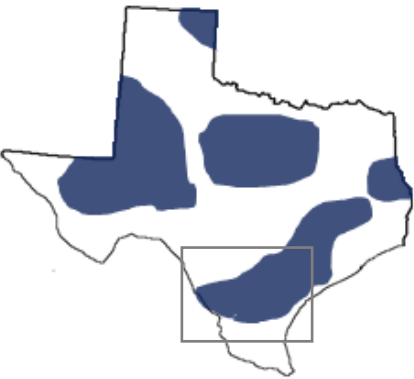


High Angle Reciprocating Pump (“HARP”) achieves 198% improvement in daily oil production



The High Angle Reciprocating Pump addresses the critical challenge of producing oil, water and gas in aging and deviated horizontal wells with declining fluid levels.



Backdrop

A private independent oil producer in South Texas desired to **improve oil production** and **pump from a highly deviated position** in an aging horizontal well. Customer partner’s historic data for the 7 months preceding the well intervention showed daily average production of 3.87 barrels of oil, 9.92 barrels of water and 29.7 thousand cubic feet of gas. The customer partner has numerous deviated horizontal wells in the Austin Chalk formation for which standard API pumps are increasingly unable to meet production goals. Growing production while utilizing existing beam units and delaying or eliminating future requirements for plugging and abandonment of wells were primary goals for this independent oil producer.

Solution

The customer utilized the HARP to produce fluid from a high angle far below the kick-off point, while both increasing pump efficiency and reducing beam unit speed.

Customer Production Data		
	<u>Oil</u>	<u>Gas</u>
Conventional Pump	3.87 bbls/day	29.7 mcf/day
HARP	11.54 bbls/day	34.9 mcf/day
Improvement:	198% GAIN	17.5% gain

Results

Utilizing a HARP, the customer increased oil and gas production, improved pump efficiency and decreased the beam unit speed. Production data is displayed for 4.5 months post-installation. The well continues to operate as of the publication date and the customer subsequently installed 5 more HARP systems.

Leading Edge Lift Technology for the Life of the Well