GeoInfo Mobile v2.4 User Manual

www.GeoInfoMobile.com

May 15, 2012

Geo-Information Solutions
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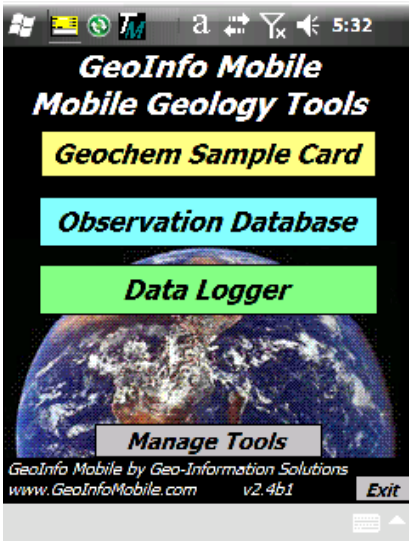

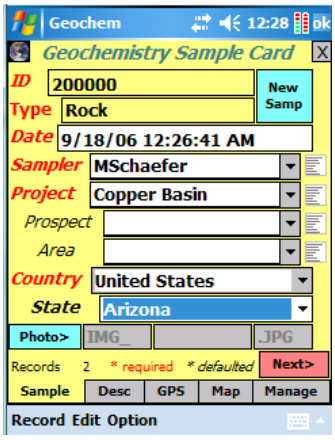

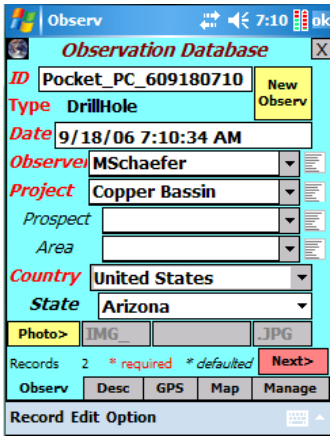

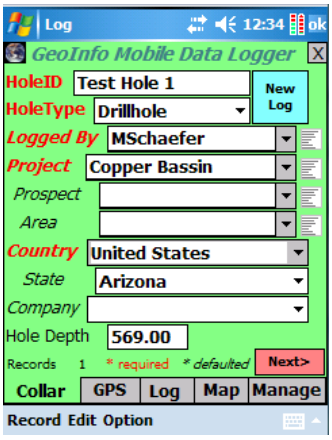

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What is GeoInfo Mobile?

GeoInfo Mobile is a set of mobile geology database tools designed specifically for the mining industry to facilitate standard and robust descriptive data collection and GPS location information for field activities. GeoInfo Mobile is integrated with Tierra Mapper (www.TierraMapper.com) which allows users to view, navigate to and edit GeoInfo Mobile data on GIS maps in the field. GeoInfo Mobile runs on Pocket PC's or smart phones with Windows Mobile or Pocket PC operating systems.

Key features facilitate simple quick data entry;

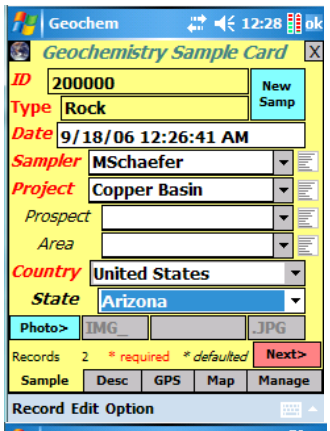
- Sample numbers are auto incremented.
- Log From To values are auto incremented, the new intervals From value is automatically assigned the last To value.
- Common entry fields (Project, Geologist, Country, State) are defaulted to previously entered values.
- Error checking checks for proper data entry, for example, To cannot be greater than From, and Azimuth has to be between 0 and 360.
- Most data entry is completed using pick lists, so typing is not necessary for most field work.
- A large numeric key pad, and calendar/date picker is activated for appropriate fields.
- Pick list values are completely customizable, generally managed by a database.
- Comment fields are available for entering unique data not covered by the pick list fields.
- GPS coordinates are automatically collected and stored with each data record.
- A simple **Next>** button is provided on every page to direct the user to appropriate fields that might need to be collected for the specific sample type or observation that is being collected, however direct access tabs on each page facilitate quick access to specific data entry fields for users who know the software.
- Formulas are auto calculated where appropriate.
- Mag susceptibility, conductivity and gamma radiation can be collected with every sample or observation.

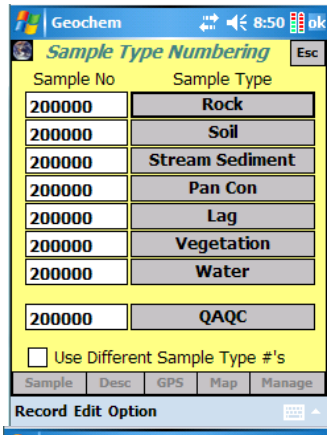
Pick lists managed by a database (the GeoInfo Tools corporate database is available from Geo-Information Solutions) offer the benefit of clean standardized data entry with no spelling/entry errors. GeoInfo Mobile puts corporate database rules at the rock human interface!

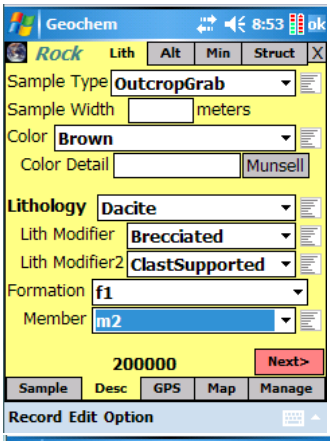
Three GeoInfo Mobile data collection tools exist;

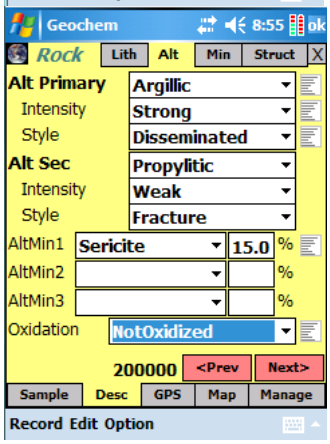
Geochemistry Sample Card

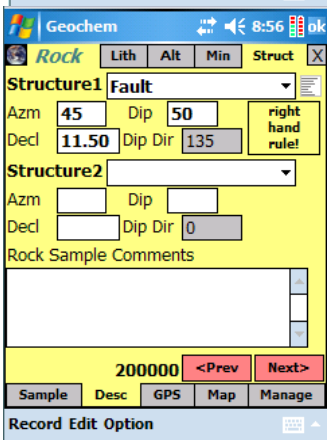
The Geochemistry Sample Card facilitates collecting surface geochemistry samples. Seven sample types and QAQC samples (blanks, standards and field duplicates) can be collected. Sub sample types can be defined for each sample type, for example for rock samples, outcrop grab, float, talus, channel chip, dump high grade etc … Each sample type has specific fields appropriate for that sample type.

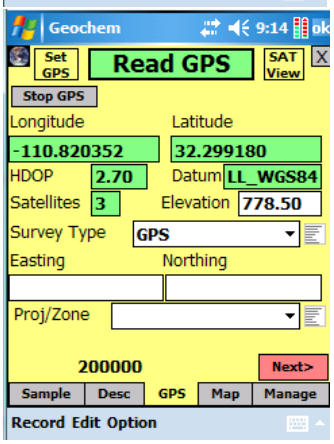


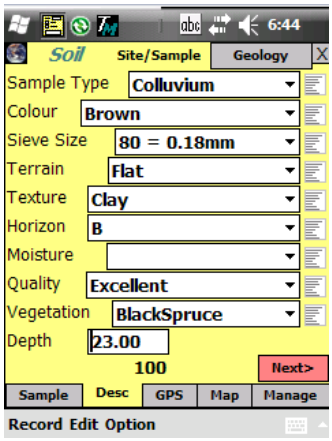


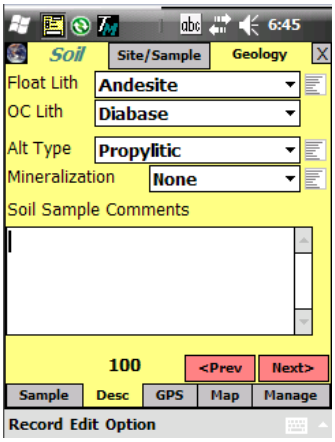






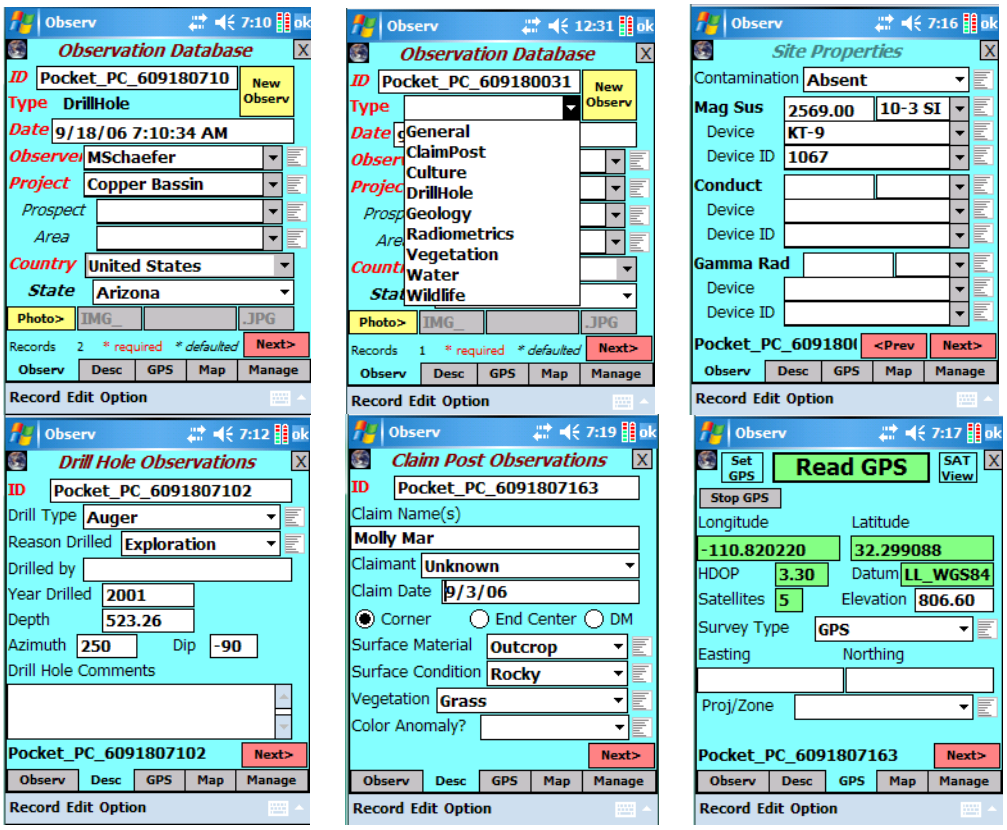






Observation Database

The Observation Database facilitates collecting field observations such as geology, strikes and dips, claim posts, old drill hole locations, water features, cultural sites, etc…anything that normally is noted in a field notebook. A General observation type can be used to collect any field observation that does not fit into one of the other predefined observation types. Pick lists in the General type are built as the user types values so after entering a value once it is available by pick list for later similar observations.

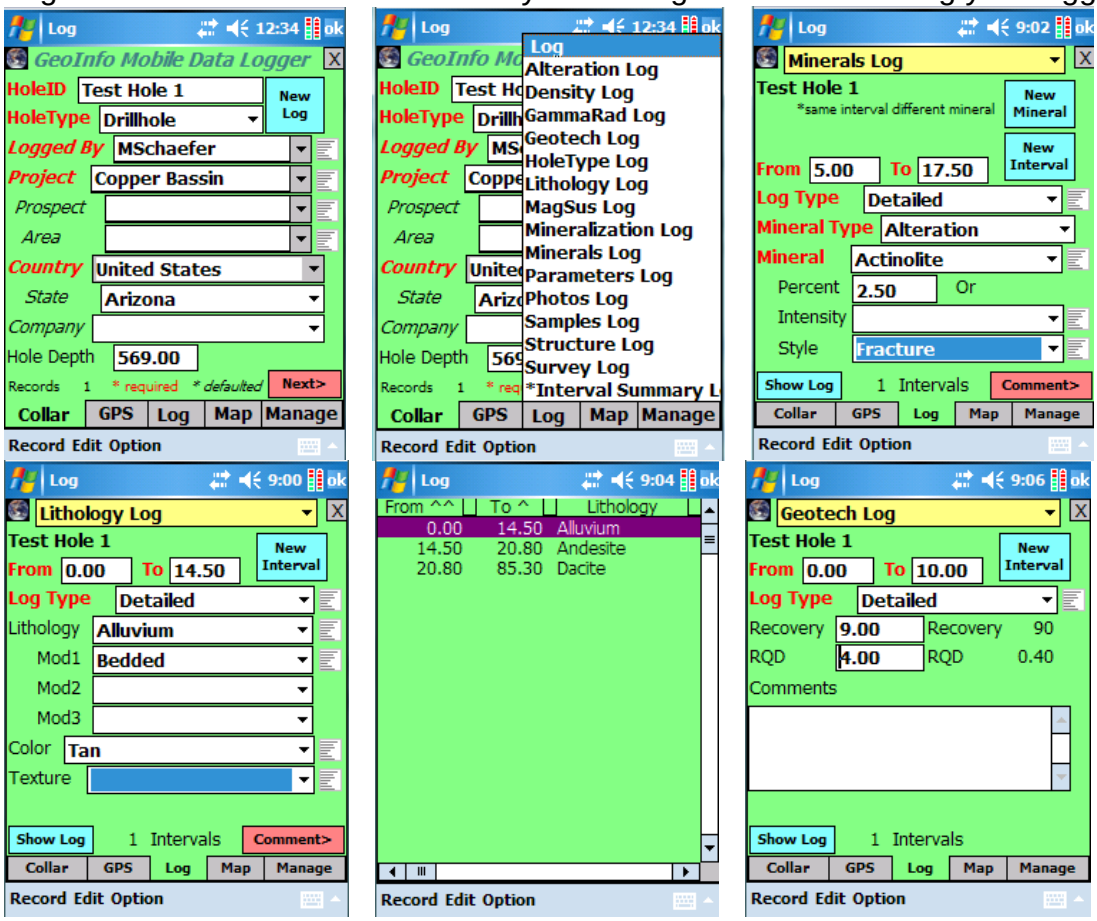


Data Logger

Data Logger facilitates logging drill holes, trenches, underground workings, and blast holes. Collar information is collected including a GPS location and then a variety of logs exist for data logging.

A survey log is required to geo-reference a hole, trench or underground working. The hole type log is for logging the type of drill hole, maybe rotary at the top, HQ core and then NQ core, the dates of the work, and the contractor completing the work. Other logs include Lithology, Alteration, Mineralization, Minerals (more details that Alt and Min), Structure, Density, Mag Susceptibility, Geotech, Gamma Radiation, Photos, and Samples. Each log has independent From To or Depth intervals. The Interval Summary Log is a special log that combines the Lithology, Alteration, Mineralization, Minerals, Structure, and Sample logs into one similar interval log. The Parameter log is used to log characteristics that are not available in any of the other logs (i.e. Box Number, Fluorescence, Veins Per Meter, etc...). It is not uncommon to have more than once data collector logging the same hole, a technician might log Geotech, Samples, Density, Mag Sus, etc … and a geologist the descriptive geology. Make sure hole names are the same!

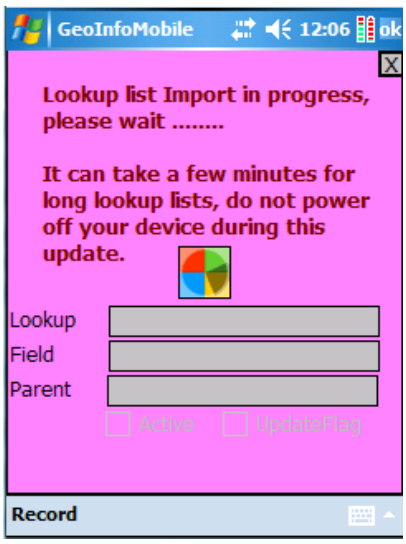
Logs have a Form View for data entry and a Log View for reviewing your logging.

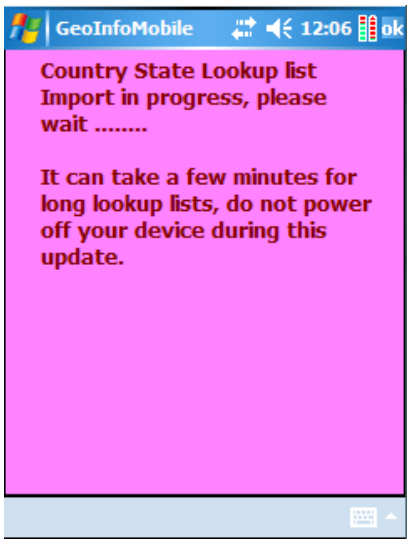


Installation

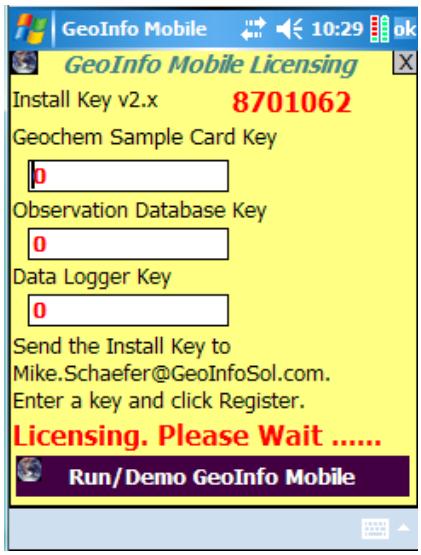
1. Run the *GeoInfoMobile_version_Installer.exe* from your PC while your PPC is connected to your PC with ActiveSync (Windows XP) or Windows Mobile Device Center (Windows Vista and windows 7).

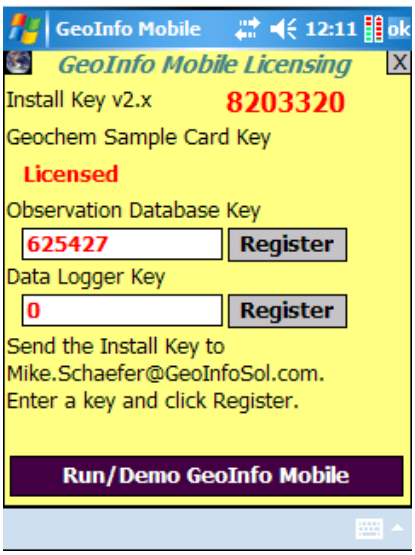
2. When installation is complete on the PC lookup lists will be updated on your device; you will see update messages on your device. First, the main lookup lists update, then the Country/State/Province lookup lists.



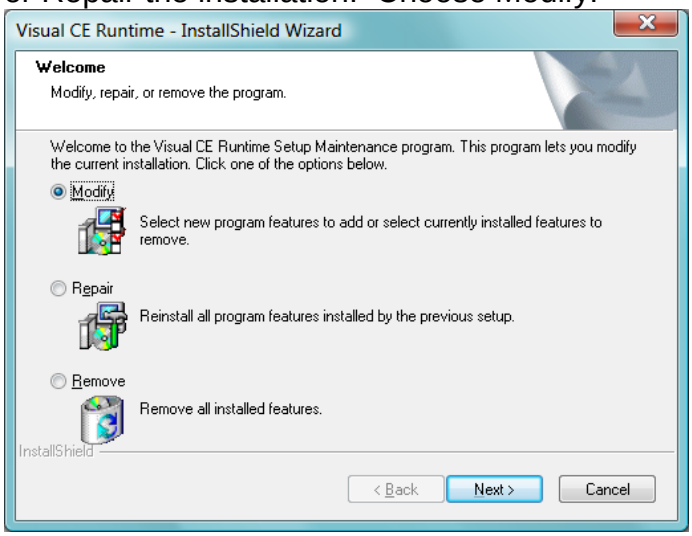


3. When the lookup list updates are complete the license manger will display. Wait for the licensing to complete; when the red “Licensing. Please Wait ……” message disappears. When the licensing is finished scanning your device you can either license GeoInfo Mobile by entering in the key codes in the appropriate boxes and clicking the Register button (Install Key will need to emailed to Mike.Schaefer@GeoInfoSol.com to get these codes), or Run/Demo GeoInfo Mobile by clicking the **Run/Demo** button at the bottom of the screen. Demo mode is limited to adding 5 records to the Geochemistry Sample Card and Observation Database and 2 logs to Data Logger with 3 records for each log.

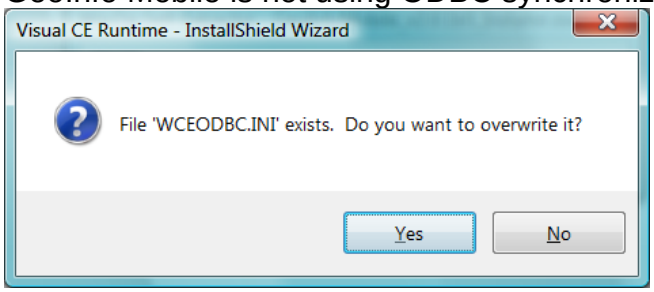




*note: If installing over an older version (2.x only) or from a PC where GeoInfo Mobile has already been installed you will be prompted to Modify or Repair the installation. Choose Modify.

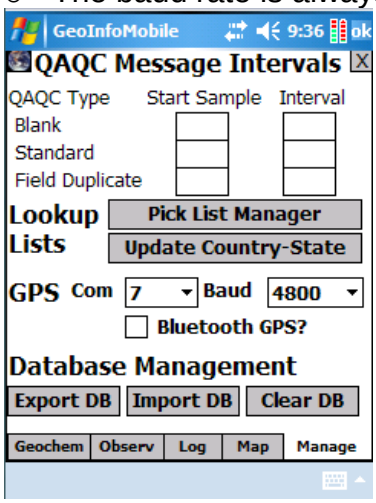


*note: If prompted to overwrite WCEODBC.INI either Yes or No is OK as GeoInfo Mobile is not using ODBC synchronization.



Quick Start

- Before you use a GPS with GeoInfo Mobile you have to set the GPS COM port, baud rate, and set if you are using an internal or Bluetooth GPS. These are set only once and remain as global defaults.
    - From the GeoInfo Mobile launcher screen click Manage Settings or from any of the application pages click the Manage tab, then the GPS tab.
    - Select the GPS com port (see specific device setting in the appendixes or get this data from your specific device).
    - Check the “Bluetooth GPS?” box if you are using a Bluetooth GPS.
    - The baud rate is always set to 4800.



- The World Icon in the upper left corner of all the pages,  , takes the user back to the GeoInfo Mobile launcher page. This facilitates a user switching back and forth from geochemistry samples to observations to logs.

- From the GeoInfo Mobile launcher screen click to open one of the 3 modules. Enter data in the first screen. All the required fields (red) have to be filled in to proceed. Click **Next>** to go to the next page and all subsequent pages required for the chosen sample or observation type (each has specific fields). After all the description information is collected the **Next>** button takes you to the GPS page.

- On the GPS page, if you are connected to a GPS, click the **Read GPS** button and the coordinates will be entered into the database. You can manually enter any coordinate in the easting and northing fields, but the Latitude and Longitude fields are locked and can only be entered from a GPS (a quality control feature). After you have coordinates, the **Next>** button takes you back to the main sample, observation or log page.

- Clicking **Next>** through the application takes you through the pages that are appropriate for the sample type or observation type that you are collecting. Once you are familiar with the pages that exist for each sample or observation type you can quickly get from one type of information to the next using the tabs at the bottom or top of the page. You can quickly get to the descriptive information (**Desc**), GPS information (**GPS**) or log information (**Log**) using the bottom tabs.

- In Data Logger, click the **Log** tab at the bottom to see a list of available logs for data collection. All the logs include independent From To intervals for each data type, except the Interval Summary log which might be useful for logging RAB or RC chips.

- To create a new sample, observation or log, click the **New** button. This creates a new sample, observation or log, assigns the next sample number by counting up one number (observation database assigns unique ID based on device name and date; PPC1_6030710551 Device Name _ 6 = year, 03 = month, 07 = day, 10 = hour, 55 = minute, a number between 1 – 9 to create unique ID's for two samples collected in the same minute), and defaults much of the first sample, observation or log page values since they are usually the same in a project area. The user then selects a sample, observation or log type, changes any of the default values they need, and then proceeds using the **Next** button.

- In the Geochemistry Sample Card you have to click **New Samp** to assign a sample number and sample type as these fields are locked in the main Sample page. Clicking **New Samp** (also on the first sample) assigns defaults values if they have previously been entered in any of the GeoInfo Mobile applications.

- In the Observation Database clicking **New Observ** assigns a unique ID number, even on the first observation, and it assigns defaults values if they have previously been entered in any of the GeoInfo Mobile applications. It is important for corporate databases to make sure each Pocket PC is given a unique name as observation ID's include device ID and this guaranties unique ID for each observation collected among multiple devices. Small names fit better in the limited screen space of PPC's, something like GIM01, GIM02, etc. This is set in Windows Mobile Settings – System – About – Device ID.

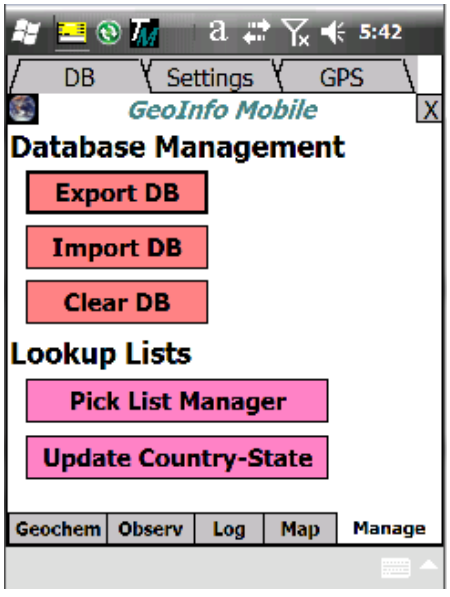
- The Photo field is populated by clicking the **Photo** button. The photo name is built using the suggested prefix, numeric value and suffix values shown in gray edit boxes to the right of the **Photo** button. Click on any of the gray suggestion boxes to edit them. The prefix and suffix boxes are global variables that are persistent until the value is changed. The center numeric counter field, once set to a value, will automatically count up one

number each time a picture is assigned. Clicking **Photo** multiple times counts the number of the photo up one each time the button is clicked. If a unique prefix is used for each camera then in a multiuser corporate setting unique picture ID's will be generated. These picture ID's can then be linked in a GIS environment for easy access to field photos.

- If you have a data collector with a built in camera, you can click on the Camera icon to the right of the Photo ID field and you will be taken to a camera page where you can take a picture and have it automatically named based on the device ID and date/time. If each device is uniquely named then this guaranties unique photo IDs.

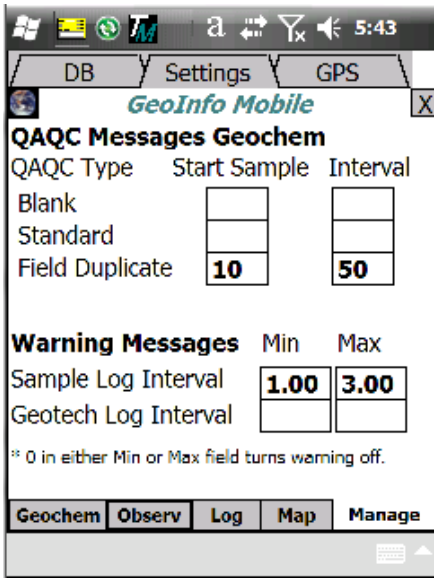
- The Map button links to Tierra Mapper (www.TierraMapper.com), a mobile Pocket PC GIS GPS mapping software that links to GeoInfo Mobile. Tierra Mapper displays the data from GeoInfo Mobile on maps with other MapInfo or ArcGIS GIS data, and has links to switch back and forth from database forms to maps showing the data.

- Once all the samples, observations or logs are collected/entered then go to the **Manage** – **DB** tab and select **Export Database**. The data is exported to a comma delimited text file that can be imported into a corporate database. Once the data is exported the database can be cleared for the next field trip using the **Clear Database** button on the Manage page. The idea is to collect data for a while (generally a few days to a few weeks), export the data from the mobile data collector, upload this data into a database, and then clear the database for the next field trip. The exported text files are small and can be emailed.



- QAQC Message Intervals set message prompts in the Geochemistry Sample Card to collect a QAQC sample. If you want QAQC reminders select a starting sample and interval for the QAQC types you want to collect.

  Warning messages can be set for Sample Log and Geotech Log intervals. This is used to catch data entry errors.



- The Dpad (iPAQ) or navigation hardware buttons (Pharos, Pidion) control the following functions in GeoInfo Mobile. Right and Down go to the next record, Up and Left go to the previous record and pushing the center/OK/select button toggles the user back and forth form list to form view (in data logger from form to log view).

Lookup List Manager PC

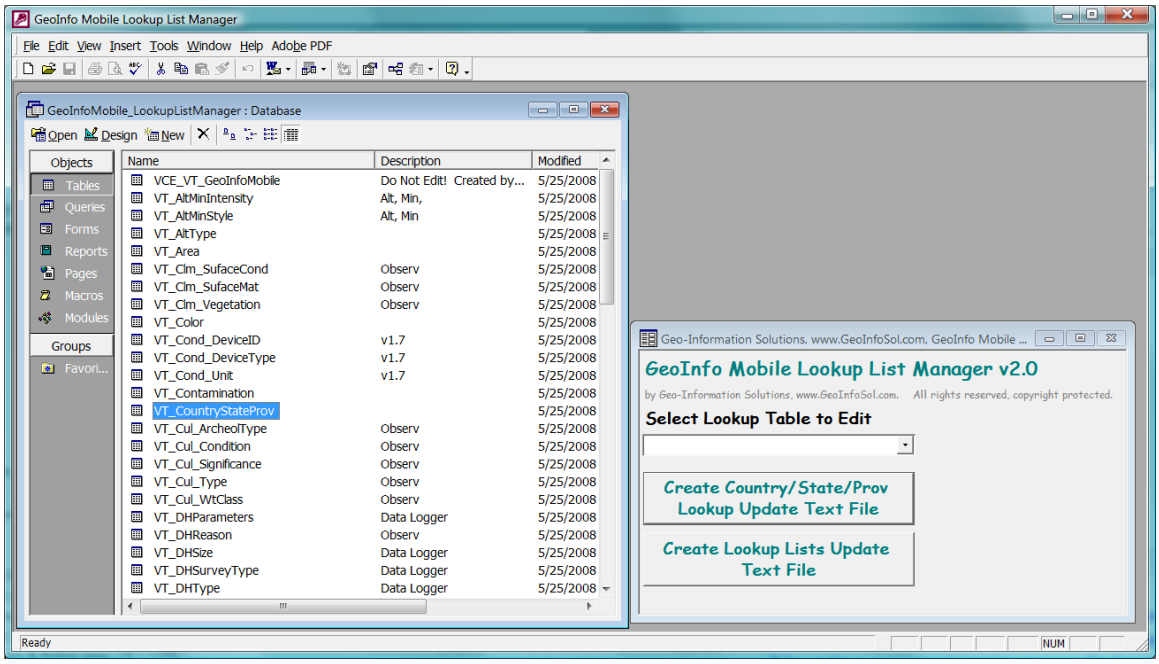
There are two levels of lookup list control in GeoInfo Mobile. The master lists are managed in an Access database on your PC, *GeoInfoMobile_LookupListManager.mdb (*or the GeoInfo Tools Database if you have purchased Geo-Information Solutions corporate database solution), which creates text file exports of lookup lists that can be copied to and imported into GeoInfo Mobile on your Pocket PC. This Access database can be set up to retrieve updated lists from any corporate database. Pocket PC users can not add values to most of the list in the fields (except Sampler, Project, and Physical Measurement Device information) so the master lists created in the PC Lookup List Manager have to be inclusive of all values a user might want in the field.

Add or edit values to any of the lookup lists (VT = Validation Table) that might need updating. The Active check box field denotes what values will be visible in the pick lists is in GeoInfo Mobile (all values are copied to the Pocket PC but only the Active ones are visible), users have the ability to use the GeoInfo Mobile Lookup List Manager to change any Active setting but cannot create new records. Once you have all the lists set the way you want for your field work click the "Create Lookup Lists Update Text File" tool to create a text file of the lookup lists to send to GeoInfo Mobile users for updating their Pocket PC's.

Two update text file lists are used to update a users GeoInfo Mobile pick lists.

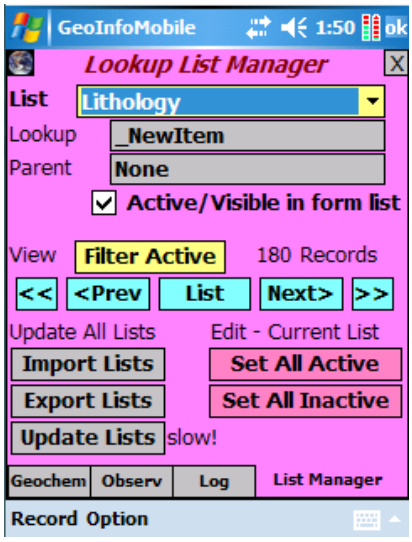
The Country/State/Province update will rarely need to be updated as the current GeoInfo Mobile lookup list covers the world. Only run this when an update to the VT_CountryStateProv has been made. Email the *VT_GeoInfoMobile_CountryState.txt* field to GeoInfo Mobile users.

All the other lookup lists in GeoInfo Mobile are updated from one master list. After values have been added to any of the lookup lists, click the "Create Lookup Lists Update Text File" tool to create a text file update that can be emailed to GeoInfo Mobile users. This text file is then used in GeoInfo Mobile to update the lookup lists.



Lookup List Manager Pocket PC

The second level of control for lookup lists is managed with GeoInfo Mobile on the Pocket PC using the Lookup List Manager. From the GeoInfo Mobile Lookup List Manager, users cannot add values to the master lookup lists but they can subset and show only the values that they believe are important for the project they are working on. These list settings can then be exported and shared with other GeoInfo Mobile users.



The idea is each user or project can customize some of the lists like lithology, minerals and sampler rather than use the complete corporate master lists; this simplifies field selection of appropriate values (why would Frank want Ralph in his Sampler list?, Why would Kimberlite be a rock type on a Porphyry project?). When you are in the applications if you see the list icon,  , to the right of a lookup list then you know that list can be managed. Click on the List Icon to go to the Lookup List Manager to edit the lookup list for the field of interest.

The user controls one field in the Lookup List Manager, the Active/Visible field. If the Active field is checked the value will display in the GeoInfo Mobile lookup list, if it is unchecked the user will not see the value in the GeoInfo Mobile lookup list. Several tools assist managing lookup lists.

The yellow dropdown at the top of Lookup List Manager sets which lookup list is currently displayed.

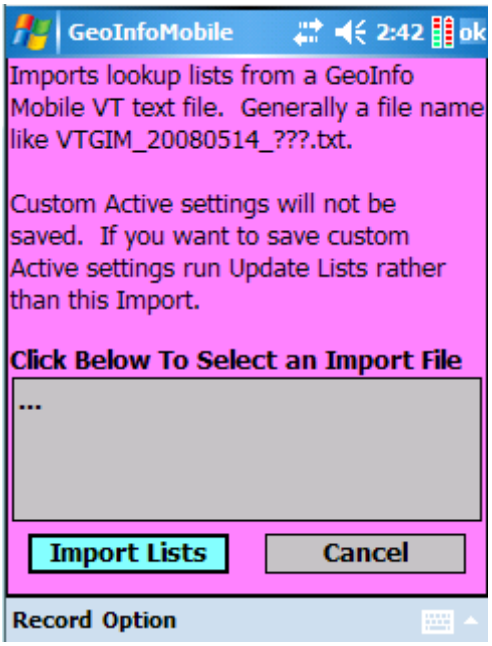
List show a list of all the records. From List view double clicking on any record takes the user to form view at the record. The select hardware button (center DPad for iPAQ, OK key for Pidion 6000) on the Pocket PC toggles List view on and off.

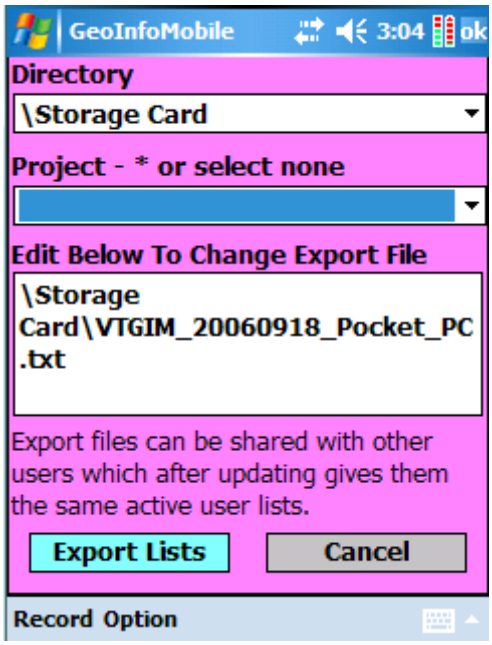
Next>, <Prev, <<First, and Last>> navigate the user through the lists. The right and down hardware buttons move to the next record and the left and up buttons move to the previous record.

The **Filter Active - Filter Off** toggle button toggles a filter showing all records for a list or only those that are checked Active.

Set All Active and **Set All Inactive** tools allow a user to quickly set all values either active or inactive. For example; if a user has a list of 20 values in a list and only 2 need to be checked Active then it would be quick for the user to Set All Inactive, then navigate to the two records they want set to Active and manually check the Active box for those records.

Import Lists allow the user to select a file to import lookup list values from. This list is generally from the Master PC Lookup List Manager database, generally a file name like *VTGIM_20080525_LookupListManager.txt* , or from another user who has built custom Active setting for a specific project, generally a file name like *VTGIM_20080525_ProjectName_DeviceID.txt*. ***Import clears the current list from the database and replaces it; all custom Active settings are lost. If you want to preserve your current Active settings use Update Lists rather than Import Lists.





Update Lists allows a user to select a file to import lookup list values from, compares these values to existing values and preserves the user's current Active setting for each value that the user already has. Unlike Import, Update saves the user's current Active settings. As an example Update will be used when a user requests a new Mineral be added to the Master Lookup List Manager database. When the user receives the update file with the new mineral, Update Lists will

keep all the users current Active settings and will add the new mineral to the list (the user might have to make the new mineral active if the database administrator did not do so in the Master PC database).

Export Lists allows a user to export his current lookup list values with current active settings. If a user defines specific list that are appropriate for a project, this list can be exported and given to other users who might be working on the project so that all users have the same subset lists visible in GeoInfo Mobile. Export allows the user to select or type a directory and optionally include a project name in the export file name. If the user tries to export to a directory that does not exist, an export error will occur.

Update Country/State/Province Lookup List on Pocket PC

After receiving an update of the County/State/Province lookup list from a database manager, *VT_GeoInfoMobile_CountryState.txt*, go the Manage page and click the **Update Country-State** button.

Linking GeoInfo Mobile to Tierra Mapper

From Tierra Mapper click the Layer Dialog icon. In the layer control screen click the Add Layer icon and Visual CE layer type. Select the Geochem.vce, Observ.vce or Log.vce file to open. The ID and Sort fields are automatically read from the .vce file and need not be edited, and the X, Y and Label fields are likely set to what the user wants but should be checked to make sure they are correct. Generally the Long_Dec and Lat_Dec fields are used for plotting GeoInfo Mobile points in Tierra Mapper, but Easting and Northing can be used as well.

Make this point layer the editable point layer in the layer dialog screen; this activates the Visual CE form Icon on the Tierra Mapper tool bar. The Geochem, Observation and Log (collar only) points can be opened and displayed at the same time on the map but only one can be set editable and thus linked to Tierra Mapper for adding and editing points.

Adding Points From Tierra Mapper

New records can be added from Tierra Mapper if the Geochem.vce, Observ.vce or Log.vce layer is loaded and set as the current editable point layer. Click and hold on the map screen in Tierra Mapper to activate the Click and Hold menu. From the Click and Hold menu select Add Point or Add GPS Point (if a GPS is connected and has a valid fix). The point is added to the map and the linked/editable GeoInfo Mobile form is opened for attribute editing. The

coordinates will already be entered into the database from Tierra Mapper and can be reviewed in the GPS screen of the database form.

Clicking and holding on a point in Tierra Mapper then selecting Edit Point from the Click and Hold menu will open the editable Geochem, Observation or Log database at the selected record for editing or review.

Toggling back and forth from the Geochem, Observation or Log database to Tierra Mapper is done using the Map button in any GeoInfo Mobile form and the GeoInfo Mobile icon in Tierra Mapper (active when a GeoInfo Mobile layer is the editable point layer).

Using GeoInfo Mobile

Starting and Closing GeoInfo Mobile

To start GeoInfo Mobile click the Windows Mobile Start menu and select GeoInfo Mobile from either the pined start list or the programs list.

To exit GeoInfo Mobile, select Record-Close or click the X button in the upper right corner of the form.

Record Menu Commands

- **First -** Displays the first record.
- **Previous** - Displays the previous record.
- **Next** - Displays the next record.
- **Last** - Displays the last record.
- **Search** - Locates a record based on the current sort/search order.
- **Delete** - Deletes the current record. In Data Logger all data for all logs is deleted along with the collar information.
- **Close** - Closes the application.

Edit Menu Commands

- **Undo** - Undoes last edit.
- **Cut** - Deletes the currently selected information from the edit box.
- **Copy** - Copies the currently selected edit box information into the Windows clipboard.
- **Paste** - Inserts information from the Windows clipboard into the current edit box.
- **IR Beam** - Beams current record to another CE device via IR.
- **IR Beam All** - Beam all records in current table or filtered list to another device.
- **Receive IR Beam** - Receives records beamed from another CE device.

Option Menu Commands

- **List** - Toggles the display between list and views.
- **Zoom** - List View Only. Enlarges text in the display.
- **Filter Off -** Displays all records in table. Not available in Data Logger.
  Filter Custom - Allows users to specify conditions that records must meet in order to appear in display; other records are hidden until filter is turned Off.
- **Recalculate** - Recalculates the values in the current record's calculated field(s).
- **About** - Displays information About GeoInfo Mobile.
- **Help** – Display the help file

Scrolling Through Records

Once you have created two or more records, you can scroll through the records in the table. The application window's Record menu lists four scrolling commands (First, Previous, Next, and Last).

On the Pocket PC pressing the Up or Left buttons moves to the previous record, and pressing the Down or Right moves to the next record. Pushing the center of the DPad or OK/Select hardware button toggles List view on and off.

Tip GeoInfo Mobile has a filter option that enables you to temporarily limit the display to just those records of current interest; that match a set of conditions you specify. In that way, you can scroll through a subset of the records, rather than entire table. Be careful setting new filters in data logger as filters are automatically set to show data only for the current hole.

Displaying a Record List

To view a list of records in the table, select Options-List, click the List button, press Ctrl+L, or click the center DPad or OK/Select hardware button. GeoInfo Mobile displays one line of data for each record. If the window is full, use the scroll bar to display additional records.

Tips

- You can adjust the column widths by dragging the squares between the column headings.
- You can sort the record list by the indexed columns in the table. Refer to the topic, Changing Sort/Search Order.
- If the sort/search order is based on a text column, you can scroll directly to the first record in the table whose entry in the column begins with a specific

letter or sequence of letters (this is useful if the list is very long). Simply select the sort/search order, then press or tap the letters on the keyboard or soft keypad.
- You can view a list of all records in the table, or just records that match specific criteria (a "filtered" list). Refer to the topic, Filtering the Record Display.

There are several ways to "turn off" the list display and return to form view/mode:

- Select Options-List.
- Click the List button.
- Press Ctrl+L.
- On an H/PC, press the Enter key.
- On a P/PC, double-click on a record or press the DPad/OK/Select hardware button.

Searching for Specific Records in the Table

GeoInfo Mobile provides three ways to quickly locate specific records:

- **Search**: The Search feature scrolls the display to the first record whose value in a specified column matches a value you provide.
- **Filter**: You can use a list "filter" to find and display all records that match up to three conditions. Your search criteria are not limited to a single column. In fact, you can even ask GeoInfo Mobile to find all records that have a specified text string in ANY text or memo column.
- **Scroll to record by prefix**: (List display mode only) If the sort/search order is based on a text column, you can scroll directly to the first record in the table whose entry in the column begins with a specific letter or set of letters. Simply select the sort/search order, then press or tap the letters on the keyboard or soft keypad.

This topic describes the Search command in more detail. For a complete description of list filters, refer to the topic Filtering the Record Display.

To apply the Search command:

1. If you are not already in list display mode, select Options-List, click the List button, or press Ctrl+L.
2. On the top line, which displays the column names, click the column you want to search on.
3. If the column is not indexed you can't search on it. If the column is indexed GeoInfo Mobile places two symbols (^^) next to the column name, to indicate that the current sort/search order is based on that column.

4. Select Record-Search. GeoInfo Mobile displays an input box that is appropriate to the column's data type.
5. Enter the value you want to find.

Note: If you are searching on a text column, it is not necessary to enter a complete word. For example, if you entered just "day", GeoInfo Mobile scrolls to the first record whose value in that column begins with those three letters - e.g., Day, days, Dayton, etc.

Changing Sort/Search Order

You can change the record sort/search order in the record list display. That means you can sort the table records by values in any column, at any time.

To change the sort/search order:

1. Select Options-List, click the List button, or press Ctrl+L.
2. On the top line, which displays the column names, click the column you want to use to sort the records.
3. If the column is indexed the sort/search order is changed to that column

GeoInfo Mobile displays the records in the newly selected order, and places a ^^ symbol next to the selected column heading to indicate that it is the basis for the current sort/search order. You can scroll the new order in either list or form view.

Notes:

- Creating a sort/search order can take a long time.
- The Search command applies only to the current sort/search order. This restriction applies only to the Search command, not the Filter option.
- Indexed columns are denoted by the ^ symbol in the column heading. Up to four columns in a table can be indexed.

Filtering the Record Display

If there are numerous records in a table, working with the entire list can be cumbersome. You can narrow your view to just those records that match specific criteria.

The set of conditions you specify is called a "filter." A filter can have up to three conditions. Each condition consists of a column name, a value, and a comparison operator that specifies how the record's value in the column must

compare to the specified value in order for the record to be included in the list. You can specify that a record must match at least one of the conditions, or all of them.

You can create your own filter. You can quickly turn a filter on/off to switch the display between the filtered list and the entire list.

To use filters:
GeoInfo Mobile offers two items:

- **Off**: Switches the filter off, so that all records in the table are displayed
- **Custom**: Brings up a dialog box in which you can apply your own filter criteria (see description below)

To apply your own filter criteria:

1. Select Option-Filter-Custom. GeoInfo Mobile displays the Define Filter dialog box. If you had applied a filter previously, or GeoInfo Mobile supplied a filter, GeoInfo Mobile displays those conditions. You can use them as is or modify them.

   Tip: To clear a value, click the drop-down arrow, scroll to the top of the display, and click the blank line.

2. Specify the first condition:
   - Click the drop-down arrow for the first field in the dialog box, and select the column that contains the data you want to compare.
   - In the field that appears to the right of the column name field, select a comparison operator. Not all comparison operators are available for every type of column ("Contains" means the column contains a specified text string; e.g., contains "cook" would find "John Cook," "Cooking," "Chocolate cookies," etc.)
   - Specify the comparison value.

   Note: Text comparisons are NOT case-sensitive.

3. If desired, add one or two more conditions in the remaining fields using the same procedure.
4. If you supplied two or three conditions, choose one of the following:
   - **Match all**: A record will be included in the filtered list only if it satisfies all of the conditions
   - **Match at least one**: A record will be included in the filtered list if it satisfies any one of the conditions
5. Click OK to close the dialog box. GeoInfo Mobile applies your filter. When you view the record display (either list or single record mode), only records that match the filter criteria are visible.

Creating New Records

To create a new sample, observation or log, click the **New** button. This creates a new sample, observation or log, assigns the next sample number by counting up one number (observation database assigns unique ID based on device name and date; PPC1_6030710551 Device Name _ 6 = year, 03 = month, 07 = day, 10 = hour, 55 = minute, a number between 1 – 9 to create unique ID's for two samples collected in the same minute), and defaults much of the first sample, observation or log page values since they are usually the same in a project area. The user then selects a sample, observation or log type, changes any of the default values they want, and then proceeds using the **Next** button.

Editing Records

GeoInfo Mobile allows you to easily edit existing records.

To change an existing field value, simply click the field and enter or select a new value.

Saving Records

GeoInfo Mobile automatically saves new records or changes to data every time you:

- Move to a new field
- Scroll to another record
- Insert a new record
- Delete a record
- List all records
- Exit the application

So it is not necessary to manually save data.

Deleting Records

Note: If you delete a record that has dependent records as is the case with Data Logger, then GeoInfo Mobile automatically deletes the dependent records as well.

To delete a single record from the table:

1. Display the record in the application window (scroll to it, if necessary).
2. Select Record-Delete. GeoInfo Mobile deletes the record.

To delete all the records from a database, use Clear Database.

To delete multiple records from the table:

1. Switch to the list display. (Select Options-List or click the List button.)
2. Highlight the records to be deleted.
3. You can select multiple, contiguous records by dragging the stylus or mouse pointer over them, or by holding down the Shift key while you select each one.
4. Select Record-Delete. GeoInfo Mobile asks you to confirm that you want to delete the selected records.

Entering Null Values in a Date/Time or Numeric Field

If you don't want to specify a date in a Date/Time field or a value in a numeric field, you can enter a null value.

1. Make the field the focus by pressing the Tab key on your keyboard until the field is highlighted. (You enter null values directly into the field, not via the Calendar dialog box or number pad.)
2. Press Delete on the keyboard

Using Word Lists in an Edit or Note Box

A word list is a set of words or phrases that you can insert into a edit or note box by simply picking entries from a pop-up display, rather than having to type them from scratch.

Word lists are intended to eliminate the need to type commonly-used text. They are not restrictive - you can type your own text into the box and simply chose from the pop-up list as needed. You can select any number of items from the word list, and modify your selections as desired. You can even add your own items to the word list for use in the future.

To insert text from a word list:

1. Double-click inside an edit or text box. GeoInfo Mobile displays the pop-up word list. **Note**: If nothing happens when you double-click, then the field is not associated a word list.

2. Select an item from the list.
3. GeoInfo Mobile inserts it into the edit box in the Word List window. You can:
    - Click OK to insert your selection into the form's edit or note box, as is.
    - Modify the text and click OK. GeoInfo Mobile asks if you wish to save the modified text in the word list. If you click Yes, GeoInfo Mobile inserts the modified text into the form's edit or note box, and adds it to the word list for future use. If you click No, GeoInfo Mobile just inserts the text into the form's eit of note box.

Copying or Moving Data Between Records

You can copy or move data from one table record to another using the GeoInfo Mobile Edit menu's cut, copy, and paste commands.

To copy data from one record to another:

1. Display the record that contains the data you want to copy (scroll to the record, if necessary).
2. Drag the data to highlight it.
3. Select Edit-Copy.
4. Scroll to the record to which you want to copy the data.
5. Click the field in which you want the data, then select Edit-Paste. GeoInfo Mobile pastes the copied data into the field.

To move data from one record to another:

1. Display the record that contains the data you want to move (scroll to the record, if necessary).
2. Drag the data to highlight it.
3. Select Edit-Cut.
4. Scroll to the record to which you want to insert the data.
5. Click the field in which you want the data, then select Edit-Paste. GeoInfo Mobile pastes the moved data into the field.

Export Database

From the Manage DB tab, select Export Database. Select the data to export, Geochemistry, Observation or Data Logger.

The data is exported to a comma delimited text file in the following format;

- GeochemSC_DeviceID_YYYYMMDD.txt
- Observations_DeviceID_YYYYMMDD.txt
- Log_DeviceID_YYYYMMDD_LogType.txt. *multiple files, one for each log type that contains data.

This data can then be imported into a corporate database. Once the data is exported the database can be cleared for the next field trip using the **Clear Database** button on the Manage page. The idea is to collect data for a while (generally a few days to a few weeks), export the data collector data and upload it into a corporate database, and then clear the database for the next field trip. The exported text files are small and can be emailed.

Notes: All date/time values are automatically exported in the following format: YYYY-MM-DD HH:MM:SS.

Tip: Most Export errors are because the user has selected a storage location that does not exist on their device; SD Card, or Storage Card.

Import Database

You can import an ASCII comma delimited text file into a table on your CE device. Typically, this file will have been created using the Export Table command.

Notes: GeoInfo Mobile considers any of the following date/time formats valid and imports values that conform to them, as is:

- YYYY-MM-DD
- YYYY-MM-DD HH:MM
- YYYY-MM-DD HH:MM:SS
- Format specified via the Windows Regional Settings.

To import the file:

1. From the Manage tab, select Import Database.
2. Select the file to import. This file has to be in the exact GeoInfo Mobile format for the data type you are importing. **Note**: To review this format do an export from GeoInfo Mobile and use this as a template for designing exporters from PC databases to GeoInfo Mobile.
3. Click on the data type to import.

The records are now available in GeoInfo Mobile.

*Note: The table format has to be the same on both data collectors, if you are exporting and importing to different version of GeoInfo Mobile you might get an error if the table format has changed.

Clear Database

To delete all records in the table, from the Manage DB tab, select Clear Database. Then select the data type to clear. Clearing the database should be done after data is imported into a master corporate database.

Beaming records from One CE Device to Another

Using an IR connection, you can copy records from one CE device to another CE device running the same application. The application must be open on both devices while the process is taking place. You can beam a single record, the records in a filtered list, or the entire contents of the application's table.

Note: GeoInfo Mobile copies records from the sending device to the receiving device, regardless of whether or not the records already exist in the table on the receiving device. That means you can end up with duplicates on the receiving device.

To beam records:

1. Open the same GeoInfo Mobile application on both devices.
2. Optional: You can beam a subset of the table's records:
    - To beam a single record: Display the record on the sending device.
    - To beam a filtered list of records: Apply the filter (either custom or pre-defined) to the records on the sending device
3. In GeoInfo Mobile on the sending device, select either:
    - **Edit-IR Beam**: Copies the current record.
    - **Edit-IR Beam All**: Copies all records in a filtered list (if applied in Step 2) or all records in the current table to the receiving device.
4. In GeoInfo Mobile on the receiving device, select **Edit-Receive IR Beam**.

Lookup List Manager

Lookup List Manager is accessed by clicking the List icon (white list page icon) that is located to the right of the lookup list fields in GeoInfo Mobile, or from the Manage tab.

With Lookup List Manager, users cannot add values to the master lookup lists but they can subset and show only the values that they believe are important for the project they are working on. These list settings can then be exported and shared with other GeoInfo Mobile users.

The idea is each user or project can customize some of the lists like lithology, minerals and sampler rather than use the complete corporate master lists; this simplifies field selection of appropriate values (why would Frank want Ralph in his Sampler list?, Why would Kimberlite be a rock type on a Porphyry project?). When you are in the applications if you see the list icon (white page icon) to the right of a lookup list then you know that list can be managed. Click on the List Icon to go to the Lookup List Manager to edit the lookup list for the field of interest.

The user controls one field in the Lookup List Manager, the Active/Visible field. If the Active field is checked the value will display in the GeoInfo Mobile lookup list, if it is unchecked the user will not see the value in the GeoInfo Mobile lookup list. Several tools assist managing lookup lists.

The yellow dropdown at the top of Lookup List Manager sets which lookup list is currently displayed.

List show a list of all the records. From List view double clicking on any record takes the user to form view at the record. The Dpad select hardware button on the Pocket PC toggles List view on and off.

Next>, <Prev, <<First, and Last>> navigate the user through the lists. The right and down hardware buttons move to the next record and the left and up buttons move to the previous record.

The **Filter Active - Filter Off** toggle button toggles a filter showing all records for a list or only those that are checked Active.

Set All Active and **Set All Inactive** tools allow a user to quickly set all values either active or inactive. For example; if a user has a list of 20 values in a list and only 2 need to be checked Active then it would be quick for the user to Set All Inactive, then navigate to the two records they want set to Active and manually check the Active box for those records.

Import Lists allow the user to select a file to import lookup list values from. This list is generally from the Master PC Lookup List Manager database, generally a file name like *VTGIM_20080525_LookupListManager.txt* , or from another user who has built custom Active setting for a specific project, generally a file name like *VTGIM_20080525_ProjectName_DeviceID.txt*. ***Import clears the current list from the database and replaces it; all custom Active settings are lost. If you

want to preserve your current Active settings use Update Lists rather than Import Lists.

Update Lists allows a user to select a file to import lookup list values from, compares these values to existing values and preserves the user's current Active setting for each value that the user already has. Unlike Import, Update saves the user's current Active settings. As an example Update will be used when a user requests a new Mineral be added to the Master Lookup List Manager database. When the user receives the update file with the new mineral, Update Lists will keep all the users current Active settings and will add the new mineral to the list (the user might have to make the new mineral active if the database administrator did not do so in the Master PC database).

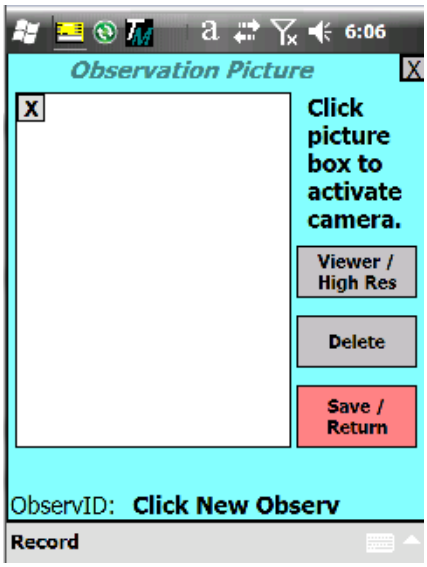
Export Lists allows a user to export his current lookup list values with current active settings. If a user defines specific list that are appropriate for a project, this list can be exported and given to other users who might be working on the project so that all users have the same subset lists visible in GeoInfo Mobile. Export allows the user to select or type a directory and optionally include a project name in the export file name. If the user tries to export to a directory that does not exist, an export error will occur.

Photo Tool

The Photo ID field can be populated by clicking the **Photo** button. The photo name is built using the suggested prefix, numeric value and suffix values shown in gray edit boxes to the right of the **Photo** button. Click on any of the gray suggestion boxes to edit them. The prefix and suffix boxes are global variables that are persistent until the value is changed. The center numeric counter field, once set to a value, will automatically count up one number each time a picture is assigned. Clicking **Photo** multiple times counts the number of the photo up one each time the button is clicked. If a unique prefix is used for each camera then in a multiuser corporate setting unique picture ID's will be generated. These picture ID's can then be linked in a GIS environment for easy access to field photos.

Taking Pictures with Built-in Camera

The camera icon to the right of the Photo ID field activates the camera tool in GeoInfo Mobile.



Click in the blank white picture box to activate the camera viewer. Once in the camera viewer the camera menu can be used to set resolutions, flash, mode and full screen (if the viewer is full screen tap the screen to see the Menu) settings. Settings are persistent. The higher the resolution the slower the picture page is to load.

Once a picture has been taken (front yellow button on the Pidion BIP-6000) close the camera (**Back** on the Pidion, different on each device). A low resolution image is displayed in the picture box and the automatically assigned Photo ID is displayed below the picture. Your devices picture viewer can be activated by clicking the **Viewer/High Res** button, or the picture can be deleted by clicking the **Delete** button. Click **Save/Return** to save the photo ID with the current record you are collecting.

Pictures are saved on the Storage Card of your device in a directory named GeoInfoMobilePictures and you will have to manually copy/move them to your PC.

If you receive and warning that the camera module has not been installed on your Storage Card you will have to copy the \My Documents\GeoInfoMobile\GeoInfoMobilePictures directory with the 3 included .vce files to the root of your Storage Card.

Using a Bar Code Scanner

Any field in GeoInfo Mobile can accept bar code scanned data. A texted based bar code value read into a numeric field will generate an error. Text fields can accept numbers or text. The scanner of the Pidion PIP-6000 emits two colors, red and green, position the green beam on the barcode.

In GeoInfo Mobile make sure the field you want to scan into is active (any field value can be scanned). So for sample number after clicking New Sample click in the sample number field of the sample type you want to set the number for (when the onscreen keypad opens click Cancel to close, access using the tab key is scheduled for the next release so the keypad is not opened) then click any of the Yellow buttons to scan the bar code into the active field. The numeric keypad has to be closed for a scanned value to be read into the active field.

Appendix A - Pidion BIP-6000 Data Collector Operation

The Pidion BIP-6000 data collector is being used with Geo-Information Solutions Tierra Mapper and GeoInfo Mobile field data collection software. The device is rugged with a rating of IP65 meaning it can be used in the rain without problems and that dust will not enter the unit. It can withstand drops of 1 meter (obviously not if a rock hits the screen directly). It is not rated for submersion, but tests show it can survive submersion in shallow water.

Our real life field tests with the GPS on, Tierra Mapper tracking and the backlight on full returns 11-12 hours of battery life. With the backlight lower and/or the GPS off (for logging) you get more time. Always make sure the Wi-Fi is turned off for field work as this will use a lot of the battery. Additional battery life can be achieved by turning the processor mode to Normal rather than Turbo in the Power settings.

We use the Windows Mobile External GPS splitter on this device to allow more than one program to connect to the GPS at the same time. When the Windows Mobile External GPS is set up as described below all programs should be set to use the GPS on COM1 with a baud rate of 4800 baud.

External GPS Settings: Start – Settings – System – External GPS

- GPS Programs Port COM1, GPS Hardware Port COM6 Baud 57600, Manage automatically checked (default).

An 8 GB micro SD card is installed in the Pidion. The Pidion is a phone and can accept GSM SIM cards. The memory card and SIM card slots are located under the battery. To remove the battery slide the metal wings out and lift up the bottom of the battery.

The device has a few particular features that make it work well in the field;

1. The keys on the keyboard have the following function;
    a. **F1** – Opens Tierra Mapper when not in Tierra Mapper and Zooms Out one level when in Tierra Mapper.
    b. **F2** – Opens GeoInfo Mobile when not in Tierra Mapper and Zooms In one level when in Tierra Mapper.
    c. **F3** – Opens Widows File Explorer when not in Tierra Mapper and Zooms to full extent of the map when in Tierra Mapper.
    d. **F4** – Rotates screen.
    e. The **Left**, **Right**, **Up** and **Down** keys pan in Tierra Mapper (when center on GPS is not active). In GeoInfo Mobile if in the Sample, Observ or Collar pages these keys scroll up and down records in the database, if in any other pages these keys scroll up and down through the pick list values of the active field.
    f. The **OK** and **Return** keys are the select key in Windows Mobile. In GeoInfo Mobile it toggles between Form and List/Log views.
    g. **Windows** key – Single click opens the Windows Start screen, double click takes you to the Today screen.
    h. **Mode** key (white square) – changes the keyboard from alpha characters to symbols/numeric keypad (blue keys). When the keyboard is set to

use alpha characters an **a** or **A** will show in the Windows task bar at the top.

i. **Shift** key – clicking once will capitalize one character then return to lower case, the Windows task bar at the top will have the **a** icon. Double clicking will change all characters to capital and the Windows task bar at the top will have the **A** icon. Double click again to return to lowercase and the **a** icon.
j. **Backlight** key – turns the backlight on and off.
k. **Yellow Scan** buttons – two side and one front buttons, click these buttons any time to scan bar codes. In GeoInfo Mobile make sure the field you want to scan into is active (any field value can be scanned, but the numeric keypad has to be closed). So for sample number after clicking New Sample click in the sample number field of the sample type you want to set the number for (when the onscreen keypad opens click Cancel to close, access using the tab key is scheduled for the next release so the keypad is not opened) then click any of the yellow buttons to scan the bar code into the active field. The scanner of the Pidion PIP-6000 emits two colors, red and green, position the green beam on the barcode.
l. **Front Yellow Scan/Camera** button – when in camera view finder mode, click the front yellow button to take a picture.
m. **Tab** key – In GeoInfo Mobile this key Tabs to the next field for data entry.
n. ***** key – press and hold to toggle the volume off and vibrate mode on.

2. In a GeoInfo Mobile pick list pressing a character key will scroll through all the values in the pick list that starts with that letter.
3. An installed task manager program adds functionality to the Pidion. The task manager shows Icons in the Windows task bar at the top for the currently running programs, you can click any Icon to activate that program. You can click and hold any icon to close/terminate it. Right swiping from the far right of the Windows task bar at the top to the left will take you to the Today screen.
4. The Task manager program includes a battery monitor at the very top of the screen above the Windows Task bar. A complete bar indicates 100% battery and the bar decreases in length from the right as the battery level decreases.
5. A Today screen application launcher program is installed and the most common used applications and settings can be activated by clicking its icon on the Today screen.

A user manual for the Pidion can be downloaded or viewed at http://www.geoinfomobile.com/Downloads/[User%20Manual]%20BIP-6000_EN.pdf.

Geo-Information Solutions offers a Pidion BIP-6000 Complete Hardware and Software Package for purchase, http://www.geoinfomobile.com/Products.htm.

Appendix B - Pharos 565 Data Collector Operation

The Pharos 565 data collector is being used with Geo-Information Solutions Tierra Mapper and GeoInfo Mobile field data collection software. The device is rugged with a rating of IP54 meaning it can be used in light rain without issue and that dust will not harm the unit. It can withstand drops of 1 meter (obviously not if a rock hits the screen directly though). It is not rated for high pressure water or submersion.

Our real life field tests with the GPS on, Tierra Mapper tracking and the backlight on full returns 4-5 hours of battery life. With the backlight lower and/or the GPS off (for logging) you get more time. Always make sure the Wi-Fi is turned off for field work as this will use a lot of the battery. Since the device is instant on and off it is not always on in many field situation so a single battery is commonly sufficient for a full day's work, however a spare battery is provided and should be carried.

We use the Windows Mobile External GPS splitter on this device to allow more than one program to connect to the GPS at the same time. When the Windows Mobile External GPS is set up as described below all programs should be set to use the GPS on COM8 with a baud rate of 4800 baud.

External GPS Settings: Start – Settings – System – External GPS

- GPS Programs Port COM8, GPS Hardware Port COM4 Baud 57600, Manage automatically checked (default).

The device has a few particular features that make it work well in the field;

1. The small button on the left side toggles the backlight from full brightness to your current setting. We set the backlight setting to half (Settings-System-Backlight) which works for most situations and then use this button if we temporarily need more backlighting in direct sunlight.
2. The left and right large silver asterisk (*) buttons above the keyboard Zoom In and Zoom Out in Tierra Mapper. Outside Tierra Mapper the left button opens Tierra Mapper and the right button opens GeoInfo Mobile.
3. The D Pad pans in Tierra Mapper, and moves up and down records in GeoInfo Mobile.
4. A battery program we install shows the battery status as a bar at the top of the screen. A complete bar indicates 100% battery and the bar decreases in length from the right as the battery level decreases
5. The keyboard Icon in the Windows bar at the top shows the keyboard status; abc = lower case, Abc = uppercase for one character, ABC = uppercase locked, Fn = function characters active. To change the status from abc > Abc click the shift key once, a second shift key click changes the status from Abc > ABC. Clicking the FN key activates the function keys.

The included second battery charger requires you to align the two outer contacts of the Pharos battery with pins. Mixing this up will not damage your battery. You can charge the Pharos and spare battery with this one charger (using the USB port) but the charging time is slower than using both chargers.

Appendix C - iPAQ 200 Series Data Collector Operation

The iPaq data collector is being used with Geo-Information Solutions Tierra Mapper and GeoInfo Mobile field data collection software. The unit is not rugged but has no moving parts and holds up well in the field. The unit will have to be used in a DryPak sealed bag if used in wet conditions (a zip lock works too!).

Our real life field tests with the GPS on, Tierra Mapper tracking and the backlight on full returns 4-5 hours of battery life with the standard battery and 8-9 hours with the extended battery. With the backlight lower and/or the GPS off (for logging) you get more time. Always make sure the Wi-Fi is turned off for field work as this will use a lot of the battery.

We use the GPS Gate virtual GPS splitter rather than the Windows Mobile External GPS splitter (as this has a bug on these devices) to allow more than one program to connect to the GPS at the same time. When GPS Gate is set up as described below all programs should be set to use the GPS on COM8 with a baud rate of 4800 baud.

GPS Gate Setup

1. If replacing a GPS, setting a new GPS to a n iPAQ that was already setup for a different GPS, then go to Start – Settings – Connections – Bluetooth – Services and highlight Serial Port then click the Advanced button. Check the box to "display the device selection screen the next time an outgoing serial connection is attempted". Click OK to close.
2. Turn on your Bluetooth GPS, and make sure no others are on nearby.
3. Turn on the Bluetooth Radio on your Pocket PC using Tman or Today screen.
4. If not already done, disable the Windows Mobile External GPS driver. Go to Start – Settings – System Tab and click External GPS, in the Hardware and software tab set port to NONE, in the Access tab uncheck Manage GPS automatically. OK
5. Install GPS Gate if not already installed. From your Pocket PC use File Explorer to find the *SD Card\Software\GpsGatePPC.arm.CAB* file and double click it to install GPS Gate. Install to the Device when prompted.
6. Start GPS Gate. Go to Start – Programs and find the GPS Gate Icon to open it.
7. In the Setup Wizard select Manual in the lower left
8. On the Input tab, select Com Port from the pick list then click Open, select Com 6 and accept the rest of the defaults. Click OK. In the Bluetooth browser screen click the "Always use the selected device" check box so you will not always be prompted to select the Bluetooth device. Click on the Holux GPS device icon (there should only be one or another GPS is one nearby). Ok on message box. Close Input then Open again until the Bluetooth browser no longer appears (this is an iPAQ bug), check the "Always use the selected device" each time. Two times is usual.
9. On the Output tab in Add Output select Virtual Com Port, then click Add, select Com 8 then OK. This adds Virtual Com 8 to the Active output. Ok to message.

10. On the Advanced tab check Start GPS Gate after soft reset.
11. Click OK in the upper right and you should be ready to go. The GPS Gate icon is in the lower right corner of the Today screen on your Pocket PC, It is red when the GPS is not connected (Bluetooth radio off or GPS off), yellow when the GPS is connected but there is not a valid reading yet, and green when it's connected and the GPS has a valid reading.

The iPaq has a few particular features that make it work well in the field;

1. The DPad is has a Left, Right, Up and Down functions. In GeoInfo Mobile if in the Sample, Observ or Collar pages these keys scroll up and down records in the database, if in any other pages these keys scroll up and down through the pick list values of the active field.
2. The TMan task manager program we install on these devices allow you to switch between active programs by clicking on the dot icon in the top Windows Task Bar.