

Entering Well Log Data for New Wells

The “Example” entry form is numbered according to the path the cursor takes as you enter new well data. Each number here refers to the position numbered on the entry form “Example” on Pages 9 and 10 and gives information on how to enter that particular data.

MDH staff will not make any changes or corrections to what is already entered. We will only add information from the well log that was not previously entered.

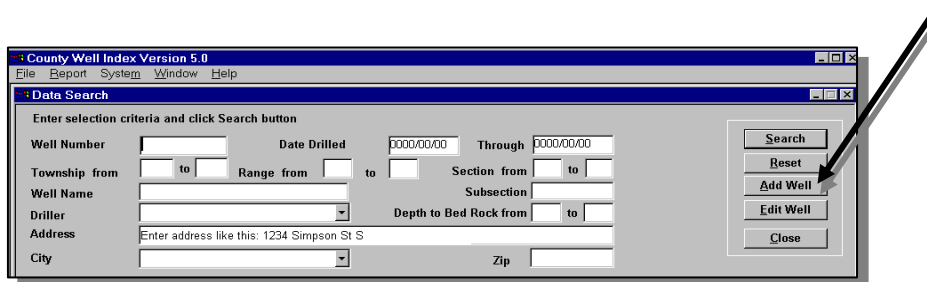
There are several things to remember when entering data:

- Keep the well logs in the **SAME ORDER** they were in when they were given to you.
- Hit “**Tab**” after every entry to move to the next entry area. You can use “enter” or the cursor and click to move in the program, but “tab” keeps the sequence of the numbering system on pages 8 and 9.
- Grayed out areas in CWI 5.0 are areas where you cannot enter data.
- When **entering people’s names** on the entry form (i.e., property owner’s name) always put **last name first**, a comma, a space, and then the first name.
- **DO NOT** enter information that is not given on the well log. **If information you are supposed to enter is not given on the well log, leave the area blank** on the CWI entry form.

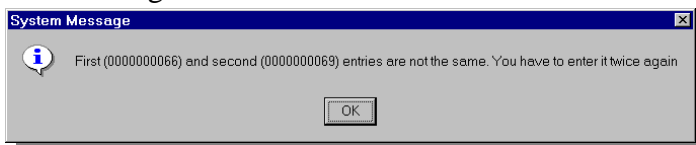
Getting Started

Login using your Oracle user name (this should be the same as your Novell username) and your Oracle password. (The Oracle password is usually your MNDWIS password.) If you cannot remember your password, please see Shelly Siems and she can reset your password for you. If Shelly is not available Duane Wiste or Dave Vaaler can help you.

Unless you know for certain that the well log has been entered, you will select the “**Add Well**” button or “Alt + A.”



1. Unique No - Type the unique well number (from the upper right-hand corner of the well log) and press “enter.” The program will ask you to type the unique number again by flashing a “read box” that contains the number you typed with 4 zeros in front of the number. Click “OK” and the unique number area goes blank and the cursor is back in the blank area. Re-type the number, no need to type the zeros,



and hit “enter.” This is done to make certain that the correct unique number has been entered. If you typed the same number twice (*as you should have*) the application will tab you to “County” after you hit “enter.” If you did not re-type the same number, you

will receive a System Message (above) indicating that you typed in two different numbers, what they are, and have you enter the number again. Once you get the right number, the application will tab you to “County” after you hit “enter.”

2. County: Type in the first few letters of the county name. As you type, the county name will appear from a list so you don't have to type the whole name. When the right county appears, hit "enter" and the program goes to "Well name."

Well name

THE PROGRAM AREA "**Well name**" HAS SPECIAL RULES and is not numbered on the example entry page. The well log you are entering must be looked at to determine what you enter here. Do not enter phone numbers in this area.

****If** it's a monitoring well, the name of the well (i.e., MW1) will be in the "Remarks" area of the well log. Put this in the "Well name" area.

****If** it's any other kind of well, put the person's name that is in the "Property Owner's Name/Company Name" area of the well log into the "Well name" area (last name first); you may repeat it when you get down to #7. If a person isn't listed on the well log but a city or business is, put that city or business in the "Well name" area of the program, keyed the regular way.

****If** a company name is also listed on the well log under "Property Owner's Name/Company Name," put the property owner's name in the "Well name" area (last name first) and **put the company name in the #7 area of the program.**

****If** there is no "Property Owner's Name/Company Name" or "Well Owner's Name/Company Name" on the well log, **SKIP** the "Well name" area.

3. Enter the "Township" number from the well log. Don't type in any letters that appear with the number on the log, i.e., 32N - only the 32 should be entered. Also, if the "Township" area has two numbers listed, such as 114-115, leave the area blank. This is a zoning issue that MGS must deal with.
4. Type in the "Range" number from the well log. Don't type in any letters that appear with the number on the log. Also, if the "Range" area has two numbers listed, such as 30-31, leave the area blank. This is a zoning issue that MGS must deal with. **SKIP the "Dir" space by tabbing past it.** ("Dir" defaults to "W" because all counties except Cook County are West; Cook County has some East directions.)
5. Type in the "Section" number from the well log.
6. "Subsection" is the "**Fraction**" area of the well log. Enter in all the letters from the well log with no spaces between them. When you hit "enter" after typing them, the program will bring up the MGS code for this designation.
7. "Contact" is again the "Property Owner's Name/Company Name" from the well log. Enter the name from the well log - **last name first**. If you put a person's name in the "Well name" area and there is a company name with it, put the company name here. If the name on the well log is a business or city, put the business or city name here, keyed the regular way.
8. Enter the address "Type." If **any type of well address** is in the "House Number, Street Name, City, and Zip Code of Well Location" area of the well log, choose "W" the "Well Address." This includes partial addresses.

As soon as you choose the "W" for "Well Address," the program will change the "Contact" name to "Well Owner" and add another row of "Contact," "Type" and address blanks below the rows you'll be filling in next. Ignore them and the name change, and hit "enter" to move to the first "House No" and follow the instructions for the well address on the next page.

ADDRESS INFORMATION - We are only interested in the well address. Do NOT enter the "Property owner's mailing address..." in this area. Well Management will take care of other addresses.

The Address Area: ONLY the actual address written in the "House Number, Street Name, City, and Zip Code of Well Location" area of the well log gets entered in the program by us. **If the well log doesn't have a full address**, just general directions, enter the information available on the well log. For example, if the well log reads "Lake Street north of First" you would only enter "Lake Street" in the program. **If the address is difficult to enter, for example: Jct. 10 Block 4 Hwy 12**, then **put this into the "Remarks" area** when you get to it and leave the address area empty.

9. If there is a "real" address on the well log, type it in: "House No." (self-explanatory). "Street" requires ONLY the NAME of the street or road (if the street name is a number, always put the nd, th, rd, or st behind the street number, i.e., 122nd).
 "Type" - whether or not it is a street, road, or avenue gets chosen from the "Type" pull-down menu.
10. Dir. - if there is a direction with the street name, such as France Avenue South, the direction gets chosen from the pull-down menu. If the address on the well log says "West Brook Lane," put the "West" in the "Dir" area of the program.
 Skip "**Other**" at the end of the line on the entry form. (See last page of manual for Rural Route or H.C. Box address entry.)

Enter whatever information is on the log in the appropriate area. For example, the well log lists only "205 Avenue" but no house number. Nothing would be entered in the "House No." area. Enter "205th" in the "Street" area and choose "Avenue" in the "Type" pull-down menu.

11. City, State, and Zip are the blank lines tabbed to right after you tab through "Other." Use the 2-letter abbreviation for states. If the address has the city or zip missing, leave the areas blank where information is missing on the well log. (There may be an out of state address on occasion. The program will let you type another state's abbreviation.)

Use "Control O" to jump to the "Well Depth" area after you've entered the address information and leave the other "Contact" and address areas blank.

12. Well Depth - THIS IS THE LARGEST NUMBER from the "Geological Materials" area of the well log and **NOT** the number from the "Well/Boring Depth (completed)" area. (It is the depth they drilled to and not necessarily the "Depth Completed.") **If the "Well Depth" is smaller than the "Well/Boring Depth (completed)" please see the lead worker for instructions on how to fill this out.**
13. Depth Completed - Fill in the depth from the "**Well/Boring Depth (completed)**" area of the well log. This is how deep the completed well is.
14. Date Well Completed - This is the same date as "Date Work Completed" on the well log. When entering dates, you **MUST ALWAYS use four digits for the year, two digits for the month and two digits for the day.**
15. Drilling Method - The method used by the driller has been checked off on the well log. The entry form has a pull-down menu with those choices on it. You will enter the initial of the method. If just "Auger" or "Rotary" is checked, choose "**Non-specified Auger**" or "**Non-specified Rotary.**" If more than one drilling method is given, use "K".

16. Drilling Fluid - This has been written in by the driller on the well log. Choose the pull-down menu and enter the letter of the material used. NOTE: If the driller listed more than one material, and this combination isn't on the pull-down menu, leave the area blank. Bentonite + water is just "Bentonite"; bentonite + foam is "Additive (+ bentonite)".
17. Check Well Hydrofractured? Yes or No? If blank, then just skip. There are usually no measurements in the "From" and "to" areas here, but if the driller has measurements on the log enter the numbers.
18. Use - This has been checked on the well log and the entry form has a pull-down menu with those choices; type in the appropriate letter. If "Elevator" is the use, it may interfere with "Casing Diameter" information and you'll probably have to ask the lead worker how to do this.

The cursor moves to the position for entering information about the casing for the well. The well log has the general name "CASING" or "CASING MATERIAL" and "CASING DIAMETER" for the areas where this information is found.

19. Material - The first designation on the entry form in this area is what **kind** of casing was used, steel, plastic, etc. Look to see what the driller has checked; use the pull-down menu to select the letter. **Don't** enter "Stainless Steel" when the well log just read "Steel;" the choice should be "Steel (black or low carbon)". **If both "Steel" and "Plastic"** are checked on the well log, choose "M" (for mixed) on the pull-down menu. If an item is not on the well log, leave the area blank.
20. Type - This is whether the casing is a single type or step-down type. The way to judge this is by looking at the "Casing Diameter" area on the well log. If only one set of numbers is given, it is a single casing; two sets of numbers means step-down. If there are more than 2 sets of numbers here, check with the lead worker or someone else to determine if this is a telescoping type casing. These are now illegal.
21. Joint - Is the casing joint "Threaded" or "Welded"? This is checked on the well log and you will choose from the pull-down menu. **If two choices are checked on the well log**, leave the area blank on the entry form. "Glued" is sometimes listed on the well log and can be chosen from the pull-down menu (but leave the area blank if two choices are there, such as "Threaded" checked and "Glued" written in).
22. Drive Shoe - The cursor then moves to "Drive Shoe". This is simply a "Yes" or "No" and is indicated on the well log. Click the "Space Bar" or the mouse on "Yes" or "No" to check it. **SKIP the "Above/Below" designation** in this area; this information isn't on newer well logs. If you accidentally go into the "Above/Below" area on the entry form, just tab out of it.
23. Diameter. - (still entering "Casing" information). Casing diameter is given on the well log. If it is a single casing, you will enter only one set of numbers in this area. Step-down casing will have more than one set, and you would enter all the sets onto the entry form. Enter the diameter's "in." (inches) and after hitting "enter" the cursor moves to the "From" designation. **There is a .00 in the "From" area. This stands for zero and nothing would be keyed here** since it's assumed the casing began at ground level. **Hit "enter" and move the cursor** to the blank space for "ft." Type the number from the "ft." area of the well log and hit "enter" to go to the "Amount" area of the entry screen (the "Weight" area of the well log). The program will automatically add blank rows; if you have only one row to enter, just ignore the blank rows and tab out.

24. Amount - (this is “Weight” on the well log) - enter the number given on the well log. It may be a number and decimal - enter both. The well log may have two or three letters before the number of the “Amount.” Enter only numbers onto the entry form and not the letters. **NOTE:** Some drillers put the number “200” here (sometimes with the letters PSI or SDR with them); this is NOT the weight of the casing and shouldn’t be entered; leave the area blank if this is what’s written on the log.
25. Hole Diameter - Enter the numbers from the well log into this area. There may be more than one set - enter all. **There are almost always fractions for the “in.” (inches) designation on the well log and these must be turned into decimals for the entry form. Use ONLY the decimals: .25, .50, .75.** If the fraction is something like 7/8, round up to one whole number - round up or down any unusual fractions to one of the three decimals allowed. When finished, use “Control” + “O” to get out.
26. Screen - This is a “Yes” or “No” area. If there isn’t a screen, after you choose “No” the program blanks out the areas here concerning screen information. It leaves the “Open Hole” designation. If no screen was present, the driller should have filled in the “Open Hole From” information. Enter it.

If there is a screen, after you choose “Yes” and hit “enter” the program blanks out the “Open Hole From” designation and the cursor moves to “Make.” This is the brand name of screen used; type it in. The cursor then moves to “Type” - choose the type of material from the pull-down menu. Drillers will sometimes put “PVC” in this area. This stands for plastic and plastic should be the material chosen from the pull-down menu. If the driller has written, “slotted” for the type, choose “Q” in the menu.

The cursor moves to “Diameter,” which is the “Diam.” within the “SCREEN” area of the well log. “Slot” is the next designation; the appropriate information is from “Slot/Gauze” on the well log. **NOTE** - some drillers will use fractions for the “Slot/Gauze” number, i.e., .010 or .90. Enter only the whole number, i.e., 10 or 90. “Length” is the length within the “SCREEN” area of the well log. Type in the number. The cursor next moves to “From” after hitting “enter.” You will get the footage for this from the “Set between” area on the well log. Type the first number, hit “tab” and the cursor moves to the “to” in order to enter the second number of feet. “Control” + “O” to exit the screen sub-form.

27. Description - This area is listed as “Geological Materials” on the well log. Type the exact word(s) from the well log here, such as “Gravel Clay.”

Color - A pull-down menu choice here; two color designations are also here. If more than two colors are given on the well log, or the word “Mixed” is used, choose “Varied” from the pull-down menu. On the well log, the initials Gry = gray; Grn = green; Blk = black; ORN = orange; PUR = purple; SLV = silver; OLV = olive; PNK = pink; BRN = brown; BLU = blue; YEL = yellow; WHT = white.

Hardness - A pull-down menu. Choose what the driller has written on the log. If the driller uses a word in the “Hardness” area that isn’t in the pull-down choice, leave the area blank.

The **first** blank for “From” will always read zero; just hit “enter” to get to the second blank (“To”) and enter the number of feet from the well log. After entering the “To” footage, the program will automatically add a blank row for more soil descriptions after you hit “enter.” The cursor will then jump to the second line which holds “Strat/Lith Prim/Sec/Minor.” Just hit “enter” at each of these and don’t type any data; we skip this whole row and come to the next layer of geological materials - which would be entered like the first except the machine automatically puts the last footage into the “From” blank so that you only have to enter the end footage. When the last row has been keyed in, you will have to use “Control” + “O” to exit, or click with your cursor on “Static Water Level” in the upper right screen. **NOTE:** the program will put a “0” in an empty row of the “From” designation, below what you entered. When you click on it, it turns into the last number you entered in the row above. Just delete all the numbers. The blank row must be completely blank or the program won’t save the well log at the end.

28. Static Water Level - Type in the number of feet given on the well log for this designation. IF “**above land surface**” IS CHECKED ON THE WELL LOG in this area, it means it is a flowing well and the number that is entered must be a negative number - put a minus sign before the number when typing it in. The next designation “**Location**” should ALWAYS be **Land Surface**. The “**Date**” designation here was automatically filled in by the application when you typed in “Date Well Completed” (#13). Compare the “Date measured” and the “Date Work Completed” on the well log. If they are more than one day apart, use the “Date measured” from the well log for this date designation.
29. Pumping Level - Type in the information from the well log. From the well log you will type in the number of feet, hours of pumping, and the amount of g.p.m. (gallons per minute); if the g.p.m. has multiple numbers like 10 - 12, please use the average - which would be 11.
30. Well Head Completion - The first designation the cursor lands on in this area is:
Pitless adapter manufacture - Type in the name from the well log (“Pitless/adapter manufacturer”); if no name is on the well log, leave that area blank.
Model - Type in the name from the log.
12 in. above grade. - This is either checked or not in the “WELLHEAD COMPLETION” area on the **well log**. Use the cursor to check or uncheck the box.
Casing Protection - This is a check-off area. If there is nothing indicated on the well log, leave this area blank.
At-grade (Environmental Wells and Borings ONLY) – This is either checked or not in the “WELLHEAD COMPLETION” area on the **well log**. Use the cursor to check or uncheck the box.
Basement offset - Rarely found on well logs. This is either checked or not in the “WELLHEAD COMPLETION” area on the **well log**. Use the space bar to check or uncheck the box.
31. Grouting Information - The cursor lands in “Well grouted?”. This is a “Yes” or “No” choice; choose according to the information from the well log. If no information, leave blank.
- 31A. The cursor then goes to “Material” which has a pull-down menu. The menu is hard to read as it cuts off some of the words. The choices are: “*Bentonite; *Cuttings; *Concrete; *Neat Cement; *High Solids Bentonite;*Well known to be not grouted; *Other; *Pearock; *Well grouted, type unknown.” Match as best you can with the well log. If the driller has put “Bentonite+” or “water/bent” on the log, choose Bentonite. (Bentonite is always mixed with water.) If the driller has “natural materials” or “high yields with cuttings” on the well log, choose “Cuttings” on the pull-down menu. Drill mud is considered “Cuttings.”
- 31B. The cursor moves to “From” - the measurements are given on the well log - and then “To (ft)” - also on the log. There may be several sets of footage here. Enter all. NOTE: The drillers sometimes invert the numbers on this and put a larger number leading to a smaller number. This is incorrect and should be entered with the smaller number leading to the larger number. The largest number used in any column here must NEVER exceed the “Depth Completed” footage used for the well.
- 31C. Amount on the entry form is the number seen before “Yds” and “Bags” on the well log. This is the number of yards or sacks of grout material used. Type in the number. Unit is a pull-down menu to indicate what was used - cubic yards or sacks of grout material.
32. Nearest Known Source of Contamination - The cursor will jump to the blank box by “**Feet.**” Enter the number of feet indicated on the well log. “**Direction**” is given on the log and the entry form has a pull-down menu. “**Type**” is a pull-down menu; choose what is listed on the well log. If the driller has written “sewer,” “cess pool,” or “outhouse” on the well log, choose “Septic” from the pull-down menu. A “sewer line” on the well log would be “Sewer” from the pull-down menu.

Check "Well disinfected upon completion?" Yes or No? If blank, then just skip.

33. Pump - The cursor will jump to the check box that states "Not Installed". If **no pump has been installed** you would **check this box** with the mouse and move out of this entire area by hitting "enter" after checking the box. If a pump was installed, you simply hit "enter" to jump to "Date Installed" and enter the date from the well log. "Manufacturer's name" - type the name from the well log. "Model" - listed on the log; type it in. "HP" is the horsepower of the pump from the well log. NOTE: The horsepower is often listed as a fraction on the well log. It **cannot be entered as a fraction on the entry form**. It must be converted to a decimal. A 1/2 HP would read as .50 on the entry form. "Volts" is on the well log; enter the number. "Capacity" is on the well log in g.p.m. "Length of drop pipe" - this footage is given on the well log; **type only the feet measurement**. If the driller has "40' 1", type only the footage - not the inches. Also, some drillers have letters with numbers after the footage in this area. Do not type in the letters or numbers; nothing but the footage goes here. "Drop Pipe Material" - this data is usually found on older well logs and you would choose from the pull-down menu according to what was on the log. The newer well logs don't have this designation, so you would just hit "enter" to move on. The cursor then moves to "Type" which is the type of pump used. This has a pull-down menu and you would choose what was given on the well log.
34. "Does property have any not in use and not sealed well(s)?" - This is a check box on the entry form and you use the mouse to enter the "Yes" or "No" from the well log.
35. "Was a variance granted from the MDH for this well?" - This is a check box on the entry form and you use the mouse to enter the "Yes" or "No" from the well log.
36. Well Contractor Certification - This area calls for the license number of the well drilling company. This number is located on the bottom right of the well log, after the drilling company's name. (Leadworker has a book of all the companies/drillers in Minnesota.) Click in the blank area and begin keying the license number. A list of numbers and company names appears by the cursor. Select the right company and click on it. The license number is automatically put in the blank space and the company name in the grayed out area to the left of the license number. **To move out of this area**, click your cursor in the "Name of Driller" area.
37. Name of Driller- This is the name of the **actual driller**, found two lines down from the drilling company's name and license number on the well log. Type **last name first**, comma and then first name **initial only**. Some drillers have last names too long for the space on the entry form. Type as much of the last name as you can. Some well logs will have two names; leave this blank if there are two names. MGS and others will be able to identify the company by the license number.
 - 37A. Received Date – This is date stamp that Well Management received the well log. The format is the same as all dates, year, month, day (yyymmdd).

The cursor may not automatically go to the "Remarks" area after you press "enter." Click the cursor in the "Remarks" area. You may have to "click" to the other three areas here also.

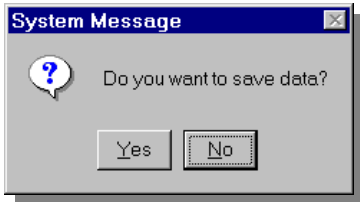
38. Remarks - Monitoring well names would go here, and any other "Remarks" from the well log. Use "Control O" to move to next entry area.
39. Status - Use the pull-down menu here. Almost all wells will be "A" for "Active."
40. Input Source - (who is entering the data). It is either MDH (Minnesota Department of Health) or MGS (Minnesota Geological Survey). This is added automatically based on the user. Check to make sure it is correct; if not, correct it using the pull-down menu.

- 41. SWL - (stands for Static Water Level) If a static water level has been given on the well log, choose "Yes." If "None" is written in the static water level area on the well log, choose "No." If this area is **blank on the well log, choose "Unknown."**
- 42. Alternate Id - SKIP these unless you have a fire number at the top part of your well log (this area on the well log is right after the well name address). If the driller has identified a fire number with the well, type the number in at "Alternate Id". For the fire number area, the "Agency" would be the county (#43) and the "Program" (#44) would be "ESN" (Emergency Service Number).

Scroll to the top of the program and choose "SAVE" to save all the information you entered. If you get a message about a "Stratigraphy" measurement needing a "From" designation, go back to the "Description" area of the program and look in the blank areas that were to be skipped. If you see a "0" in one of the blank areas, delete it. The program should save now.

YOU HAVE FINISHED ENTERING DATA.

Scroll to the top of the screen and select "Save."



If you are working with original well logs and NOT copies, put a check mark on the well log by the scanning date in the upper right margin of the well log that was entered. This indicates the well log has been entered into CWI.

You then choose to "Close" the window and your starting screen comes up. (May have to click "Close" twice.) Select the "Add Well" button to enter another well log.

If the only address is an H.C. Box, and/or Route number:

"RR" (Rural Route) and the route number go in the "House No." space and H.C. Box goes in the "Street" space (use the periods when entering H.C.) and skip "Type." Below is an example of two such addresses:

House No	Street	Type	Dir.	Other
RR(space)2	Box 69	(Use normal spacing between words. Nothing in the rest of the areas here.)		
	H.C. Box 20	(Use normal spacing between words. Nothing in the rest of the areas here.)		

Data Entry New Well Page 1

County Well Index Version 5.0
File Report System Window Help

Data Entry [Add] [Save] [Close]

CTRL+O to exit a subform

Unique No 69 1	MINNESOTA DEPARTMENT OF HEALTH WELL AND BORING RECORD MINNESOTA STATUTES CHAPTER 1031	Relate Id 0000000069
County 2		Entry Date 2003/05/02

Wellname	Township Range Dir	Section Subsection	Well Depth	Depth Completed	Date Well Completed
	3 4 W	5 6	12 ft	13 ft	14 0000/00/00

Contact 7	Type Both 8	Drilling Method 15
House No 9/10 Street 9/10 Type 9/10 Dir 10 Other 9/10		Drilling Fluid 16
11 MN 11 11		Well Hydrofractured 17 YES <input type="checkbox"/> NO <input type="checkbox"/>

Use 18	Drive Show <input type="checkbox"/> YES <input type="checkbox"/> NO	Hole Diameter (in.)
Casing 19	Case Depth 22	To
Materia 19	Above/Below	25
Type 20	Joint 21	
Diamete in. from 23 To ft. 24 lbs/ft		

Description	Color	Hardness	From To
Strat/Lith Prim/Sec/Minor			
27			

Screen 26	Open Hole(ft.) From to
Make	Type
Diameter Slot Length From ft. to ft.	

Data Entry New Well Page 2

Well Grouted - YES
31A, 31B, 31C

Material	From	To	Amount	Unit
31A	31B	31C	ft.	