Texan Minerals and Chemicals

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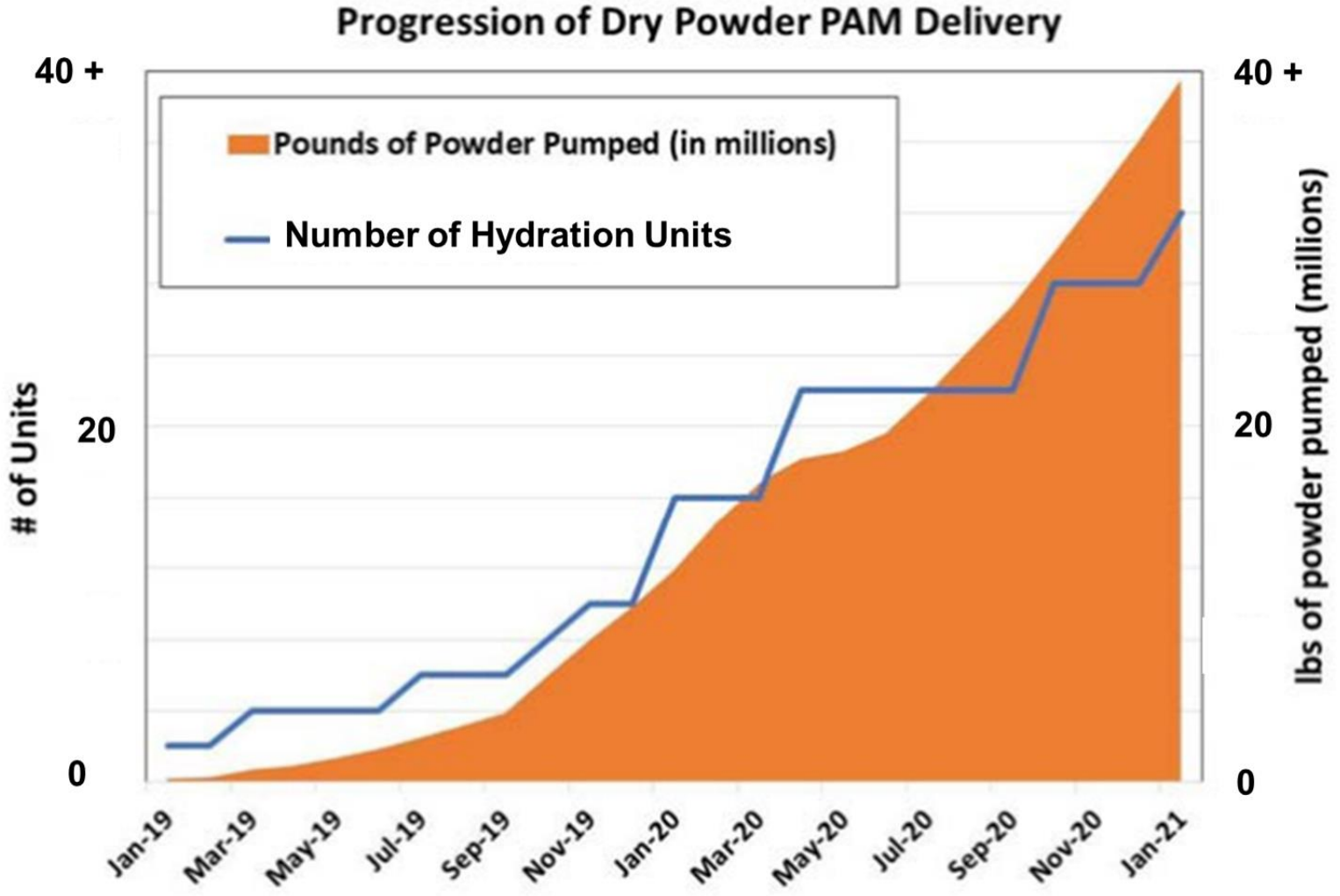
DRY POWDER HYDRATION UNIT

- A delivery method in which chemicals are added to water to decrease friction pressure and assist proppant delivery in hydraulic fracturing (fracking) operations.
- In traditional liquid emulsion FRs, only about 20-30% of the fluid content is active polymer. The emulsion combination of oil and water is strictly a carrier fluid that provides no benefit to the operation.
- A 100% active dry polymer at the fracture site reduces logistics and road hours, as well as increases the ESG benefits.



Rapid Growth of Dry Powder Delivery System Since Early 2019 (SPE Paper)

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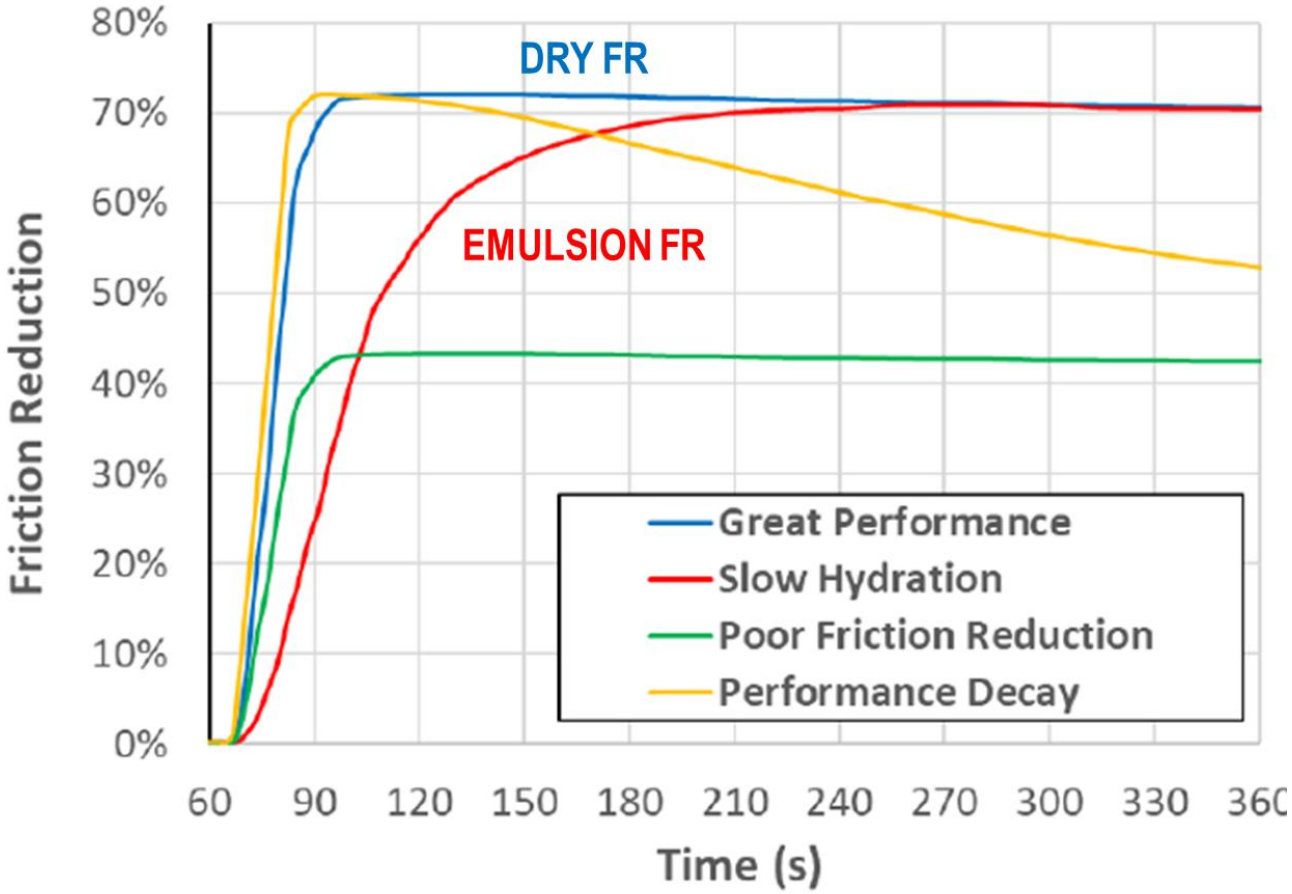
ENHANCED OPERATIONAL EFFICIENCY

- Dry FR (DFR) developed a maximum friction reduction of approximately 60% in 30 seconds. Liquid FR (LFR) produced equivalent friction reduction but took around 120 seconds to reach maximum reduction due to the time required for emulsion inversion and hydration of the polymer.
- Two minutes approximates requires during the operation when a polymer is added at the blender to when the perforations are reached out from the well casing.
- Exhibits superior friction reduction up to 75% which results in lower horsepower requirements.



Flow loop data comparison between LFR and DFR

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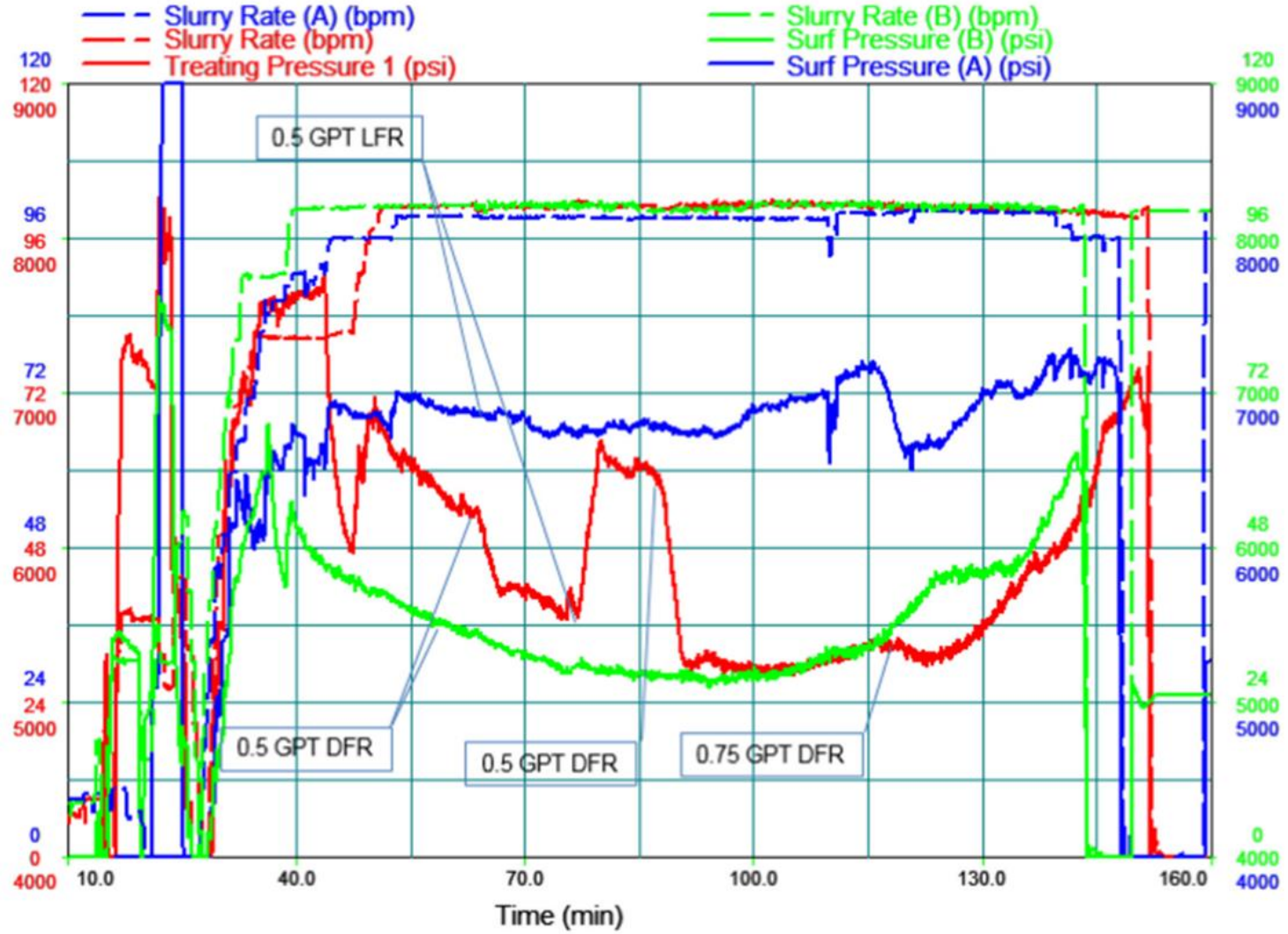
REAL TIME DESIGN CHANGE

- The hydrated polymer can lower treatment pressure by as much as 1,200 psi at equivalent loading when compared to LFR.
- Treatment pressures may be maintained below those possible with LFR by utilizing DFR at polymer loadings 40% less than LFR.



Pressure Profile Comparing LFR and DFR During Operation Pumping (SPE-179146 MS)

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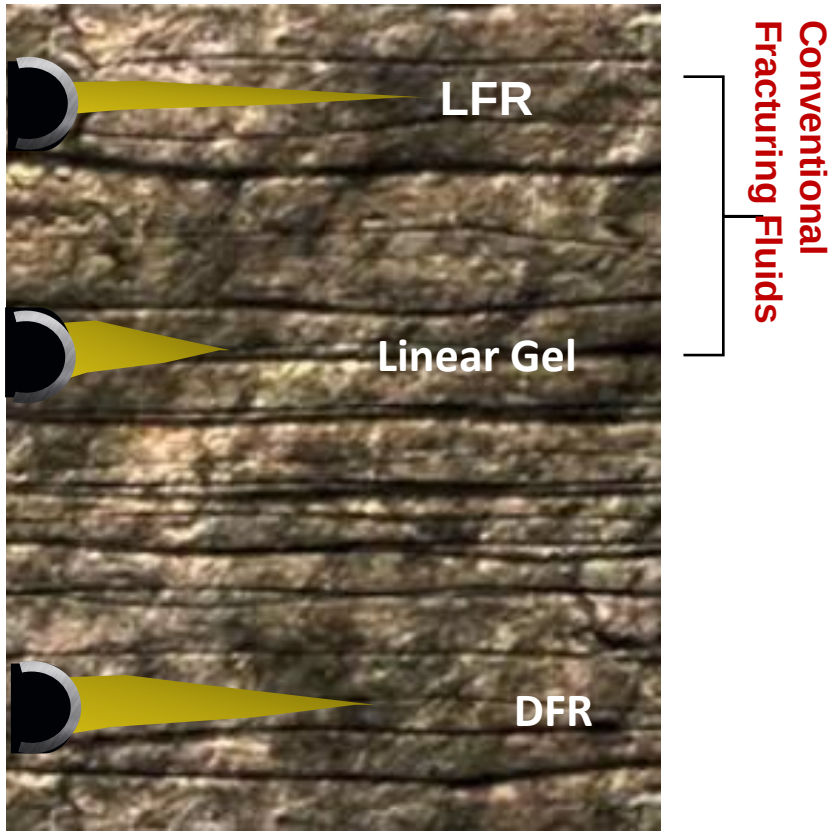
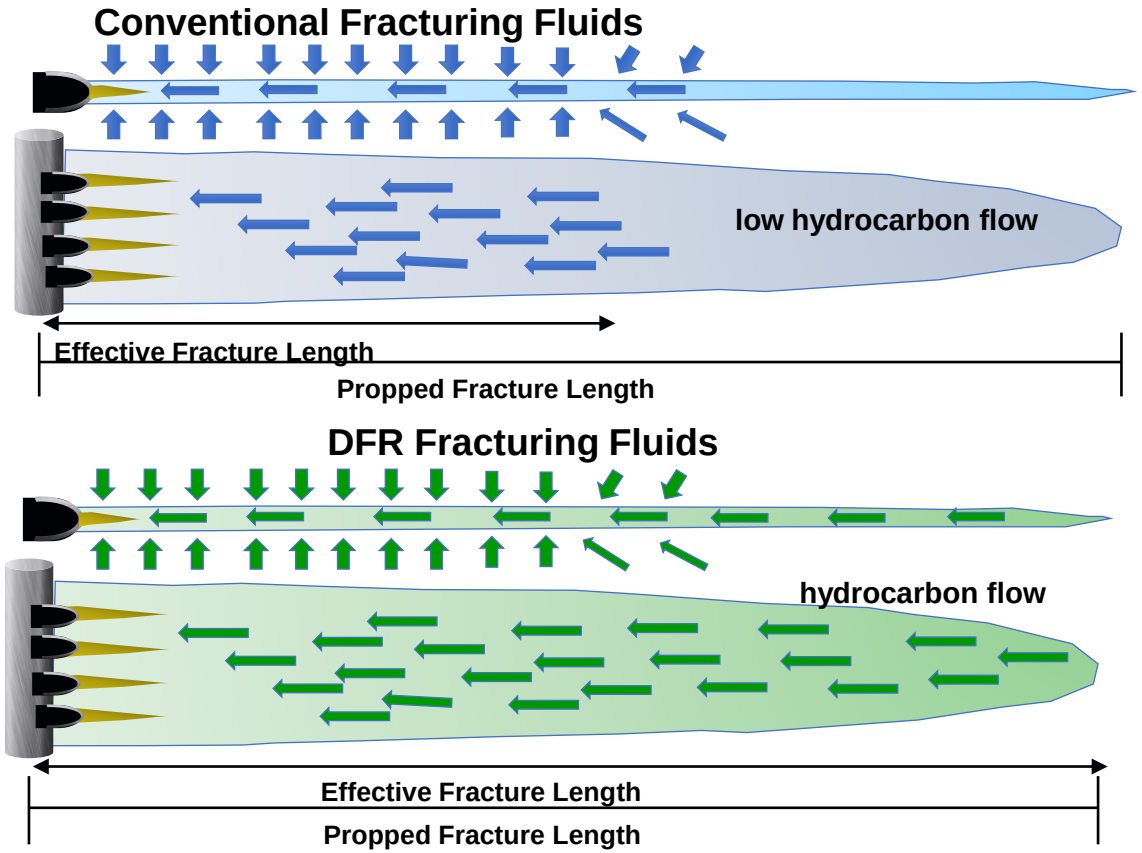
BETTER PERMEABILITY = BETTER PRODUCTION

- DFR provides a new option for placing high sand to water loadings which provides benefits and makes for simpler operations when compared with LFR systems. DFR provides almost 80% retained conductivity, less formation damage, and reduction in chemical cost, such as breakers.





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ADVANTAGES AND FEATURES

- From a cost savings perspective, reductions in material uses which typically comprise about 70% of the volume of material required on location.
- The primary mechanism for improved economics is related to operational efficiency.
- Pumping the slurry-based FR or Emulsion system, excessive viscosity of the fluid caused issues and downtime with the additive pumps used to deliver the slurry to the frac blending equipment.
- Regarding health, safety and environmental issues, the systems reduce chemical-related last-mile CO2 emissions by 73% and cuts the number of last mile trips to job sites by 76%.
- Simpler operations on the fly adjustments in FR concentrations and placing high proppant to water loadings which provides better well performance.

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PRODUCTS ARE STOCKED IN STAFFORD, TEXAS WAREHOUSE

709 Avenue E, Suite B,
Stafford, TX 77477

QUALITY PRODUCTS AT WHOLESALE PRICES

- READY GUAR ® 41/46 GUAR POWDER
- DPAM FR - FRESH, HIGH BRINE, AND CATIONIC
- XANTHAN - DISPERSIBLE AND NON-DISPERSIBLE
- XANTHAN ALTERNATE
- CALCIUM CHLORIDE

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WAREHOUSE NEAR WELLSITES

TRANSLOADING PRODUCT TO PNEUMATIC TRAILERS

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DRY POWDER HYDRATION UNIT

- PREPARING HYDRAULIC FRACTURING CHEMICALS POWDER AT A CENTRAL LOCATION WHICH CAN BE READILY TRANSPORTED TO AN OIL OR GAS WELL IN A FORMATION AT A WELL SITE.

DISCHARGE
POLYMER SOLUTION, MANIFOLD

SUCTION PUMP → HOPPER & MIXERS → FRAC VAN INTEGRATION

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DRY POWDER HYDRATION UNIT

HYDRATION UNIT SPECIFICATIONS FOR HYDRAULIC FRACTURING

DRY POLYMER POWDER FEED RATE:	2 - 60 LBS/MIN
MOTHER SOLUTION CONCENTRATION:	1.0 - 2.5 % “2.0 – 5.0 BBL/MIN”
DRY FR DOSAGE RANGE:	< 15 PPT (LBS DRY FR/1000 GALLONS FRAC FLUID)
DRY FR DOSAGE EQUIVALENCY TO EMULSION:	< 6 GPT (NEAT EMULSION FR/1000 GALLONS FRAC FLUID)
DPHU AND PNEUMATIC TRAILER DIMENSIONS:	35’ L × 8.5’ W × 13.5’ H, 45’ L × 120” W × 147” H
SELF POWER GENERATION :	120 KW

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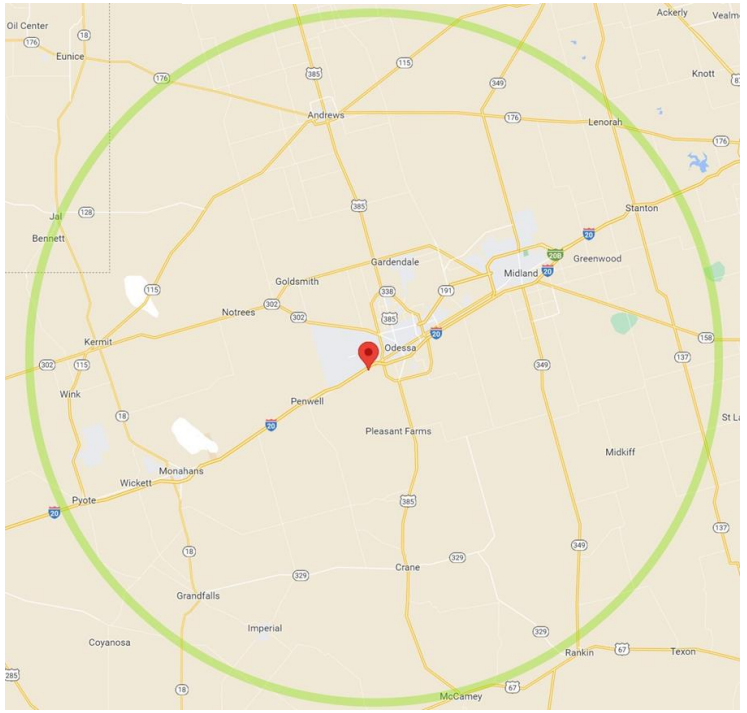
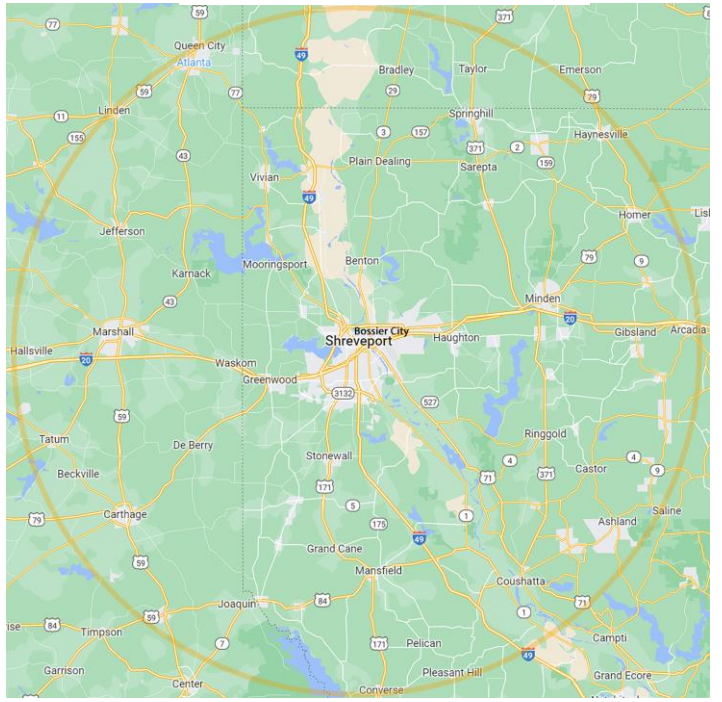
LOCATION OF THE WELLSITES

- SIX PNEUMATIC TRUCKS SHUTTLE FROM PNEUMATIC LOADING YARDS TO WELLSITES 50-75 MILE RADIUS FROM THE LOCATIONS
- TWO PNEUMATICS POSITIONED AT THE WELLSITE

ODESSA, TX



SHREVEPORT, LA



ALL TEXAN DELIVERY AND SERVICES ARE IMPLEMENTED WITH HIGHEST DEPENDABILITY FOR WELLSITE OPERATIONS

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PROMISE TO OUR CUSTOMERS ON SERVICE

- All key strokes and valve positions stored for 5 years.
- Solid state computer with internet connectivity for monitoring of operations
- Most dry add units working through E & P companies to meet their expectations on performance.
- 3 frac providers have dry add units – Halliburton, Liberty and Gore Nitrogen
- Texan promises to supply top tier service
- Texan promises to have back up Emulsion FR on location to mitigate any DAU NPT
- Texan promises to have well trained personnel on location
- Texan promises to use only equipment with extensive record