



FracTrends Viewer

Liberty Engineering Solution

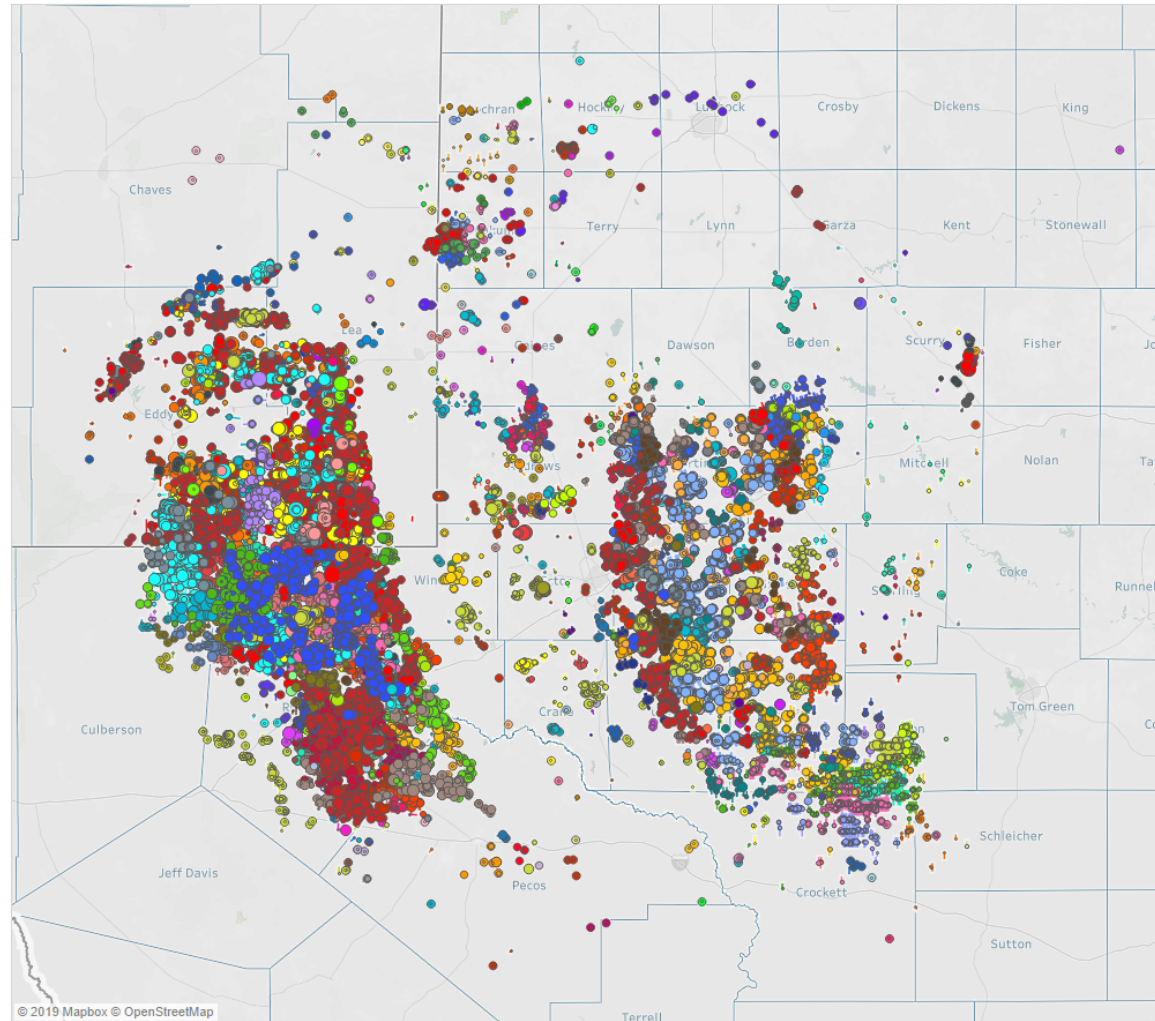


Liberty FracTrends Viewer

- Online viewer of public completion, petrophysical and production data
- Information on 60,000+ horizontal wells in basins where Liberty is active
- Access to simple filtering and hundreds of plots
- Helps “big picture” identification regarding who makes better wells and if their success is driven by a better completion or by “good rock”
- Viewer does not provide access to the raw underlying data

FracTrends – Permian Basin

All horizontal wells in the Permian Basin



LIBERTY

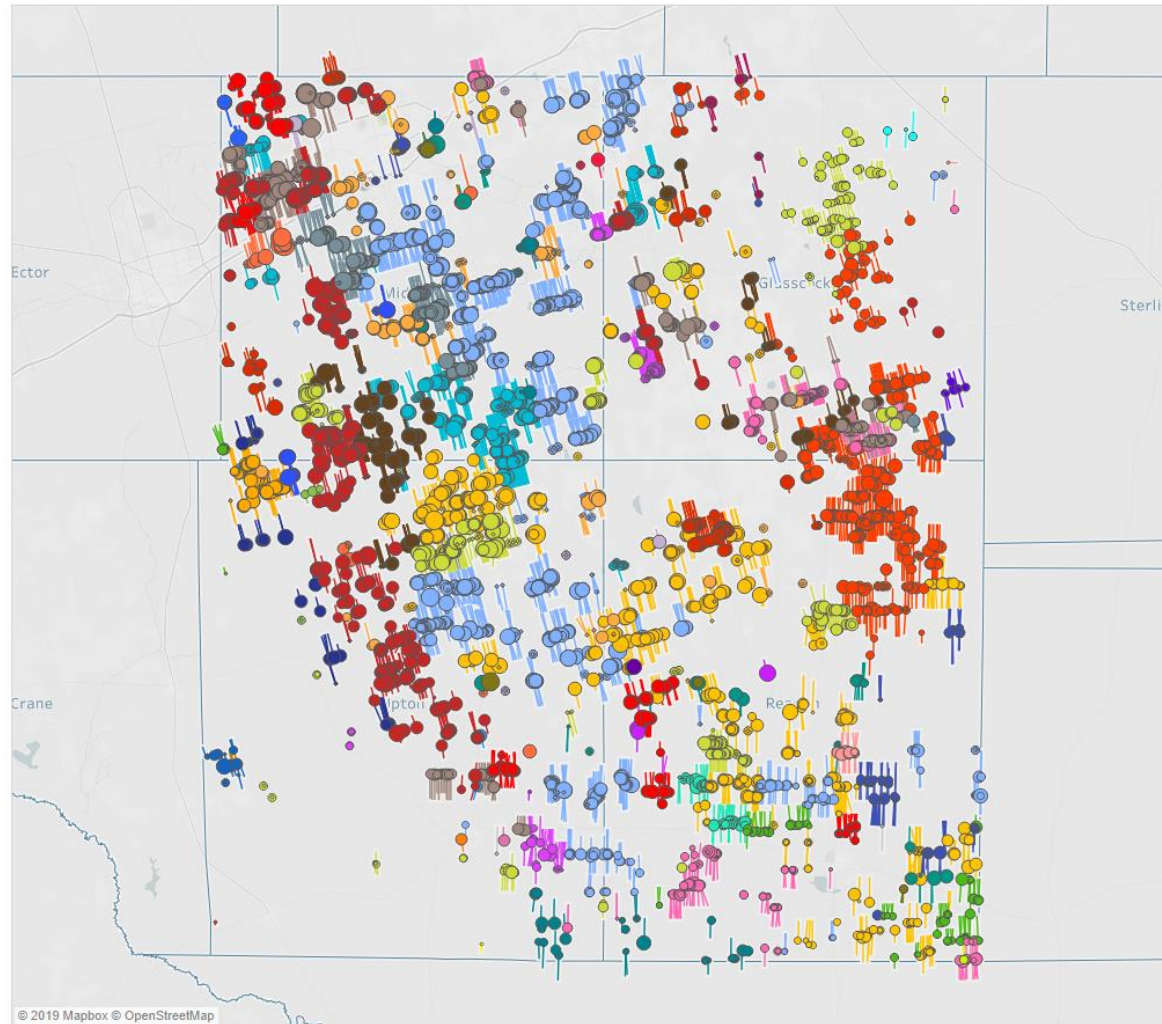
- 3-T EXPLORATION INCOR..
- ABRAXAS PETROLEUM C..
- ADVANCE ENERGY PART..
- ADVENTURE OPERATING..
- AJAX RESOURCES LLC
- AMEREDEV LLC
- AMERICO ENERGY RESO..
- AMTEX ENERGY INC
- ANADARKO E & P ONSHO..
- APACHE CORPORATION
- APPROACH OPERATING ..
- APR OPERATING LLC
- ARABELLA OPERATING L..
- ARES ENERGY LIMITED
- ASCENT ENERGY INCOR..
- ASPEN OPERATING COM..
- ATLANTIC RESOURCES C..
- AVAD OPERATING LLC
- BAKER RESOURCES
- BARRON PETROLEUM
- BASIN ENGINEERING & T..
- BAYSWATER EXPLORATI..
- BC OPERATING INC
- BHP BILLITON PETROLEU..
- BLACK MOUNTAIN OIL & ..
- BLACK SWAN OPERATIN..
- BLACKBEARD OPERATIN..
- BLUESTONE NATURAL R..
- BOAZ ENERGY II OPERAT..
- BOB HUGHES OIL COMP..
- BOLD OPERATING LLC
- BOPCO LP
- BOYD & MCWILLIAMS OP..
- BRAHMAN RESOURCE P..
- BREITBURN OPERATING ..
- BRIGHAM RESOURCES O..
- BROKEN ARROW SWD LL..
- BROWN GEORGE R PART..
- BROWNING OIL COMPAN..

Basin PERMIAN	Production Indicators Y-Axis_Norm Norm 365 Day Oil/Lat Length (bbl/ft)
Area Selection Latitude 30.423 - 33.796 Longitude -104.702 - -100.061	Y-Axis 365 Day Oil (bbl)
Rng 23 - 39 Twp 1 - 45 Twp N S (All)	Oil/Gas (All)
State (All)	Completion Filters Completion Type (All)
County (All)	Brown and White Proppant (All)
	Partial Comp (All)
	Refrac (All)
	Cemented/Open (All)
	Design Type By Avg PPG (All)
Main Filters Operator (All)	Completion Ranges % Sand Ranges (All)
Formation (All)	% RCS Ranges (All)
AOI (All)	% Ceramic Ranges (All)
Completion Company (All)	Avg PPG Ranges (All)
Well Name (All)	Clean Volume Ranges (All)
API (All)	Lateral Length Ranges (All)
Year of Production Start Date (All)	Adjusted WC 180 Day Ranges (All)
	Adjusted WC 365 Day Ranges (All)

Map – Filter to Area of Interest

Central Midland Basin

- Midland
- Glasscock
- Upton
- Reagan



- 3-T EXPLORATION INCOR..
- ADVENTURE OPERATING..
- APACHE CORPORATION
- BOLD OPERATING LLC
- BREITBURN OPERATING ..
- BTA OIL PRODUCERS LLC
- CALLON PETROLEUM OP..
- CAMBRIAN MANAGEMEN..
- CAPSTONE NATURAL RE..
- CHEVRON USA INC
- CINNABAR ENERGY LTD
- COG OPERATING LLC
- CROWNQUEST OPERATI..
- DE3 OPERATING LLC
- DEVON ENERGY PRODU..
- DIAMONDBACK EXPLORA..
- DISCOVERY NATURAL R..
- DISCOVERY OPERATING ..
- DRIFTWOOD ENERGY OP..
- EARTHSTONE OPERATIN..
- EGL RESOURCES
- ELEVATION RESOURCES..
- ENCANA OIL & GAS (USA)..
- ENDEAVOR ENERGY RES..
- ENERGEN RESOURCES ..
- EP ENERGY E&P COMPA..
- FASKEN OIL AND RANCH ..
- FDL OPERATING LLC
- HENRY RESOURCES LIML..
- HIBERNIA RESOURCES III..
- HUNT OIL COMPANY
- INDEPENDENCE RESOU..
- LAREDO PETROLEUM IN..
- LARIO OIL & GAS COMPA..
- LEGACY RESERVES OPE..
- MDC TEXAS OPERATOR ..
- MURCHISON O&G INC
- OXY USA INC
- PARSLEY ENERGY OPER..

Basin: PERMIAN

Production Indicators

Y-Axis_Norm: Norm 365 Day Oil/Lat Length (bbl/ft)

Y-Axis: 365 Day Oil (bbl)

Oil/Gas: (All)

Completion Filters

Completion Type: (All)

Brown and White Proppant: (All)

Partial Comp: (All)

Refrac: (All)

Cemented/Open: (All)

Design Type By Avg PPG: (All)

Completion Ranges

% Sand Ranges: (All)

% RCS Ranges: (All)

% Ceramic Ranges: (All)

Avg PPG Ranges: (All)

Clean Volume Ranges: (All)

Lateral Length Ranges: (All)

Adjusted WC 180 Day Ranges: (All)

Adjusted WC 365 Day Ranges: (All)

Area Selection

Latitude: 31.079 to 32.087

Longitude: -102.306 to -101.272

Rng: [Slider]

Twp: 1 to 5

Twp N S: (All)

State: (All)

County: (Multiple values)

Main Filters

Operator: (All)

Formation: (All)

AOI: (All)

Completion Company: (All)

Well Name: (All)

API: (All)

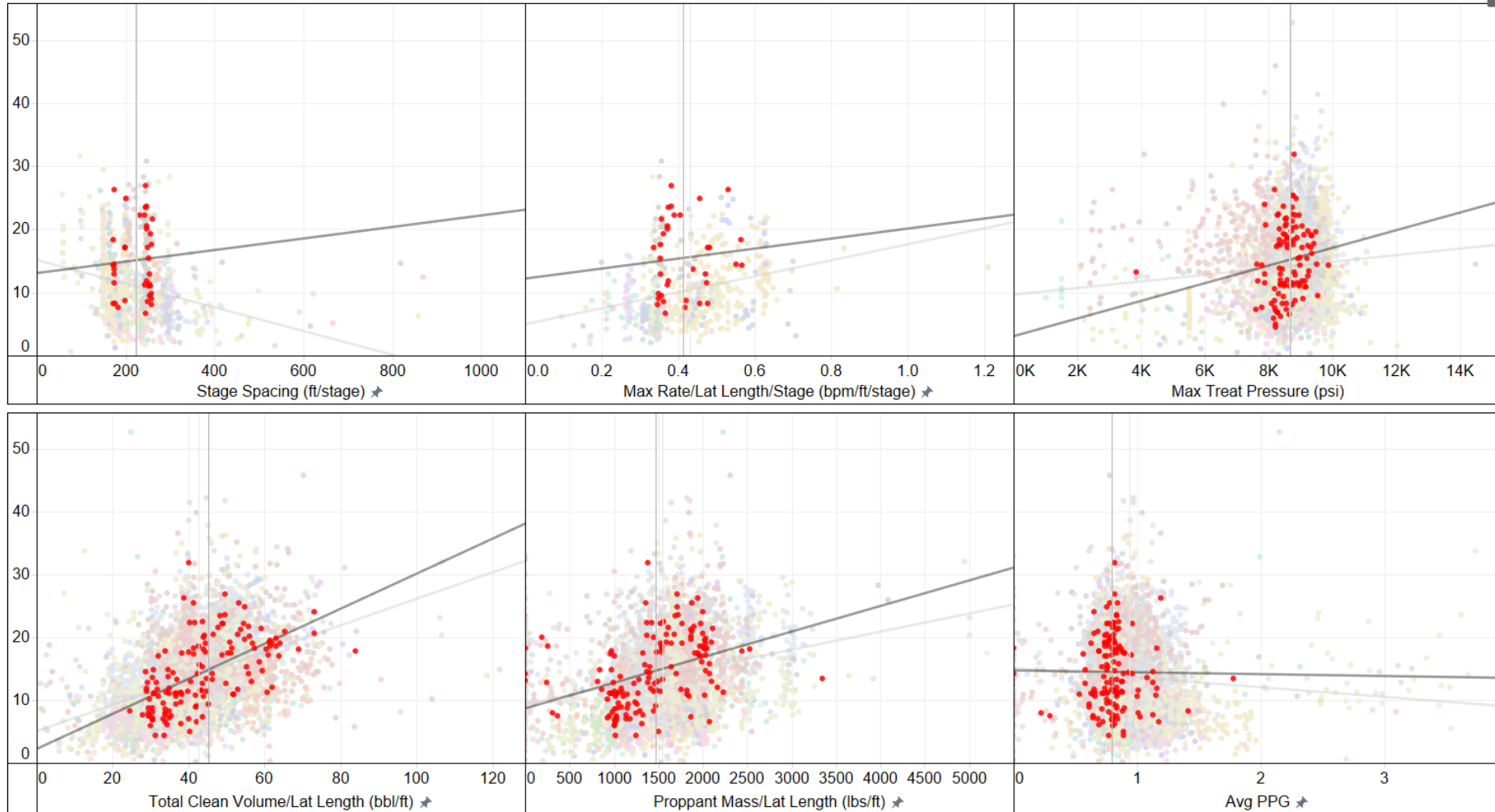
Year of Production Start Date: (All)

Completions Parameter Comparisons

Norm 365 Day Oil/Lat Length (bbl/ft) vs. General Completions Parameters



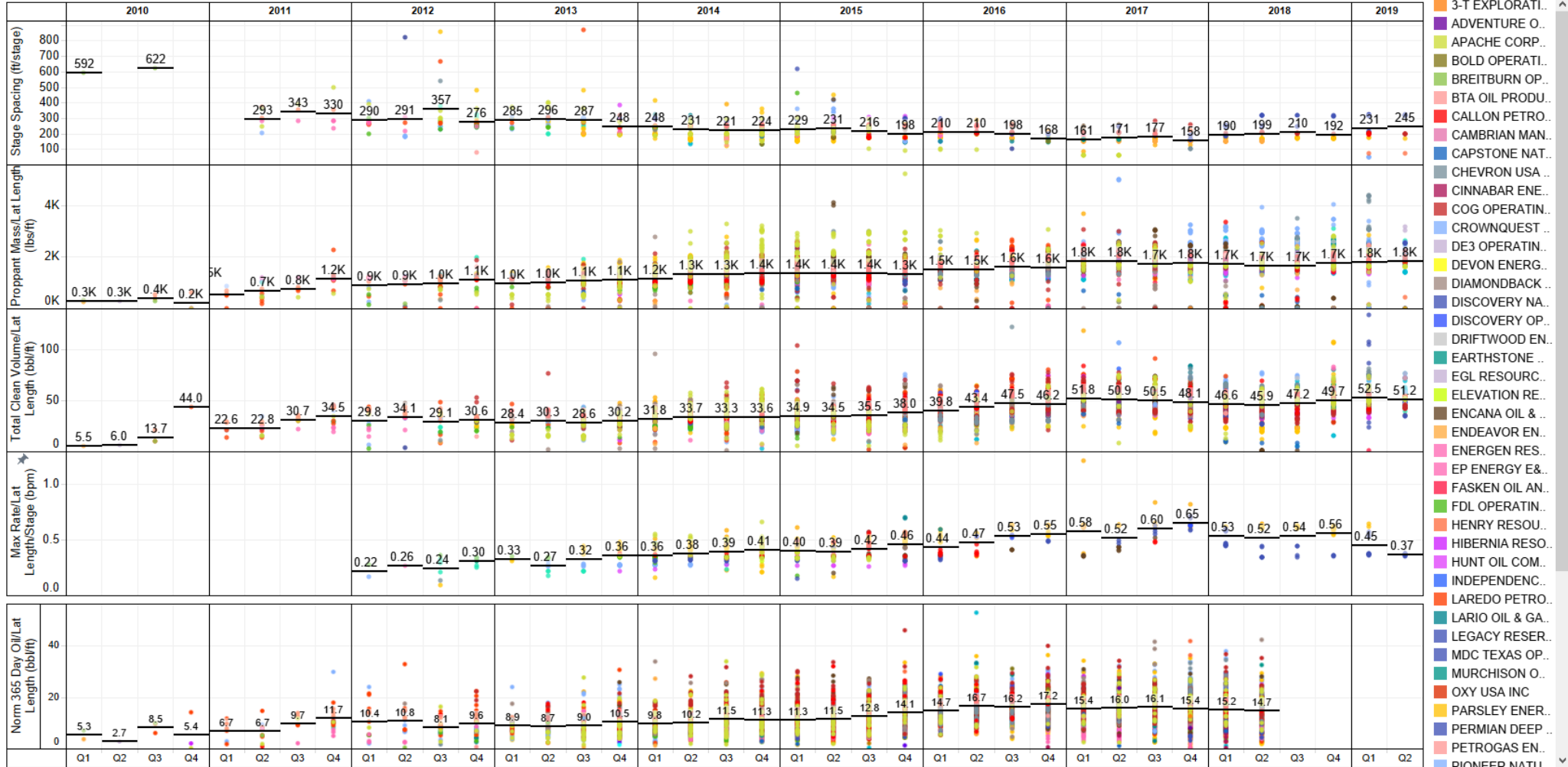
- 3-T EXPLORATI..
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- APACHE CORP..
- BOLD OPERATI..
- BREITBURN OP..
- BTA OIL PRODU..
- CALLON PETRO..**
- CAMBRIAN MAN..
- CAPSTONE NAT..
- CHEVRON USA..
- CINNABAR ENE..
- COG OPERATIN..
- CROWNQUEST ..
- DE3 OPERATIN..
- DEVON ENERG..
- DIAMONDBACK ..
- DISCOVERY NA..
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- ELEVATION RE..
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- INDEPENDENC..
- LAREDO PETRO..
- LARIO OIL & GA..
- LEGACY RESER..
- MDC TEXAS OP..
- MURCHISON O..
- OXY USA INC
- PARSLEY ENER..
- PERMIAN DEEP ..
- PETROGAS EN..
- PRIME OPERATI..
- PT PETROLEUM..



View of overall trends and highlight to compare operators

Completions Trends Over Time

Norm Completion Parameter Time Series, Norm 365 Day Oil/Lat Length (bbl/ft)



Year/quarter trends of stage spacing, proppant and fluid amounts, pumping rates and production over time.

How to Get Access

- FREE to Liberty customers
- Updated daily
- Tablet, phone, and desktop compatible

Questions? Please visit <https://www.libertyfrac.com/request-your-fraconomics-analysis/>