

CASE STUDY

OBJECTIVE

Decrease operating costs by installing Jet Pump.
Customer replaced 6 ESPs in a 4 year period.

RESULTS

Seven months after installing JJ Tech Jet Pump, no workover rig has been needed, and well remains as productive as it was on ESP.



Decrease operating costs by replacing ESP with Hydraulic Jet Pump



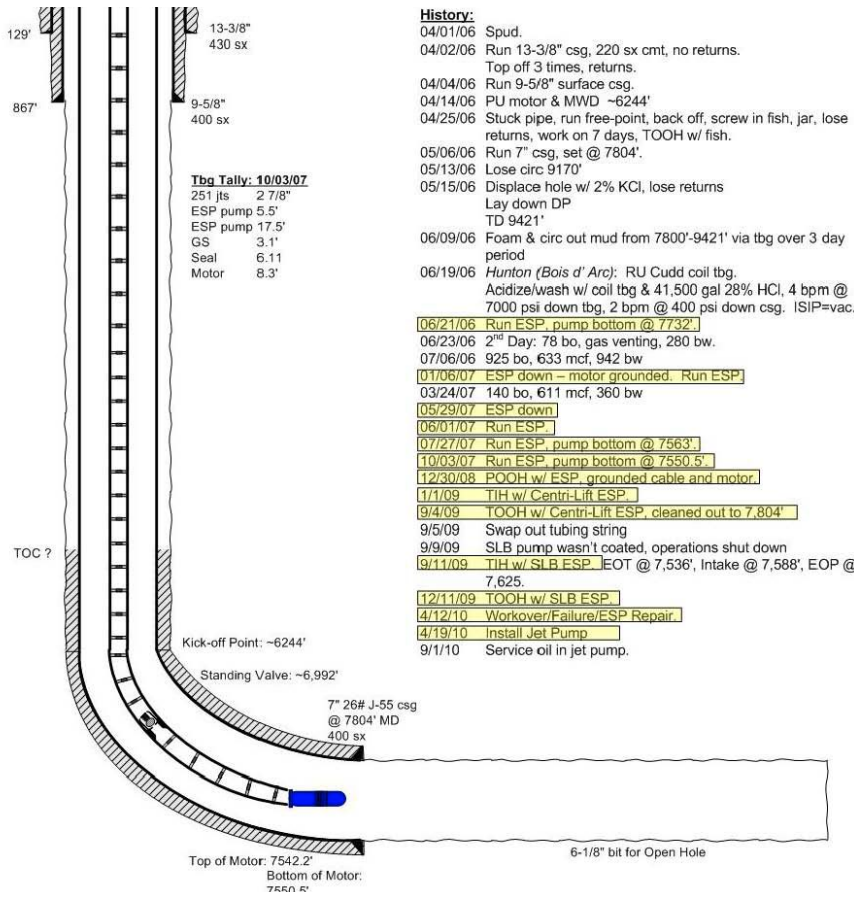
ADVANTAGES OF JET PUMP VS. ELECTRIC SUBMERSIBLE PUMP

- Can produce moderate to high volumes of solids
- Has no moving parts down-hole
- Can produce high volumes of oil
- Software can calculate PBHP based on production volumes

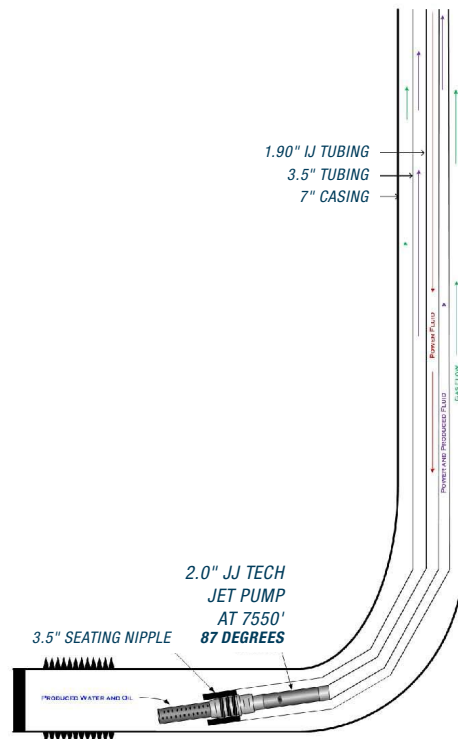
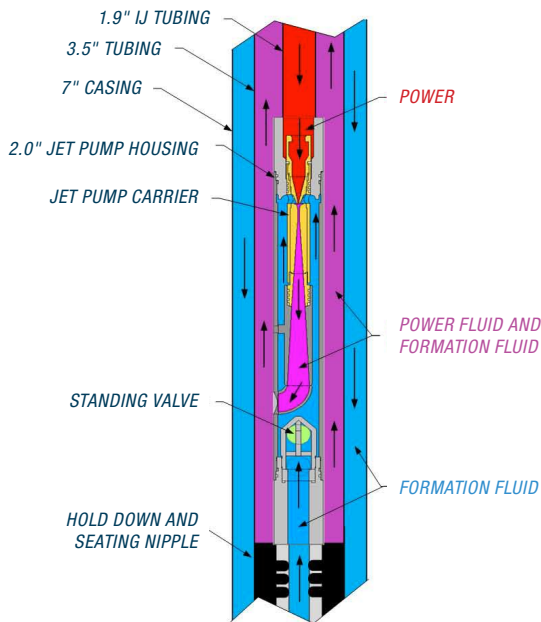
JJ Tech

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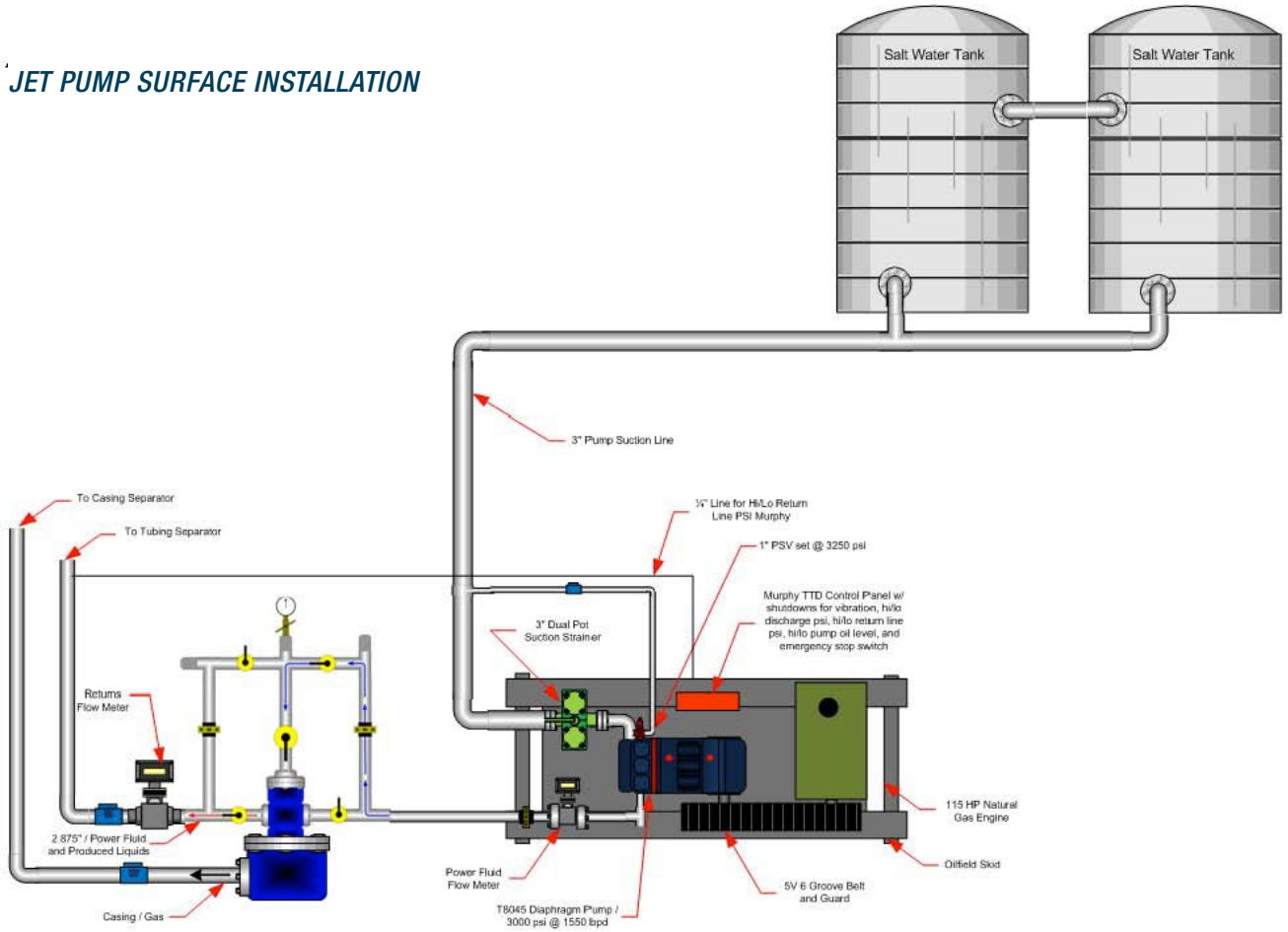
CUSTOMER PROVIDED SCHEMATIC | Highlighted ESP Failures



HOW IT WORKS



JET PUMP SURFACE INSTALLATION



T8045 NATURAL GAS SKID | 2.0 JET PUMP | NORTH OKLAHOMA OIL & GAS WELL



SOFTWARE ANALYSIS

Input Data

COMPANY:	LEASE:
WELL IDENTIFICATION:	REPRESENTATIVE:.....CBL
PUMP DEPTH:.....6975Feet	TUBING LENGTH TO PUMP:.....7550Feet
TUBING ID:.....1.61Inches	TUBING OD:2.0Inches
CASING ID.:2.992Inches	POWER FLUID:.....Water
BH TEMP:.....155Deg F	FLOWING WH TEMP:.....90Deg F
GAS LIQ. RATIO:.....20SCF/BBL	DE SIGN LIQ. PROD. RATE:.....80BBL/DAY
PROD. RETURN:.....Annulus	PRODUCED OIL GRAVITY:.....42API
PROD. WATER GRAV: (Sp.Gr.):.....1.13	PRODUCED GAS GRAVITY:.....0.79
WAT. FRAC.: (50% = 0.50):.....0.45	SURFACE HYD. PRESS.:.....4500psig
PUMPING BHP:.....100psig	FLOWING WH PRESS.:.....70psig
Date: 11 - February - 2010	

Computed Output Data - English Units

Pump Size	Power Pres s psig	Power Fluid Rate bblpd	Horse Power	Non-Cav Rate bblpd	Prod. Rate bblpd	Pumping Bot-hole psig	Nozzle Area inches	Throat Area inches
B:2	2048	817	31	92	80	100	.0095	.0189

FLUID LEVEL SHOT Shows 95.4 PSI Pump Intake Pressure

