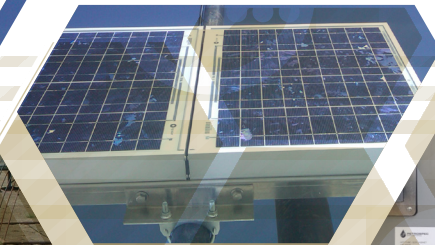


# **POWER-TUBE™**

## COILED TUBING ESP DEPLOYMENT



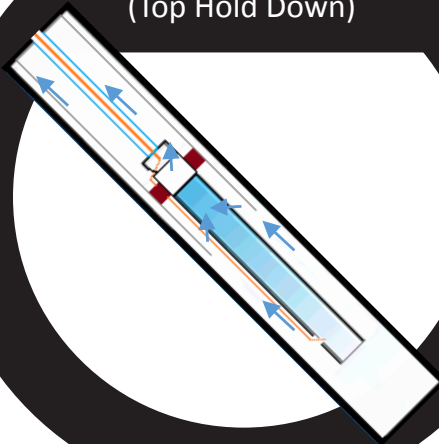
**PETROSPEC**  
ENGINEERING

# Power-Tube™ ESP

Patented Technology

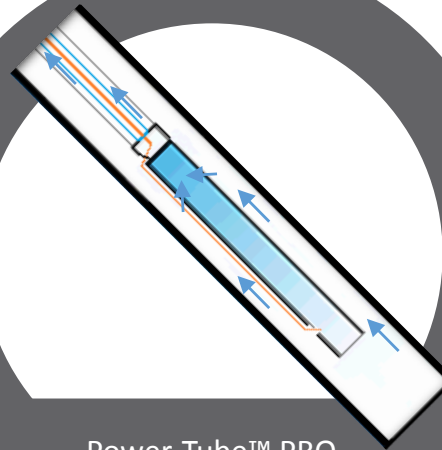
Rapid + Rigless + Live = Cost Effective and Safe  
ESP Completions

Power-Tube™ THD  
(Top Hold Down)



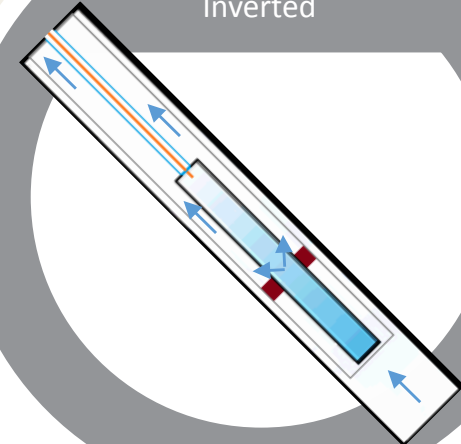
- \*Thru tubing Completion
- \*Standard ESP Configuration

Power-Tube™ PRO



- \*Replaces Production Tubing
- \*Standard ESP Configuration

Power-Tube™ Inverted



- \*Thru Tubing Completion
- \*Inverted ESP Configuration
- \*External Lubrication
- \*Superior Motor Cooling
- \*MLE Eliminated

# Value Proposition

Immediate ESP change minimizes cost, maximizes productivity, and prolongs equipment life

## CHALLENGE

## POWER-TUBE™ SOLUTION

### Expensive and Inefficient Rig Operations

All Power-Tube™ configurations are deployed on coiled tubing and DO NOT require a workover rig.

### Deferred Production

Power-Tube™ deployment is rapid and rigless, no dependency on rig availability.

### Damage to cable

Elimination all chances of mechanical damage to cable, chemical or gas pressure damage, as well as risks associated with cable detachment, cable pile up and loss of clamps or bands in the well.

### Killing the Well

All Power-Tube™ configurations can be deployed under live well conditions; no need to kill the well.



# Power-Tube™ ESP Completion Options

No wet connect

Superior ESP cable protection

## Power-Tube™ THD (Top Hold Down)

Components of the ESP assembly are run in the conventional configuration. This system may be run as a through tubing completion or as a through casing completion. Either way, isolation between pump intake and pump discharge is achieved through the use of a pump seating nipple and hold down tool or through the use of a packer.

## Power-Tube™ PRO

This system is a conventional through casing ESP completion with integrated annular coiled tubing production path. A Power-Tube™ ESP power cable string is installed inside a larger diameter coiled tubing string. The annular path between the two coiled tubing strings becomes the production path.

## Power-Tube™ Inverted

Components of the ESP string are inverted relative to the way in which they are conventionally deployed. This system may be run as a through tubing completion or a through casing completion and intake and discharge may be isolated through the use of a pump seating nipple and hold down tool or through the use of a packer. A positively pressured external lubrication system may be optionally added.

# Success Story - Alaska

- Challenging remote operations
- ESP installed and operational in 3 shifts
- Live well operation
- Eliminated massive rig mobilization cost
- High profile well was brought back online with minimal deferred production





# Total Solution – Continual Support



Petrospec Engineering provides complete turn-key systems from designing, manufacturing, and installation, to final system commissioning data management and software tools. The breadth of products, full range of installation options, and ongoing customer support has made Petrospec the preferred source when seamless implementation of high temperature reservoir monitoring is desired. System installations are completed with a full system performance assessment and detailed commissioning report.

**We offer 24/7 technical support and can mobilize field service personnel on demand.**

# For more information please contact:

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