



# SILVER BULLET™

## DESIGNED BY THE LEADERS IN SEPARATION TECHNOLOGY

With today's highly dynamic unconventional wells, gas separation is essential after the conversion from ESP to rod lift. Let The SILVER BULLET from WellWorx Energy lead the way to higher production levels. Combining the efficiency of the industry's leading packer-style gas separator and the new innovative technology of the bypass tubes from the ESP Gas ByPass, the SILVER BULLET maximizes gas separation by providing two pathways for separation to occur naturally.

## LESS DOWNTIME GIVES YOU MORE

Utilizing The SILVER BULLET increases total production by ensuring the pump is full and reducing the time the well spends idle. Additionally, decreasing the number of gas interference events helps reduce failure and increase the life of downhole equipment. Less gas interference in the pump leads to longer run times, more consistent pump fillage and ultimately more revenue. In testing The SILVER BULLET, separation efficiencies were increased by 45 percent compared to other technologies on the market. The SILVER BULLET is an innovative system which improves on the traditional packer-style systems. This new technology was first applied to ESP applications and allows the free gas interface

below the dual HNBR packer cups to be exhausted out into casing 70 to 90 feet above the BHA system via an isolated path through the packer ID and a 3/4" bypass tube. Since this system allows free gas to travel past the packer, the fluid intake of the system can be laid at a 45-degree angle, allowing for an additional natural gas bypass of approximately 25 percent.

## HOW IT WORKS

Beneath the packer, a two-phase system naturally develops as the gas rises out of the fluid. The gas column is then channeled through the bypass tubing of The SILVER BULLET and discharged above the slots of the MAX and encouraged to flow freely up the annulus. In addition to free gas being bypassed from below the packer, the original gas separation properties of the packer-style system still apply. The fluid column travels through a desander, where the solids are separated and discharged below the point of fluid intake. Clean fluid moves up through the desander, through the ID of the packer and into the MAX. Fluid and entrained gas then travel 40 feet upwards toward the top of the MAX. Fluid velocity is slowed as the fluid and gas pour into the casing annulus for gas to take the path of least resistance and travel up casing away from the pump intake, while fluid flows back down the casing annulus to the diptube intake. Fluid then enters the 3/4" inch dip tube before traveling up 40 feet to the pump intake.



# HOW IT WORX

- 1** Fluid enters at intake. This can be a HELIX Sand ByPass or a slotted sub. Fluid is forced downward. Solids settle in bull plugged mud joints. Clean, solid-free fluid now works its way up through the ID of the diptube, through the ID of the dual-cup packer assembly and discharges out of the top slots of the MAX Gas Separator where a fluid level begins building. This fluid level enters the diptube intake above the MAX directly on top of the packer where fluid enters the pump.
- 2** While the well is producing, a gas interface is building below the dual-cup packer (set above KOP). This free gas enters the Gas ByPass Port and then is transferred to the stainless-steel bypass tube, which is banded to the MAX assembly.
- 3** The bypass tube terminates into the "Gas Discharge" portion of the tool through a ball and seat guarded port, completing the path for free gas to flow from below the packer to above the entire bottom hole assembly to freely rise up casing.

## WELLWORX

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**Questions?** Please call us at 432.701.5715  
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