

Command Center Quick Start Guide

Version 1.4



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Getting Started

To begin, you will be e-mailed user information either from your account representative, or directly from the LiveLog e-mailer. This information will contain a user name and typically a randomly generated password.

To get start we recommend you first log in to the web site (<u>https://livelog.digidrill.com</u>) and change your password.

Logging in

To log in to the web site, open a browser and navigate to <u>https://livelog.digidrill.com</u>.

This is the web version of the remote viewer, and also allows for managing users, licenses, and jobs. You can view a web dashboard and view log information from here. The site is mobile-friendly and should work on most mobile devices with a recent browser.

Changing your password

To change your password, navigate to <u>https://livelog.digidrill.com</u>. Once the site has loaded, log in.

Enter your account information when prompted, and click "Log in".



DigiDrill LiveLog	Downloads	Log in
Log in.		
Use a LiveLog a	account to log in.	
Email	nbenson@digidrill.com	
Password	•••••	
	Remember me?	
	Log in	
	DIGITAL DRILLING DATA SYSTEMS	© 2017 - Digital Drilling Data Systems, LLC 5.25.50.21798

Figure 1 - Logging in to LiveLog

Once you have logged in, you will be brought to the main landing page. Locate your user name in the menu bar, and click on it.



Figure 2- Changing User Settings in LiveLog

This will bring you to your user information. From here you can change your password.



DigiDrill LiveLog My Wells Dashboard Downloads	nbenson@digidrill.com Log off Admin
Manage. Change your account settings Password: [Change your password]	
DIGITAL DRILLING DATA SYSTEMS	© 2017 - Digital Drilling Data Systems, LLC 5.25.50.21798

Figure 3 - Changing your password

Click on "Change your password" and you will be prompted to enter a new password.

LiveLog Web Interface and Administration

Viewing the Dashboard

The dashboard provides an overview of the wells you have access to. Wells that are active will show a status with color, and "stale" wells will show as "STALE". You have the option of hiding stale wells or displaying them. Jobs are automatically expired off the dashboard when they have been stale for 10 days.

To view the dashboard, locate the "Dashboard" link on the top menu bar. Click on it and you will be brought to the dashboard page.



DigiDrill LiveLog	My Wells	Dasl	hboard Dow	nloads						nbi	enson	@digidril	l.com	Log off	Adn
Show Stale				Show 10	 ✓ entrie 	IS						Search:			
Status ↓↑ Rig	Ii Well	11	Job 灯	Bit Depth ↓ ↑	Hole Depth ↓1	TVD 11	vs 🕼	INC 11	AZM ↓↑	Key Company	11	Key	11	TeamViewer	11
OFF BOTTOM			«Job 139433»	131.73	3910.03	131.73	0.00	0	0		٦	Г	٦		
ON BOTTOM			«Job 139427»	4364.60	4364.60	4364.49	0.00	7.34	45.42						
ON BOTTOM		11		15322.16	15322.16	8737.88	6766.55	89.59	170.87						1
OFF BOTTOM		t		5434.55	7470.00	5370.50	-182.34	4.66	316.40						
ON BOTTOM			,	17304.16	17304.16	8426.24	9717.86	87.65	178.79						
OFF BOTTOM				4077.72	4080.80	4013.99	45.77	21.81	216.96						
ON BOTTOM				3145.11	3145.11	1363.21	1978.66	89.03	315.88						
OFF BOTTOM				10063.78	10137.14	6268.26	3867.05	88.64	179.68						
PENDING				0	0	0	0	0	0						

Figure 4 - Viewing the web dashboard

The dashboard will "tick" in real time and update the values displayed to track activity in the field. By default the dashboard will not display "STALE" wells. Stale wells are those that have not communicated with the server for at least 30 minutes. If a rig loses connectivity to the internet it will eventually show as stale.

Hiding or showing STALE wells

To show or hide stale wells, click on the button at the top left of the dashboard table. The title of the button states what action it will perform. If stale wells are being hidden, the button will display "Show Stale". If the wells are being shown, it will display "Hide Stale".



Hide Stale Story 10 entries Start Start Start Start Key	DigiDrill LiveLog	My Wells	Dashboard	Dow	nloads						nbe	nson@digidi	ill.com	Log off	Adn
Sature II Reg I Well I Job Bit open II Hole open II TVD IV	Hide Stale				Show 10	· ∨ entri	es					Search			
OFF 4.Job 139433 131.73 3910.3 131.73 0.00 0 0 ON 5171.00 4372.87 4372.87 4372.87 4372.87 45.42 STALE 4.Job 139430 492.33 94.00 492.33 0.00 7.34 54.82 STALE 1036.61 10399.15 1036.61 0.00 2.83 24.88 ONTON 15322.66 15322.66 877.80 676.70 89.50 170.87 OFTON 15322.61 15322.62 173.05 174.62 170.90 174.81 164.91 OFTON 17335.62 173.6	Status 👫 Rig	↓≞ Well	.lî Job	11	Bit Depth ↓ ↑	Hole Depth _l↑	TVD II	vs 💵	INC 11	AZM .↓↑	Key Company		IJ	TeamViewe	r II
ON-TOM xJob 139427, 4372.87 4372.74 0.00 7.34 4542 STALE xJob 139430 94.00 492.33 0.00 0 0 0 STALE 10386.81 0389.15 10386.81 0.00 2.83 24.88 ON-TOM 15322.68 15322.68 8737.80 6707.06 89.59 170.87 OBTTOM 15322.61 15322.62 8737.80 6707.06 89.59 170.87 OBTTOM 15322.62 170.80 5477.80 -166.48 4.66 316.40 OBTTOM 17305.62 170.86 8126.32 971.92 87.65 178.79 OBTTOM 17305.62 170.66 816.31 178.79 178.79 178.79 OBTTOM 17305.62 170.66 816.32 971.92 87.65 178.79 OBTTOM 17305.62 17305.62 173.15 67.60 95.90 178.79 OBTTOM 117305.62 173.05.62 173.05 179.72 179.75 179.75 OBTTOM 117305.62 173.65 163.21 <td>OFF BOTTOM</td> <td></td> <td>«Job 139</td> <td>433»</td> <td>131.73</td> <td>3910.03</td> <td>131.73</td> <td>0.00</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td>1</td>	OFF BOTTOM		«Job 139	433»	131.73	3910.03	131.73	0.00	0	0					1
STALE xJob 139430 492.33 494.00 492.33 0.00 0 0 10	ON BOTTOM		«Job 139	427»	4372.87	4372.87	4372.74	0.00	7.34	45.42					
STALE DATA 10366.81 10389.15 10386.81 0.00 2.83 24.88 ON BOTTOM BOTTOM BOTTOM BOTTOM BOTTOM 15322.68 15322.68 15322.68 8737.88 6767.06 89.59 170.87 ON BOTTOM BOTTOM BOTTOM BOTTOM 17305.62 1740.00 5477.80 -166.48 4.66 316.40 ON BOTTOM BOTTOM 17305.62 17305.62 17305.62 9719.32 87.65 178.79 ON BOTTOM 13145.68 3145.68 1363.21 1978.66 89.03 315.88	STALE DATA		«Job 139	430»	492.33	494.00	492.33	0.00	0	0					
ON 01 15322.68 15322.68 8737.88 6767.06 89.59 170.87 OBTION 5571.04 7470.00 5477.80 -186.48 4.66 316.40 ON 17305.62 17305.62 875.82 9719.32 87.65 178.79 ONTOM 4077.43 4008.08 4013.18 46.70 25.76 217.45 ONTOM 3145.68 3145.68 1363.21 1978.66 89.03 315.88	STALE DATA			٦	10386.81	10389.15	10386.81	0.00	2.83	24.88					
OFF BOTTOM 5571.04 7470.00 5477.80 -186.48 4.66 316.40 ON BOTTOM 17305.62 17305.62 9719.32 87.65 178.79 OFF BOTTOM 4077.43 4080.80 4013.18 46.70 25.76 217.45 ON BOTTOM 3145.68 3145.68 1363.21 1978.66 89.03 315.88	ON BOTTOM				15322.68	15322.68	8737.88	6767.06	89.59	170.87					
ON BOTTOM 17305.62 17305.62 8426.32 9719.32 87.65 178.79 OFF BOTTOM 4077.43 4080.80 4013.18 46.70 25.76 217.45 ON BOTTOM 3145.68 3145.68 1363.21 1978.66 89.03 315.88	OFF BOTTOM				5571.04	7470.00	5477.80	-186.48	4.66	316.40					
OFF BOTTOM 4077.43 4080.80 4013.18 46.70 25.76 217.45 ON BOTTOM 3145.68 3145.68 1363.21 1978.66 89.03 315.88	ON BOTTOM			A.	17305.62	17305.62	8426.32	9719.32	87.65	178.79					
ON 3145.68 3145.68 1363.21 1978.66 89.03 315.88 BOTTOM	OFF BOTTOM				4077.43	4080.80	4013.18	46.70	25.76	217.45					
	ON BOTTOM				3145.68	3145.68	1363.21	1978.66	89.03	315.88					

Figure 5 - The web dashboard with stale wells

Viewing Well Details

To view detailed information about the well, click on any of the available links on the dashboard. All links in the dashboard table will bring you to the detailed view of the selected well.

DigiDrill Live	eLog	My Wells	Da	shboard		nloads						nbe	nson@) digidrill		Log off	Adm
Hide Stale						Show 10	→ entri	es					ç	Search:			
Status ↓↑ I	Rig	↓≞ Well	11	Job	11	Bit Depth ↓↑	Hole Depth ↓↑	TVD 11	vs It	INC 11	AZM 🕼	Key Company	11	Key	1l	TeamViewe	r 11
OFF BOTTOM				«Job 1394	33»	131.73	3910.03	131.73	0.00	0	0				_		1
ON BOTTOM				«Job 1394	27»	4372.87	4372.87	4372.74	0.00	7.34	45.42						
STALE DATA			С	«Job 1394	30»	492.33	494.00	492.33	0.00	0	0						
STALE DATA					1	10386.81	10389.15	10386.81	0.00	2.83	24.88						
ON						15322.68	15322.68	8737.88	6767.06	89.59	170.87						



The well detail page will show well header information, sync percentage (amount of data synchronized from the rig) as well as log information, surveys, and user access information. Access can be granted to specific users in the system here.

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Viewing log information

The detailed view currently supports several pre-prepared views. The toolbar allows the user switch between the views as well as change certain settings of the currently displayed view.

- Geosteering

This displays gamma data along with options for wrap ranges

- Surface
 - This displays a basic surface log
- Temperature

This displays downhole temperature as recorded by the MWD tool

- Resistivity

This displays any resistivity data if it has been recorded

Rig Well Name	Job	Number	Well Identifier	Service Company	Operator	Location	Sync %	Key Serial	TeamViewer
							100.0		
WITSML Well UID				v	ITSML Wellbore UID				
9140e962-172c-44eb-9eb6	-5375122a0c	1d		6	080fe69-a6f9-4ce4-9074-c13	c74a50a16			
Logs Surveys User A	Access C Surface 🤇	Command St	atus ture <u>Q</u> Re	esistivity 1":100' -	MD - 0-300 -	□ Tracking En	abled		🖸 Refresh
Logs Surveys User.	Access C Gurface	Temperat	atus ture Q Re	esistivity 1":100' -	MD - 0-300 -	□ Tracking En	abled	2	₿ Refresh
Logs Surveys User	Access C Surface	Command St Temperat	atus ture 🔃 Ro	esistivity 1":100' v	MD ~ 0-300 ~	Tracking En	abled 150.00 300.00	2	C Refresh
Logs Surveys User.	Access C Surface	Command St	atus	osistivity 1°:100 v	MD + 0-300 +	Tracking En	abled 150.00 300.00		C Refresh
Logs Surveys User .	Access C Surface	Command St	atus ture 🔬 Re	esistivity 1°:100 v	MD - 0-300 -	Tracking En	abled 150.00 300.00	2	₿ Refresh

Figure 7 - Viewing well detail

The detail view also displays UID information necessary to connect external WITSML tools. The provided information displays the UID of the currently displayed well and wellbore. This is sufficient for most tools to connect to the log and survey data.

Using the plot toolbar

The toolbar above the plot area allows the user to customize their current view. The following options are available:

- View selection (geosteering, surface, temperature, resistivity)
- The scale of the displayed data
- The depth type of the displayed data (MD/TVD/VS)



- Tracking Enabled enable the autoscrolling of the page to the bottom (deepest) part of the log
- Refresh this button will force a refresh of the log image

Viewing Surveys

To view the surveys for the well, click on the "Surveys" button.

Rig V	Vell Name	Job Number	Well Identifier	Service	Company	Oper	ator	Location	Sync %	Key Serial	TeamViewer
WITSML V	Vell UID					WITSML Well	oore UID			_	
9140e962-	172c-44eb-9eb6-53751	22a0c1d				6080fe69-a6f9	-4ce4-9074-c1	3c74a50a16			
Logs Su Show 10	rveys User Access	Command	Status								
Survey Numb	ber MD	↓₽ INC	AZM	TVD	VS	DLS	Build Rate	Turn Rate		Create Time	
154	15230.00	89.59	170.12	8737.59	6725.53	1.75	-1.01	-1.43		7/19/2017 3:37	7:51 PM
153	15136.00	90.55	171.46	8737.70	6631.94	2.10	0.66	2.00		7/19/2017 12:5	6:52 PM
152	15042.00	89.93	169.58	8738.10	6538.31	1.62	-0.98	1.29		7/19/2017 11:5	52:55 AM
151	14948.00	90.85	168.37	8738.73	6444.50	2.10	1.46	1.51		7/19/2017 11:1	15:43 AM
150	14854.00	89.48	166.95	8739.01	6350.57	1.89	-1.87	-0.26		7/19/2017 10:3	37:28 AM
149	14761.00	91.22	167.19	8739.58	6257.61	1.69	-1.64	0.39		7/19/2017 9:53	3:17 AM
148	14667.00	92.76	166.82	8742.84	6163.71	0.54	0.51	-0.16		7/19/2017 8:33	3:10 AM
147	14573.00	92.28	166.97	8746.98	6069.83	0.51	0.51	-0.06		7/18/2017 6:46	6:42 PM
146	14480.00	91.81	167.03	8750.29	5976.92	2.74	2.68	0.53		7/18/2017 5:53	3:25 PM
145	14386.00	89.29	166.53	8751.19	5882.96	1.03	1.01	0.19		7/18/2017 5:09	0:08 PM
								Previous 1	2	3 4 5	16 Nex

Figure 8 - Viewing surveys from the web

The table will display the survey information complete with the time it was displayed. It has options for the number of items to display per page, and the ability to switch between pages of surveys. The surveys are sorted by default by MD descending. You can change the sort order by clicking on any of the headers on the table.

Granting access to users

Access can be granted to other users by accessing the "User Access" button.



Rig Well Name	Well Job Number Ident	ifier Service Company	Operator	Location	Sync %	Key Serial	TeamViewer
					100.0		
WITSML Well UID			WITSML Wellbore UID				
9140e962-172c-44eb-9	eb6-5375122a0c1d		6080fe69-a6f9-4ce4-9074-c13	ic74a50a16			
Logs Surveys Us	er Access Command Status						
							+ Add User
Name	.∥≞ Ro	le	11 Actions				1
		No data availal	blo in tablo				

Figure 9 - Granting user permissions to wells

This will display all users with explicit permissions for the job. By default, users in the system that are marked as "Company Admins" will be granted access to all wells for that company. All other users, including regular users of the same directional company as well as external or other 3rd party users need to be granted permissions here.

Rig Well Name	Well Job Number Identifier	Service Company	Operator	Location	Sync %	Key Serial	TeamViewer
					100.0		
WITSML Well UID		v	/ITSML Wellbore UID				
9140e962-172c-44eb-9eb	6-5375122a0c1d	6	080fe69-a6f9-4ce4-9074-c1	3c74a50a16			
Logs Surveys Use	r Access Command Status						
							+ Add Us
Name	↓≞ Role		11 Actions				
		No data available	e in table				

Adding users to a well

Click on the "Add User" button. Enter the user's e-mail information and select the access type. For most cases, "User" should be selected. This grants read-only access to the well with no other special permissions.



	Add User	×
Jo	E-Mail Address	
W1 10	Job Role	
2a0	Close Save changes	
٦.		

Figure 10 - Adding a user to a well



Command Center Windows Desktop Application

The Command Center desktop application is an advanced real-time monitoring application for well data. The user interface closely resembles the field interface for the DataLogger application. It allows users to perform many of the functions of the field software, including survey reports, generating logs, exporting LAS files, and editing data.

Downloading and installing the Command Center application

Downloading Command Center

Navigate to the LiveLog site (<u>https://livelog.digidrill.com</u>) and log in. Once you have logged in to the system, click on the "Downloads" link in the toolbar.

DigiDrill LiveLog My Wells Dashboard Downloads

nbenson@digidrill.com Log off Admin

This will take you to the downloads page. The CommandCenter2 installer is available for download here.

From here you can also view release notes for the current release.

DigiDrill LiveLog M	y Wells	Dashboard	Downloads				nbens	on@digidrill.com	Log off	Admin	
A license (key) s	serial	number is	required fo	or licensed dow	nloads						
Please enter your key/lice	nse seria	l number to see	downloads: En	ter your serial number.	Show Lice	ensed Downloads					
Application											
Application Name	11	Version	tt	Release Date	11	Notes	ti.	Download Link		11	
CommandCenter2			5.24.50.21586	5/30/2017	9:03:53 AM		View Notes	Down	load		
SlingShot Survey Import T	ool		5.23.50.21261	2/8/2017 1	1:03:50 AM		View Notes	Down	load		

Figure 11 - Accessing downloads from the web

Click on the "Download" link and save the file.

Installing the Command Center application

Once the application has been downloaded, run the installer package.



← → • ↑ 🕇	> This PC > Downloads >	
	Name	Date mod
 Quick access Desktop 	CommandCenter2Setup-5.25.50.21806.exe	7/19/2017

When prompted to accept the license, click "Yes". Click next until the installer completes.

Once installed, the application will appear in your start menu.

≡	Connect	^
	Cortana	
	D	
	DbSchema	~
	Delivery Tech Corp	~
	DevExpress 13.2	~
	DevExpress DXperience 12.2	~
	DigiDrill	^
۲	CommandCenter2	
	🗲 Correlator	
	DataEditor	

Click on the icon to start the application.

Using the Command Center Dashboard

Once you have run the Command Center application from the start menu, you will be prompted to log in. Use the same user name and password you use for the LiveLog web site.





The first window displayed is the Dashboard or Map view. This displays a map overview of the wells you have access to as well as a grid that displays a list of all the active wells. The grid updates in real-time to display the most current data from the rig.



Figure 12 - Viewing the Command Center dashboard

Selecting the columns displayed in the grid

To change the columns displayed in the grid, click on the "Column Chooser" button at the top left of the grid.



Calife	omia OpenStree	Sonora tMap - Map data ©20	Chihuahua 17 OpenStreetMap		Texas
Ŧ	ΤA	RIG	SVC COMP		OPER COM
F	DF	PATTERSO			
	ON	Savanna #654			
	OF	Nabors 887		-	_
	OF	Lewis Petro		-	_
	ON	H&P 642			

The column chooser allows you to choose which fields are hidden or displayed.



The columns that are "checked" are being displayed, those that are not are being hidden.

Changing the display status of stale wells

The dashboard has the ability to show or hide stale wells, as well as allowing the user to choose how many days a well has to be stale before it no longer displays.

To show or hide stale wells, check or uncheck the box "Show Stale". To change the number of days a well is to be stale before showing in the dashboard, adjust the number next to "Dashboard Age".

Open Older	✓ Hide Stale Jobs	Dashboard Age: 5	🖨 days	Refresh (4m)
Welcome		5.25.50.21806	nbenson@digio	drill.com SiteAdmin



Forcing an immediate refresh of the dashboard

The dashboard automatically updates values in real-time, and periodically updates the well list. To force an update of all wells and values, click the "Refresh" button. The button label displays the number of minutes since the last automatic refresh. By default, the well list refreshes every 10 minutes, while the values displayed in the list update every few seconds.

Open Older	☑ Hide Stale Jobs	Dashboard Age: 5 📥 days	Refresh (4m)
Welcome		5.25.50.21806 nbenson@digid	ill.com SiteAdmin

Opening older wells not displayed on the dashboard

By default, wells are archived on the server for 6 months. To access an older well that no longer displays on the dashboard, click on the "Open Older..." button. This will present a list of all wells archived in the system that the user has access to.

SVC Company	Operator	JobNumber	WellName		Rig	County	State	CreateDa
								07/19/201
	15 - The Second		1		H&P 512	Karnes	Texas	07/19/20
	Concho		1		Precision 601	Reeves	Tx	06/26/20
	SURGE ENERGY		,	·5	PATTERSON 2	HOWARD	TEXAS	07/19/20
								07/19/20
5	s RSP Permian LLC		1	(Sidewinder #128	Midland	Texas	07/19/20
	Marathon Oil EF LLC		1		Nabors X29	Karnes	Texas	07/19/20
i i	COG OPERATING, LLC		1	٩	PATRIOT 2	LEA	NM	07/12/20
								07/18/20
	SM Energy		1		Orion Lynx	Martin	TX	07/17/20
								07/18/20
	EOG Resources Inc.		1		H&P 646	Loving	Texas	07/18/20
	Tracker Resources		1		Patterson 770	Irion	Texas	07/18/20
	WPX Energy		1		H&P 556	Loving	Texas	07/05/20
	EOG RESOURCES		1	Α	H&P 642	LEA	NM	07/02/20
	EOG Resources		1		H&P 651	Loving	Texas	07/18/20
	JAY BEE OIL & GAS		1		PATTERSON 5	PLEASAN	WV	07/18/20
	EOG		1		H&P 649	Karnes	Tx	07/09/20
	Alta Mesa		•	4	Latshaw 29	Kingfisher	OK	07/18/20
	Sheridan Production		1		Capstar 132	Gaines	Texas	07/16/20
	EOG Resources		1		Patterson #285	Karnes C	Texas	07/18/20
	EOG Resources			ŧΗ	Noram 30	Loving	ТΧ	07/02/20
Ĩ	Scala Energy		1		Nabors M30	Culberson	Texas	07/17/20
								07/17/20
	Antero Resources		,		Well Service Gr	Ritchie	West Virg.	07/17/20

Figure 13 - Accessing archived wells in Command Center

To open a well, double click on it in the list. This will open the well in the real-time view which allows for viewing the log data, etc.

Opening a well from the dashboard

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Double-click on the well in the list. This will open the well in the real-time display allowing access to the log data, surveys, etc.

Functional Areas of the Real-Time Display

The real-time view is the main view for the application. It allows access to all of the functionality related to job monitoring and data management.



Figure 14 - The Command Center real-time view

The Real-Time View

The real-time display has three main areas.

1) The real-time gauges

The real-time gauges display data as it comes in via the real-time stream. This data updates approximately every 5 seconds. Each gauge can be configured using different style, pointed at different curves, and have alarms set on them. Templates can be saved and loaded.





Figure 15 – The real-time view gauges

2) The real-time plot

The real-time plot shows curves, fills, markers, and user annotations. Also supported are images based on azimuthal gamma data (when available). The plot area allows for automatic tracking of the data, changing the depth type (MD/TVD/VS/Time), changing the scale, orientation (vertical/horizontal), as well as many other options including printing. Templates can be loaded or saved from here as well.







3) The survey window

The survey window shows the surveys for the currently active track. It allows users with the proper permissions to add, delete, or change surveys as required. It also allows a direct export to Excel workbook. Also available as a tab here is the Chat window, as well as quick plots of the wellbore. The status bar is located directly below it and shows the name of the current user, the well status (on/off bottom/stale) as well as any communication errors reported from the field software.

Surveys [MD: 12453.00, Inc: 88.85,	vreys [MD: 12453 00, Inc: 88 85, Az: 176 60, TVD: 9188 08, VS: 3195 60] 🗸 🗸											
SurveyType	MD 🗸	Incl.	Azm.	TVD	VS	NS	EW	CA	CD	DLS	Create Date	Refresh
Survey	12453.00	88.85	176.60	9188.08	3195.60	-3186.68	685.13	167.87	3259.50	0.00	07/19/2017 06:43 P	
Survey	12389.00	88.85	176.60	9186.80	3131.68	-3122.81	681.34	167.69	3196.27	0.60	07/19/2017 06:42 P	Add Survey
Survey	12293.00	88.71	176.04	9184.76	3035.83	-3027.03	675.18	167.43	3101.42	1.41	07/19/2017 06:17 P	Edit Survey
Survey	12199.00	89.38	177.18	9183.19	2941.94	-2933.21	669.62	167.14	3008.67	3.54	07/19/2017 05:57 P	
Survey	12104.00	86.42	175.59	9179.71	2847.14	-2838.48	663.63	166.84	2915.02	2.57	07/19/2017 05:22 P	Delete
Survey	12008.00	86.19	178.05	9173.52	2751.43	-2742.83	658.32	166.50	2820.73	0.71	07/19/2017 04:33 P 🗸	Export to Excel
Surveys Section View Plan Vie	surveys Section View Plan View Chat Pulse Display											
Opacity:						nbenso	n@digidrill.com		OFF BO	TTOM COM4 - WITS-ba	sed tool: ERROR	

Using the real-time gauges (DigiDisplay)

The real-time gauges are fully configurable.

Loading and Saving Gauge Templates

The configuration and layout of the gauges can be saved to a template and loaded on a different computer, or for a different well. The alarms, curves, etc. are stored and are applied to whatever well the template is loaded against.



Loading a Template

Click on the "Load button". You will be prompted to select the template file you wish to load.



Saving a template

Click on the "Save" button, you will be prompted to select the filename for the saved template.

Changing Gauge Settings

Right-click on the gauge you wish to modify. Select "Edit Settings". This will bring up the settings dialog.





Curve Settings					↔	_		×
Curve			Visual Settings	Alarm Settings				
Type: RealTime \checkmark Show: All \checkmark			Display					
Type here to search			Control	Gradient	\sim			
Name Unit	Description	^	Options					
⊕ Gamma			✓ Misc					
Generic Variables			Color		0, 25	5, 75		
. MWD			ElapsedD	ecaySeconds	10			
⊞ Besistivity			Label		Block Heid	ght		
⊕ Sharewell			ShowLab	el	True			
Status								
Surface								
BlockHeight FT Current Blo	ck Height - (BlockHeight)							
GRadial GRadial - (GRADIAL)							
HoleDepth FT HoleDepth -	- (HoleDepth)		Preview					
Hookload kLBS Hookload -	(HKLD)			Bloc	:k Height			
MD FT Measured d	lepth (MD)							
MSE MSE - (MSE	=)					-		
PumpPressure psi Pump press	sure at bit depth - (PMPP)				K h			
ReferenceHoo kLBS Reference H	Hookload - (REFHKLD)							
ROP FT/H Rate of pen	etration at bit depth (ROP)							
RotaryRPM RPM Rotary RPM	1 at bit depth (MMRP)							
RotaryTorqueA KFT/ Average rot	ary torque at bit depth (MTQA)					OK	6	
RotaryTorque KFT/ Current rota	arv torque at bit depth (MTQC)	~				UK	Car	ncêl

The left hand side of the dialog displays the available curves as well as the type of curve to display.

In order to display real-time streaming data select "RealTime". To display the last value recorded in the field, select "Log". Select the curve you wish to display by clicking on it.

Visual Settings

The "Visual Settings" tab allows you to choose the style of display (text, seven-segment, gauge) as well as change the visual settings for it. You can change colors, show/hide curve name labels, etc.

Alarm Settings

The "Alarm Settings" tab allows you to change alarm settings.



isual Settings Alarm :	Settings
Aam Enabled	
Name:	
 Above Below Between 	and
O Advanced Formula:	
	Formula Builder
Notification Settings	tyle Pop-Up
Play Sound Sound File: C:	:\DigiDnll\Alarms\default_alarm.wav Browse
	OK Cancel

From here you can enable or disable the alarm for this gauge, as well as change the settings related to when it fires, and what kind of notification it provides.

Alarm Triggers

The triggers allow for:

- Above
 - Fire when the real-time value is above the entered value
- Below
 - Fire when the real-time value is below the entered value
- Between

Fire when the real-time value is between the entered values

- Advanced

This allows the user to enter a formula using an Excel-like formula builder. We recommend you use the formula build by clicking the button. This shows what values are available as well as the functions. It will also validate the formula for the user before accepting it. For advanced users, you can enter the formula directly in the text box.

Alarm Notifications

The Notifications Settings allow you to enable or disable outlook-style popups for the alarm. If triggered, a popup will display. If you click on the pop-up it will bring the real-time window that generated the alarm to the front. Play sound allows you to configure a .WAV file to be played when the alarm fires. The sound will be played in a loop until the alarm is acknowledged.

When the alarm fires, the gauge will begin flashing red.





Silencing Alarms

To acknowledge/silence the alarm, right-click on the gauge and select "Silence Alarm".



Using the Survey Display

The survey display allows users to view the surveys, and users with appropriate permissions to edit them. These changes are pushed back to the field computer and update the field database as well as the server.

Adding a new survey

Click on the "Add Survey" button. This will bring up the Add Survey dialog. Enter the appropriate MD, Inclination, and Azimuth. Optionally you can also specify the kind of survey instrument used.

New Survey	↔	
Measured Depth:	12562.09	
Inclination:	88.29	
Azimuth:	174.70	
Survey Source:	Magnetic MWD \sim	
	<u>O</u> K <u>C</u> ancel	



Editing an existing survey

The edit an existing survey, double click on the survey in the grid. Or select it and click the "Edit" button. This provides the same dialog to edit the survey values.

Delete a survey

Select the survey in the grid, and click the "Delete" button.

Export to Excel

Click on the Export button. You will be prompted for a filename and type for the exported surveys (xls/xlsx).

Survey quick plots

The quick plots show plan and section views of the surveys. To view on, click on its tab.



Using the chat/messaging functionality

The Command Center and DataLogger applications have a built-in secure chat/im feature. This allows users to broadcast messages to all other users of the current well. The history is preserved and users are notified when pop-ups and flashing of the tab.



Using the Real-Time Plot



Configuring Display Settings

The real-time plot allows users to add curves, fills, and other visuals. These are updated in real-time.

Depth Settings

The plot can be displayed in several different "depths". The default is MD (measured depth), with the other options being TVD, VS, or DateTime. The change the depth used for the Y-Axis click on the "Depth Type" drop-down and select the desired depth.

Stop Tracking Depth Type	MD 👻 S
	MD
	TVD
	VS
	DateTime

Scale Settings

The plot allows for scaling. These scales represent the most commonly required scales for geosteering and geology. To change the scale, click on the "Scale" drop-down, and select the desired scale.

Scale:	1":100' 🗸		Or
	1":100'		
	2":100'		
	2.5":100'		
	5":100'		
	10":100'		

Display Orientation

The plot can be displayed oriented vertical (default), or horizontal. The horizontal display orients itself so that shallower or older data is on the left, and newer or deeper data is on the right.

To select the orientation, click on the "Orientation" drop-down and select the desired orientation.





Figure 17 - The plot area using a horizontal orientation

Fit Vertical/Horizontal

The plot area can be configured to ignore scaling or fixed visual track widths and forced to fill the entire vertical or horizontal areas on screen. Both can be applied at the same time to force the plot to live entirely within its visible bounds on the screen. The enable either option (fit width is enabled by default), click on the appropriate button on the toolbar. To disable the option, simply click on the button again.





Figure 18 - The plot area with both Fit Vertical and Fit Horizontal enabled

Loading and Saving Templates

The plot area allows users to create, save, and load templates for visual displays. These templates are compatible with DigiDrill LogViz and templates created in either application can be loaded in the other. So you can create a template with LogViz, and load it in the Command Center or the reverse.

These templates get stored as files on the filesystem with the extension ".lvtmpl". The templates store everything necessary to apply to any data source (any well). A template created on one well can be applied to any number of other wells.

Loading a Template

To load a template, locate the "Layout Tools" menu on the plot toolbar. Click on it to expand the menu, and select "Open Template".





You will be prompted to locate the template file you wish to load. Once you have done so, click "OK" and the template will be applied.

Saving a Template

To save a template, locate the "Layout Tools" menu on the plot toolbar. Click on it to expand the menu, and select "Save Template".



Resetting to the default template

From time to time it may be necessary to reset the view to the default template provided with the Command Center application. This will reset the visuals to the original, default layout and reload the data. To do this, locate the "Layout Tools" menu on the plot toolbar and click on "Reset to default".

Printing Logs

Command Center has the ability to print logs (physical or to a PDF printer) directly from the real-time view. The user can choose to use automatic or manual (specified) depth or time ranges. The range type is based on the depth type used for the plot (depth-based or time-based).

Print Options	5	+	_		×
Options					
Range Start:	0.00		Auto	0	
Range End:	0.00		Auto	0	
			ОК	Cano	:el

Adding, Removing, Rearranging Visual Tracks and Their Properties

The plot supports several different visual types. Curves, fills, annotations, survey annotations, and images. Below is a description of how to add, remove, and modify these visuals.

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The visual area of the plot is divided into "tracks". Each track acts as a container for other visuals (curves, etc). Tracks can have their properties specified (grid lines, title, linear/log scale, etc) and they can be re-arranged. Tracks can also be added or removed.

There are three types of tracks supported by the plot. These are pre-configured in a certain way, but <u>all</u> track types are capable of containing other visuals (curves, etc).

Adding a Track

There are three types of tracks supported by the plot:

- Curve

This type of track is configured for displaying most normal curve data.

- Depth

This type of track is used for displaying depth/time data

- Annotation

This type of track comes without any markers, etc and is most useful for displaying survey or user annotations.

To add a new track, locate the "Add Track" button on the toolbar and click to expand it. You will then be prompted to choose the type of track you want to add.



Removing a Track

To remove a track, click on the track you wish to delete. This will highlight the track and mark it as selected.



	TVD	\wedge
	FT	
		×.
ł	12,015	\wedge
ł		
ł	12 020	
ł	12,020	
ł		
ł	10.005	
ŧ	12,025	
E		
Ŧ	12,030	
ł		
E	12,034	

Figure 19 - The annotation track is being shown as selected

Once the track is selected, locate the "Remove Track" button on the toolbar and click it. If the track contains visuals, you will be prompted to confirm removal.



Changing Track Properties

Each track type has its own properties. Each individual track in a plot can have its own settings. To change the settings for a track you can:

Right click on the track and select "Track Properties"



- Double click on the track to bring up the Track Properties dialog.

The track properties dialog has two forms, one for the depth track type, and one for all other track types.



Depth Track Properties	×
Custom Title:	
Auto Depth Ticks	
Major Tick Every: 100 🔺 ft/m	
Minor Divisions: 10 🚖	
OK Cancel	

Figure 20 - The track properties dialog for a depth track

💸 Track Properties 🛛 🗙
Custom Title: Value Scale Type: Linear Value Scale Type: White Width: 177 (1/100 in.)
Value Grid Properties ✓ Show Grid Lines ✓ Major Divisions: 2 ÷ ✓ Minor Divisions: 10 ÷
Depth Grid Properties ✓ Show Grid Lines ✓ Major Line Every: 100 € € (ft/m) Mid Divisions: 50 € € ✓ Minor Divisions: 10 € €
OK Cancel

Figure 21 - The track properties dialog for all other curve and annotation tracks



Tracks can be rearranged visually. Simply click on a track, and "drag" it with the mouse to the new desired location. This will move the track and all of its contents.

Adding, Removing, Rearranging Visuals (Curves, etc..) and Their Properties

Curves are the most common type of visual, and they support a variety of different properties. Smoothing, data markers, survey markers, block shifting, formulas, etc.

Adding Curves

To add a new curve, click on the track that will contain it. Then, locate the "Add Visual" button on the toolbar. Click on it to expand it and select "Add Curve".



You are then prompted to specify where this curve will come from. You can add curves from:

- The current well
- A different well on the server
- An LAS file

Choose the type of data you wish to add and click "OK".

Curve Source	+
Add a curve from	
This Well	
 A different well 	
LAS File	
	OK Cancel

If you chose "A different well", or "LAS file" you will be prompted to select the well or file that contains the data.

Once you have selected the location of the data, you will be shown the curve chooser. From here you can select which curve you wish to display.



Type: Log \checkmark Show	: All	V Type here to search X	
Name	Unit	Description	^
Annotations		Summary of user entered information - (Annotations)	
🖃 Gamma			
API	API	API corrected gamma counts at sensor depth (GR)	
APIDown	API	API corrected gamma counts at sensor depth for GTF 90	
APIDown_1	API	API corrected gamma counts at sensor depth for GTF 90.	
APIUp	API	API corrected gamma counts at sensor depth for GTF	
APIUp_1	API	API corrected gamma counts at sensor depth for GTF	
API_1	API	API corrected gamma counts at sensor depth (GR)	
Counts	mG	GammaCounts - (Counts)	
Counts_1	mG	GammaCounts - (Counts)	
GravToolface	deg	Gravity Toolface - (GTF)	
GravToolface_1	deg	Gravity Toolface - (GTF)	
MD	FT	Measured Depth of Gamma - (GRMD)	

Select the desired curve and click "OK".

Once the curve has been selected, you will be shown the "Curve Properties" dialog. Please refer to "Changing Curve Properties" for more information.

Removing Curves

To remove a curve from the plot, first click on it to select it. Then locate the "Remove Visual" button on the toolbar and click on it. The curve will be removed.



Changing Curve Properties

The Curve Property dialog supports a number of options for changing the visual properties of a curve in a plot.



👫 Curve I	Properties ×		
Name:	GR		
Depth (Fe	eet)		
Scale:	Depth 🗸		
Start:	Auto Depth Override:		
End:	Auto 🗸 None 🗸		
Show Survey Markers Automatic Value Limits Left: 0.00 Right: 150.00 Number of Wraps: 1 Line: Magenta Data			
Apply	y Fomula:		
Apply	y Smoothing: 1 🜲		
Maxin	mum Gap: 10.00 🜲 ft/m		
Block	k Shift (+/-): 0		
	OK Cancel		

- Name

This is the name shown in the header and footer of the plot area

Start

This is the start type of the log. It has several options

• Tie-In

Start plotting data from the MD of the tie-in survey

- First Survey Start plotting data from the MD of the first survey that's not a tie-in
- Auto
 - Plot all available data
- Manual Start depth is manually entered
- End
 - Last Survey Plot data through the MD of the last survey



- Auto
 - Plot all available data
- Manual
 - The stop depth is manually specified
- Depth Override

This allows a curve to be plotted on a depth scale other than what the plot area is displaying. For example, you could configure the plot area to display on MD, but plot Gamma.API on TVD by setting its depth override to "TVD".

- Show Data Density
 - Shows small markers where the data was recorded rather than a full curve
- Show Survey Markers

Shows small diamond markers overlaid on the curve at survey stations

- Automatic Value Limits
 When the box is checked, the curve is scaled to fill the width of the track. If it is unchecked, the curve will be clipped based on the left and right settings.
- Number of Wraps

Chooses the number of wraps to apply to the curve. Wrapping points are determined by the right value limit.

- Line Settings

Sets the color, width, and style of the curve on a per-wrap basis.

- Apply Formula

Allow user to apply simple formulas to the curve data when it is displayed. The formulas have access to the MD, TVD, VS, Time, and Value of each curve point.

Apply Smoothing

Applies a moving average smoothing. The value selected represents the number of samples in the averaging window.

- Maximum Gap

By default all gaps are filled. Enabling this option says "Fill gaps up to "XXX" but no larger". So if the setting is 10, gaps of up to 10' fill we filled, but anything larger will appear as a broken line.

- Block Shift

This allows you to shift the curve shallower or deeper on TVD logs to aid in geographic correlations between current wells and offsets. Most useful for geosteering.

Adding Annotations

There are two types of annotations. There are built-in survey annotations, and user-entered annotations. Both types are added via the "Add Curve" option from the "Add Visuals" menu.

To add a user annotation, select Add Visuals -> Add Curve. When the curve chooser pops up, select "Annotations".



rpe: Log \checkmark Show:	All \sim	Type here to search	X
Name	Unit	Descrip	otion
Annotations	Si	ummary of user entered inform	ation - (Annotations)
⊛ Gamma			
Generic Variables			
Sharewell			
Surface Surface			
 Temperature 			
Vibration			

Click "OK".

The Annotation Editor dialog will appear and will allow you to add values, change the name, colors, etc.

Appearance Name: Ann Line: Ent Size:	otations Cyan V -	Show Depth Label	
Depth Start MD: [End MD: [Z Auto	Depth Override: None V	
MD	Time	Content	

Removing Annotations

To remove an annotation, click on it in the plot area to select it. Then click on "Remove Visual".

Changing Annotations Properties and Values

Double-click on the annotation in the plot area to bring up the Annotation Editor dialog.

Adding Fills

Fills must be attached to a curve. The curve provides the "reference" line to fill against, and a normal fill will go from the curve to the left or right edge of the track containing track. Between fills require that two curves be selected and the fill applies between them.

To add a fill, first select one or two curves. Then locate "Add Visual" -> "Create Fill".



👫 Fill Properties	×
Depth (Feet) Name: Gamma.API	
Appearance Direction: Left	~
Data	✓
	OK Cancel

From here you can change the name of the fill, choose whether it is left or right (fill to the left of the curve, or to the right of the curve) and change the color and hatch style of the fill.



Removing Fills

Click on the fill in the plot area to select it, and click "Remove Visual".

Changing Fill Properties

Double-click on the fill in the plot area to bring up the Fill Editor dialog.

Range Fills

Range fills are a special kind of "Min/Max" fill. A curve is selected as the reference line, and a minimum value and fill properties as well as a maximum value and fill properties are selected for it. The fill will apply to any section of the curve below the minimum or above the maximum.



Fill Properties	×
Depth (Feet) Name: Gamma.API	
Appearance	
Minimum: 50	
Maximum: 90	
Data	
Min. Value:	✓
Max. Value: DarkRed	✓
	UK Cancel



The Job Center

The Job Center allows the user to remotely change settings related to the job including:

- Well header/job information
- Track information including survey offsets, logging intervals, etc.
- Gamma Setup information including scaling factors and gamma offset
- Adding/Removing tracks and gamma setups

Changing Job Properties Adding and Removing Tracks Adding and Removing Gamma Setups



The Data Editor

The Data Editor allows for editing data remotely. Users can add, remove, or change values. When these values are saved, they will be pushed to the field database as well as the server. The field database will be updated to reflect any changes made.

LAS Export

The LAS Export view allows users to export industry-standard LAS 2.0 and 3.0 files from data store in the LiveLog service. The LAS Export view contains a lot of functionality related to what data to export, how to handle cases like centering of points for fixed-step exports, and the formatting of the output data. It also allows the user to specify any custom formulas to be applied as well as any smoothing required. The exported data range can be selected manually, automatically (all data), or based on surveys (Tie-In, First, Last).

The Report View

The Report view contains several simple reports generated as PDF files. This includes the survey report.

Bulk Reports

Bulk Reporting allows the user to attach LAS and LogViz projects to be generated in bulk. Multiple templates of each type can be added and PDF or LAS files can be generated as a batch. Bulk Reporting also allows users to e-mail these generated files directly. This feature supports most e-mail providers providing SMTP. The e-mail body and subject lines can be customized to include static text as well as dynamically replaced values for curve or survey values, or job information.

Configuring Bulk Reporting Configuring the Output Path

By default, all files generated by the bulk reporting feature get stored in "C:\DigiDrill\CommandCenter2\<JOBGUID>\Reports". This is fine for normal usage, but if you wish to include additional files in your e-mail sent by Command Center it can be difficult to find the proper folder.

Bulk Reporting can have the output path (the location files are saved to when generated, and read from when sending e-mails) configured to a known location on a PER-WELL basis. This folder needs to be configured for each well it is used on if you wish to use a known location.



_

For example, if you wish to store the output to "C:\temp\CommandCenter\Reports\Well 1"

Create the f	folder using Wind	lows Explorer						
py Paste	 Copy path Paste shortcut 	Copy to 🔻	📑 Rename	New folder	Propertio	es 🎻 Edit		
Clipboard		Orga	nize	New		Open		
N « OS	N Not well 1 Not well							
FREE	Name	^		Date modified	н -	Туре		
illing Data S			TI	his folder is emp	ity.			
- Digital Dri								
- Personal								

- Open the well in Command Center, and switch to the Bulk Reporting tab. Once there, select the "Configuration" tab

4	Real	-Time Disolay	Bulk Reportin		Reports	L
	Report	Configuration	\sim			
	Name	Туре	FilePath	Parameters	IncludeParamete	-Out
				1		0
						Em
						5
						SN

- On the Configuration tab, click the browse button located next to the "Output Path"

Output	
Output Path:	
Email	



Select the new output location

Output		
Output Path:	C:\temp\CommandCenter\Reports\Well 1	

Once the output location is configured, you can easily locate this folder on the computer and even add additional files to be sent with any e-mails that are generated by the Command Center application.

Including Additional Files with E-mail Deliverables

All files located in this output path will be attached to the e-mail that is sent, whether or not it is in the configured "project" list. This allows you to include any additional files you might want to include with your deliverables even if they are not generated with the Command Center application.

First, configure your e-mail settings, the output path, and add the projects you will be generating to the projects list in Bulk Reporting.

Once configured, generate the reports and verify that they are being stored in the correct location.

Reports	Configuration			
		Туре	Prev	
	rical ut			
		-Surveys.pdf	PDF	
–	o Donina N.	Surveys.xlsx	XLSX	



	(C:) > temp	> CommandCente	r > Reports	>	Well 1 🗸 🗸
	Name	^		×	Date modified
255	PDF		Surveys.pdf		11/27/2019 11:30
ling Data S	×	00-10-107	Surveys.xlsx		11/27/2019 11:30
Distant Dat					

Now that the new storage location for this well has been verified, you can copy any files you want into this folder and they will appear in the Bulk Reports "Output" Window when you click the "Refresh" button.

Here, we have copied the Command Center quick start PDF to the output path so we can send it in an e-mail.



After the file has been copied to the folder, just click the "Refresh" button in Bulk Reports and it will be displayed in the output list.

Reports Configuration			
Name	Туре	Preview	
Historical Historical		📙 😂 🔍 🔍	
Output			
DigiDrill Command Center Quick Start Guide 1.2.pdf	PDF		
Surveys.pdf	PDF		[CommandConter-Quick Start - 1.2]
Surveys.xlsx	XLSX		
			Command Center Quick Start Guide
			Version 1.3
\sim			
	Cond		Constraint of the second first statement on a second se
Explore – Delete Generate	Send		
\sim			

Now, when the e-mail is sent, this file will be included as an attachment.



N o Nils Ber	Wed 11/27/2019 11:41 AM nils.benson@gmail.com Reports - 19 Jonneeds - 03 00 18 16 -	92-052-09120 - N.M. Kon-200 - M9144		
PDF 5 MB	rill Command Center Quick Start Guide 1.2.pdf 🧅	275 KB	f - 88 KB	Sonanc ⊅Surveys.xlsx -

THIS IS A TEST.

Other Functionality and Features

The Floating Real-Time Window

The floating real-time window is simply a minimal display of the real-time plot. Templates can be loaded and saved and it otherwise acts just like the normal plot area of the real-time display. The biggest difference is that it has minimal toolbars and other "chrome" to maximize the space for displaying log data.

The DigiDisplay

The DigiDisplay works like the real-time gauges on the real-time view. However, it allows the user to customize the number of rows and columns available for gauges, as well as allowing for multiple tabs of gauge sets to be created. Templates created with the DigiDisplay can be loaded in the real-time view as well.

Importing Data

Command Center can import LAS and CSV files directly into the LiveLog server. This data will not be pushed down to the aggregator on the rig, and will only be available on the server.

Notes:

CSV files are preferred, but most LAS files can be accepted. If the LAS file has mnemonics that have "." In the name, this should be changed to remove the "." Or the processing the file will fail.

It is required that there are no duplicate column names in the CSV files. Each column header must have a unique name.

It is required that there be no rows of data before the column header, and there be no extra rows (empty or with other data) between the column header and the data rows.



CSV files should look similar to this – no extra rows before the header, or between the header and data.

ſ	1 2 (3						
F	ile Ho	me Ins	ert Page	Layout	Formulas	Data	Review	View .
ľ	*	H N Calibri	• 11	P • A A		A 	R ab Wrap	W Text
Pas	ste 💉	в <i>I</i> <u>U</u>	•	🕭 - 🗛 -		≡ €≣ →	🗄 🖽 Merg	je & Center
Clip	board 🕞		Font		5	Alig	nment	
A1	L	- : :	x 🗸	f _x DEF	PTH			
	А	В	С	D	E	F	nula Bar	н
1	DEPTH	DBTM	DMEA	BPOS	ROPA	HKLA	WOBA	TQA
2	0	6.91	2366	19.22	0	32.46	0	0
3	5	10.45	2366	17.29	0	32.39	0	0
4	10	14	2366	15.36	0	32.32	0	0
5	15	17.55	2366	13.42	0	32.24	0	0
6	20	21.1	2366	11.49	0	32.17	0	0
7	25	24.64	2366	9.56	0	32.1	0	0

If only a subset of the data is to be imported, it is recommended that the file be edited in Excel or a text editor first to remove all the extra data. The import process will import the entire contents of the file, so any extra data that is not required should be removed first.

1. Open the well in Command Center

From the dashboard or the archive ("Older Jobs") list open the well.

2. Switch to the "Data Import" tab

Survey Repor	t Lock Plots	: Track 1 - 8/27/2018	•	
r	LAS Export	Job Center	Data Import	
əd				

3. Load the CSV/LAS file

To load the data file, click on the "..." button to browse for the file.

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	Real-Time Display	Bulk Reporting	Reports	U V
D	ata			
F	ile:		Load	

The default file type for import is CSV.

🕅 Open									Х
$\leftarrow \rightarrow \cdot \uparrow$ his	s PC > OS (C:) > temp >				ٽ ~	Search temp			P
Organize 🔻 New folder	r					1			?
LoggerService ^	Name	Date modified	Туре	Size					
Samples	surveys.csv	10/4/2018 9:31 PM	Microsoft Excel C	1 KB					
🔥 temp	actual surveys.csv	9/24/2018 4:55 PM	Microsoft Excel C	15 KB					
🔒 temp	a. Sample Import Data.csv	9/23/2018 2:40 PM	Microsoft Excel C	58 KB					
Digital Drilling Dat	Samples	9/27/2018 2:48 PM	File folder						
	📙 deploy	9/2/2018 2:23 PM	File folder						
RIOC - Docume									
RIOC - Email Me									
Technology - Dc									
🕋 OneDrive - Digital									
🝊 OneDrive - Persor									
💻 This PC									
3D Objects									
Desktop									
Documents									
Downloads									
h Music									
Pictures									
Videos									
Changes (E)									
Storage (F:)									
💣 Network 🗸 🗸									
File <u>n</u> a	me: Sample Import Data.csv				~	CSV Files (*.csv))		\sim
						Open		ancel	
						<u>U</u> pen		ancel	

To change the filter to show LAS files, type "*.las" in the "File Name" box and press enter.



← → This PC > OS (C:) > temp > ✓ O Organize ▼ New folder Size LoggerService ^ Name Date modified Type Size Samples 2 Samples 9/23/2018 2:37 PM LAS File 125 KB temp Samples 9/27/2018 2:48 PM File folder	Search temp			0						
Organize New Folder LoggerService Samples Samples Samples Samples Samples Samples Samples Name Date modified Type Size 125 KB 125 KB<			$\leftarrow \rightarrow \checkmark \uparrow$ \blacktriangleright This PC \rightarrow OS (C:) \rightarrow temp \rightarrow $\checkmark \lor$ \checkmark							
LoggerService Name Date modified Type Size Samples Sample LAS.las 9/23/2018 2:37 PM LAS File 125 KB temp Samples 9/27/2018 2:48 PM File folder	Organize 🔻 New folder									
temp y/2/2018 2:23 PM File folder RTOC - Docume RTOC - Email Me Technology - Dc OneDrive - Digital OneDrive - Digital OneDrive - Persor This PC 3D Objects Desktop Documents Documents Nusic Pictures Videos Videos Network										
File <u>n</u> ame: Tilas	CSV Files (*.csv)	Cancel	~						

Once the file has been selected, click "Open".

Data		
File: C:\temp\Sample Import Data.csv	Load	
DEPTH, DBTM, DMEA, BPOS, ROPA, HKLA, WOBA, TQA, RPM	SPPA, SPM1, SPM2, SPM3, MFOP, MFIA, MDOA, MDIA, MTOA, TVCA, TV01, TV02, TV03, METH, ETH, PRP, IBUT, NBUT, IF	PEN, NPEN
0,6.91,2366,19.22,0,32.46,0,0,0.14,0.76,1.9	,1.51,0,0,1.89,1.89,52.08,44.13,-5.25,73.96,59.88,77.75,580.87,0,0,0,0,0,0	
5,10.45,2366,17.29,0,32.39,0,0,0.14,0.64,1.	,0,1.25,0,0,1.9,1.9,51.96,43.88,-5.08,74.25,59.61,77.76,484.06,0,0,0,0,0	
10,14,2366,15.36,0,32.32,0,0,0.14,0.51,1.27	,1,0,0,1.9,1.9,51.83,43.63,-4.91,74.54,59.35,77.77,387.25,0,0,0,0,0,0	
15,17.55,2366,13.42,0,32.24,0,0,0.14,0.38,0	5,0,0.75,0,0,1.9,1.9,51.7,43.38,-4.74,74.83,59.08,77.78,290.44,0,0,0,0,0	
20,21.1,2366,11.49,0,32.17,0,0,0.14,0.25,0.	,0,0.5,0,0,1.9,1.9,51.58,43.12,-4.57,75.13,58.81,77.79,193.62,0,0,0,0,0	
25,24.64,2366,9.56,0,32.1,0,0,0.14,0.13,0.3	0,0.25,0,0,1.9,1.9,51.45,42.87,-4.4,75.42,58.54,77.8,96.81,0,0,0,0,0	
30,28.19,2366,7.63,0,32.03,0,0,0.14,0,0,0	,0,1.9,1.9,51.32,42.62,-4.22,75.71,58.28,77.81,0,0,0,0,0,0	
35, 33.76, 2366, 9.42, 0, 32.02, 0, 0, 0.14, 0, 0, 0, 0	,0,1.9,1.9,51.27,42.59,-4.23,75.71,58.27,77.81,0,0,0,0,0,0	
40,39.33,2366,11.22,0,32.01,0,0,0.14,0,0,0,	0,0,1.9,1.9,51.22,42.57,-4.23,75.71,58.27,77.81,0,0,0,0,0,0	
45,44.89,2366,13.02,0,32,0,0,0.14,0,0,0,0	,1.9,1.9,51.17,42.55,-4.23,75.72,58.27,77.81,0,0,0,0,0,0	
50,50.46,2366,14.82,0,31.99,0,0,0.15,0,0,0,	0,0,1.9,1.9,51.12,42.52,-4.23,75.72,58.27,77.81,0,0,0,0,0,0	
55,56.03,2366,16.61,0,31.98,0,0,0.15,0,0,0,	0,0,1.9,1.9,51.06,42.5,-4.23,75.72,58.26,77.81,0,0,0,0,0,0	
60,60.29,2366,13.28,0,32.65,0,0,0.14,0,0,0,	0,0,1.9,1.9,51.06,42.51,-2.49,75.73,60.1,77.71,0,0,0,0,0,0	
65, 65.13, 2366, 14.87, 0, 32.51, 0, 0, 0.14, 0, 0, 0,	0,0,1.9,1.9,51.14,42.56,-2.84,75.73,59.73,77.72,0,0,0,0,0,0	
70,69.97,2366,16.45,0,32.38,0,0,0.14,0,0,0,	0,0,1.9,1.9,51.22,42.61,-3.2,75.73,59.37,77.73,0,0,0,0,0,0	
75,74.81,2366,18.03,0,32.24,0,0,0.14,0,0,0,	0,0,1.9,1.9,51.3,42.67,-3.55,75.73,59,77.74,0,0,0,0,0,0	
80,79.66,2366,19.61,0,32.1,0,0,0.14,0,0,0	,0,1.9,1.9,51.39,42.72,-3.91,75.73,58.63,77.75,0,0,0,0,0,0	
85,84.5,2366,21.2,0,31.97,0,0,0.14,0,0,0,0,	0,1.9,1.9,51.47,42.78,-4.27,75.74,58.26,77.76,0,0,0,0,0,0	
90,91.37,2366,24.99,0,32.53,0,0,0.14,0,0,0,	0,0,1.9,1.9,51.54,42.75,-2.42,75.72,60.13,77.76,0,0,0,0,0,0	
95,97.41,2366,22.06,0,39.07,0,0,0.15,0,0,0,	0,0,1.9,1.9,51.32,42.2,-2.31,75.78,60.19,77.75,0,0,0,0,0,0	
100,103.18,2366,16.29,0,39.2,0,0,0.15,0,0,0	,0,0,1.9,1.9,51.63,43.2,-2.34,75.67,60.13,77.88,0,0,0,0,0,0,0	
105,108.24,2366,11.23,0,39.47,0,0,0.15,0,0,	0,0,0,1.9,1.9,50.04,41.8,-2.29,75.77,60.15,77.82,0,0,0,0,0,0	
110,114.01,2366,5.46,0,39.88,0,0,0.15,0,0,0	,0,0,1.9,1.9,50.34,42.2,-2.35,75.75,60.11,77.82,0,0,0,0,0,0	
115, 113.92, 2366, 25.01, 0, 34.56, 0, 0, 0.14, 13.6	,0,0,0,0,1.87,1.87,55.35,50.73,0.6,65.59,70.33,77.87,0,0,0,0,0,0	
120, 119.58, 2366, 21.34, 0, 33.42, 0, 0, 0.14, 1.08	,0,0,0,0,1.9,1.9,51.99,43.35,-2.15,74.92,60.99,77.74,0,0,0,0,0,0	
125, 126.94, 2366, 18.48, 0, 41.55, 0, 0, 0.15, 10, 0	,0,0,0,1.88,1.88,55.24,49.75,0.79,67.48,69.08,77.94,0,0,0,0,0,0	
Han ann nn nnee an naini an nnini n' n' stinni e		

The file will be opened and the contents will be displayed in the preview window.

4. Map the file contents to the server curves

Once the data has been loaded, you must map the curves contained in the file to the server curves.

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The import supports both time and depth data. You cannot continue until you have selected the mapping for either the time or the depth index.

There are three index types: Date Time DateTime

Date and Time must be used together. If you have two columns (one representing the date, and one representing the time) you must map both columns.

DateTime is used when there is a single column representing both the date and the time.

The date and time formats supported are anything that can be processed by the .NET DateTime.Parse() method.

In this example we are importing depth data, so we will map the depth column to the depth index for the import.

Source	Destination
DEPTH	Depth
DDTM	*Demotionports
DMEA	< Do not import >
BPOS	< Do not import >
ROPA	< Do not import >
HKLA	< Do not import >
WOBA	<do import="" not=""></do>
TQA	<do import="" not=""></do>
RPMA	<do import="" not=""></do>
SPPA	<do import="" not=""></do>
SPM1	<do import="" not=""></do>
SPM2	<do import="" not=""></do>
SPM3	<do import="" not=""></do>
MFOP	<do import="" not=""></do>
MFIA	<do import="" not=""></do>
MDOA	<do import="" not=""></do>
MDIA	<do import="" not=""></do>
MTOA	<do import="" not=""></do>
TVCA	< Do not import >
TV01	<do import="" not=""></do>
TV02	<do import="" not=""></do>
TV03	<do import="" not=""></do>
METH	<do import="" not=""></do>
ETH	<do import="" not=""></do>
PRP	<do import="" not=""></do>
IBUT	<do import="" not=""></do>
NBUT	<do import="" not=""></do>
IPEN	<do import="" not=""></do>
NPEN	<do import="" not=""></do>



Proceed to map the rest of the columns as appropriate. It may be necessary to contact the field crew to determine which curves in the data file map to the appropriate WITS curves for importing the data.

Please note that curves that are colored green have data in the database. This can make it easier to determine which curve to use when there are many for the same value. Also note that depthbased imports should only happen to depth-based WITS groups (02, 13, 08, ...). Time based curves should only be imported to time-based groups (01, 12, ...).

BPUS	< Uo not import >	
ROPA	WITS.0210 - Rate of Penetration (avg)	
HKLA	WITS.0210 - Rate of Penetration (avg)	~
WOBA	WITS.0211 - Weight-on-Bit (surf,avg)	
TQA	WITS.0212 - Hookload (avg) WITS.0213 - Standpipe Pressure (avg)	
RPMA	WITS.0214 - Rotary Torque (surf,avg)	
SPPA	WITS.0215 - Rotary Speed (surf,avg)	
SPM1	WITS.0217 - Mud Density In (avg)	~
SPM2	<do import="" not=""></do>	
SPM3	< Do not import >	
NEOD	- B + 1 + 1	

Map all of the curves that need to be imported.

Source	Destination	T
DEPTH	Depth	
DBTM	WITS.0208 - Depth Hole (meas)	
DMEA	<do import="" not=""></do>	
BPOS	< Do not import >	
ROPA	WITS.0210 - Rate of Penetration (avg)	
HKLA	WITS.0212 - Hookload (avg)	
WOBA	WITS.0211 - Weight-on-Bit (surf,avg)	
TQA	WITS.0214 - Rotary Torque (surf,avg)	
RPMA	WITS.0215 - Rotary Speed (surf,avg)	
SPPA	WITS.0213 - Standpipe Pressure (avg)	
SPM1	<do import="" not=""></do>	
SPM2	<do import="" not=""></do>	
SPM3	<do import="" not=""></do>	
MFOP	<do import="" not=""></do>	
MFIA	<do import="" not=""></do>	
MDOA	<do import="" not=""></do>	
MDIA	<do import="" not=""></do>	
MTOA	<do import="" not=""></do>	
TVCA	<do import="" not=""></do>	
TV01	<do import="" not=""></do>	
TV02	< Do not import >	
TV03	<do import="" not=""></do>	
METH	WITS.1310 - Methane (C1) (avg)	
ETH	WITS.1313 - Ethane (C2) (avg)	
PRP	WITS.1316 - Propane (C3) (avg)	
IBUT	WITS.1319 - Iso-Butane (IC4) (avg)	
NBUT	WITS.1322 - Nor-Butane (NC4) (avg)	
IPEN	WITS.1325 - Iso-Pentane (IC5) (avg)	~
NPEN	WITS.1328 - Nor-Pentane (NC5) (avg)	\sim



5. Set the NULL value

It is important to set the correct NULL value. We do not want to import "null" data into the system. For an LAS file, you can check the file header. For a CSV file you must check the data to see what is being used as NULL.

Typical values are: -999.25 -9999.00 -9999 -999.2500

The value set here must match EXACTLY what is used in the data file.

1	Mapping					
	Null Value:	-999.25]	
	Jource			_	De	stinatic
F	DEDTU				D	-

6. Import the data

OEN	1		
PEN	WITS.1325 - Iso-Pentane (IC5) (avg)		
NPEN	WITS.1328 - Nor-Pentane (NC5) (avg)	\sim	
Refresh	Track: Active Track	Import	

Click the "Import" button. This will process the data and import it into the server.

Once the data is imported, a dialog will tell you how many records were imported.



Import Data					
1	Imported 6706 values				
	OK				