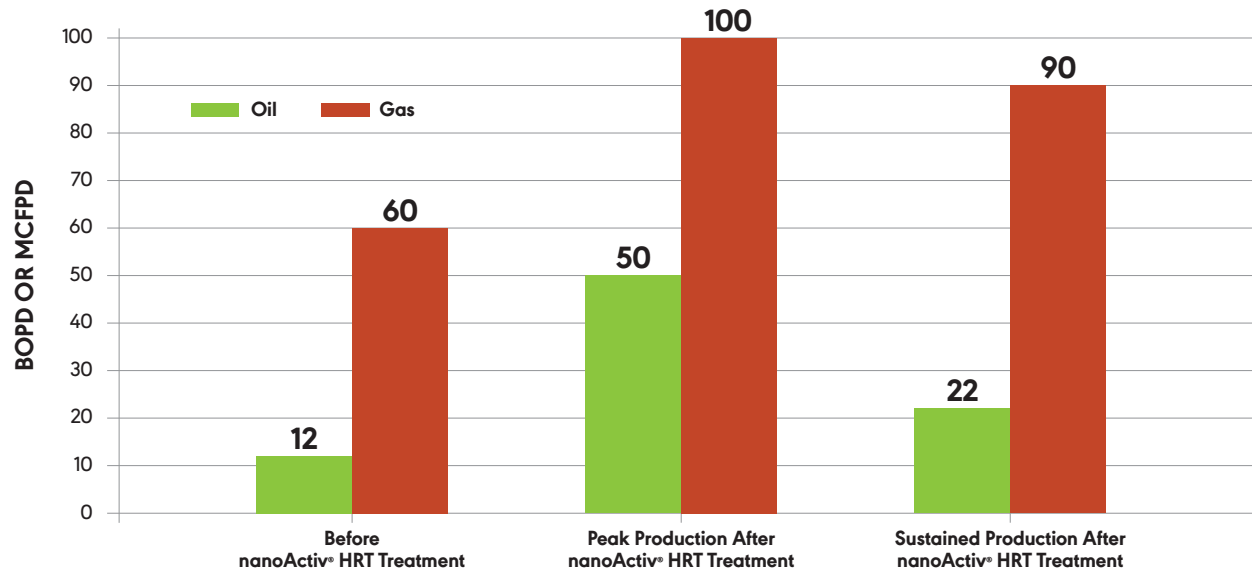


nanoActiv[®] HRT Unfrac'd Wolfcamp Well Production Treatment Results



ROI: Net incremental production paid for job in less than 60 days

Details

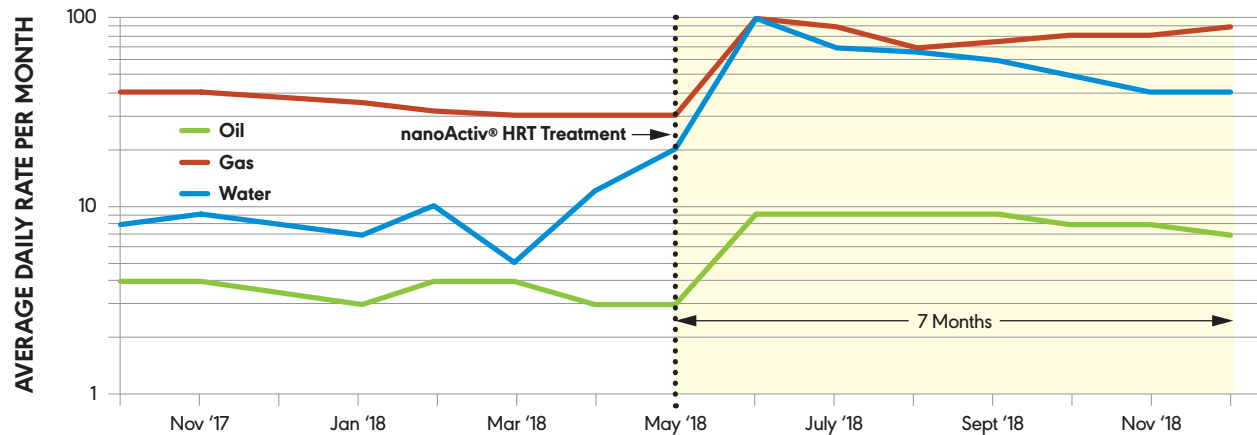
- Unfrac'd Wolfcamp reservoir—nanoActiv[®] HRT dispersed directly into the reservoir, disjoining/freeing up oil and gas
- Treatment was 1,500 gallons of nanoActiv[®] HRT—paid for in less than 60 days by increased production
- Production before treatment: 12 bopd and 60 mcf/d

- Peak production after treatment: 50 bopd and 100 mcf/d
- Sustained production after treatment: 22 bopd and 90 mcf/d

Conclusion

- This well continues to maintain higher production after 6 months
- The operator is currently evaluating other candidates for nanoActiv[®] HRT

nanoActiv® HRT Unfrac'd Wolfcamp Well Production Treatment Results



**ROI: Net additional production over 7 months
is more than 1,500 BOE (20:1) or \$61,000***

Well Information

- Permian Basin: drilled in 1959, completed into the Wolfcamp in 2006
- Well Type: vertical/unfrac'd
- Treatment: 1,500 gallons of nanoActiv® HRT in May 2018

Results Summary

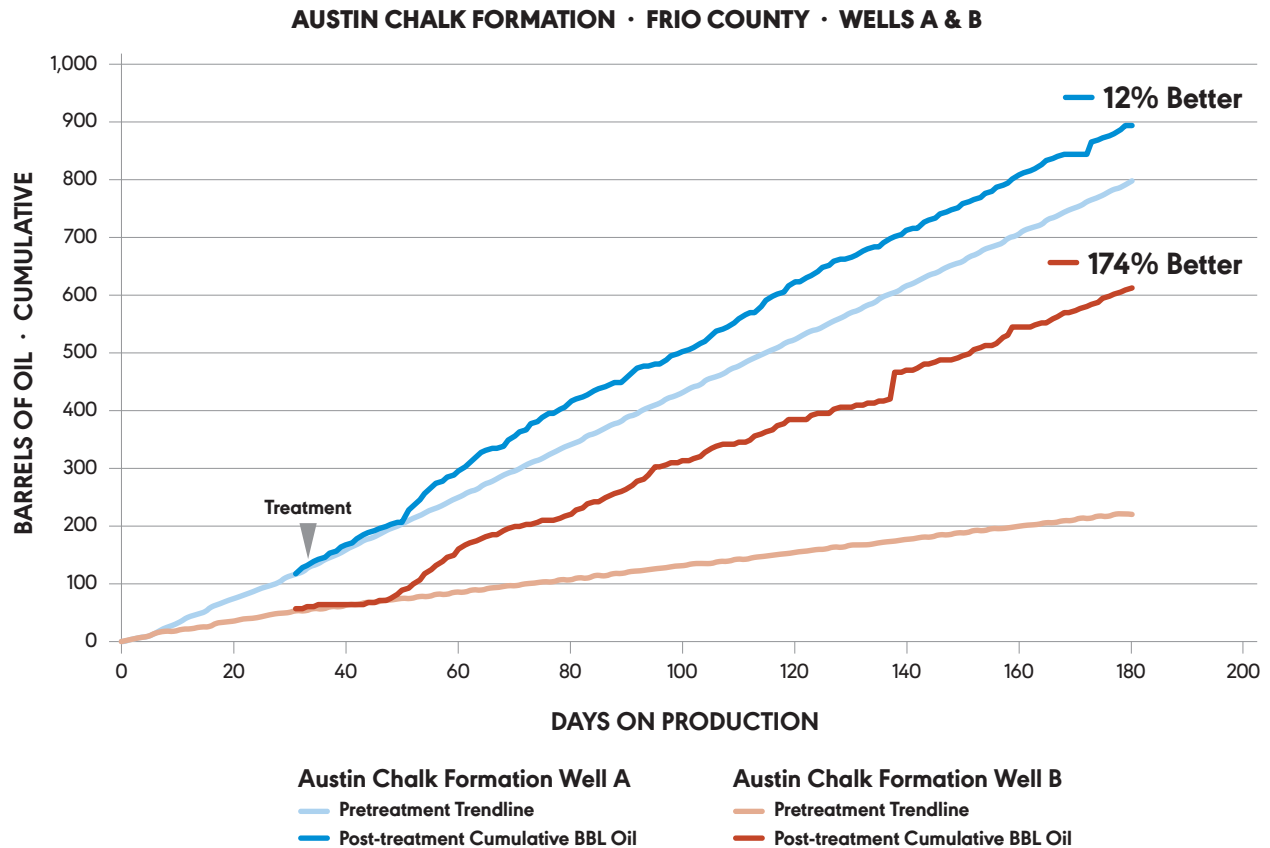
- Oil production stabilized around 9 bbl/d for the first 5 months after treatment and around 6 bbl/d after 7 months.
- Gas has fluctuated between 70-90 mcf/d on average post-treatment.
- Water production continuing to decline after initial spike.

*Estimated \$61,000 at \$40/bbl net to the operator.

Daily oil production has sustained at twice the production for 7 months post-treatment and counting.

	Avg BOPD	Avg MCF/D	Avg BW/D
Before Treatment	3	30	10
3 Months Post-Treatment	9	75	70
7 Months Post-Treatment	6	90	40

RECHARGE HNP™ · Oil Production



June–December 2017 data from two Austin Chalk and two Buda wells in Frio County, Texas. These wells were remediated using a RECHARGE HNP™ treatment where nanoActiv® HRT was injected into the reservoir and pushed further out by N₂ to allow even deeper penetration.

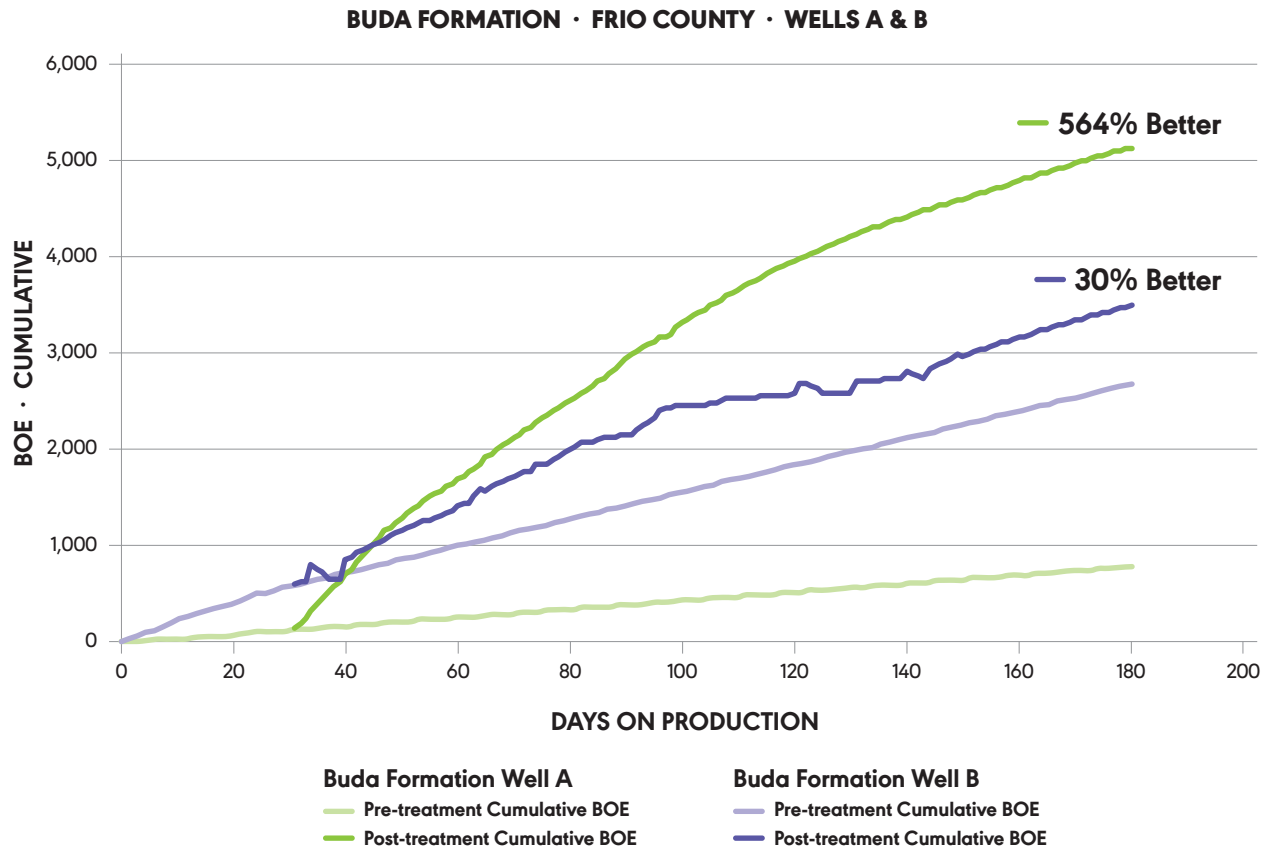
Austin Chalk Formation · Well A *(low dosage)*

RECHARGE HNP™ pre- and post-treatment comparison after 180 days of cumulative production. Cumulative oil production increased 12%.

Austin Chalk Formation · Well B *(high dosage)*

RECHARGE HNP™ pre- and post-treatment comparison after 180 days of cumulative production. Cumulative oil production increased 174%.

RECHARGE HNP™ · Gas Production



Buda Formation · Well A (high dosage)

RECHARGE HNP™ pre- and post-treatment comparison after 180 days of cumulative production. Cumulative gas production increased 564%.

Buda Formation · Well B (low dosage)

RECHARGE HNP™ pre- and post-treatment comparison after 180 days of cumulative production. Cumulative gas production increased 30%.

Numerous factors affect the performance of an oil well—the geology, the number and size of treatment stages, the choice of additives, etc. RECHARGE HNP™ treated wells have shown meaningful performance improvement versus comparative wells from the same operators. While no single technology or treatment can account for the entire performance of an oil well, the effects of RECHARGE HNP™ are significant and compelling.