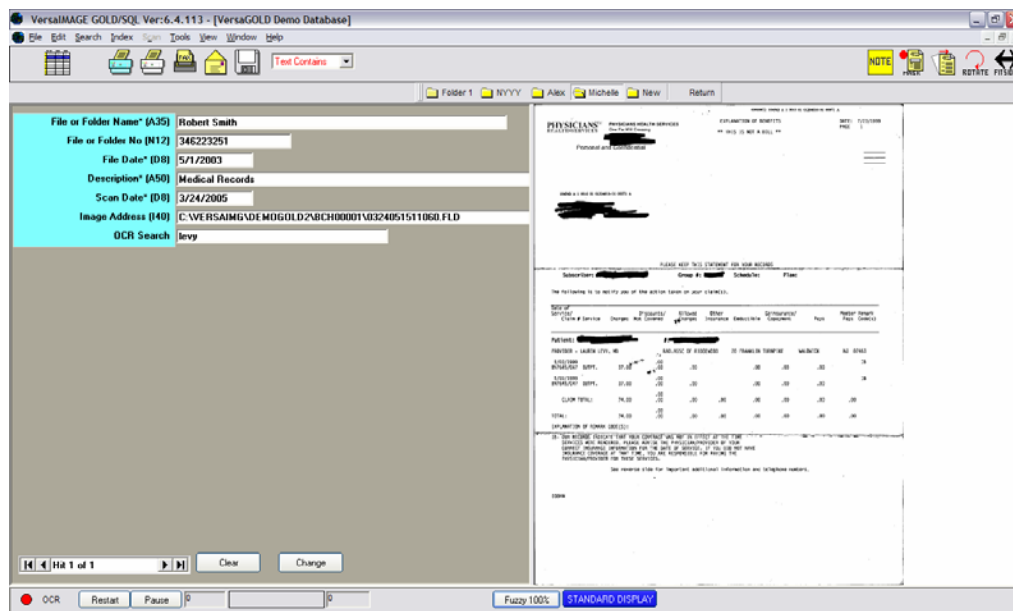


START HERE: Use DemoGold2 database. May be downloaded from the web!

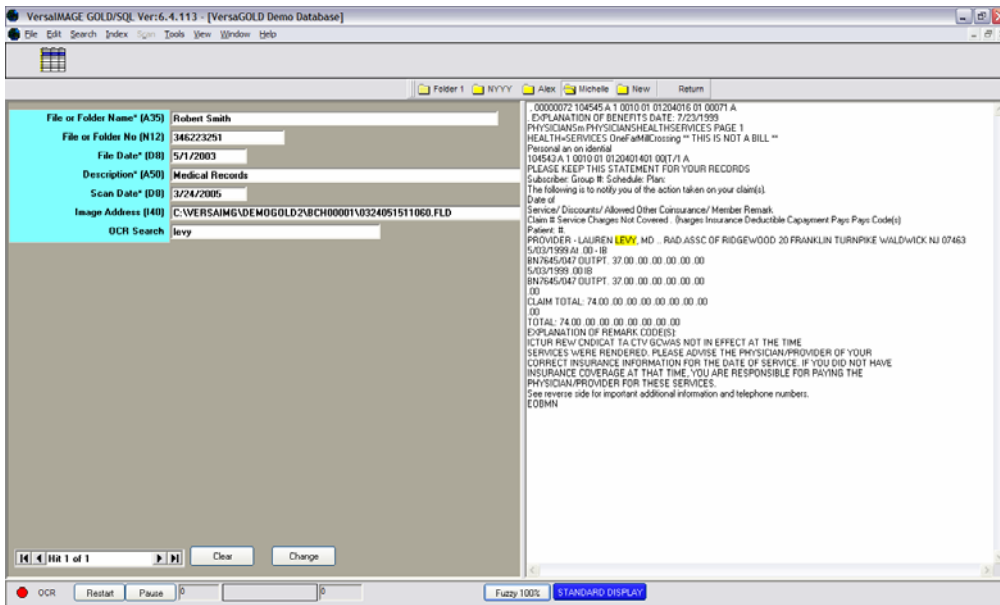
Search for Robert Smith and enter Levy into OCR field:



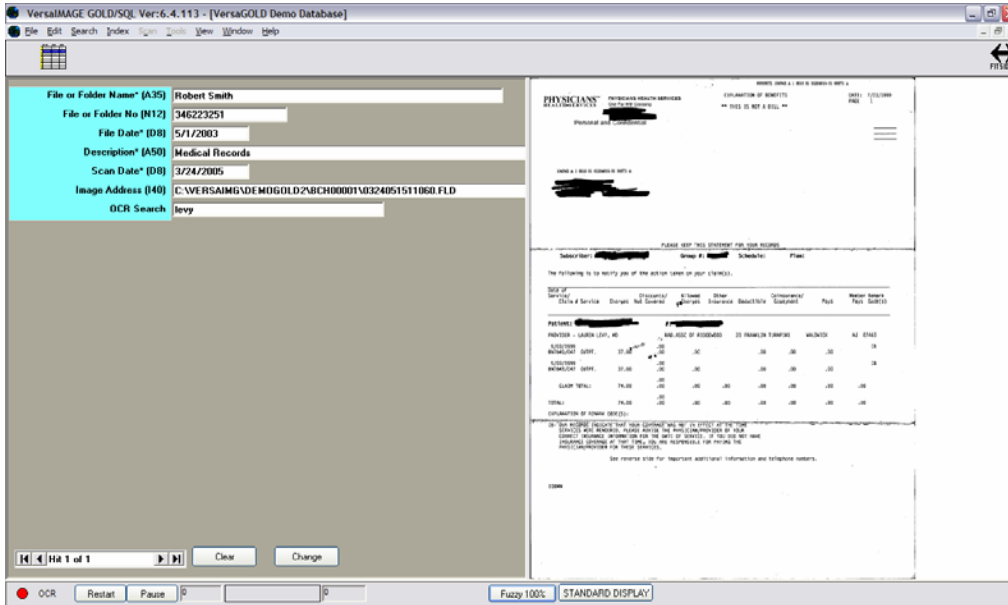
Result of a Search for **Robert Smith** in Name field and **Levy** in OCR field yields 2 OCR HITS, Page numbers #30 and #41 (Green Background is OCR HIT display)



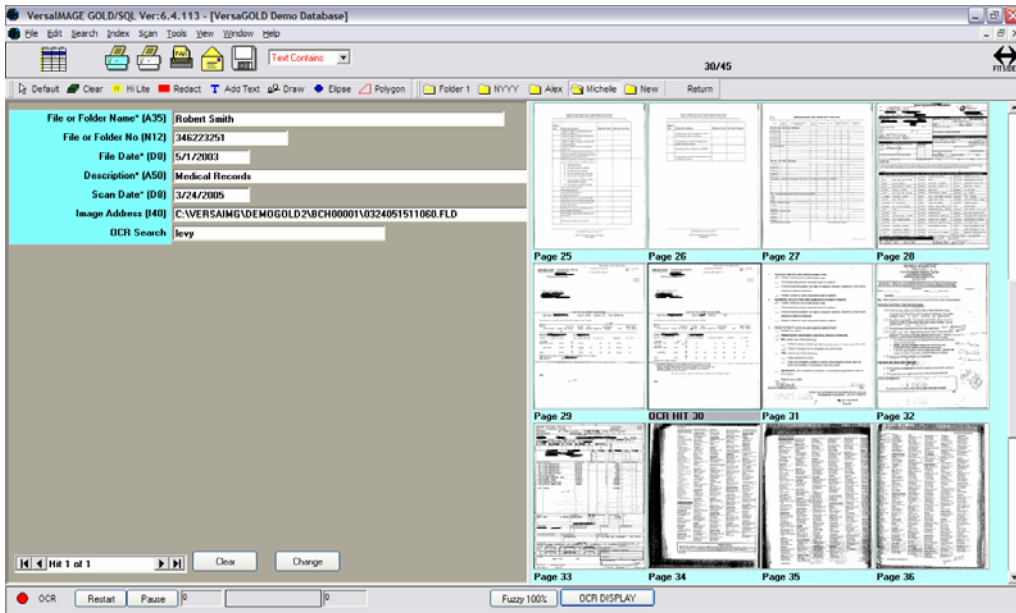
Click on OCR HIT 30 enlarges the image



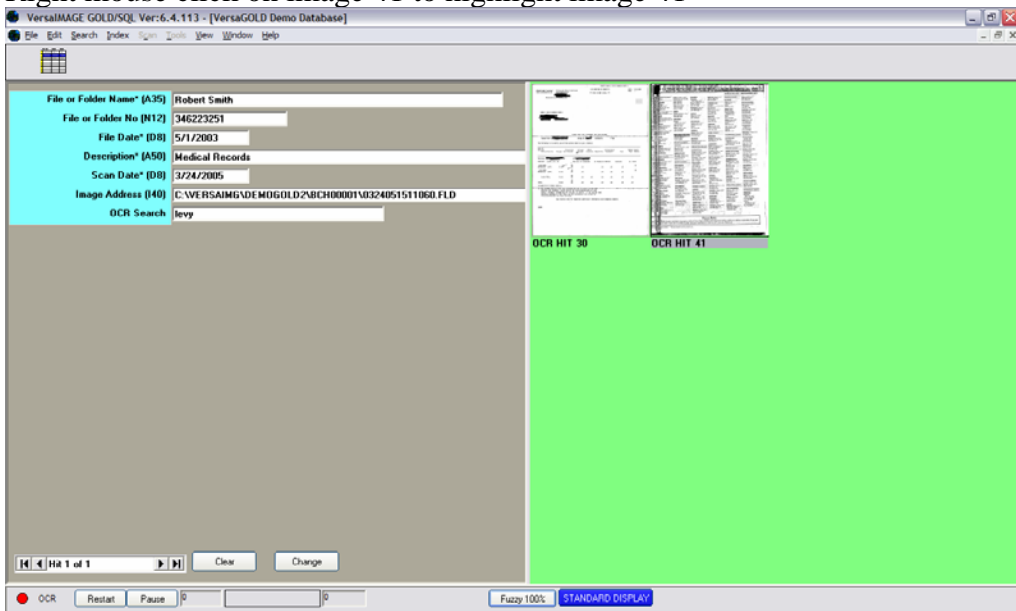
Control/Right Mouse or middle mouse click on image switches to OCR text note yellow highlight area around **Levy** text

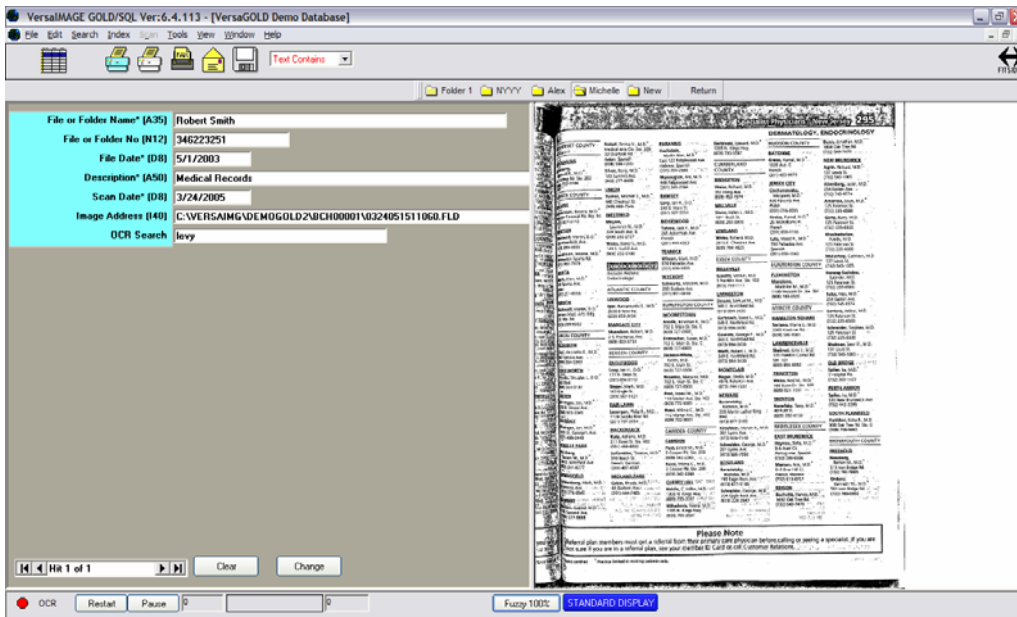


and Right Mouse click switches display back to image display, then click on blinking STANDARD DISPLAY to see OCR HIT page 30 in main file (blue background) below:

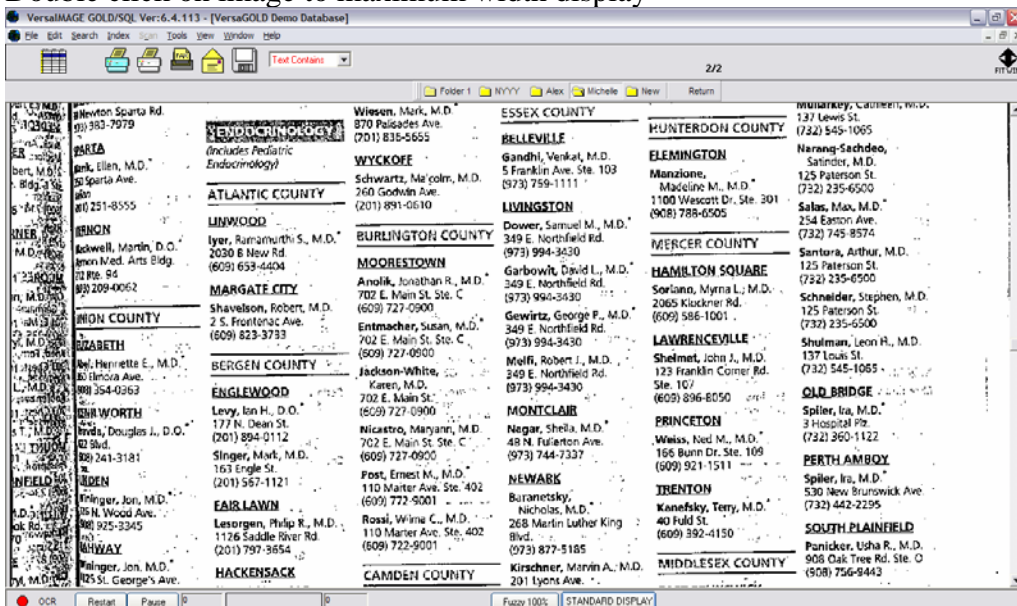


Then click on OCR DISPLAY button to switch back to OCR display.
 Right mouse click on image 41 to highlight image 41

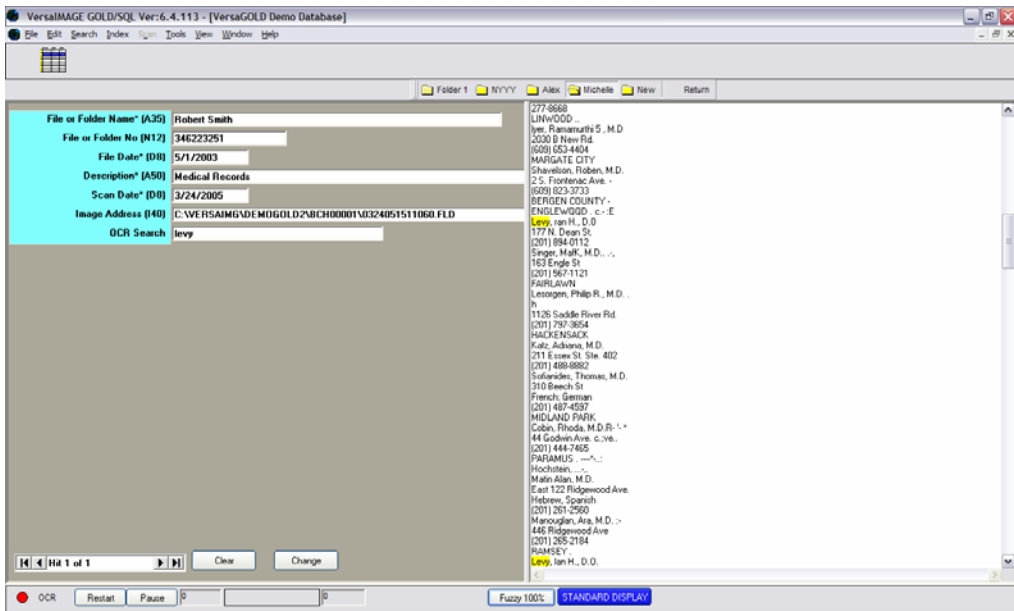




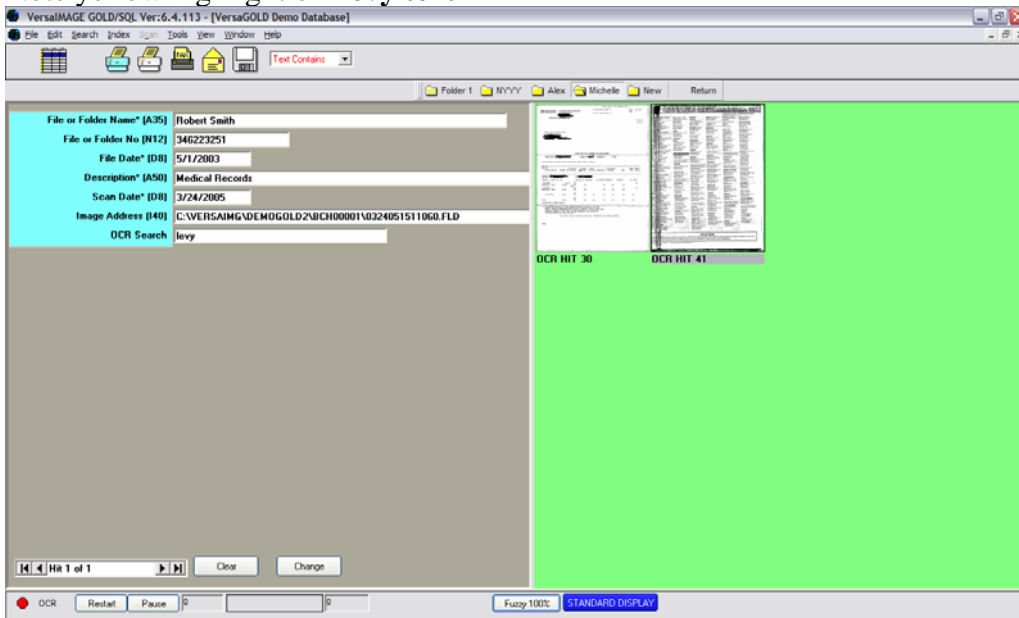
Click on image 41 to bring it to full page display
 Double click on image to maximum width display



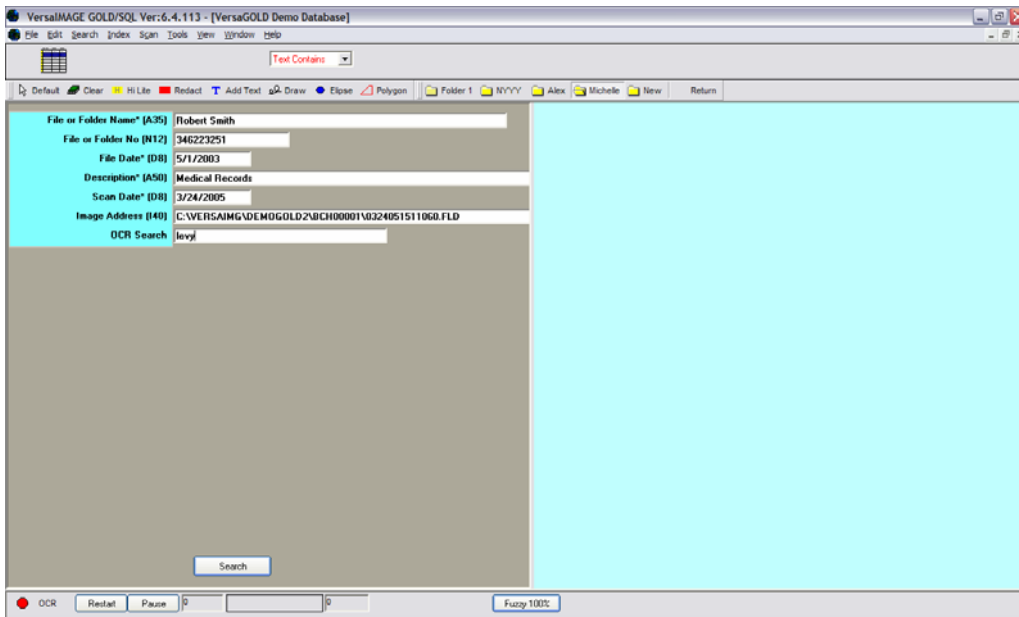
Right mouse click or double click on image to reduce it back to full page display



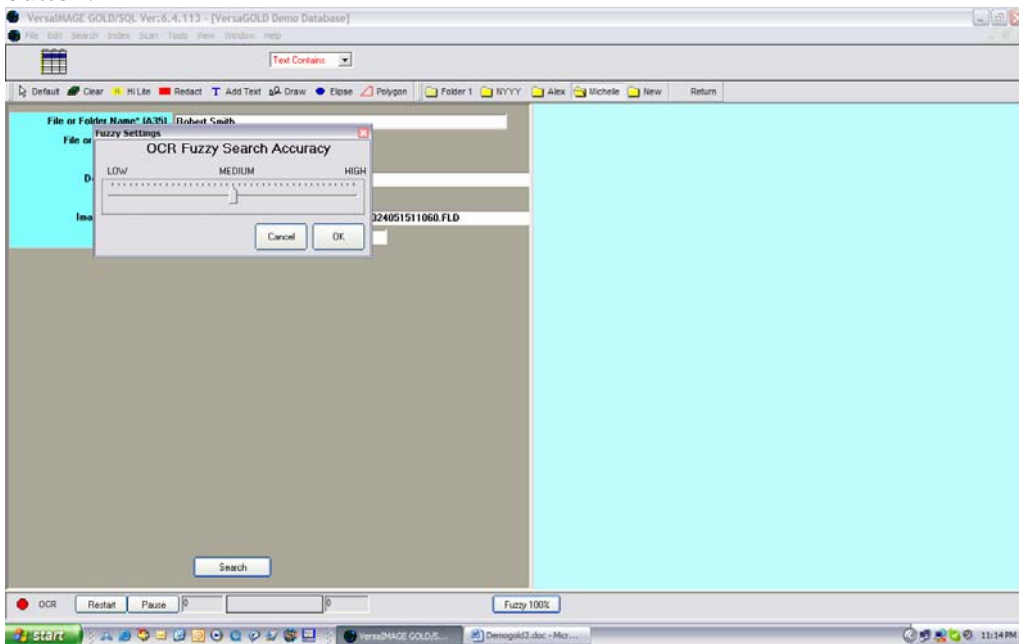
Then Control/right mouse click or middle mouse click on image to show OCR
 Note yellow highlight of Levy text



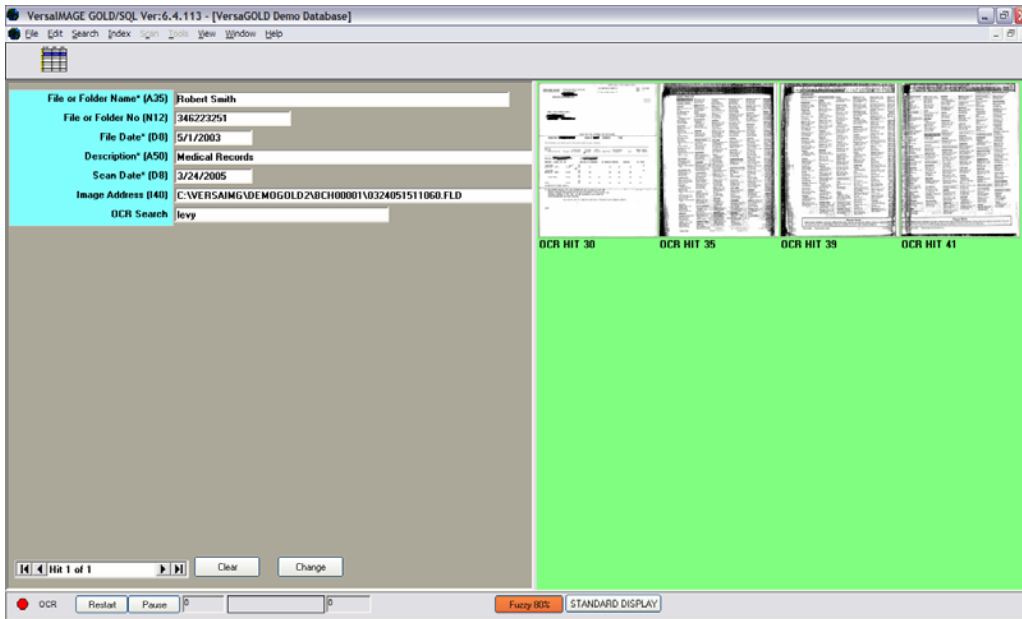
Right mouse click on image to go back to thumbnail display



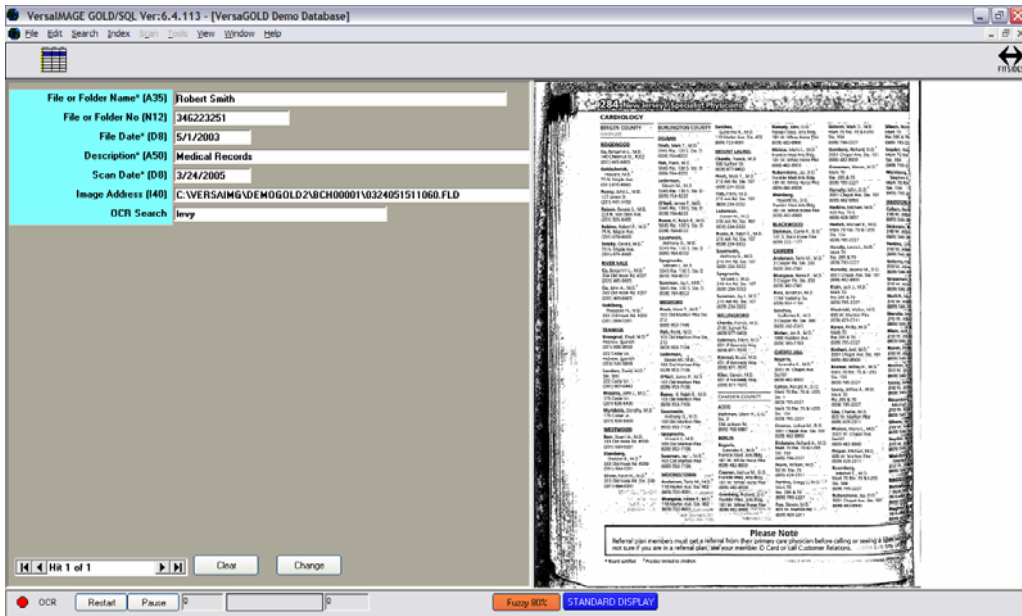
Click in the OCR field to make a new OCR search. You may change search words now or leave the same word Levy but change the fuzzy filter setting by clicking on the fuzzy button.



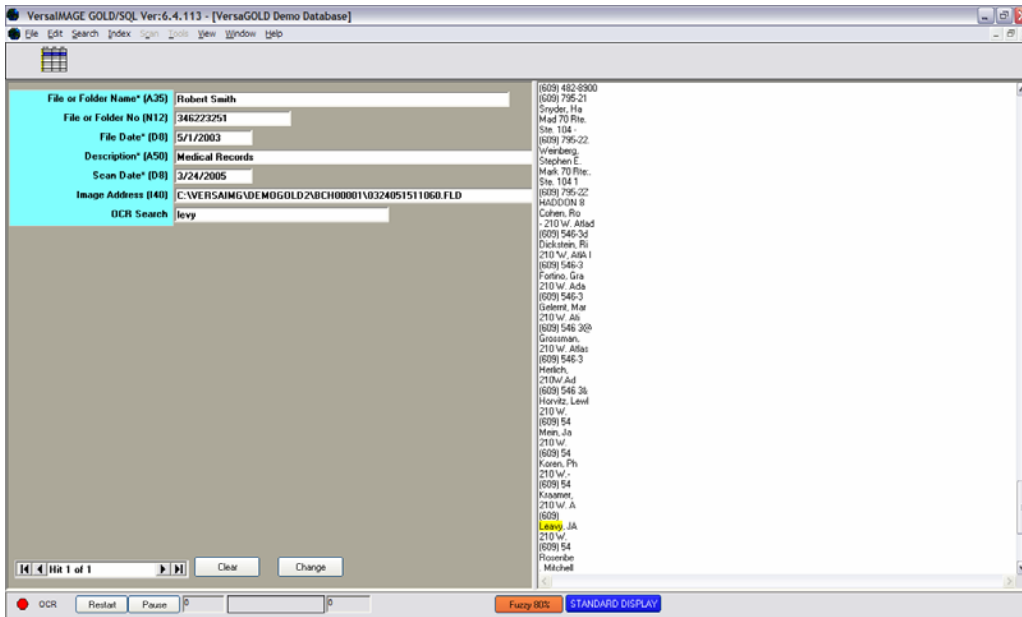
Move fuzzy slider to 80 or medium and click on OK and then on the SEARCH button.



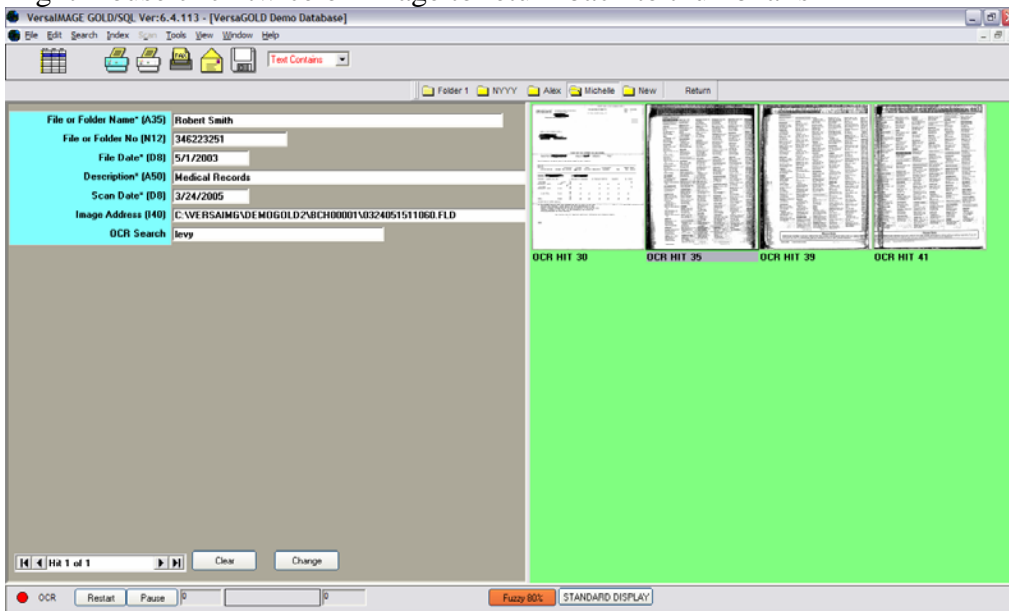
Now 4 OCR HIT PAGES are found.



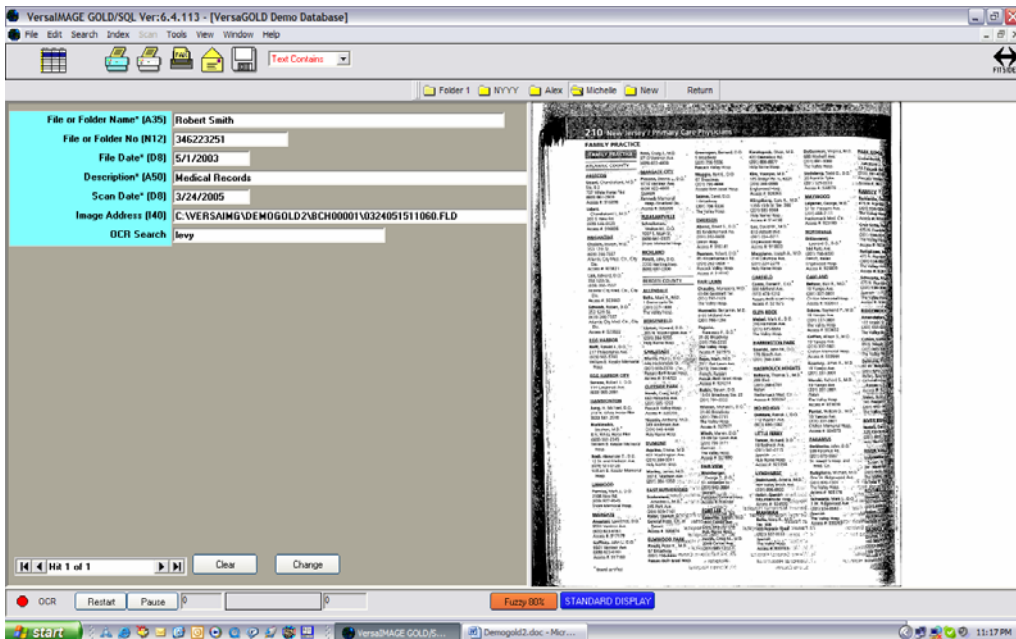
Click on OCR HIT Page #39



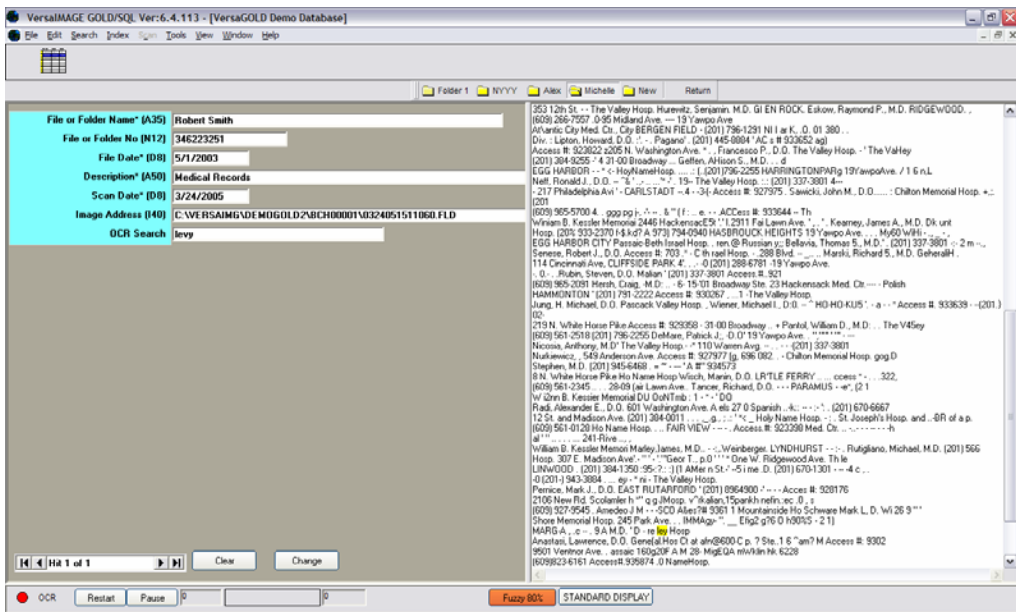
Control/right mouse click on image to see text. Note **Leavy text was located now!**
 Right mouse click twice on image to return back to thumbnails



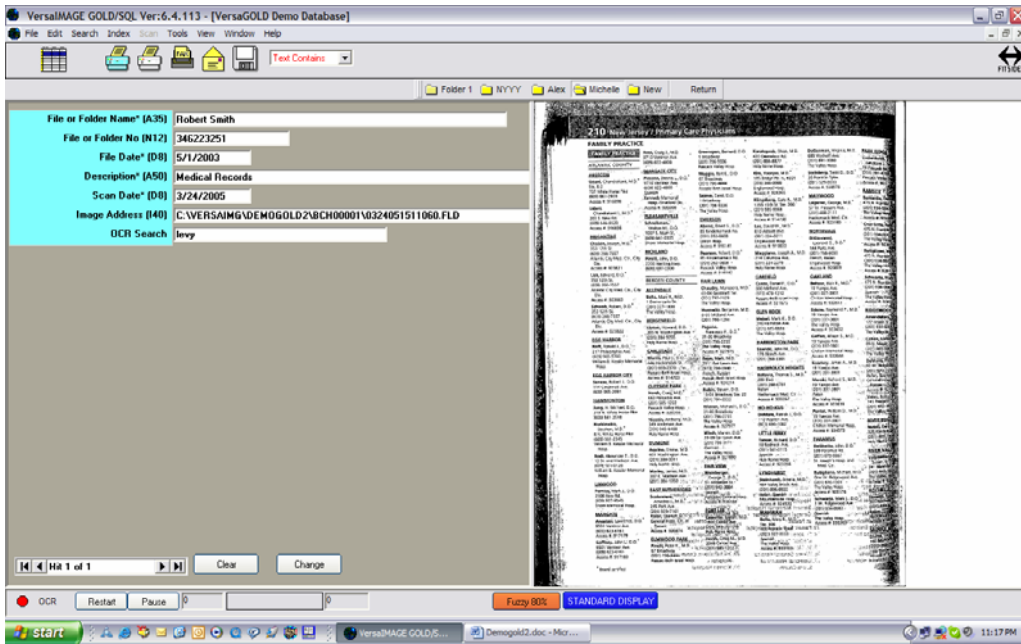
Click on OCR Hit Page #35



OCR HIT page #35 is in full page display now right mouse click on image and note Yellow highlight area around Ley text below:



Right mouse click back to full page display:



Right mouse click again to thumbnail display

