StimDesigner
User Guide

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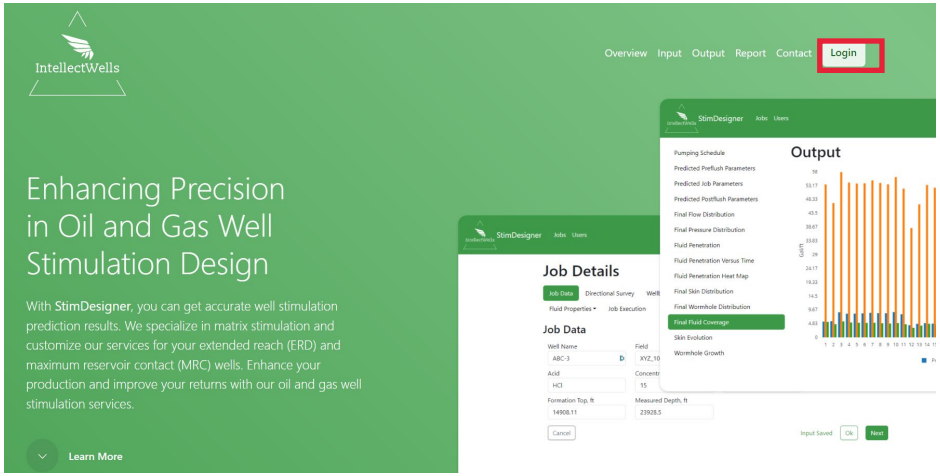
1. Account Set Up and Log in

1.1. Access company website at www.intellectwells.com.

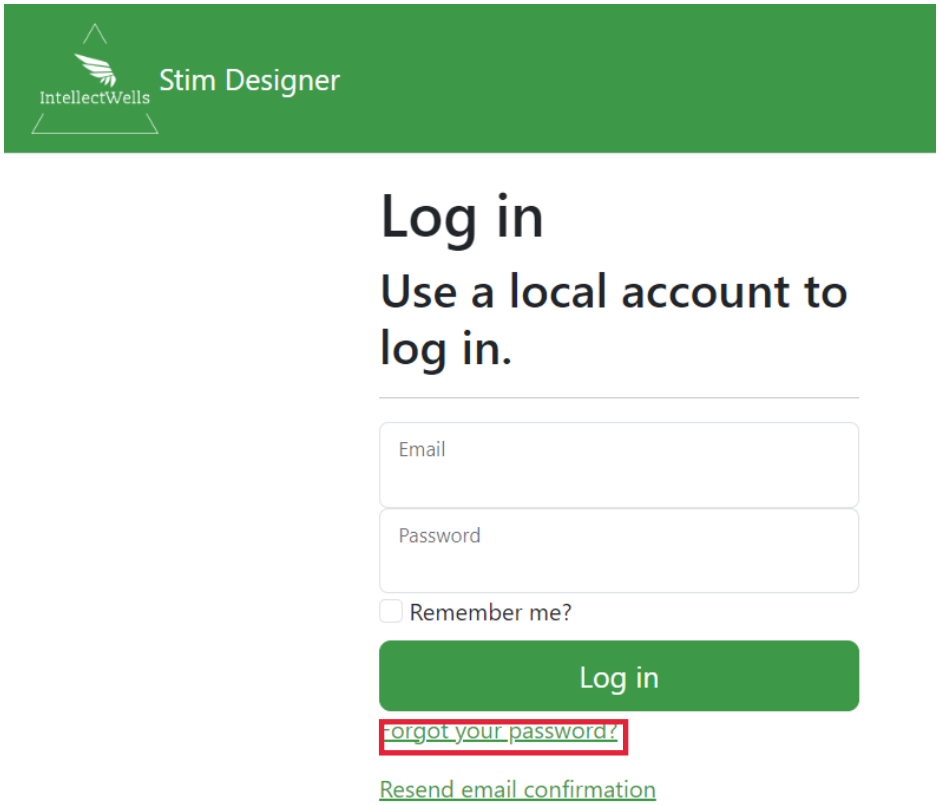
1.2. With the main page loaded, click the “Log in” tab in the upper right corner as shown in the picture.



1.3. **With the “Log in” screen open, enter your username. The username is the email address that was used to create the account by the application admin.**

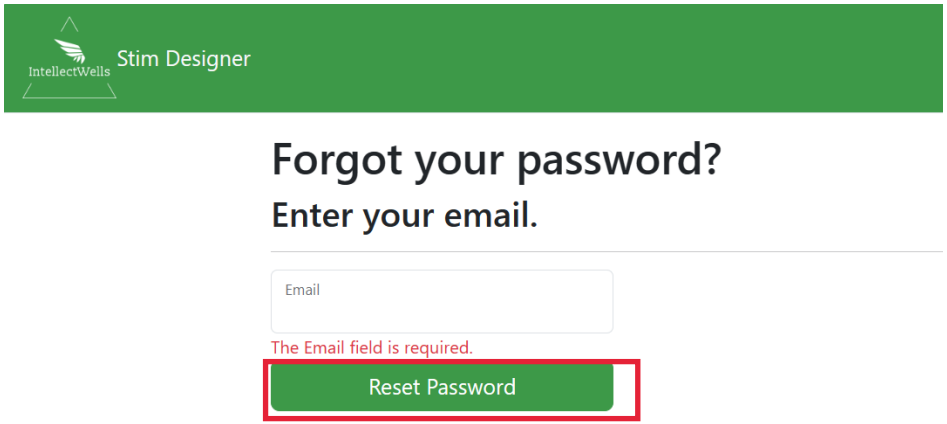
1.4. **Enter your password if available.**

1.5. **Alternatively, if an account has just been created by the admin, but a password has not yet been set, click the “Forgot Password" button.**

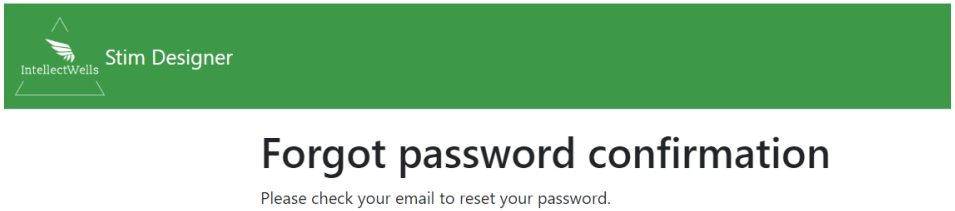


1.6. Enter your username. The username is the email address that was used to create the account by the application admin.

1.7. Click the “Reset Password” button.



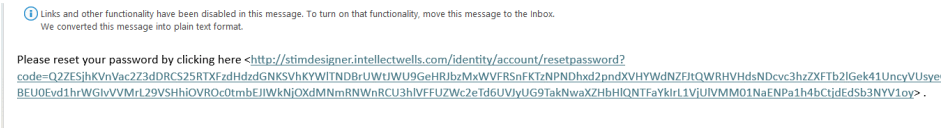
1.8. The application will confirm the receipt of your request and will instruct you to check your email, A password reset link will be sent to your email.



1.9. Open the email message from "StimDesigner" and click the link.

1.10. In some cases, the email is sent to the junk/spam folder and the link will look like the one in the picture.

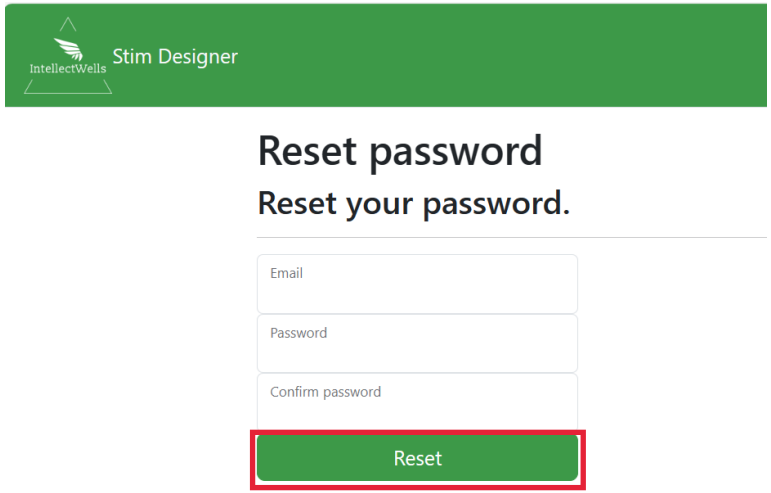
1.11. Move the message from the junk/spam folder to your inbox before clicking the password reset link.



1.12. **Enter a new strong password. The application will instruct you on the types of characters that must be included in the password.**

1.13. **Confirm the newly created password by entering it again into the second textbox.**

1.14. **Click the “Reset” button.**

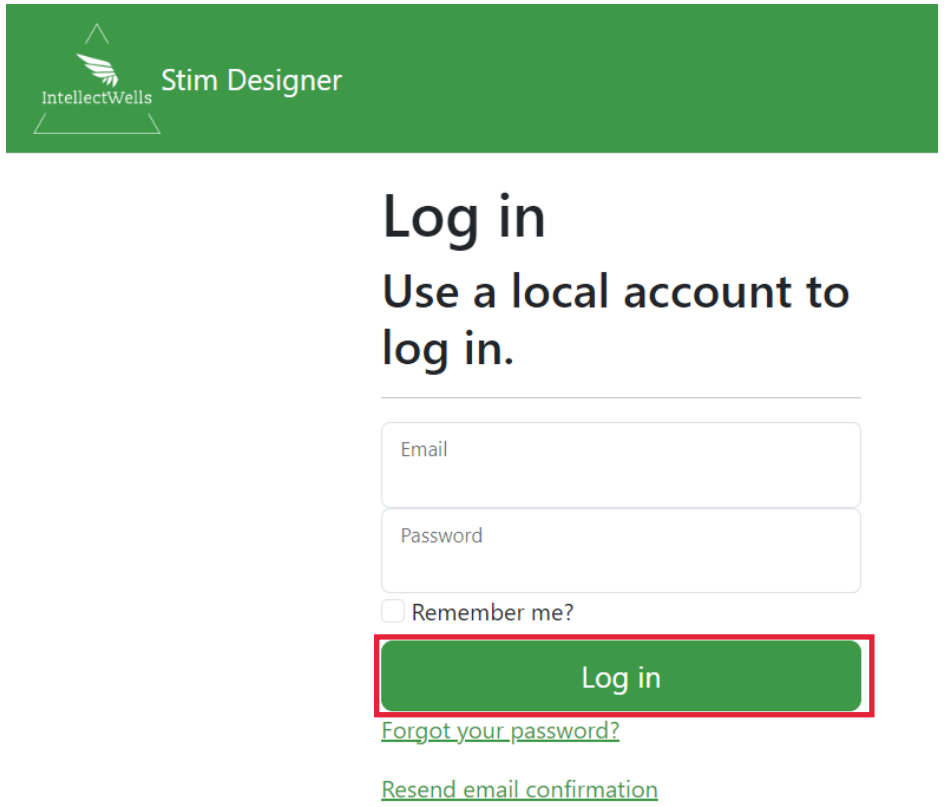


1.15. **Click the “Log in” button to access the “Log in” screen.**

1.16. **Enter your username. The username is the email address that was used to create the account by the application admin.**

1.17. **Enter the newly created password.**

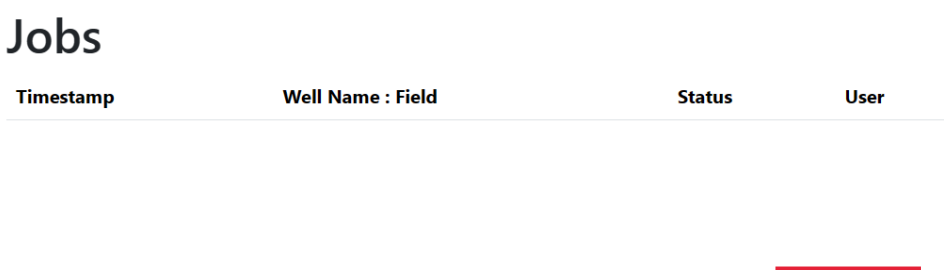
1.18. **Click the “Log in” button.**



2. Job Database

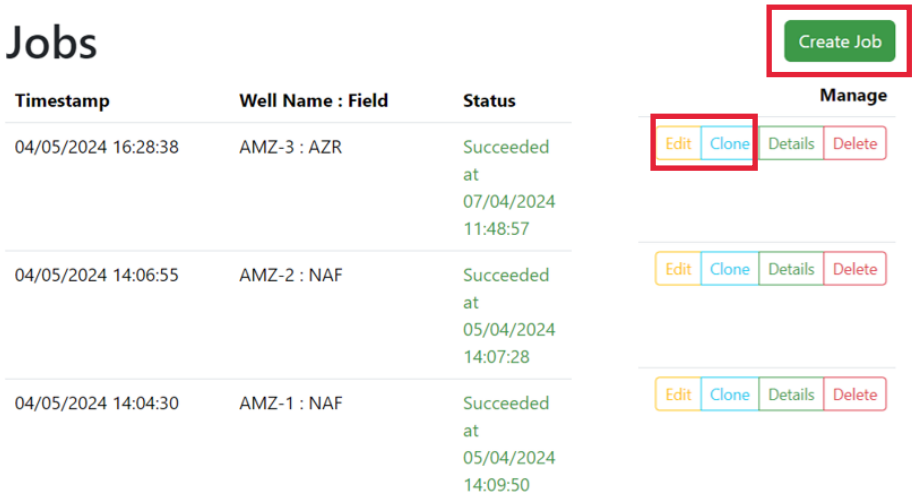
2.1. If logged in for the first time, the job database, that appears after logging in, will be empty.

2.2. Click the "Create Job" button to access the input interface.



2.3. Alternatively, if jobs have already been modelled during previous sessions, the job database will list those jobs and will resemble the one shown in the picture.

2.4. Click either the "Edit" button to access and/or make changes to an existing job, the "Clone" button to save an existing job as a new one, or the "Create Job" button to start a new job.



3. Job Details

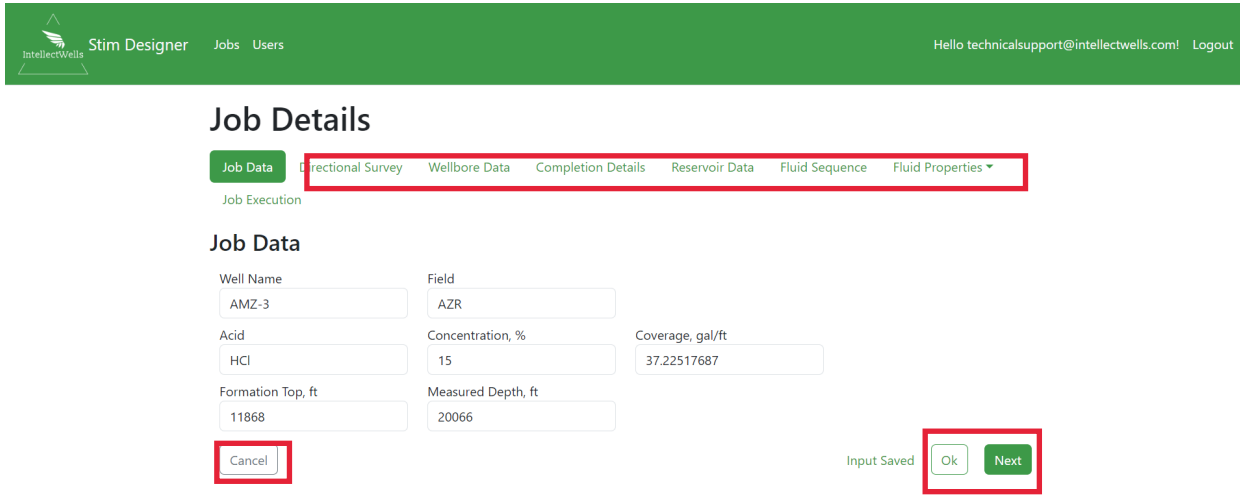
3.1. With the "Job Data" screen open, enter job data into the corresponding textboxes.

3.2. Enter data values according to the measurement units shown next to each textbox.

3.3. Click "OK" to save changes or "Cancel" to ignore them.

3.4. Click "Next" to access the "Directional Survey" screen.

3.5. To skip to a particular screen, click its corresponding tab in the main menu.



4. Directional Survey

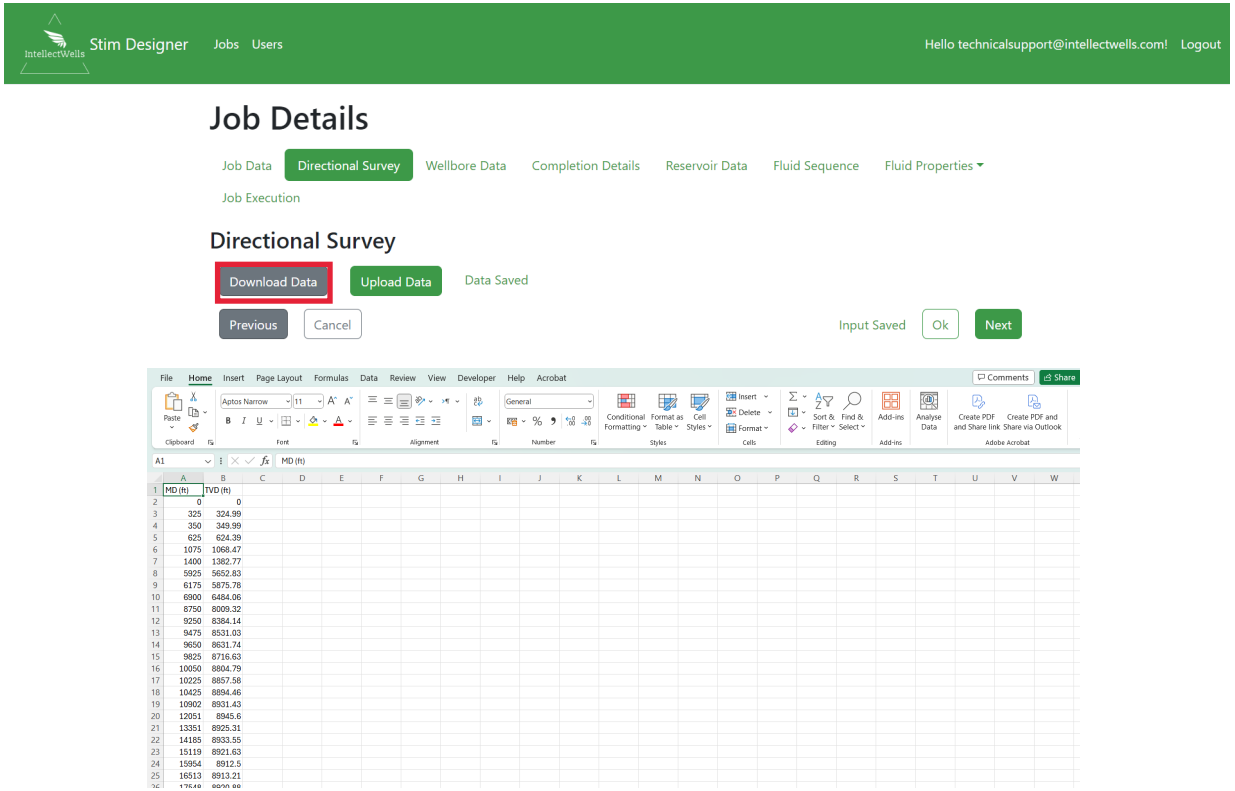
4.1. With the "Directional Survey" screen open, click the "Download Data" button. A "directional_survey_data" csv file link will pop up.

4.2. Click the link to download and open the "directional_survey_data" csv file.

4.3. Copy and paste "measured depth" and "true vertical depth" data into their corresponding columns. Close file.

4.4. To keep the csv file in the "Downloads" folder, click save.

4.5. Otherwise, click "Save as" and browse to the folder on your local machine where the file is to be stored.

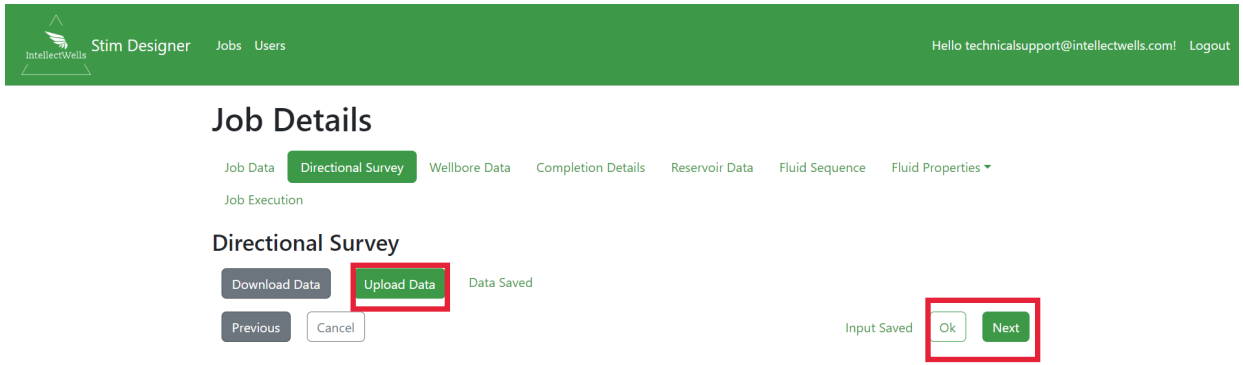


4.6. Click the “Upload Data” button. A dialogue box will open.

4.7. Locate the “directional_survey_data” file on your machine and click “OK” to upload the file.

4.8. Click “OK” to save the changes and then “Next” to access the “Wellbore Data” screen.

4.9. To skip to a particular screen, click its corresponding tab in the main menu.



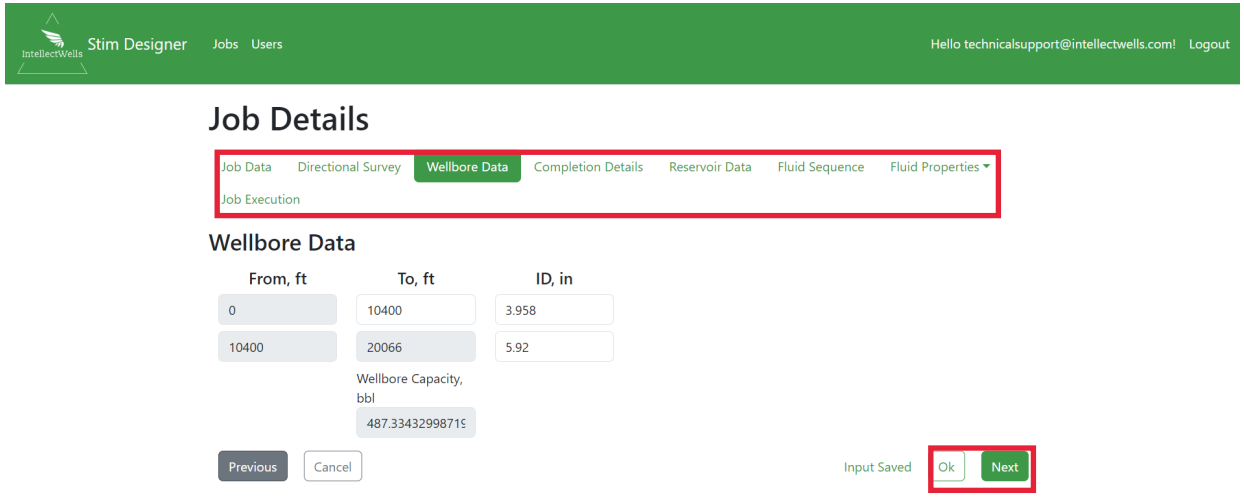
5. Wellbore Data

5.1. With the “Wellbore Data” screen open, enter data into the corresponding textboxes.

5.2. Enter data values according to the measurement units shown next to each textbox.

5.3. Click “OK” to save changes or “Cancel” to ignore them.

5.4. Click “Next” to access the “Completion Details” screen.



5.5. To skip to a particular screen, click its corresponding tab in the main menu.

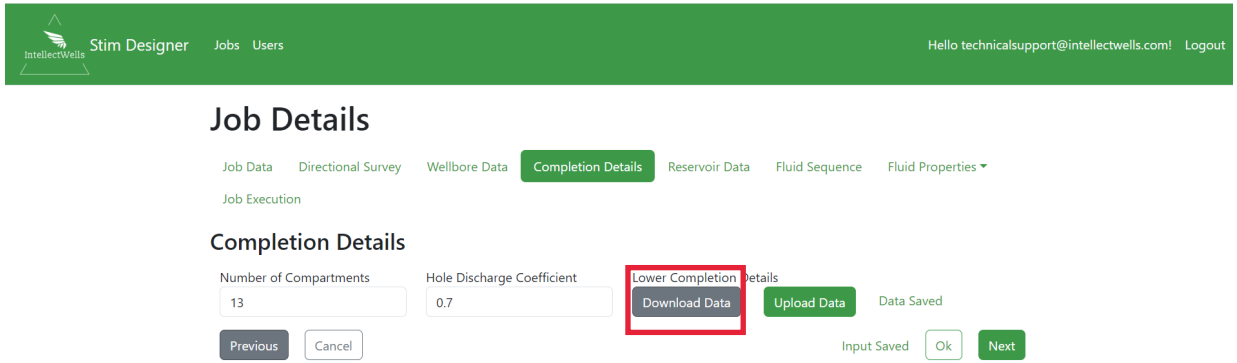
6. Completion Details

6.1. With the “Completion Details” screen open, enter data into the corresponding textboxes.

6.2. Enter data values according to the measurement units shown next to each textbox.

6.3. Click the “Download Data” button. A “completion_details_data” csv file link will pop up.

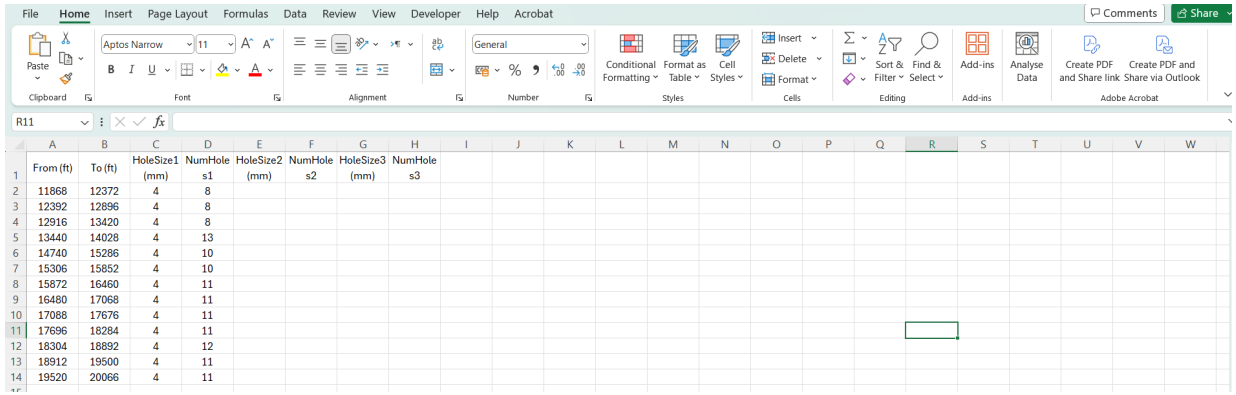
6.4. Click the link to download and open the “completion_details_data” csv file.



6.5. Copy and paste lower completion data into their corresponding columns. Close file.

6.6. To keep the file in the "Downloads" folder, click save.

6.7. Otherwise, click "Save as" and browse to the folder on your local machine where the file is to be stored.



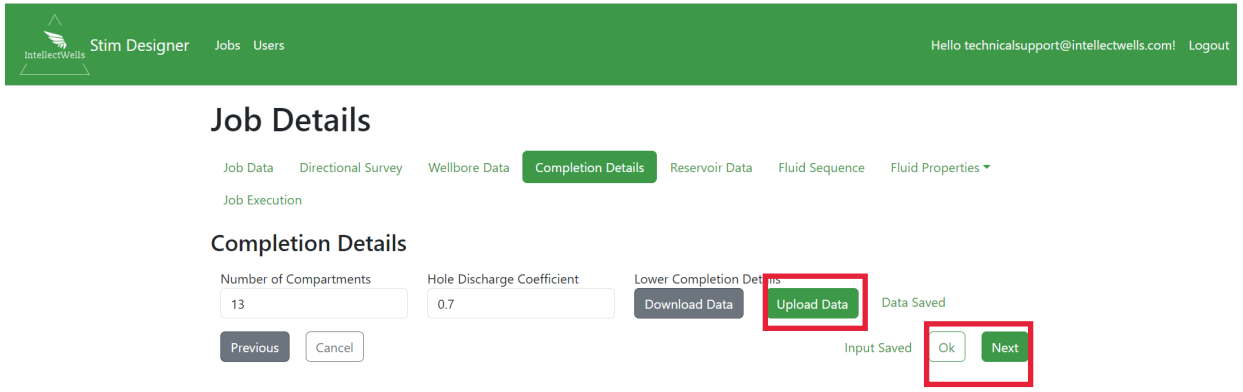
	From (ft)	To (ft)	HoleSize1 (mm)	NumHole s1	HoleSize2 (mm)	NumHole s2	HoleSize3 (mm)	NumHole s3
2	11868	12372	4	8				
3	12392	12896	4	8				
4	12916	13420	4	8				
5	13440	14028	4	13				
6	14740	15286	4	10				
7	15306	15852	4	10				
8	15872	16460	4	11				
9	16480	17068	4	11				
10	17088	17676	4	11				
11	17696	18284	4	11				
12	18304	18892	4	12				
13	18912	19500	4	11				
14	19520	20066	4	11				

6.8. Click the "Upload Data" button. A dialogue box will open.

6.9. Locate the "completion_details_data" csv file on your machine and click "OK" to upload.

6.10. Click "OK" to save the changes and then "Next" to access the "Reservoir Data" screen.

6.11. To skip to a particular screen, click its corresponding tab in the main menu.



7. Reservoir Data

7.1. With the "Reservoir Data" screen open, enter data into the corresponding textboxes.

7.2. Enter data values according to the measurement units shown next to each textbox.

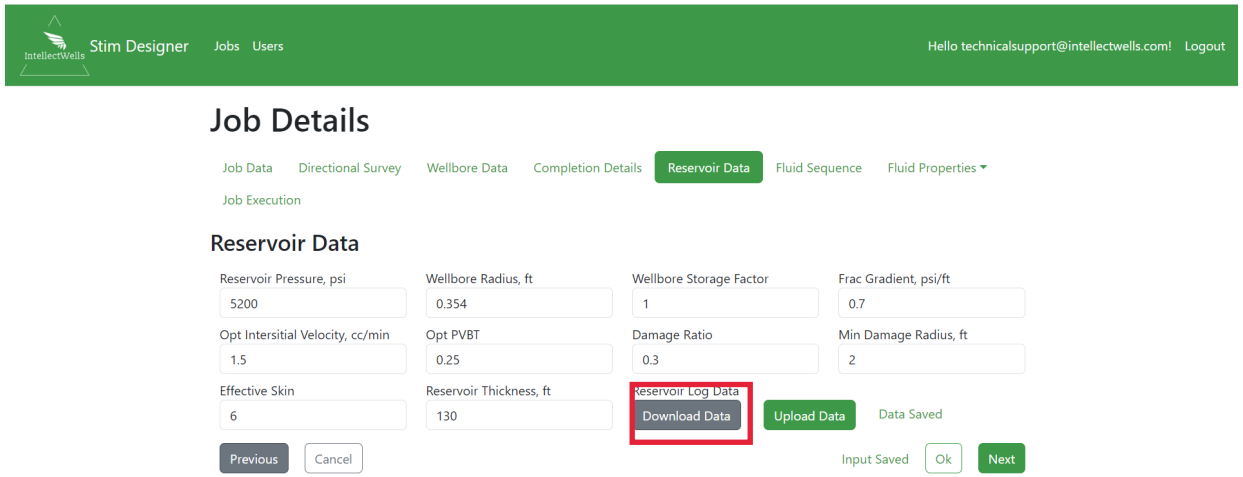
7.3. Click the "Download Data" button. A "reservoir_log_data" csv file link will pop up.

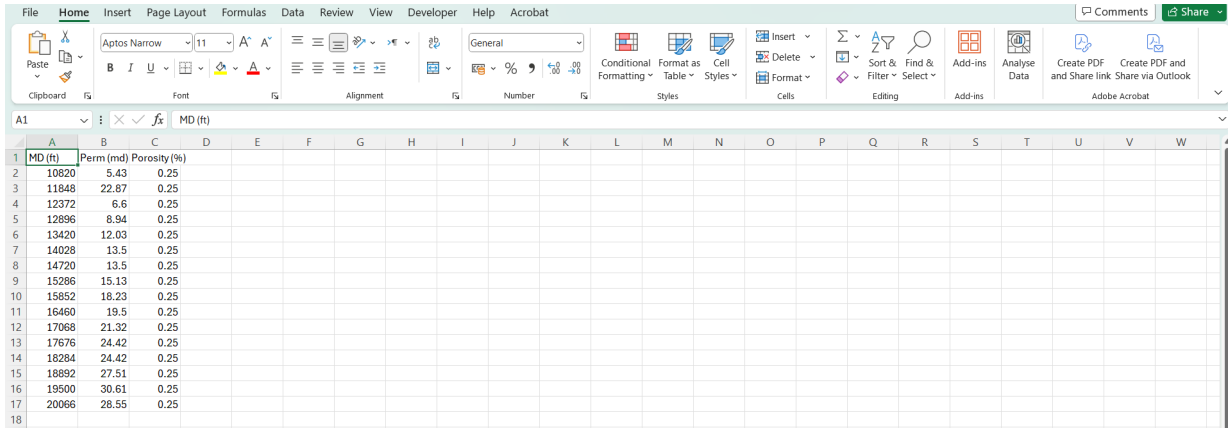
7.4. Click the link to download and open the "reservoir_log_data" csv file.

7.5. Copy and paste log data into their corresponding columns. Close file.

7.6. To keep the file in the "Downloads" folder, click save.

7.7. Otherwise, click "Save as" and browse to the folder on your local machine where the file is to be stored.



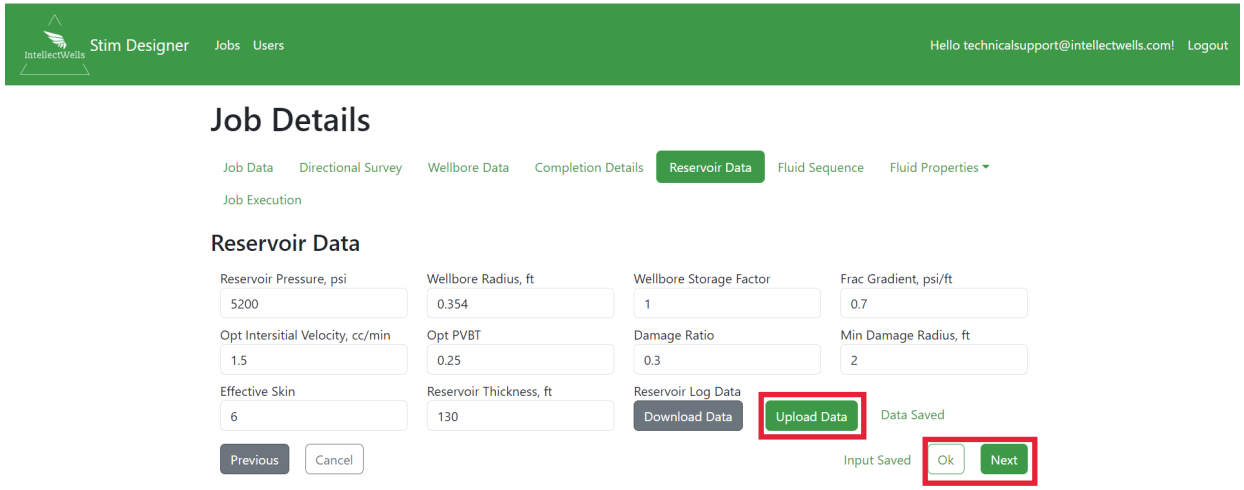


7.8. Click the “Upload Data” button. A dialogue box will open.

7.9. Locate the “reservoir_log_data” csv file on your machine and click “OK” to upload.

7.10. Click “OK” to save the changes and then “Next” to access the “Fluid Sequence” screen.

7.11. To skip to a particular screen, click its corresponding tab in the main menu.



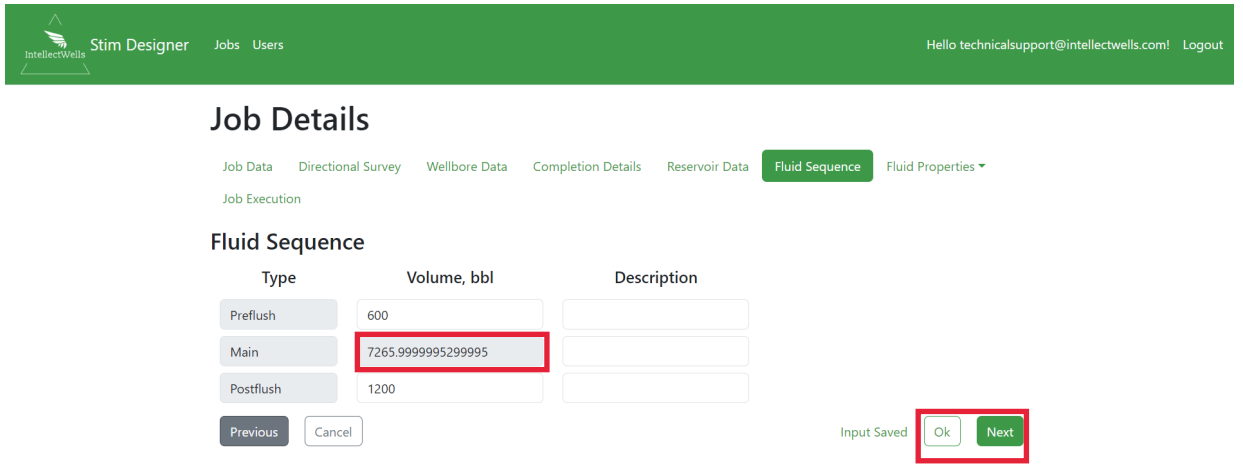
8. Fluid Sequence

8.1. With the “Fluid Sequence” screen open, enter data into the corresponding textboxes.

8.2. Enter data values according to the measurement units shown next to each textbox. Main fluid volume will be calculated automatically.

8.3. Click “OK” to save changes or “Cancel” to ignore them.

8.4. Click “Next” to access the “Fluid Properties” screen.



8.5. To skip to a particular screen, click its corresponding tab in the main menu.

9. Fluid Properties

9.1. With the “Fluid Rheology” screen open, enter density values for each fluid into the corresponding textboxes.

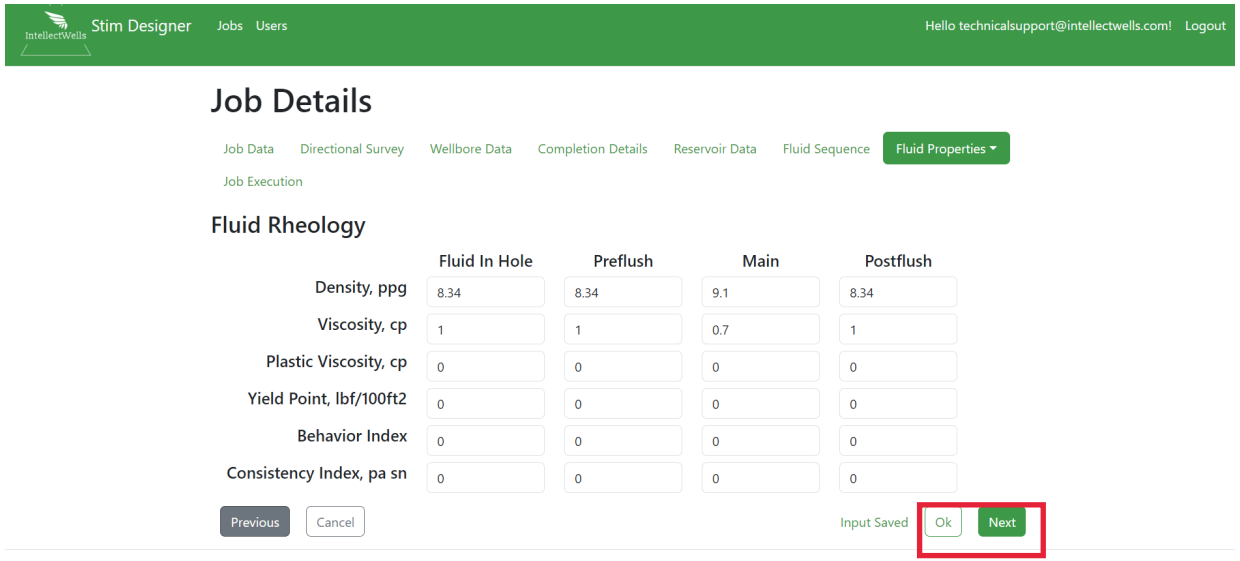
9.2. Enter rheological properties for Newtonian and non-Newtonian (if any) fluids.

9.3. Enter data values according to the measurement units shown next to each textbox.

9.4. Click “OK” to save changes or “Cancel” to ignore them.

9.5. Click “Next” to access the “Fluid Recipes” screen.

9.6. To skip to a particular screen, click its corresponding tab in the main menu.



9.7. With the “Fluid Recipes” screen open, click the “Add Row” button to add as many rows as required, based on the maximum number of additives for all fluids.

9.8. Select additive type from the drop-down menu in each row.

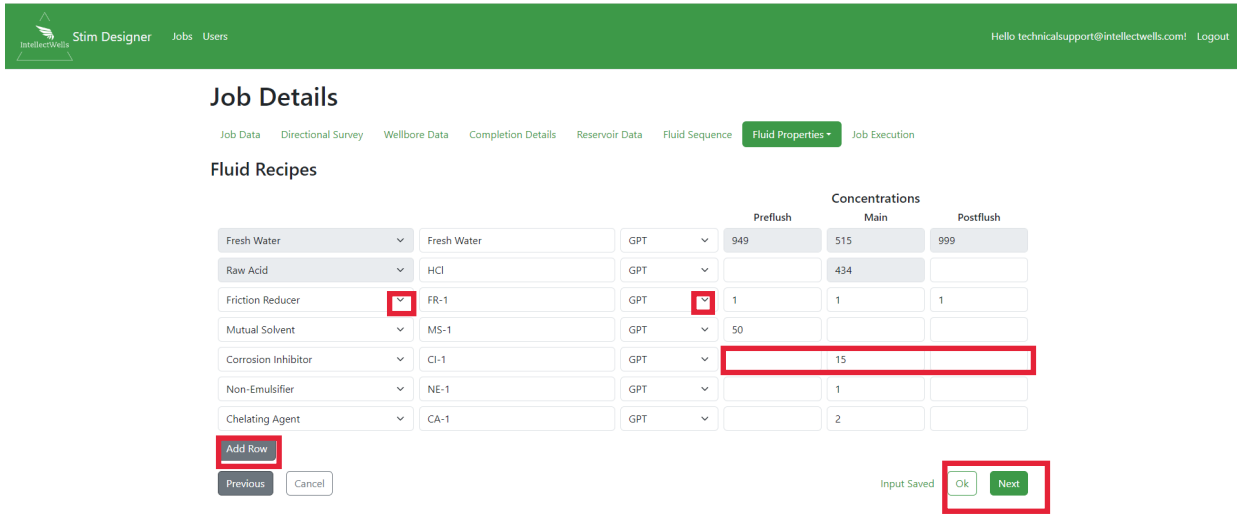
9.9. Enter each additive’s commercial name and measurement unit into their respective text boxes.

9.10. Enter additive concentration for each fluid into their respective textboxes.

9.11. Click “OK” to save changes or “Cancel” to ignore them.

9.12. Click “Next” to access the “Fluid Friction Data” screen.

9.13. To skip to a particular screen, click its corresponding tab in the main menu.



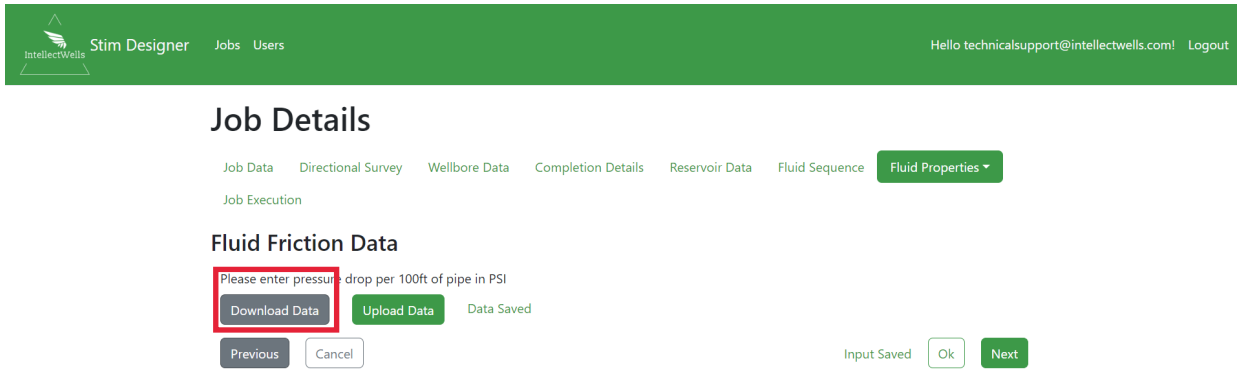
9.14. **With the “Fluid Friction Data” screen open, click the “Download Data” button. A “fluid_friction_data” csv file link will pop up.**

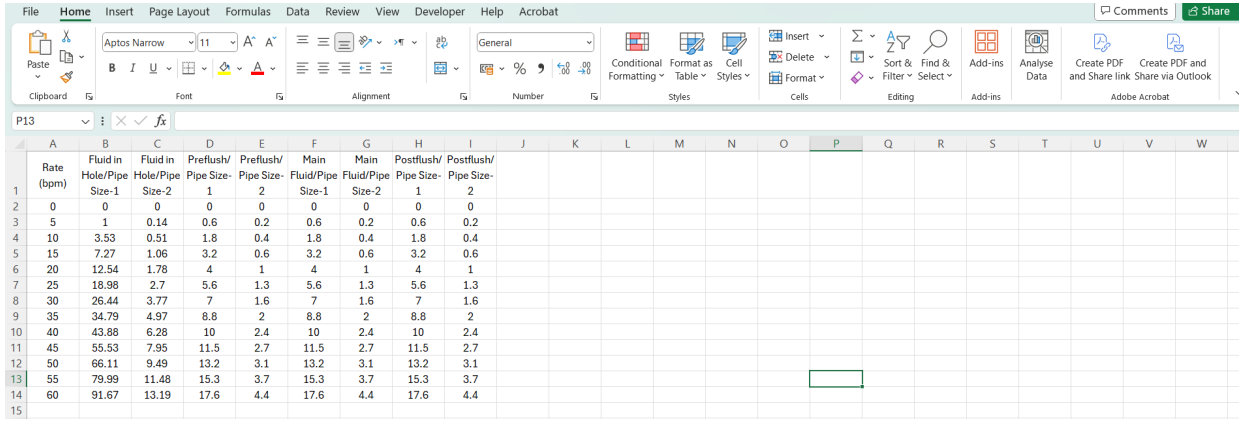
9.15. **Click the link to download and open the “fluid_friction_data” csv file.**

9.16. **Copy and paste friction data for each fluid and tubular size into their corresponding columns. Close file.**

9.17. **To keep the file in the “Downloads” folder, click save.**

9.18. **Otherwise, click “Save as” and browse to the folder on your local machine where the file is to be stored.**





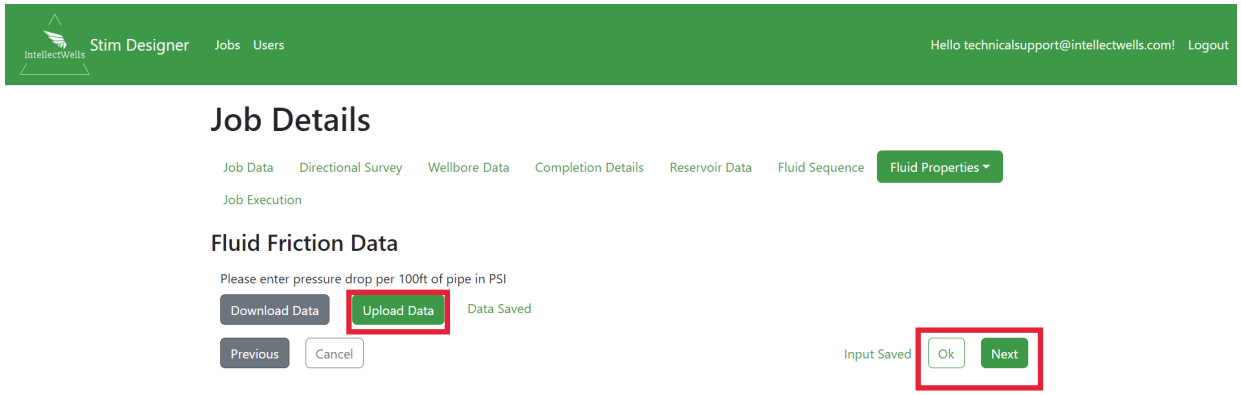
Rate (bpm)	Fluid in Hole/Pipe Size-1	Fluid in Hole/Pipe Size-2	Preflush/ Pipe Size- 1	Preflush/ Pipe Size- 2	Main Fluid/Pipe Size-1	Main Fluid/Pipe Size-2	Postflush/ Pipe Size- 1	Postflush/ Pipe Size- 2
0	0	0	0	0	0	0	0	0
5	1	0.14	0.6	0.2	0.6	0.2	0.6	0.2
10	3.53	0.51	1.8	0.4	1.8	0.4	1.8	0.4
15	7.27	1.06	3.2	0.6	3.2	0.6	3.2	0.6
20	12.54	1.78	4	1	4	1	4	1
25	18.98	2.7	5.6	1.3	5.6	1.3	5.6	1.3
30	26.44	3.77	7	1.6	7	1.6	7	1.6
35	34.79	4.97	8.8	2	8.8	2	8.8	2
40	43.88	6.28	10	2.4	10	2.4	10	2.4
45	55.53	7.95	11.5	2.7	11.5	2.7	11.5	2.7
50	66.11	9.49	13.2	3.1	13.2	3.1	13.2	3.1
55	79.99	11.48	15.3	3.7	15.3	3.7	15.3	3.7
60	91.67	13.19	17.6	4.4	17.6	4.4	17.6	4.4

9.19. Click the “Upload Data” button. A dialogue box will open.

9.20. Locate the “fluid_friction_data” csv file on your machine and click “OK” to upload.

9.21. Click “OK” to save the changes and then “Next” to access the “Job Execution” screen.

9.22. To skip to a particular screen, click its corresponding tab in the main menu.



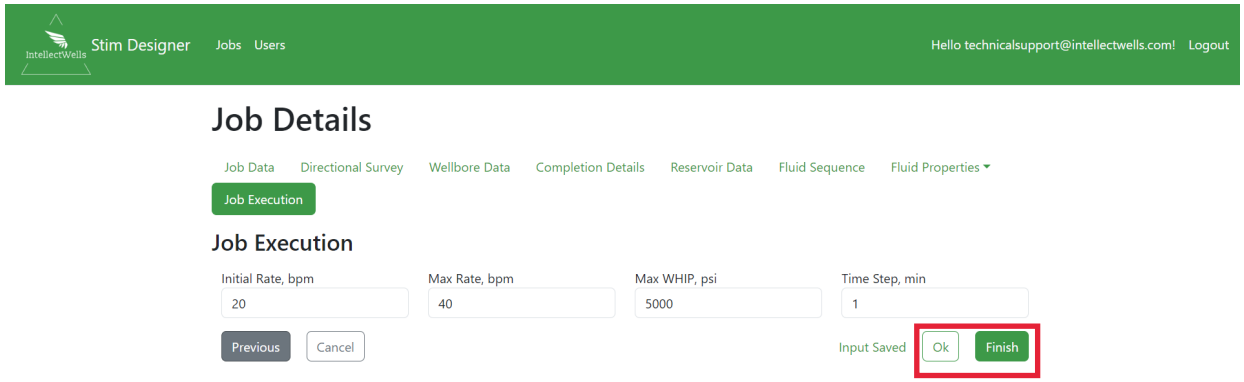
10. Job Execution

10.1. With the “Job Execution” screen open, enter data into the corresponding textboxes.

10.2. Enter data values according to the measurement units shown next to each textbox.

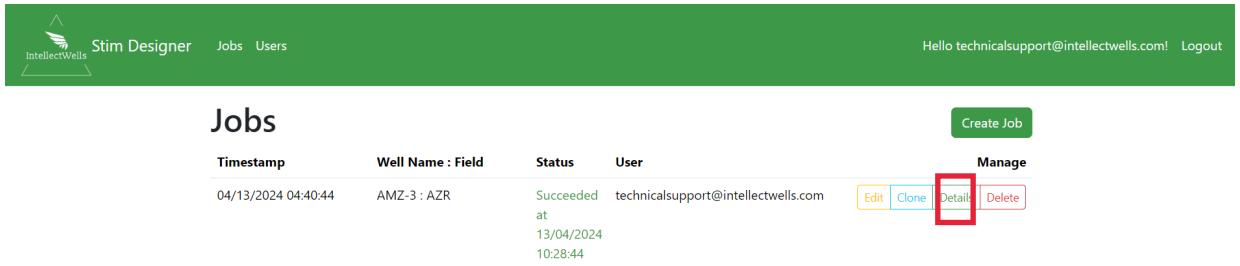
10.3. Click “OK” to save changes or “Cancel” to ignore them.

10.4. Click the “Finish” button to run the simulator.



10.5. Once the calculations are over, the "Jobs" screen will open automatically, showing details of the job that has just been simulated (time stamp, well and field names, calculation status and user).

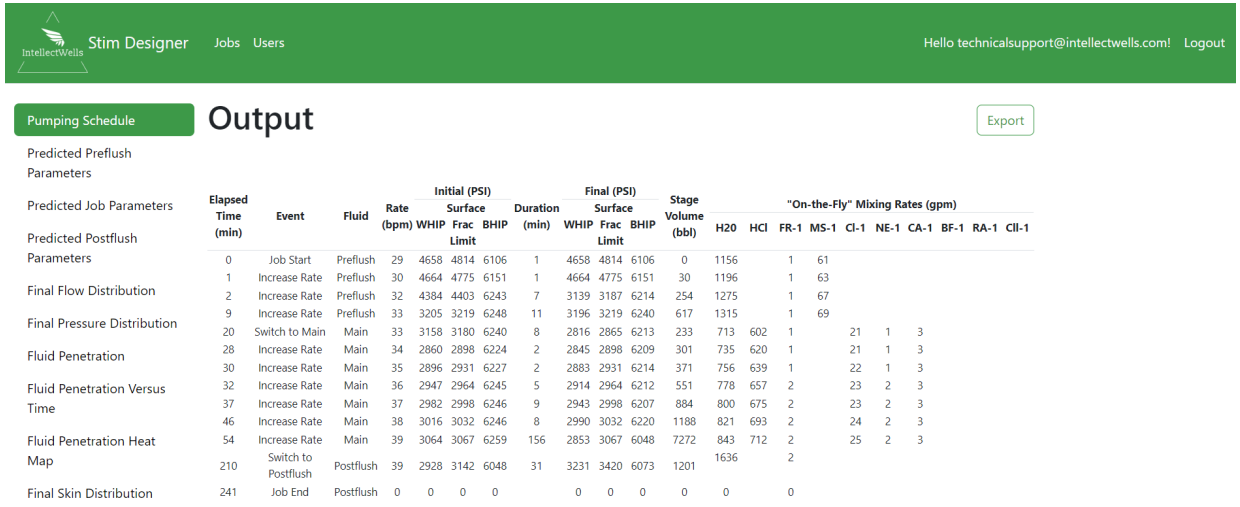
10.6. Click the "Details" button to access the simulation output.



11. Recommended Pumping Schedule

11.1. From the left side menu bar, select the "Pumping Schedule" tab to view the application recommended job pumping schedule.

11.2. Get an idea about the anticipated initial rate, maximum achievable rate, job duration and how the injection rate is optimized by a special algorithm to ensure surface and downhole injection pressures remain below the surface and downhole frac limits.



Elapsed Time (min)	Event	Fluid	Initial (PSI) Rate (bpm)	Initial (PSI) Surface WHIP	Initial (PSI) Frac Limit	Initial (PSI) BHIP	Duration (min)	Final (PSI) Surface WHIP	Final (PSI) Frac Limit	Final (PSI) BHIP	Stage Volume (bbl)	"On-the-Fly" Mixing Rates (gpm) H20	HCl	FR-1	MS-1	Cl-1	NE-1	CA-1	BF-1	RA-1	Cll-1
0	Job Start	Preflush	29	4658	4814	6106	1	4658	4814	6106	0	1156		1	61						
1	Increase Rate	Preflush	30	4664	4775	6151	1	4664	4775	6151	30	1196		1	63						
2	Increase Rate	Preflush	32	4384	4403	6243	7	3139	3187	6214	254	1275		1	67						
9	Increase Rate	Preflush	33	3205	3219	6248	11	3196	3219	6240	617	1315		1	69						
20	Switch to Main	Main	33	3158	3180	6240	8	2816	2865	6213	233	713	602	1		21	1	3			
28	Increase Rate	Main	34	2860	2898	6224	2	2845	2898	6209	301	735	620	1		21	1	3			
30	Increase Rate	Main	35	2896	2931	6227	2	2883	2931	6214	371	756	639	1		22	1	3			
32	Increase Rate	Main	36	2947	2964	6245	5	2914	2964	6212	551	778	657	2		23	2	3			
37	Increase Rate	Main	37	2982	2998	6246	9	2943	2998	6207	884	800	675	2		23	2	3			
46	Increase Rate	Main	38	3016	3032	6246	8	2990	3032	6220	1188	821	693	2		24	2	3			
54	Increase Rate	Main	39	3064	3067	6259	156	2853	3067	6048	7272	843	712	2		25	2	3			
210	Switch to Postflush	Postflush	39	2928	3142	6048	31	3231	3420	6073	1201	1636		2							
241	Job End	Postflush	0	0	0	0		0	0	0	0	0		0							

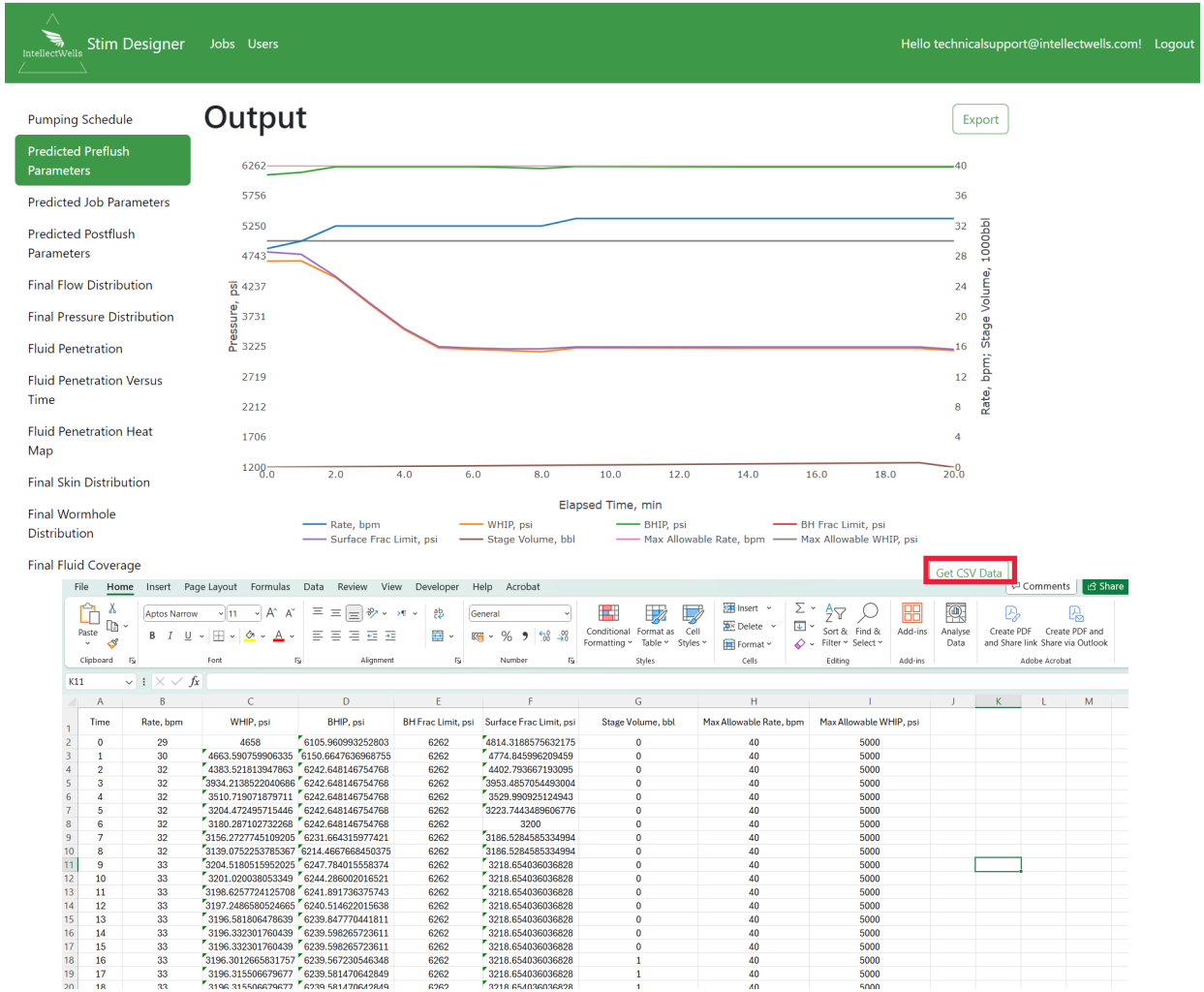
12. Predicted Pre-flush Parameters

12.1. Select “Predicted Preflush Parameters” tab to view an interactive graph illustrating the anticipated job parameters versus job elapsed time during the preflush pumping stage.

12.2. Hover the mouse over any part of the graph to read data pairs representing each parameter’s time dependence.

12.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the graph.

12.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



Time	Rate, bpm	WHIP, psi	BHIP, psi	BH Frac Limit, psi	Surface Frac Limit, psi	Stage Volume, bbl	Max Allowable Rate, bpm	Max Allowable WHIP, psi
0	29	4658	6105.960993252803	6262	4814.3188576321 75	0	40	5000
1	30	4663.590759906335	6150.6647636968755	6262	4774.845996209459	0	40	5000
2	32	4383.521813947863	6242.648146754768	6262	4402.793667193095	0	40	5000
3	32	3934.213852204 0686	6242.648146754768	6262	3953.485705449 3004	0	40	5000
4	32	3510.719071879711	6242.648146754768	6262	3529.990925124943	0	40	5000
5	32	3204.472495715446	6242.648146754768	6262	3223.7443489606776	0	40	5000
6	32	3180.287102732268	6242.648146754768	6262	3200	0	40	5000
7	32	3156.272774510 9205	6231.664315977421	6262	3186.5284585334994	0	40	5000
8	32	3139.075225378 5367	6214.4667668450375	6262	3186.5284585334994	0	40	5000
9	33	3204.518051595 2025	6247.784015558374	6262	3218.654036036828	0	40	5000
10	33	3201.020038053349	6244.286002016521	6262	3218.654036036828	0	40	5000
11	33	3198.625772412 5708	6241.891736375743	6262	3218.654036036828	0	40	5000
12	33	3197.248658052 4665	6240.514622015638	6262	3218.654036036828	0	40	5000
13	33	3196.581806478639	6239.847770441811	6262	3218.654036036828	0	40	5000
14	33	3196.332301760439	6239.598265723611	6262	3218.654036036828	0	40	5000
15	33	3196.332301760439	6239.598265723611	6262	3218.654036036828	0	40	5000
16	33	3196.301266583 1757	6239.567230546348	6262	3218.654036036828	1	40	5000
17	33	3196.315506679677	6239.581470642849	6262	3218.654036036828	1	40	5000

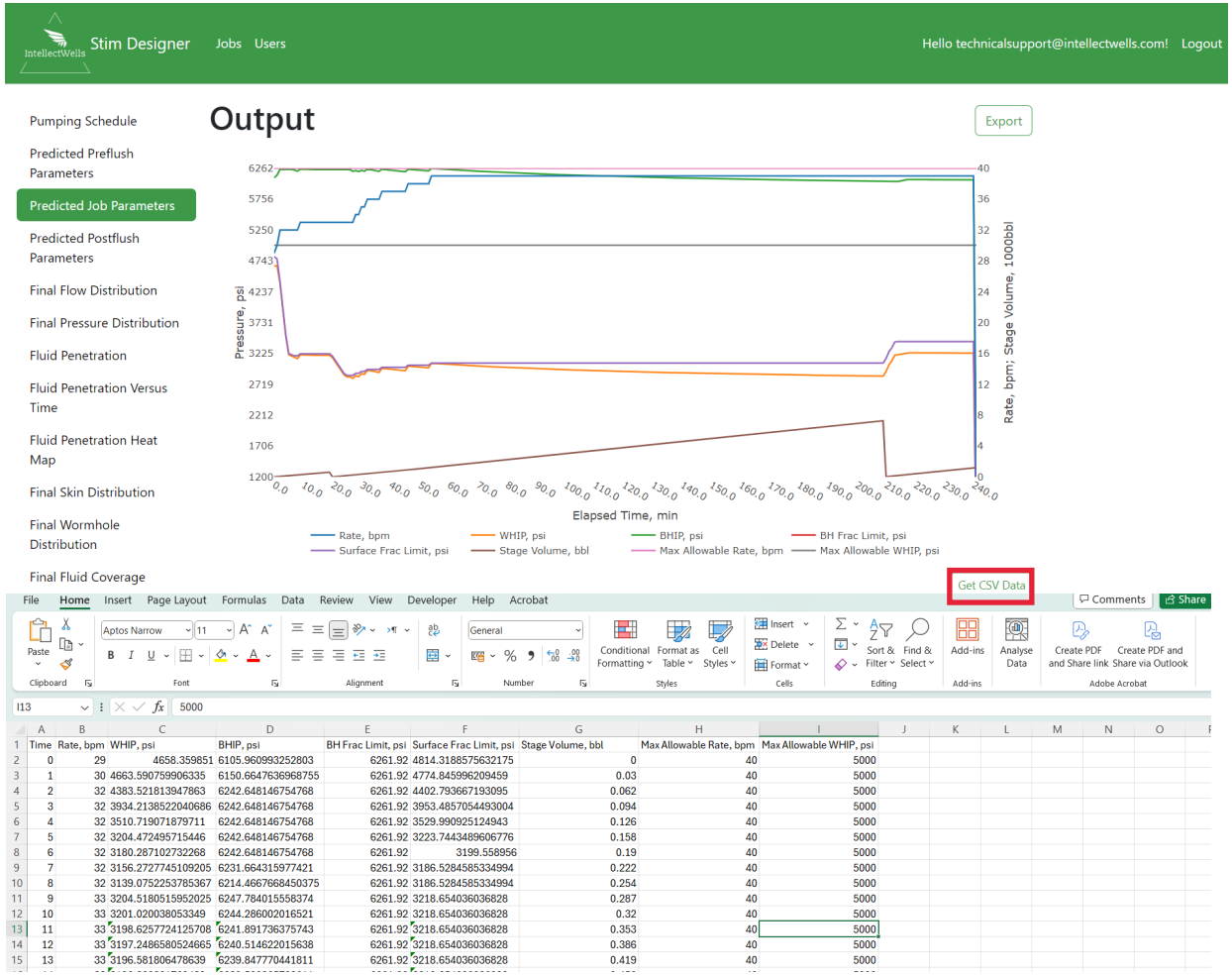
13. Predicted Job Parameters

13.1. Select “Predicted Job Parameters” tab to view an interactive graph illustrating the anticipated job parameters versus job elapsed time during the entire job.

13.2. Hover the mouse over any part of the graph to read data pairs representing each parameter’s time dependence.

13.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the graph.

13.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



Time	Rate, bpm	WHIP, psi	BHIP, psi	BH Frac Limit, psi	Surface Frac Limit, psi	Stage Volume, bbl	Max Allowable Rate, bpm	Max Allowable WHIP, psi
0	29	4658.359851	6105.960993252803	6261.92	4814.3188575632175	0	40	5000
1	30	4663.590759906335	6150.6647636968755	6261.92	4774.845996209459	0.03	40	5000
2	32	4383.521813947863	6242.648146754768	6261.92	4402.793667193095	0.062	40	5000
3	32	3934.2138522040686	6242.648146754768	6261.92	3953.4857054493004	0.094	40	5000
4	32	3510.719071879711	6242.648146754768	6261.92	3529.990925124943	0.126	40	5000
5	32	3204.472495715446	6242.648146754768	6261.92	3223.7443489606776	0.158	40	5000
6	32	3180.287102732268	6242.648146754768	6261.92	3199.558956	0.19	40	5000
7	32	3156.2727745109205	6231.664315977421	6261.92	3186.5284585334994	0.222	40	5000
8	32	3139.0752253785367	6214.4667668450375	6261.92	3186.5284585334994	0.254	40	5000
9	33	3204.5180515952025	6247.784015558374	6261.92	3218.654036036828	0.287	40	5000
10	33	3201.020038053349	6244.286002016521	6261.92	3218.654036036828	0.32	40	5000
11	33	3198.625772425708	6241.891736375743	6261.92	3218.654036036828	0.353	40	5000
12	33	3197.2486580524665	6240.514622015638	6261.92	3218.654036036828	0.386	40	5000
13	33	3196.581806478639	6239.847770441811	6261.92	3218.654036036828	0.419	40	5000

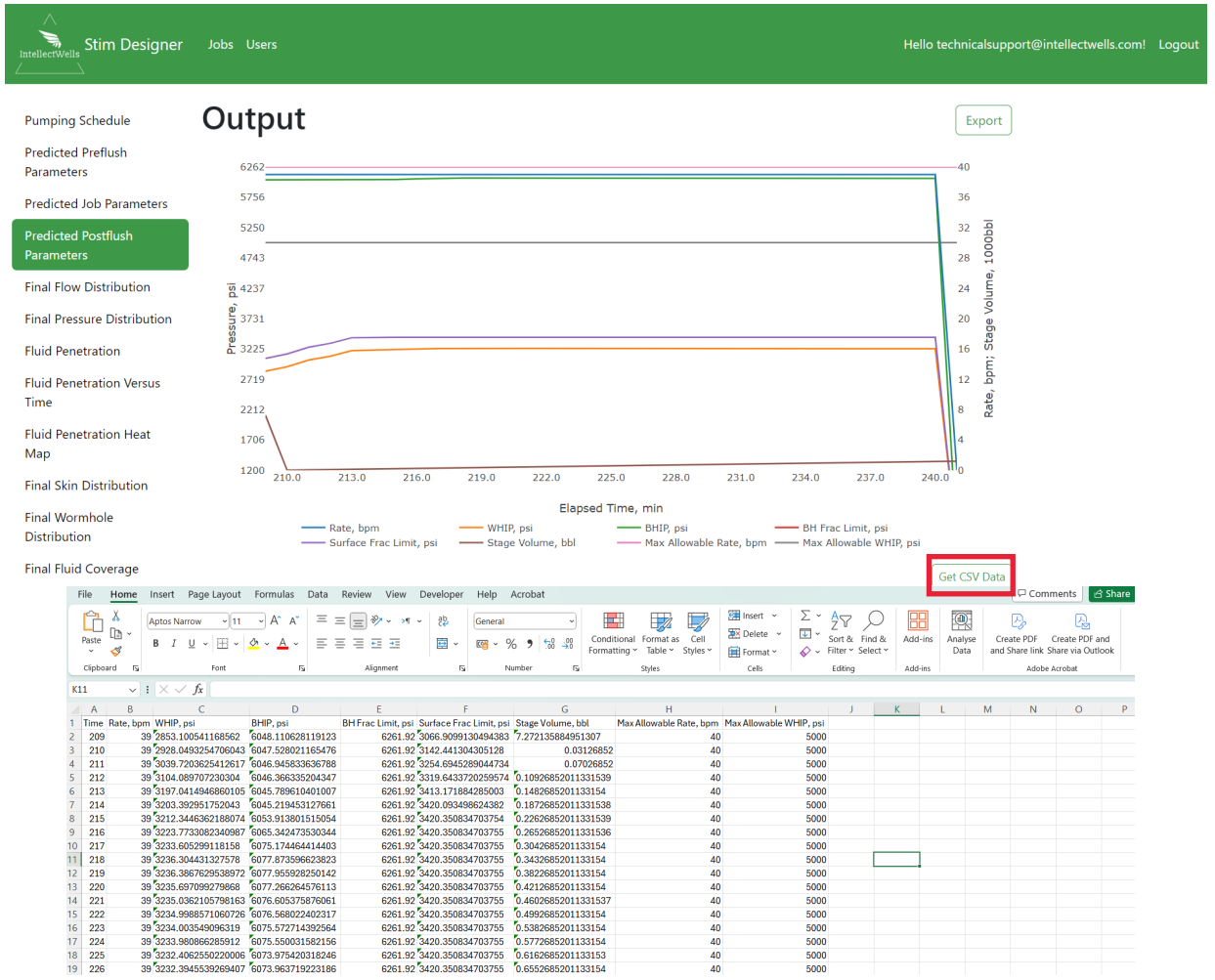
14. Predicted Post flush Parameters

14.1. Select “Predicted Postflush Parameters” tab to view an interactive graph illustrating the anticipated job parameters versus job elapsed time during the postflush stage.

14.2. Hover the mouse over any part of the graph to read data pairs representing each parameter’s time dependence.

14.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the graph.

14.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



Time	Rate, bpm	WHIP, psi	BHIP, psi	BH Frac Limit, psi	Surface Frac Limit, psi	Stage Volume, bbl	Max Allowable Rate, bpm	Max Allowable WHIP, psi
209	39	2853.100541168562	6048.110628119123	6261.92	3066.9099130494383	7.272135884951307	40	5000
210	39	2928.049325476043	6047.528021165476	6261.92	3142.441304305128	0.03126852	40	5000
211	39	3039.7203625412617	6046.945833636788	6261.92	3254.6945289044734	0.07026852	40	5000
212	39	3104.089707230304	6046.366335204347	6261.92	3319.6433720259574	0.10926852011331539	40	5000
213	39	3197.0414946860105	6045.789610401007	6261.92	3413.171884285003	0.14826852011331154	40	5000
214	39	3203.392951752043	6045.219453127661	6261.92	3420.093498624382	0.18726852011331538	40	5000
215	39	3212.3446362188074	6053.913801515054	6261.92	3420.350834703754	0.22626852011331539	40	5000
216	39	3223.773308234098	6065.342473530344	6261.92	3420.350834703755	0.26526852011331536	40	5000
217	39	3233.605299118158	6075.174464414403	6261.92	3420.350834703755	0.30426852011331154	40	5000
218	39	3236.304431327578	6077.873596623823	6261.92	3420.350834703755	0.34326852011331154	40	5000
219	39	3236.3867629538972	6077.955928250142	6261.92	3420.350834703755	0.38226852011331154	40	5000
220	39	3235.697099279868	6077.266264576113	6261.92	3420.350834703755	0.42126852011331154	40	5000
221	39	3235.0362105798163	6076.605375876061	6261.92	3420.350834703755	0.46026852011331537	40	5000
222	39	3234.998857106726	6076.568022402317	6261.92	3420.350834703755	0.4992685201133154	40	5000
223	39	3234.003549096319	6075.572714392564	6261.92	3420.350834703755	0.5382685201133154	40	5000
224	39	3233.980866285912	6075.550031582156	6261.92	3420.350834703755	0.5772685201133154	40	5000
225	39	3232.4062550220006	6073.975420318246	6261.92	3420.350834703755	0.6162685201133153	40	5000
226	39	3232.3945539269407	6073.963719223186	6261.92	3420.350834703755	0.6552685201133154	40	5000

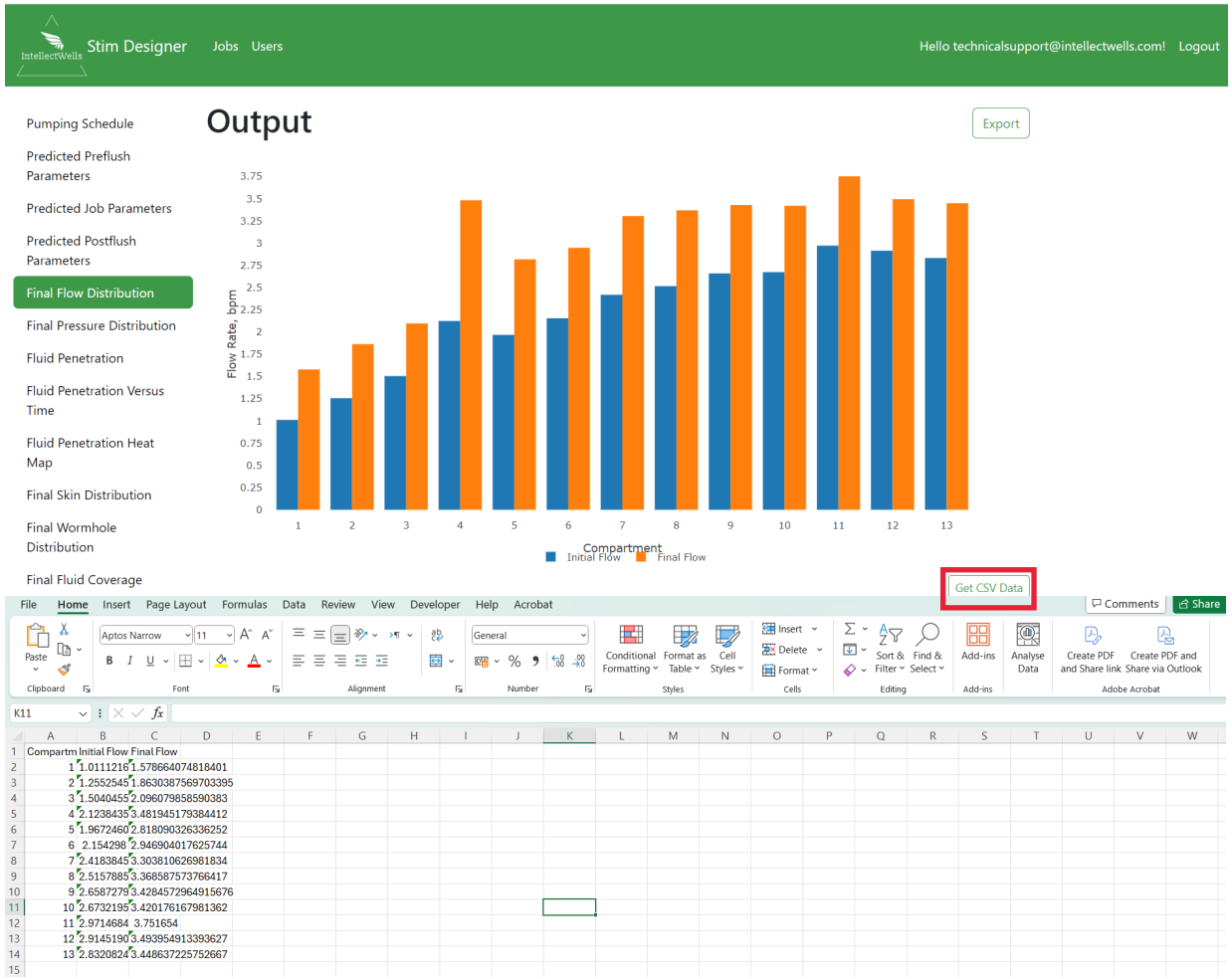
15. Final Flow Distribution

15.1. Select “Final Flow Distribution” tab to view a bar chart showing snapshots of initial and final flow distributions through the various compartments across the lateral section.

15.2. Hover the mouse over any part of the graph to read data pairs representing each compartment’s initial and final share of the total flow.

15.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the chart.

15.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



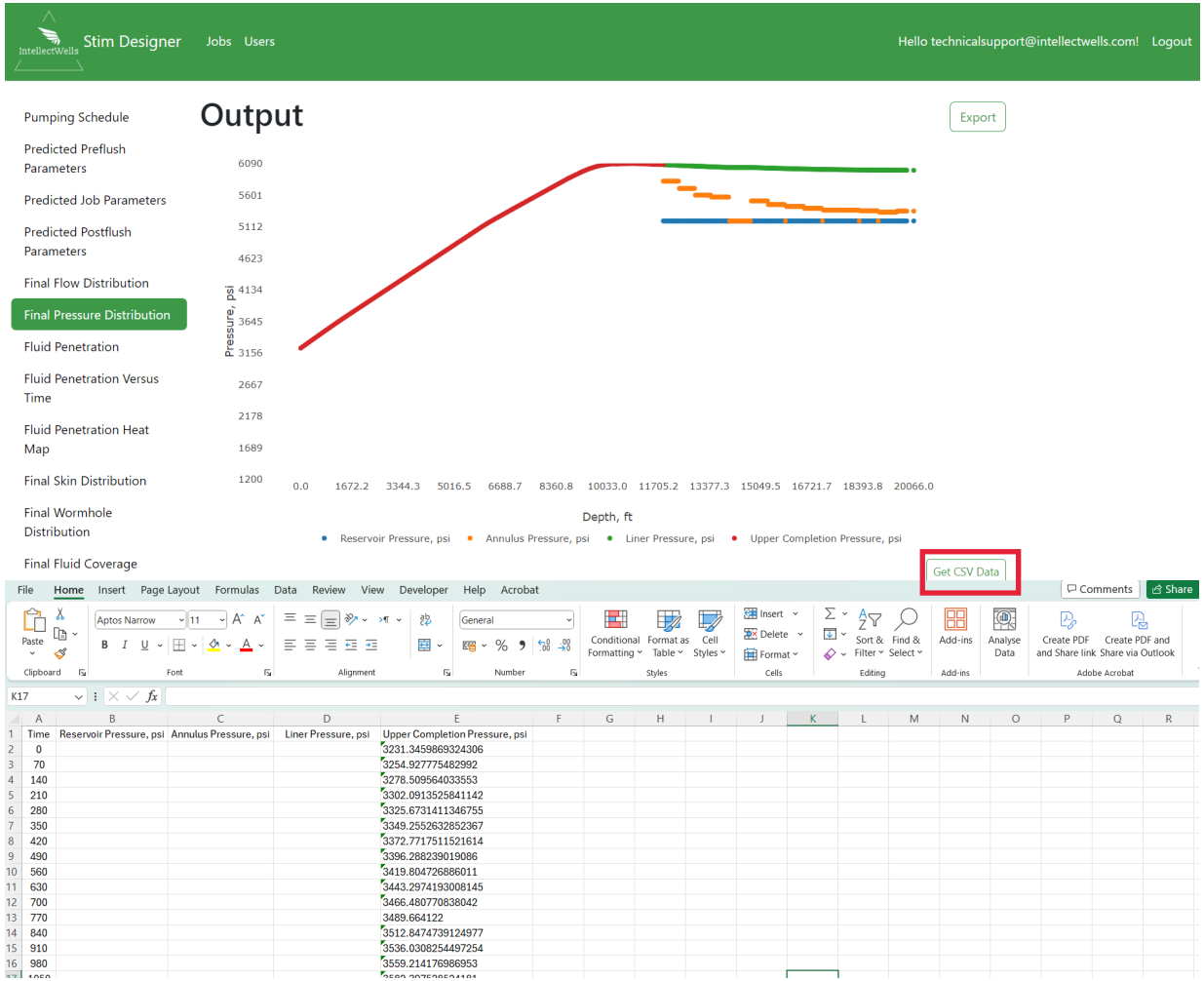
16. Final Pressure Distribution

16.1. Select “Final Pressure Distribution” tab to view a graph showing a snapshot of the final pressure distribution versus depth inside upper completion, lower completion, annulus and formation.

16.2. Hover the mouse over any part of the graph to read data pairs representing pressure at each depth point.

16.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the graph.

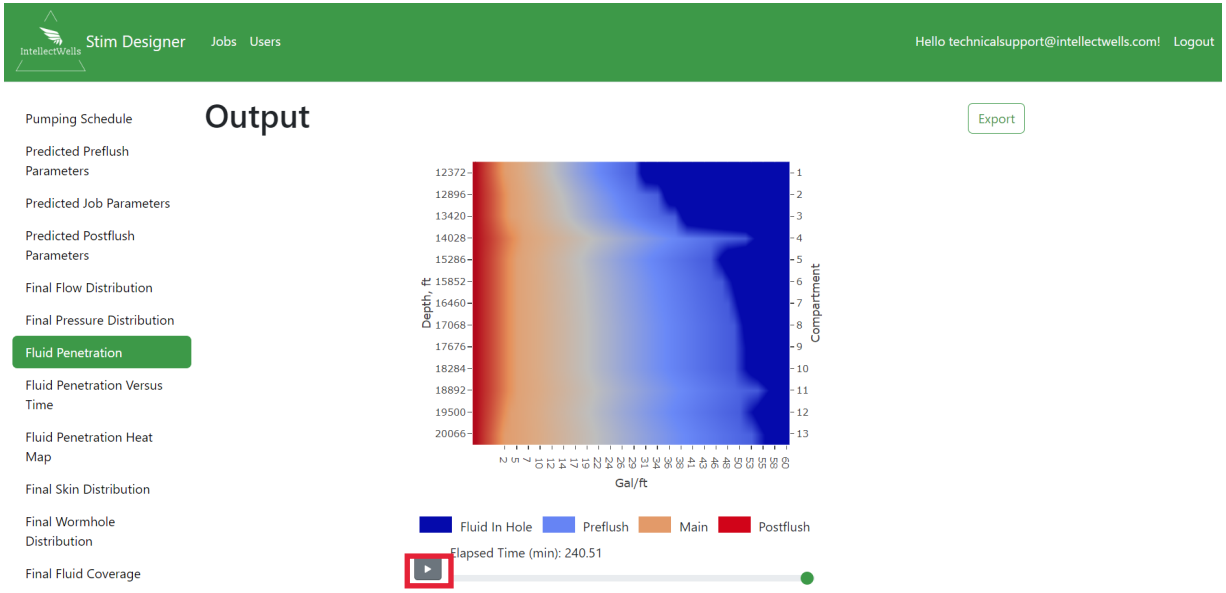
16.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



17. Fluid Penetration

17.1. Select “Fluid Penetration” tab and press the “Play” button to play back the simulated job and see when and where the penetration of each fluid took place and in what quantities.

17.2. Press the “Pause” button to view a snapshot of fluid penetration at any point in time during job execution.

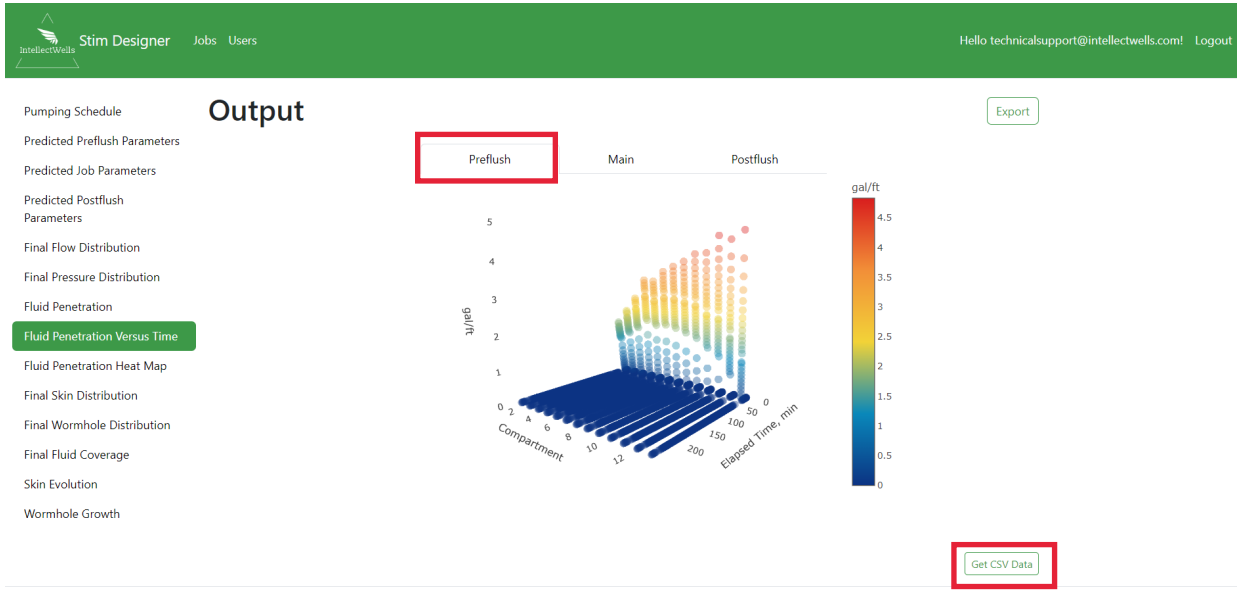


18. Fluid Penetration versus Time

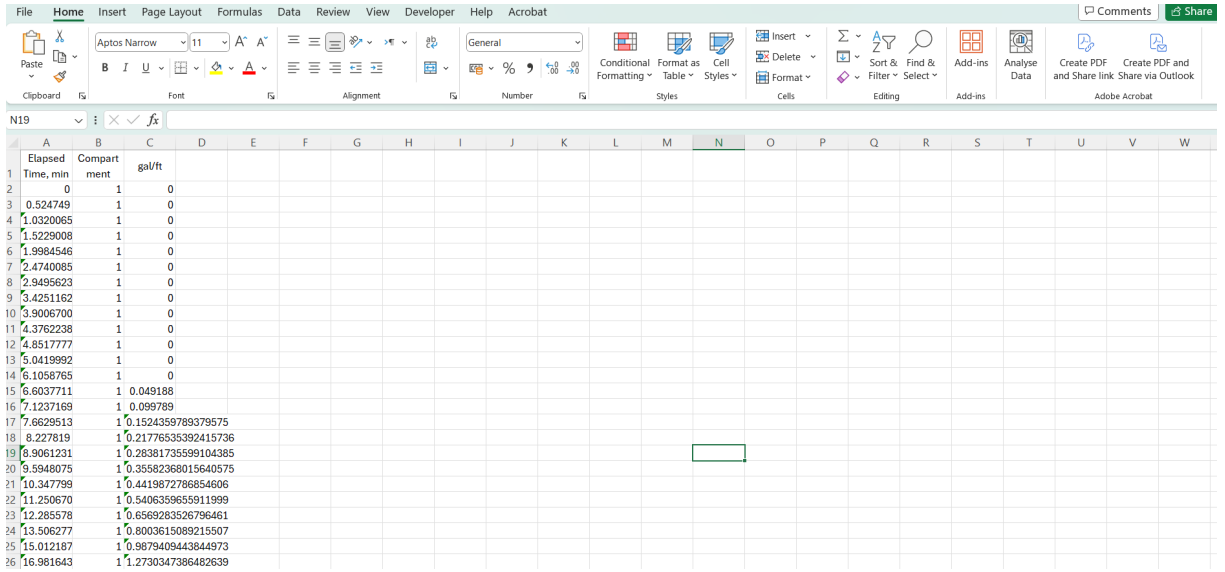
18.1. Select “Fluid Distribution versus Time” tab from the left side menu bar and the “Preflush” tab from the top menu bar to view a 3d scatter plot showing preflush penetration in gal/ft through each compartment as a function of elapsed time.

18.2. Rotate, flip, or zoom in or out to view the plot from different angles and to get a better understanding of how the preflush was being distributed across the lateral during job execution.

18.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the plot.



18.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



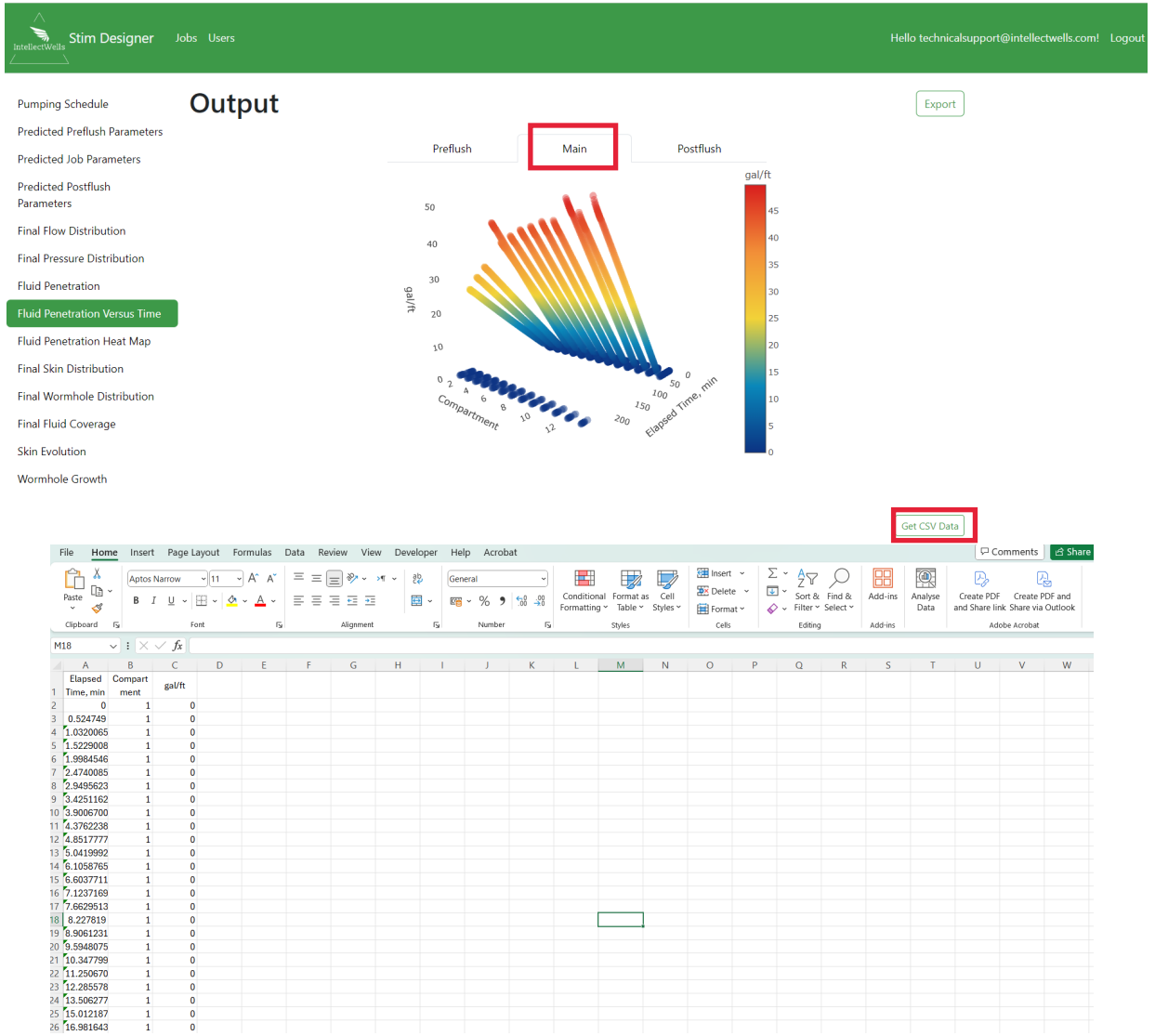
	A	B	C
1	Elapsed Time, min	Compartment	gal/ft
2	0	1	0
3	0.524749	1	0
4	1.0320065	1	0
5	1.5229008	1	0
6	1.9984546	1	0
7	2.4740085	1	0
8	2.9495623	1	0
9	3.4251162	1	0
10	3.9006700	1	0
11	4.3762238	1	0
12	4.8517777	1	0
13	5.0419992	1	0
14	6.1058765	1	0
15	6.6037711	1	0.049188
16	7.1237169	1	0.099789
17	7.6629513	1	0.1524359789379575
18	8.227819	1	0.21776535392415736
19	8.9061231	1	0.28381735599104385
20	9.5948075	1	0.35582368015640575
21	10.347799	1	0.4419872786854606
22	11.250670	1	0.5406359655911999
23	12.285578	1	0.6569283526796461
24	13.506277	1	0.8003615089215507
25	15.012187	1	0.9879409443844973
26	16.981643	1	1.2730347386482639

18.5. **Select the "Main" tab from the top menu bar to view a 3d scatter plot showing main fluid penetration in gal/ft through each compartment as a function of elapsed time.**

18.6. **Rotate, flip, or zoom in or out to view the plot from different angles and to get a better understanding of how the main treatment was being distributed across the lateral during job execution.**

18.7. **Click the "csv" button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the plot.**

18.8. **If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.**

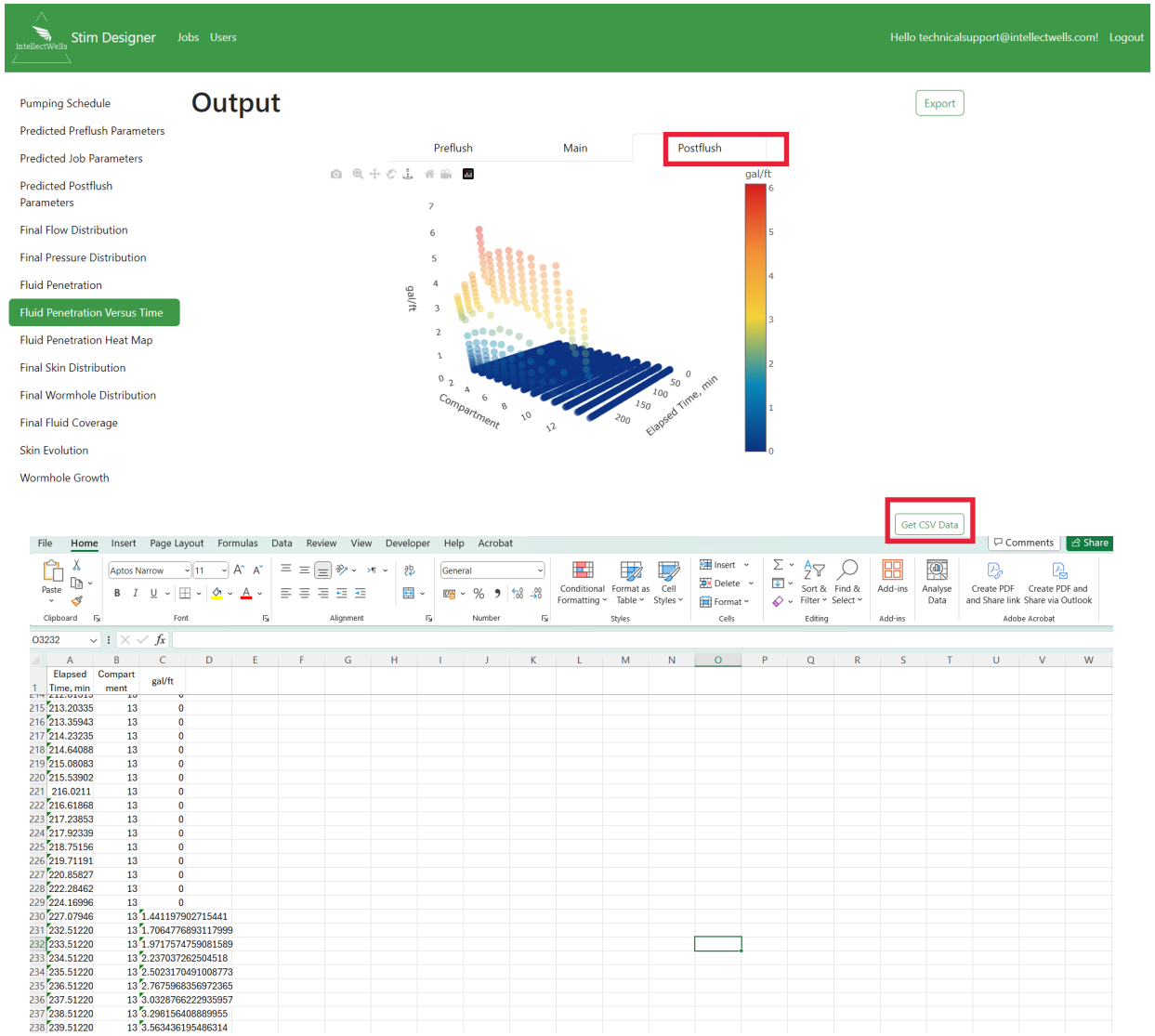


18.9. Select the "Postflush" tab from the top menu bar to view a 3d scatter plot showing postflush penetration in gal/ft through each compartment as a function of elapsed time.

18.10. Rotate, flip, or zoom in or out to view the plot from different angles and to get a better understanding of how the postflush was being distributed across the lateral during job execution.

18.11. Click the "csv" button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the plot.

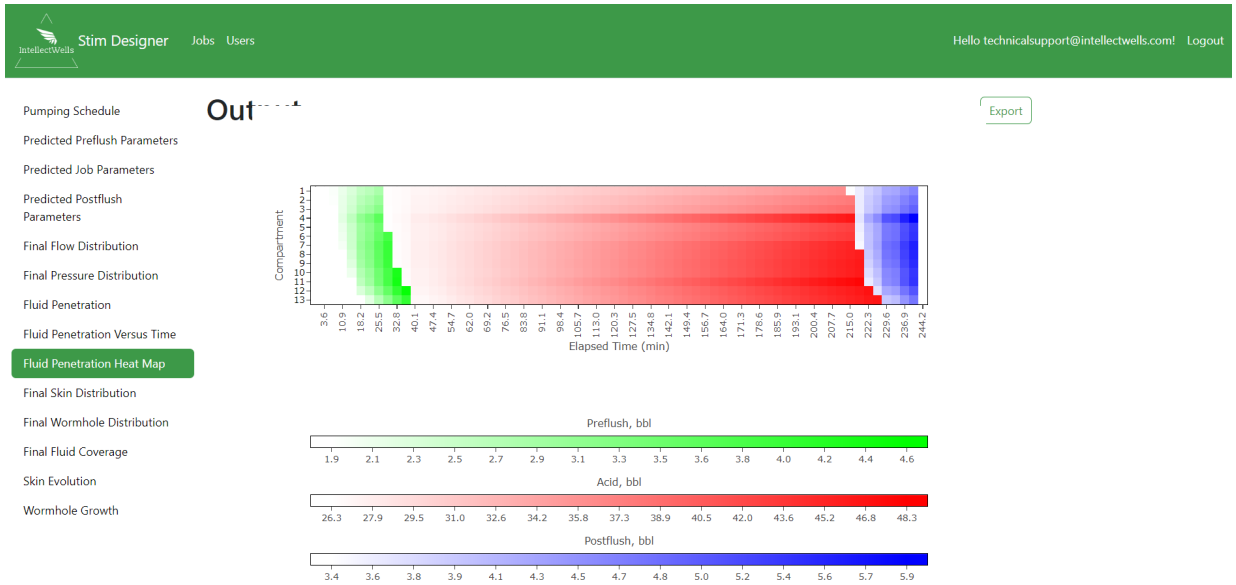
18.12. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



19. Fluid Penetration Heat Map

19.1. Select "Fluid Penetration Heat Map" tab to view a snapshot of final fluid penetration across the entire lateral as a function of elapsed time. Different fluids are represented by different colours and colour intensity is s measure of fluid volumes.

19.2. Get an idea of the time delay each lateral section experiences in receiving a certain fluid by checking the curvatures of the different fluid interfaces.



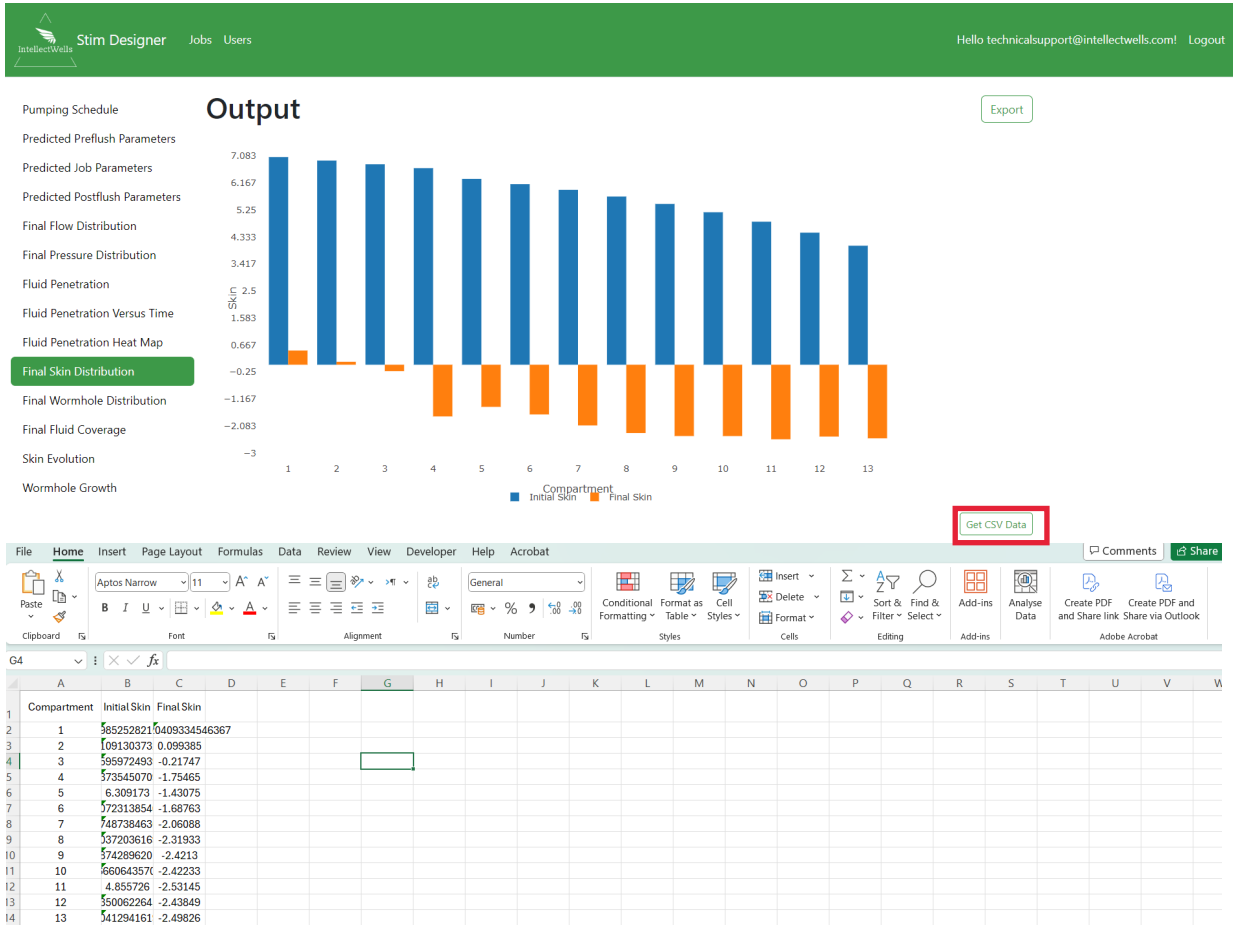
20. Final Skin Distribution

20.1. Select “Final Skin Distribution” tab to view a bar chart showing snapshots of initial and final skin distributions across the lateral section.

20.2. Hover the mouse over any part of the chart to read data pairs representing initial and final skin values across all compartments.

20.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the chart.

20.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



Compartment	Initial Skin	Final Skin
1	7.852528211	0.409334546367
2	6.109130373	0.099385
3	5.295972493	-0.21747
4	4.573545070	-1.75465
5	6.309173	-1.43075
6	3.172313854	-1.68763
7	2.748738463	-2.06088
8	2.037203616	-2.31933
9	1.374289620	-2.4213
10	1.660643571	-2.42233
11	4.855726	-2.53145
12	1.350062264	-2.43849
13	1.041294161	-2.49826

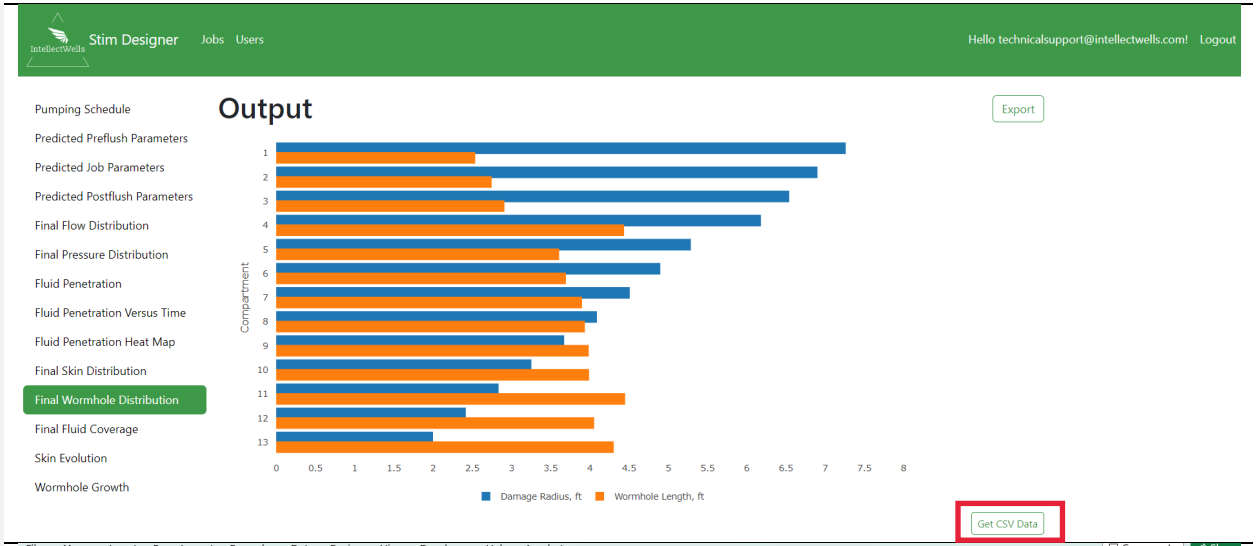
21. Final Wormhole Distribution

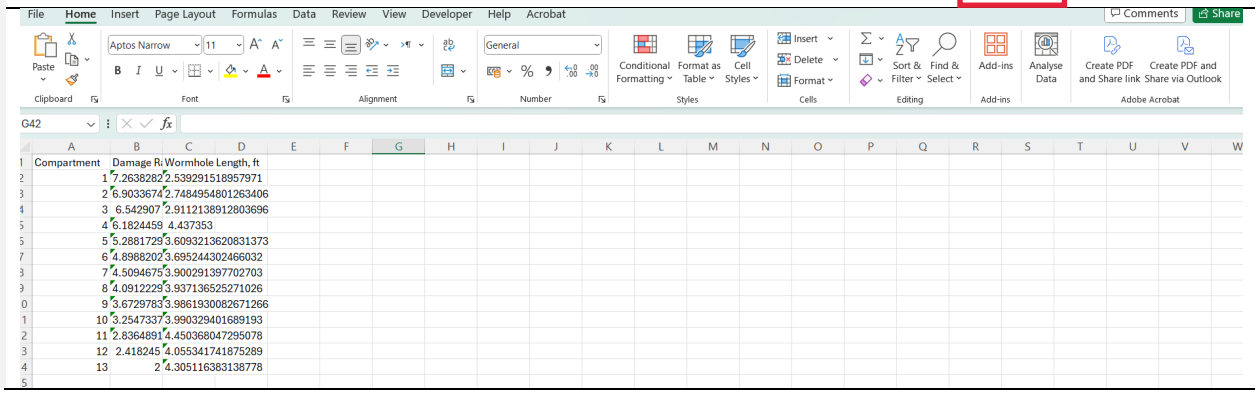
21.1. Select “Final Wormhole Distribution” tab to view a bar chart showing snapshots of final wormhole length values versus damage radii across the lateral section.

21.2. Hover the mouse over any part of the chart to read data pairs representing final wormhole length and damage radius values across all compartments.

21.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the chart.

21.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.





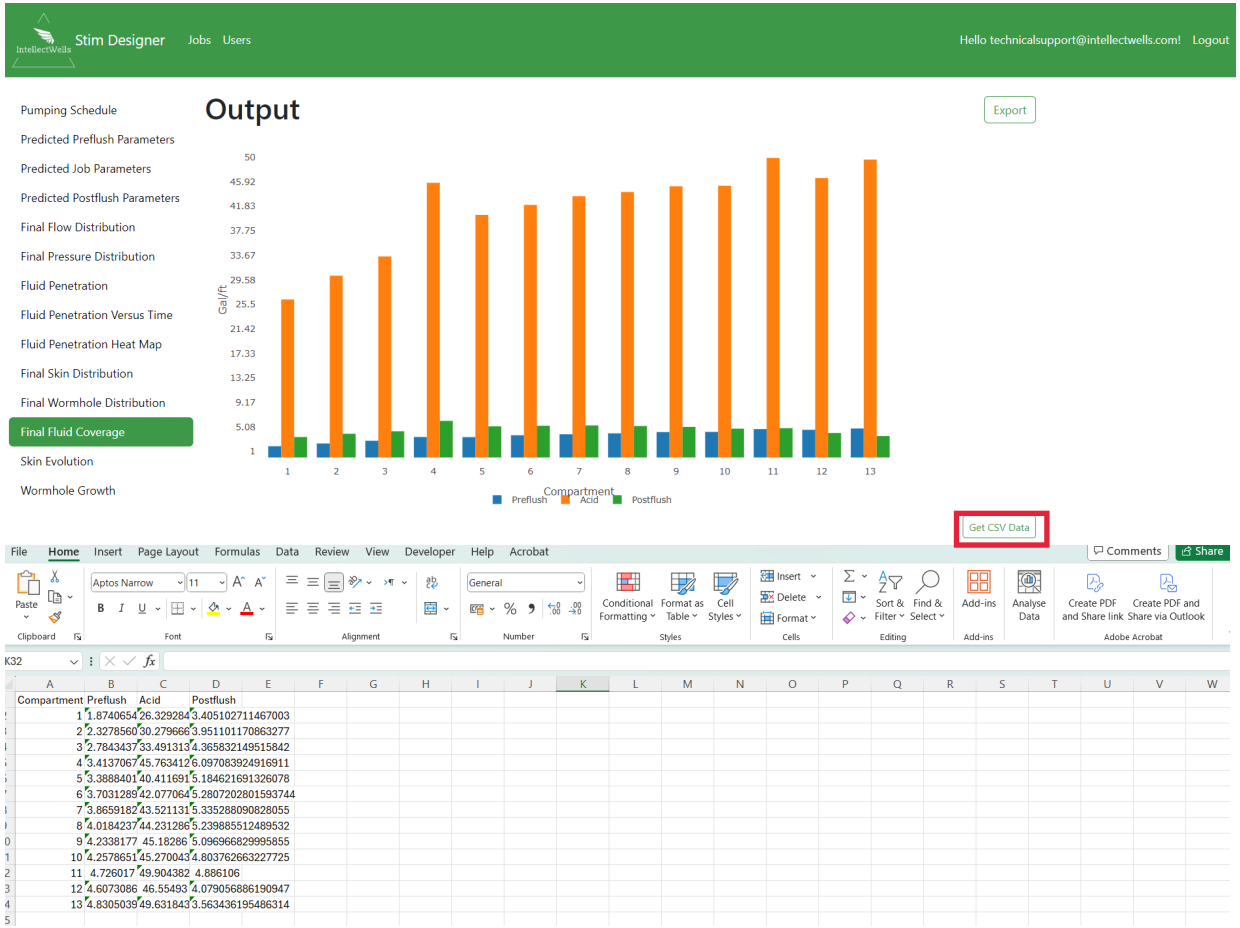
22. Final Fluid Coverage

22.1. Select “Final Fluid Coverage” tab to view a bar chart showing snapshots of final fluid coverage across the lateral section for all pumped fluids.

22.2. Hover the mouse over any part of the chart to read data pairs representing each fluid’s final coverage per compartment.

22.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the chart.

22.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



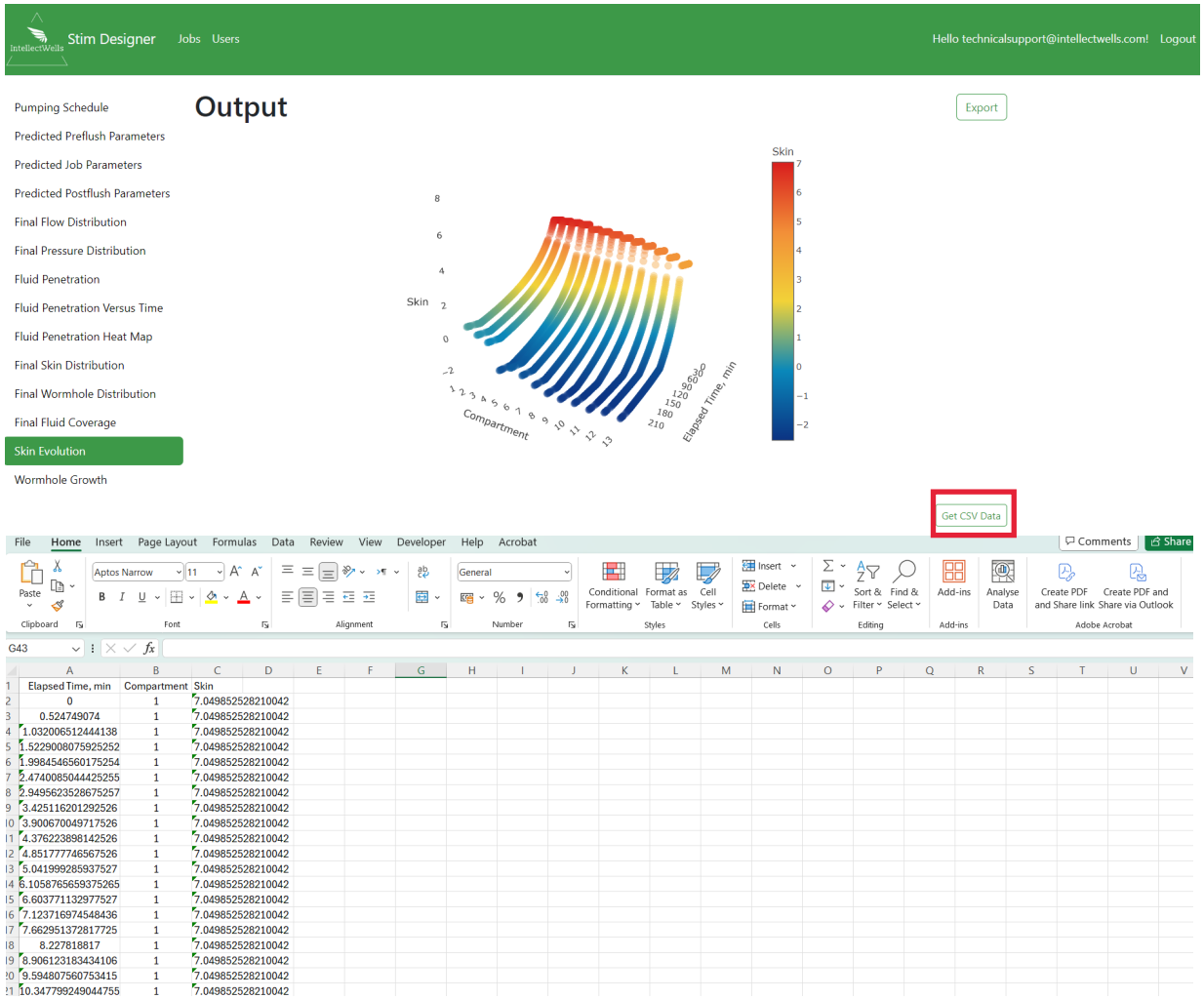
23. Skin Evolution versus Time and Depth

23.1. Select the “Skin Evolution” tab to view a 3d scatter plot showing skin evolution across lateral length versus job elapsed time.

23.2. Rotate, flip, or zoom in or out to view the plot from different angles and to get a better understanding of how skin evolved across the lateral during job execution.

23.3. Click the “csv” button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the plot.

23.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



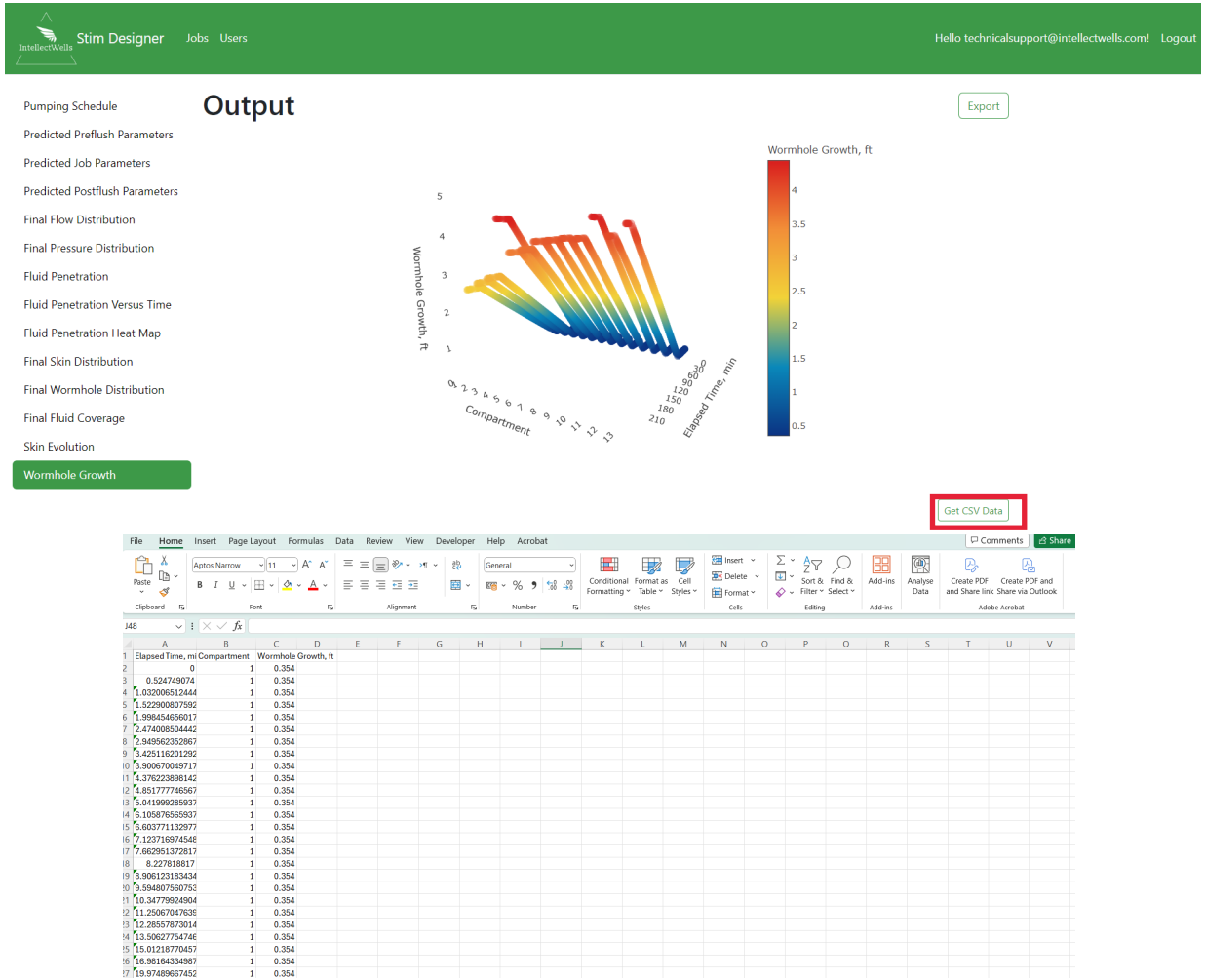
24. Wormhole Growth versus Time and Depth

24.1. Select the "Wormhole Growth" tab to view a 3d scatter plot showing wormhole growth across lateral length versus job elapsed time.

24.2. Rotate, flip, or zoom in or out to view the plot from different angles and to get a better understanding of how wormhole length increased across the lateral during job execution.

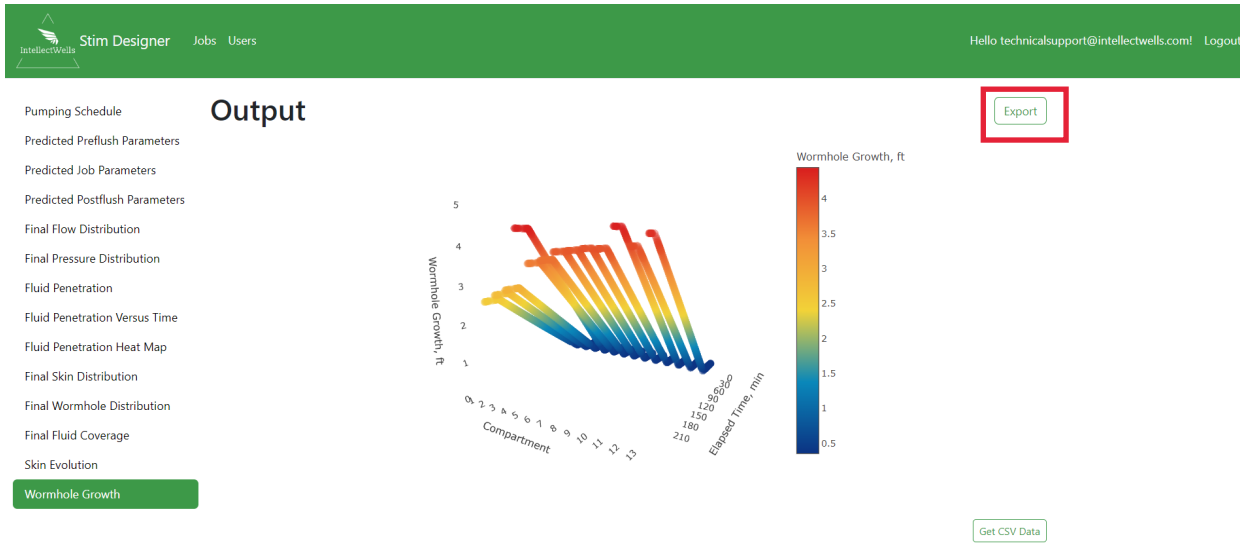
24.3. Click the "csv" button in the lower right corner of the page to download and open a csv file that contains the application generated raw data used to create the plot.

24.4. If desired, save the downloaded csv file to your local machine for further data processing using other applications on your local machine.



25. Final Report

25.1. **Click the “Generate” button in the upper right corner of any output page to generate a fully detailed pdf report inclusive of all input and output data.**



25.2. **Click the pdf file link that pops up once the file report generation is complete to download and open the report.**

25.3. **To keep the file in the “Downloads” folder, click save.**

25.4. **Otherwise, click “Save as” and browse to the folder on your local machine where the file is to be stored.**