

## Cost and Time Savings Possible when Using Shear-able Gas Lift Orifice and IPO Unloading Valves

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### Abstract

Many gas lifted wells are completed with dummy valves in the Side Pocket Mandrels (SPMs). This is to facilitate annulus pressure testing after packer setting.

If the gas lift facilities are not commissioned at the time the wells are initially connected to the production facilities, the wells are sometimes kicked off using coil tubing N2 lift.

Once the gas lift facilities are commissioned, a series of wireline interventions will be carried out to replace the dummy valves with IPO unloading and operating gas lift valves.

This white paper describes an alternative solution, using tubing pressure shear-able IPO unloading and orifice gas lift valves.

These can eliminate the need for well interventions to change the out dummy valve and for coil tubing N2 lift operations. Resulting in significant operational cost and time savings.

### Opportunities to Reduce Well Interventions and Costs

Wireline interventions to remove dummy valves and replace them with gas lift valves are notoriously challenging, especially in potentially scaly, deviated wells.

If however, shear-able gas lift orifice and IPO valves were installed with the initial completion, these well intervention challenges and costs would be eliminated. This would:

- Eliminate the need for 1 – 2 days (assuming problem free operations) wireline equipment and crew costs
- Accelerate production start up by 1 – 2 days
- Eliminate the need to buy dummy valves.

As a result, even assuming the wireline operations were not problematic, for each well the potential exists to make cost savings significantly in excess of the incremental cost of purchasing shear-able valves.

In cases where the gas lift facilities are not yet commissioned, N2 can be injected via the annulus (instead of lift gas) for initial kick off and lazy well restart operations. This offers the additional opportunity to save the cost of coil tubing N2 lift operations.

### Tubing Shearable Gas Lift Operating and IPO Valves

The PTC Shearlift-T Tubing Shearable Gas Lift Operating and IPO valves are an evolution of PTC's field proven barrier rated SafeLift valve designs.

The valve initially performs as a dummy valve, allowing testing of annulus and tubing during completion installation operations.

The valve is opened by the application of tubing pressure. The system design is such that multiple valves in the completion string can be sheared open in one pressure cycle.



Thereafter the valves operate as standard GLV / IPO.