DriFlow™

by Downhole Chemical Solutions

The most reliable & advanced ***stimulation chemical delivery system*** *on the market*

Outline of Topics

The Team

- *DCS's team responsible for DriFlow Performance*

The Equipment

- *DriFlow 2.X System vs. DriFlow 3.X System*

The Data

- *Custom Analytics & Dashboards*

The Tools & Features

- *Additional Value Adding Features*

DriFlow Support Team

DCS Operations Structure

DCS Field Service Structure

- 24/7 support -

Operator

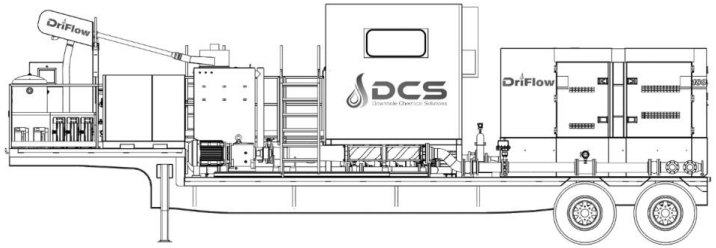
- Responsible for on-site equipment & operations
- Communicates Issues to Coordinators & Engineers

Field Coordinator

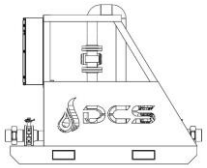
- One coordinator per *three* DriFlow Units
- Ensures product is working, and location inventory is sustained

Field Engineer

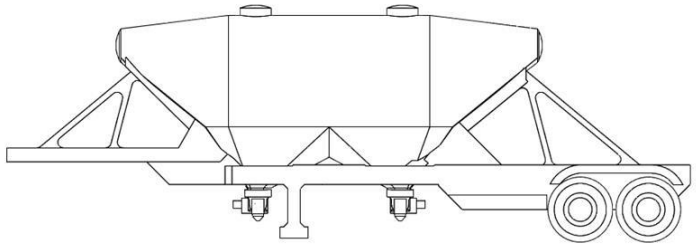
- One engineer per *four* DriFlow Units
- Provides field support for (1) data transmission & (2) Equipment issues



DriFlow™ Unit



Multi-Stim™ Unit



Pneumatic Trailer

DriFlow Support Team

Additional 24/7 Support Resources

Support Personnel

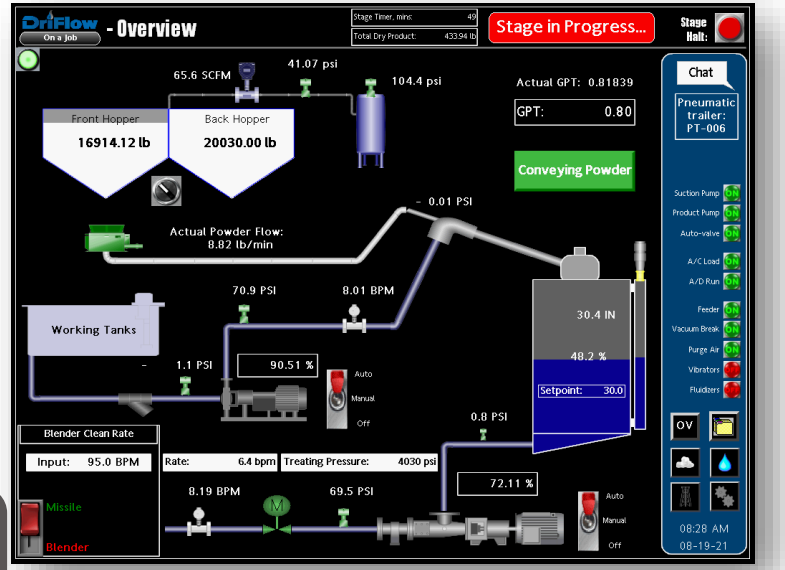
Field Coordinator

- 1st POC
- Performs routine unit rounds, & can solve most field issues

Field Engineer

- Priority #1 → Support field ops.
- Focused on → Data transmission, asset integrity, and equipment improvements

Real-time Remote Support

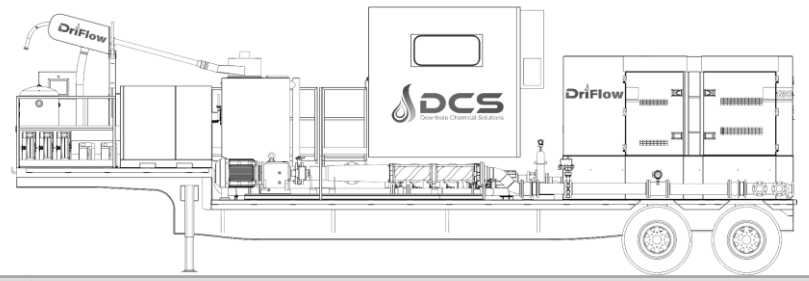
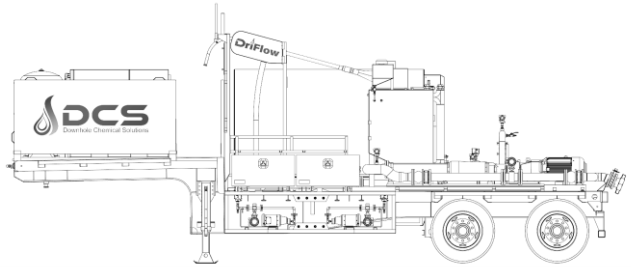


Complete Remote Access & Control

High Resolution Analytics & Alarming of Anomalies

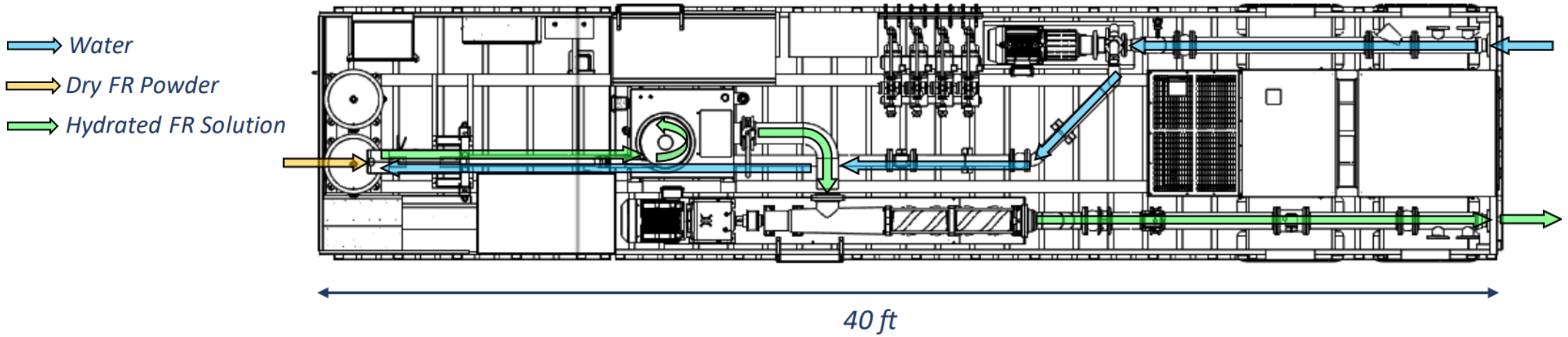
DriFlow Equipment

Units 2.X vs. 3.X – Comparison

Spec…	Series 2.X	Series 3.X
		
Flow Rate	8 BPM	3.75 BPM
On-board Buffer Volume	9 BBL	4.5 BBL
Max Loading @ 80 BPM	18 PPT (60 lb/min)	12 PPT (40 lb/min)
Power Requirement	Integrated 180 kVA Generator	Detached 125 kVA generator
E-Fleet Capable?	YES	YES
Footprint	40’ (l) x 8.5’ (w) – 45,000 lb	28’ (l) x 8.5’ (w) – 25,000 lb
Operator Control	Trailer-mounted Cabin	Operation from DCS truck cab

DriFlow Equipment

Units 2.X vs. 3.X – Process Design

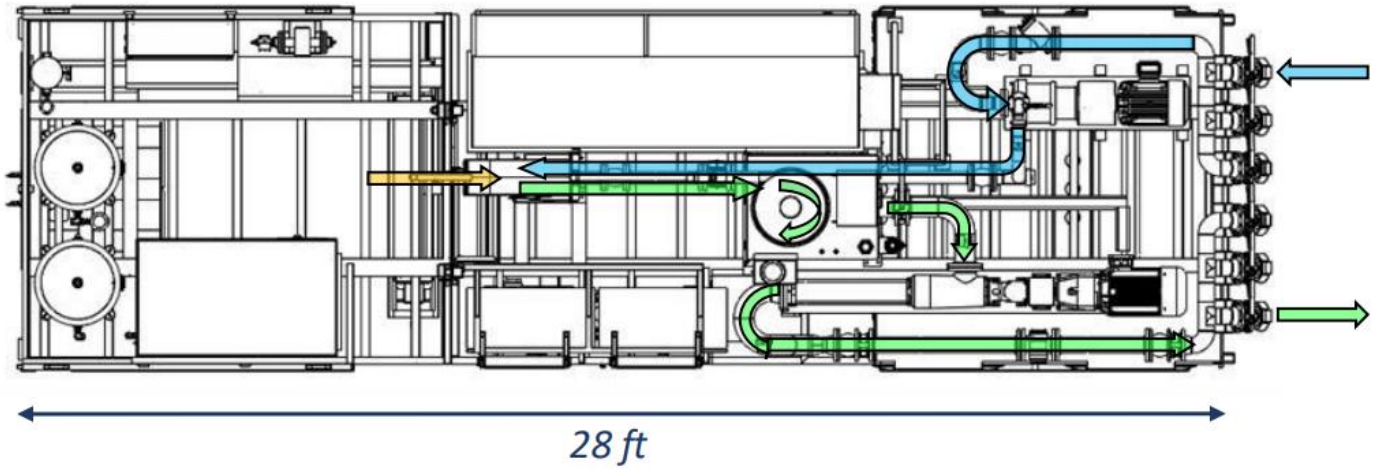


Different form factor, same exact process

3.X units have…

1. A smaller footprint
2. Lower power consumption
3. Lower flow rate

…without sacrificing performance!



DriFlow Services

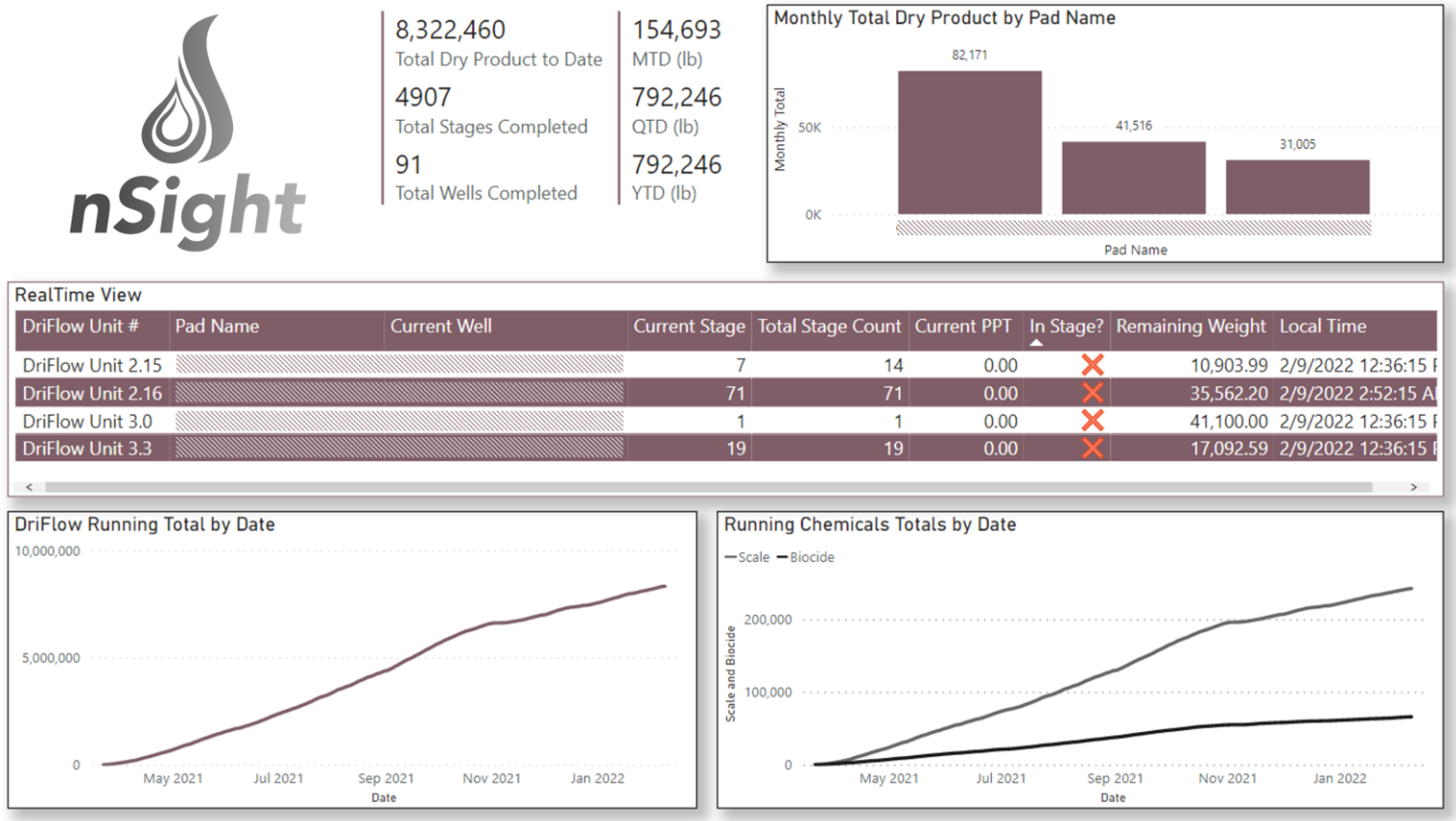
DCS-nSight - Customer facing data analysis service!

nSight

DCS-nSight.com

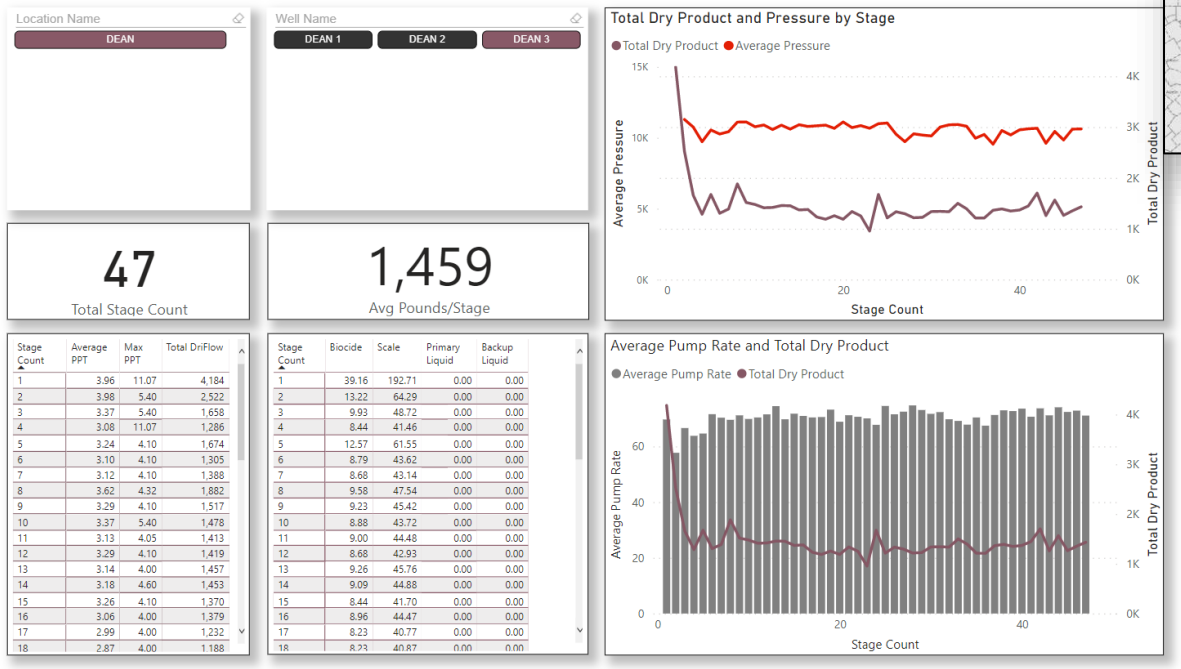
Custom Analytics Dashboards

- ✓ Stage-level analytics of jobs
- ✓ Deep insight to by-stage performance & invoicing
- ✓ Integration of ***Machine-Learning*** tools for Chemical Usage Prediction



DriFlow Services

DCS-nSight - Customer facing data analysis service!



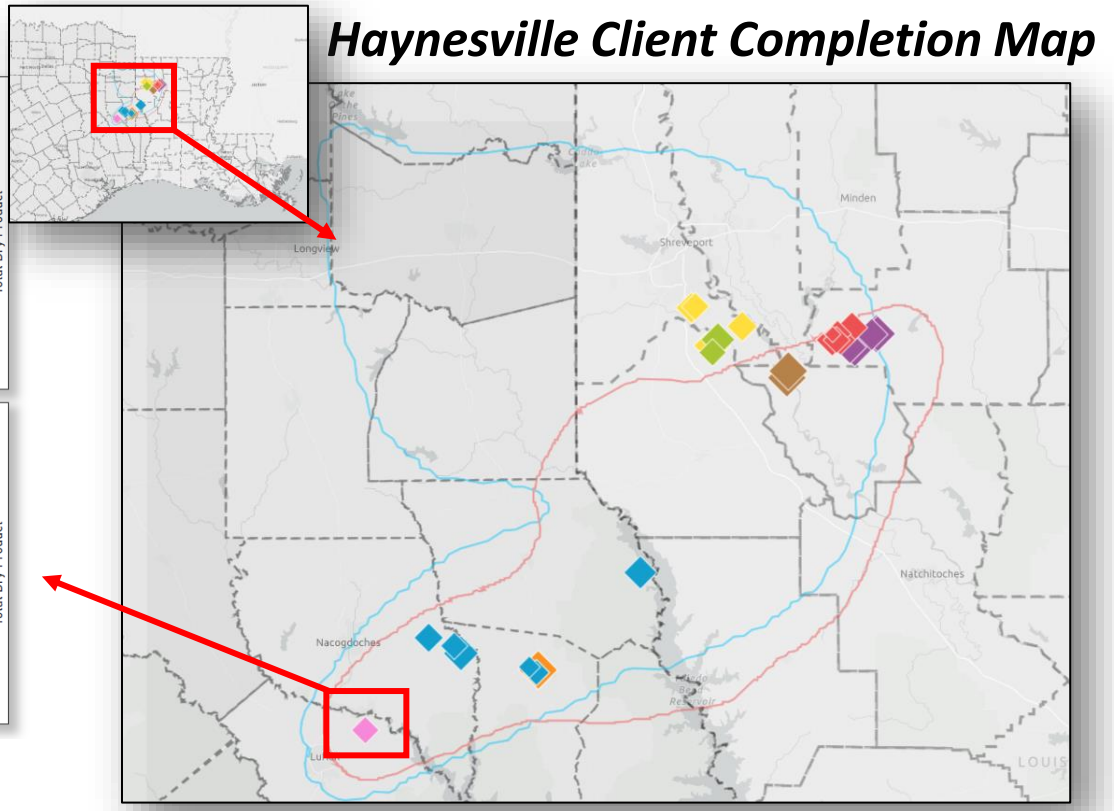
Stage Count	Average PPT	Max PPT	Total DriFlow
1	3.96	11.07	4,184
2	3.98	5.40	2,522
3	3.37	5.40	1,658
4	3.08	11.07	1,286
5	3.24	4.10	1,674
6	3.10	4.10	1,305
7	3.12	4.10	1,388
8	3.62	4.32	1,882
9	3.29	4.10	1,517
10	3.37	5.40	1,478
11	3.13	4.05	1,413
12	3.29	4.10	1,419
13	3.14	4.00	1,457
14	3.18	4.60	1,453
15	3.26	4.10	1,370
16	3.06	4.00	1,379
17	2.99	4.00	1,232
18	2.87	4.00	1,188

Stage Count	Biocide	Scale	Primary Liquid	Backup Liquid
1	39.16	192.71	0.00	0.00
2	13.22	64.29	0.00	0.00
3	9.93	48.72	0.00	0.00
4	8.44	41.46	0.00	0.00
5	12.57	61.55	0.00	0.00
6	8.79	43.62	0.00	0.00
7	8.68	43.14	0.00	0.00
8	9.58	47.54	0.00	0.00
9	9.23	45.42	0.00	0.00
10	8.88	43.72	0.00	0.00
11	9.00	44.48	0.00	0.00
12	8.68	42.93	0.00	0.00
13	9.26	45.76	0.00	0.00
14	9.09	44.88	0.00	0.00
15	8.44	41.70	0.00	0.00
16	8.96	44.47	0.00	0.00
17	8.23	40.77	0.00	0.00
18	8.23	40.87	0.00	0.00

Performance analysis based on:

- ✓ Geographical location
- ✓ Well treating pressure & Rate

Haynesville Client Completion Map



Automated ARC-GIS plotting

- ✓ Average FR Loading
- ✓ Average treating pressure
- ✓ Average down-hole rate

Other Equipment Features & Services

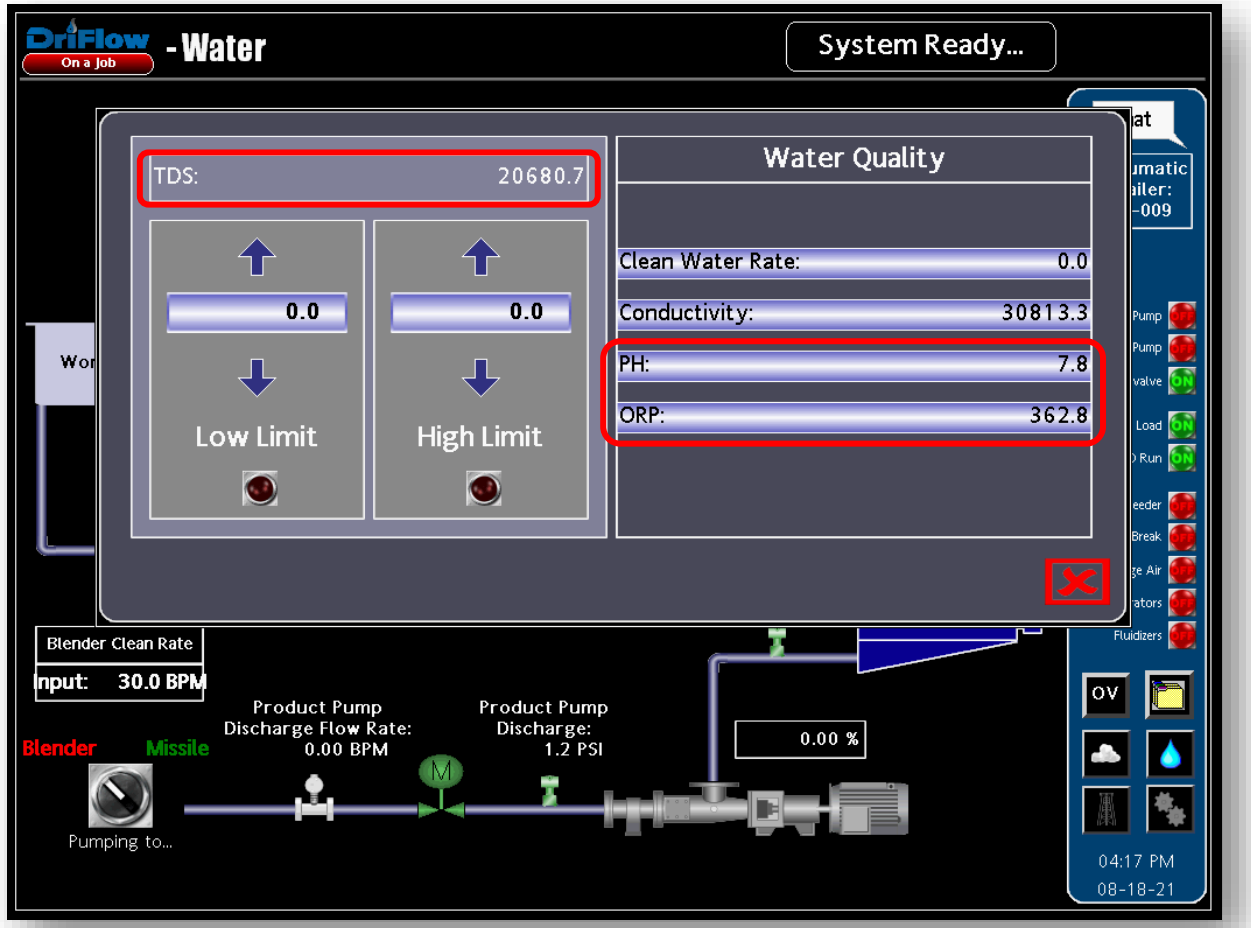
On-Board services

Water Monitoring Capabilities

- ✓ Real-time water quality measurements of:
  - ✓ **TDS** (ppm)
  - ✓ **pH**
  - ✓ **ORP**
- ✓ On-demand water quality measurements of:
  - ✓ **Hardness** (most impactful for FR)
  - ✓ **Free Residual Chlorine** (FRC)

Other capabilities

- ✓ On-board chem-ad pumps



DriFlow™ + Multi-Stim™ Technology

The latest in simul-frac chemical technology

August 18, 2021

DCS Downhole Chemical Solutions

Outline of Topics

How it Works

- *Basic Operating Principle*

Why it works

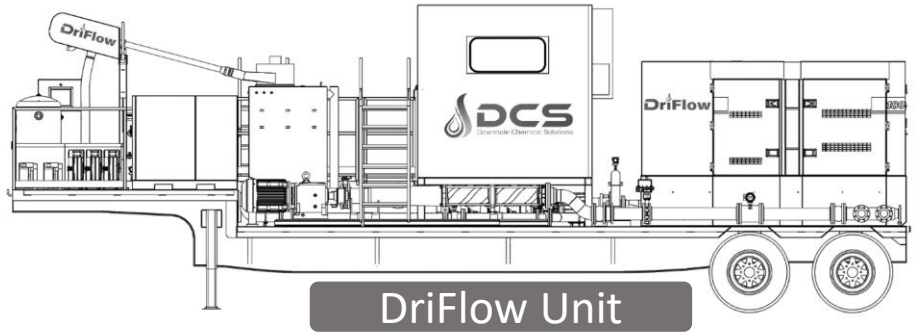
- *What are the benefits to using Multi-Stim™?*

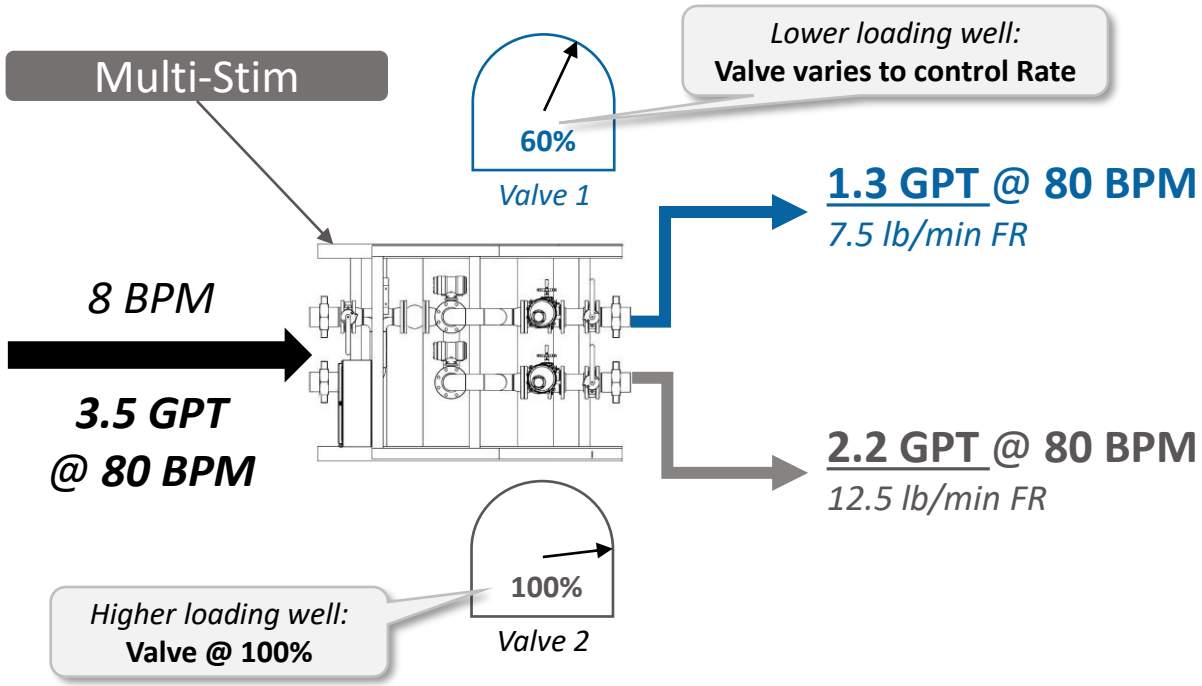
By the Numbers…

- *Past performance IS an indication of future outcomes*

How Does it Work?

Basic Process Flow





Step 1:
PPT_1 + PPT_{2+}= Total PPT

Step 2:
Mix Total FR on DriFlow Unit

Step 3:
Auto-Valves & Flow-meters divide the flow

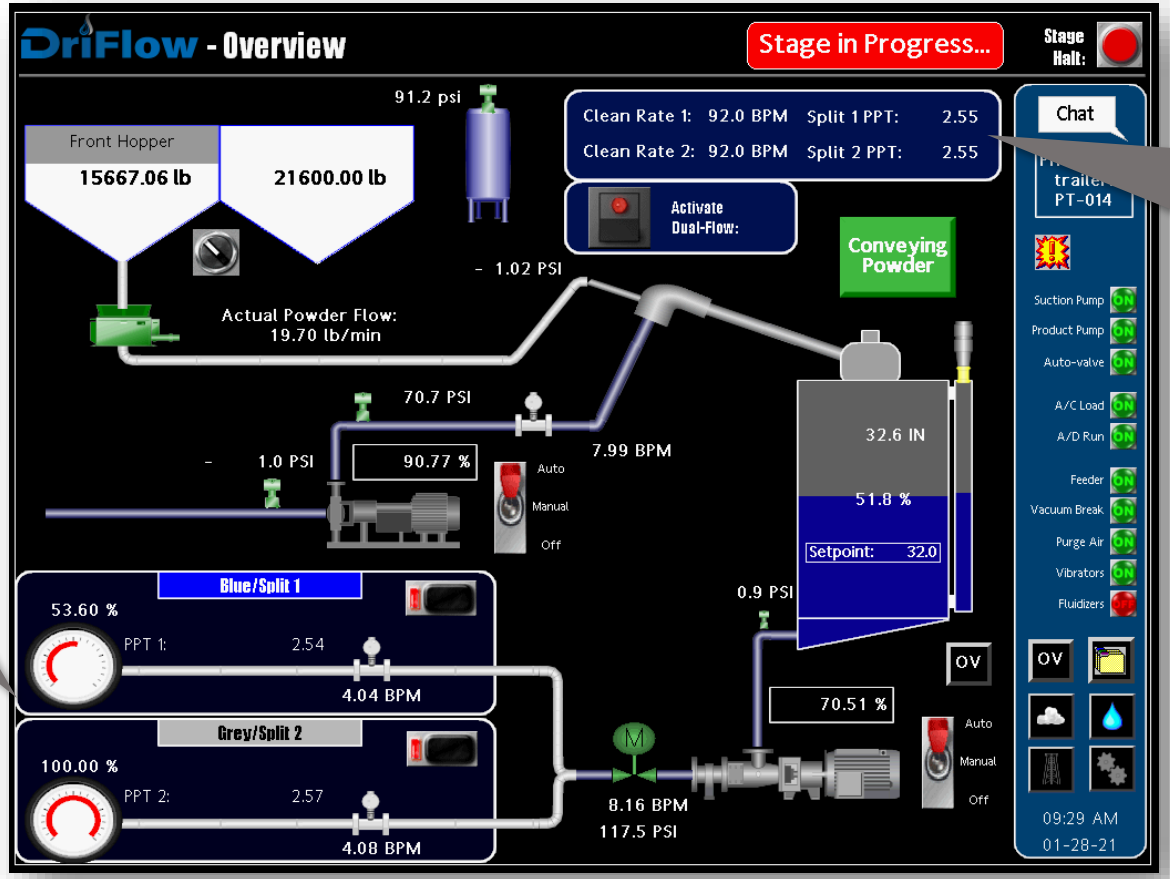
Step 4:
Each well gets the right amount of FR

How Does it Work?

Controls & Communication

Independent FR Rate

Control System adjusts valves automatically to deliver



Inputs for:

Well 1: **1.5 GPT @ 92 BPM**

Well 2: **1.5 GPT @ 92 BPM**

Communication with Datavan

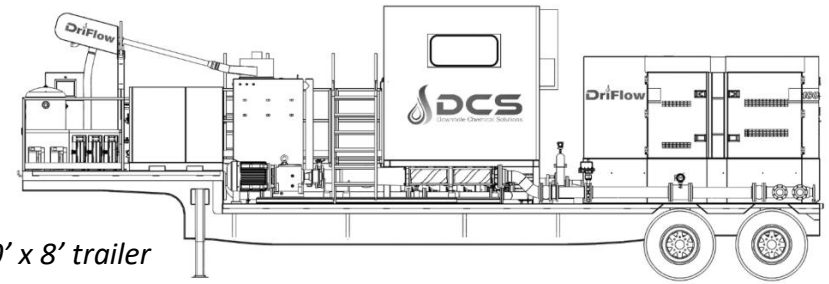
- Multi-Stim™…
- Integrate with all common frac platforms

What are the benefits?

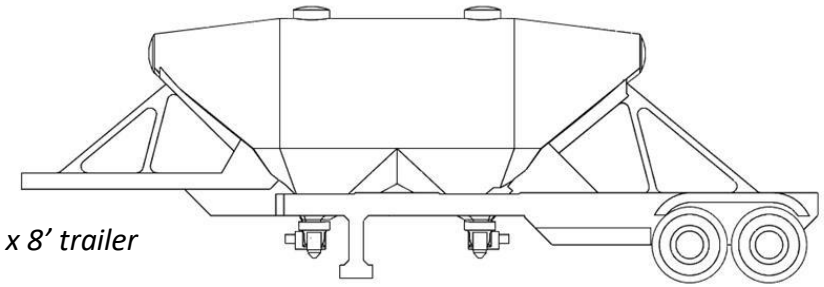
*Stimulation of multiple wells with **1 DriFlow Unit***

- *Smaller Footprint*
- *Fewer points of failure = better run-time efficiency*

Replace: (1) DriFlow Unit & (1) Pneumatic Trailer

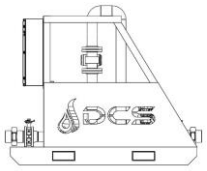


40’ x 8’ trailer



42’ x 8’ trailer

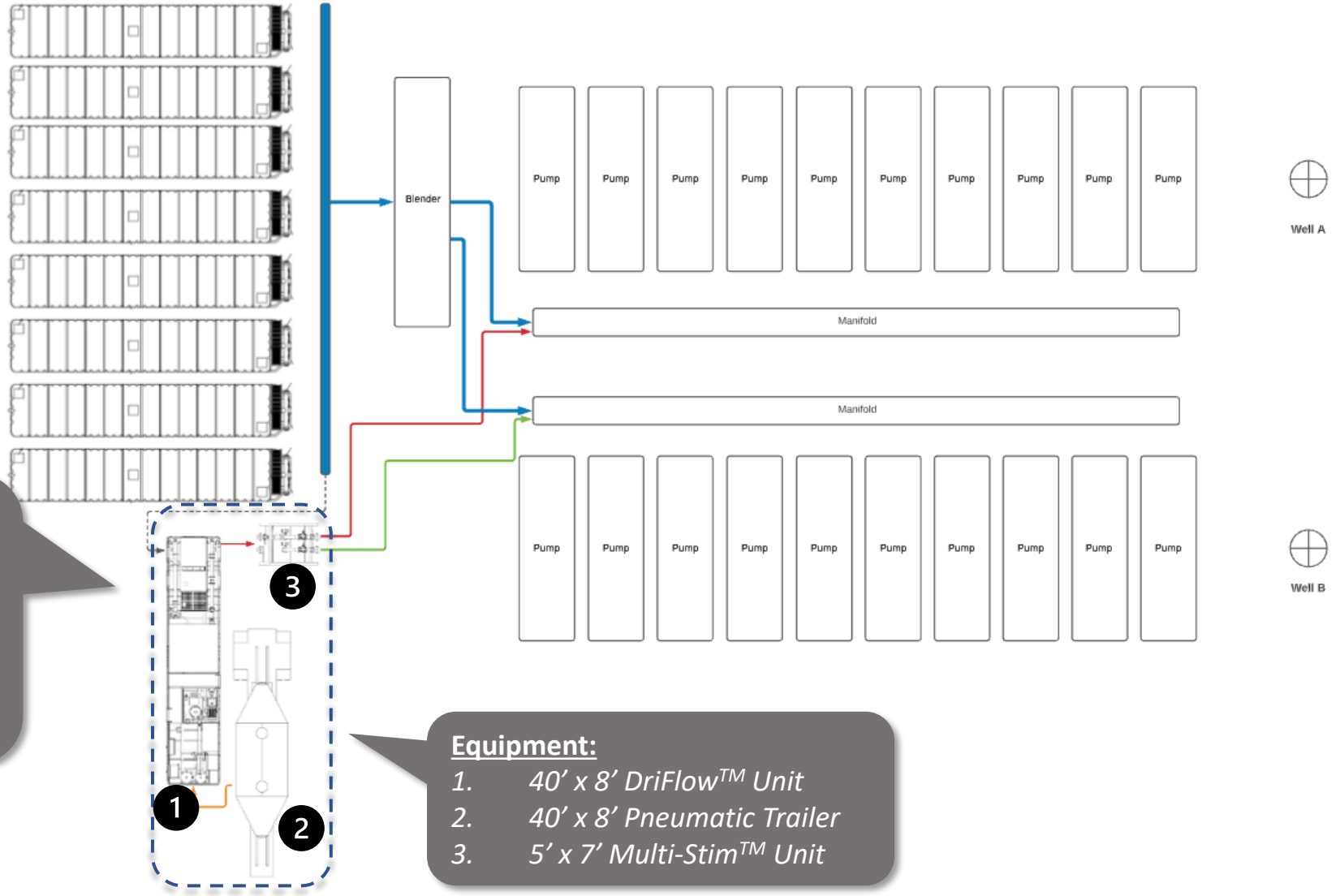
…with: (1) Multi-Stim Unit



5’ x 7’ skid

How Does it Work?

Example Pad Layout



Compact system for ***multi-well stimulation***

Equipment:

1. *40' x 8' DriFlow™ Unit*
2. *40' x 8' Pneumatic Trailer*
3. *5' x 7' Multi-Stim™ Unit*

Past Performance…

Indication of future outcome!

DriFlow™ + Multi-Stim® Technology

Data Dashboard

Historical Usage

1,578,750
YTD (lb)

245,167
QTD (lb)

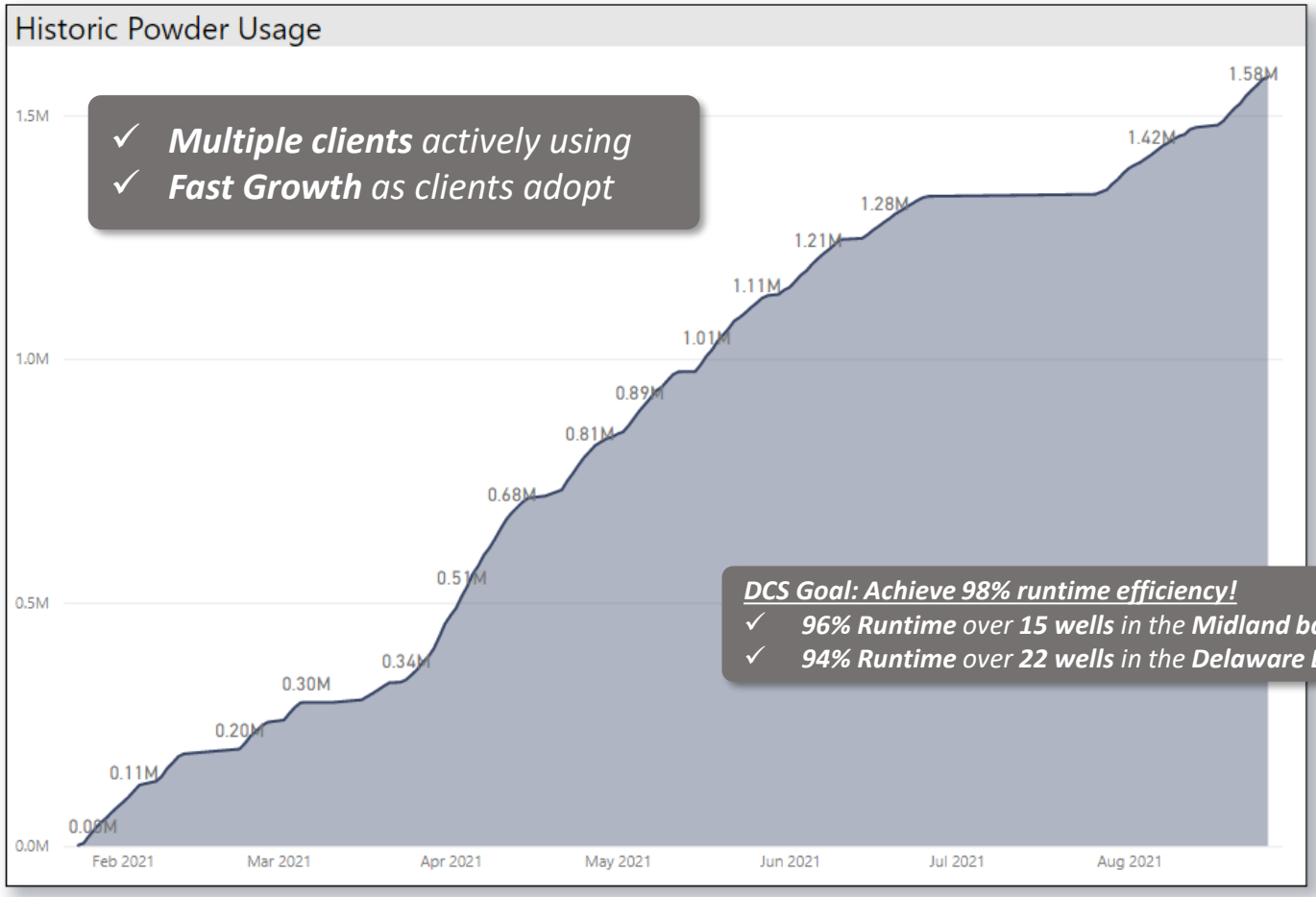
197,560
MTD (lb)

Summary Information

1,578,750
Dry Product Used (lb)

1515
Stages Completed

37
Wells Completed



- ✓ ***Multiple clients** actively using*
- ✓ ***Fast Growth** as clients adopt*

DCS Goal: Achieve 98% runtime efficiency!

- ✓ ***96% Runtime** over **15 wells** in the **Midland basin***
- ✓ ***94% Runtime** over **22 wells** in the **Delaware Basin***

- ✓ **1.5 Million** pounds
- ✓ **1,500** stages
- ✓ **37** wells

One Cowboys Way Suite 572
Frisco, TX 75034
469-466-1100
info@stimchems.com
www.stimchems.com

downholechem.com/driflow