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## DOWNHOLE TO DESKTOP DATA ACQUISITION, ANALYSIS & CONTROL

In addition to downhole sensors, Zenith offer a full range of services related to the interpretation and analysis of data gained from the wellsite.



**ZTRENDZ**  
MORE OUTPUT  LESS INPUT

Zenith's data management suite, Z-Trendz™, takes operator efficiency to the next level. Automated, real-time trending, diagnosis and control at the wellsite not only enables optimisation of production levels and pump runlife, but also of your own work-flow.

## DOWNHOLE TO DESKTOP DATA ANALYSIS & INTERPRETATION

Monitoring your artificial lift system provides the means to ensure optimised production and protection against well conditions. Achieving these objectives requires the ability and experience to interpret your data and react to the circumstances.

Zenith's Z-Trendz Data Management Suite provides the tools to store, trend, analyse, validate and diagnose the operational data for your artificially lifted well.

The software includes an ESP design module which, when used in conjunction with the well data validation tools, will provide a fit-for-purpose design matched to the actual well performance.



### ZTRENDZ BENEFITS

Improved productivity from your artificially lifted well through...

- » PVT validation
- » Surface and downhole flow rate validation
- » Watercut validation
- » Bottom hole flowing pressure validation
- » Static bottom hole pressure validation
- » Productivity index validation
- » IPR curve operating point
- » Accurate pump operating point
- » Accurate well performance indicators
- » Trend analysis

Delivers...

- » Improved runlife
- » Improved production
- » Enhanced knowledge of pump operating conditions
- » Enhanced knowledge of well performance

Intuitive, easy-to-use interface

Technical support and training courses available

Independently developed by industry experts

Calculation procedures developed & tested over 7-year period in 30+ fields

### ZTRENDZ FEATURES

Intelligent data entry check minimises user error ensuring accurate results

Flexible unit system on all data screens and plots

Progressive messaging/warning system; wizard-style...

- » Minimum for experienced users
- » Queries as default
- » Guided for new users
- » Maximum for warnings at every wrong step

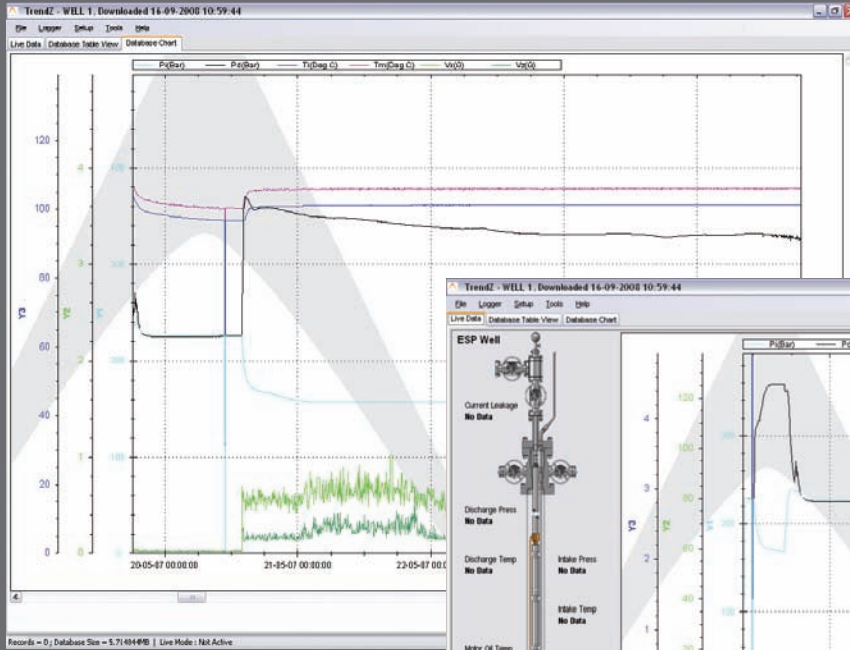
All calculation details displayed in plots & tables — nothing hidden from user aiding understanding

Standard auto report templates & easy-to-design custom reports printable from any PC

Only nodal analysis/ESP diagnosis/ESP design software to run on pocket PC

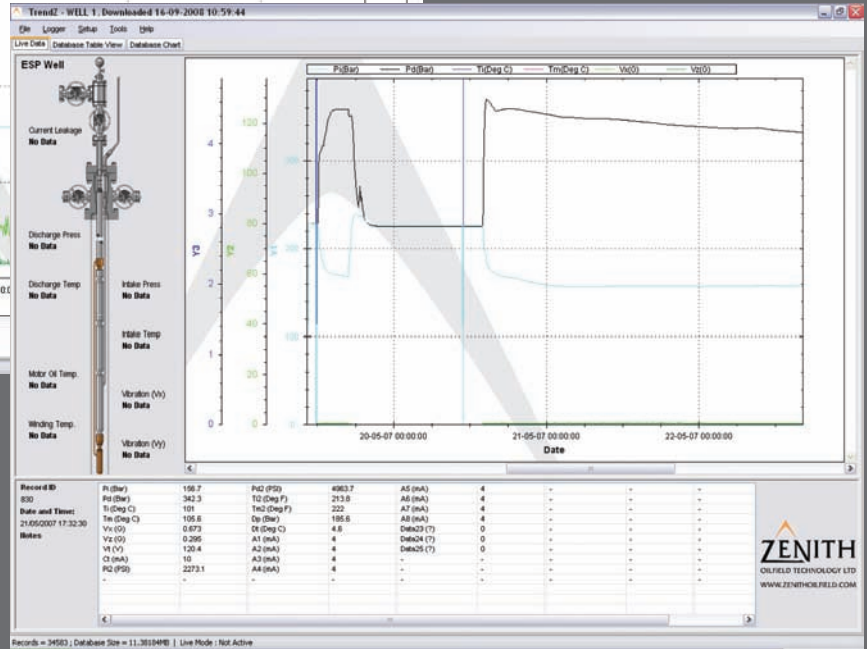
Pocket PC files interchangeable with PC version — wellsite files can be sent to office for review

# ZTRENDZ DATA MANAGEMENT



- Live trending
- Historical trending
- Snap shot analysis
- Direct transfer of data
- Works with all wellsite data

Records = 0 | Database Size = 5.71494MB | Live Mode: Not Active



Records = 34503 | Database Size = 11.36104MB | Live Mode: Not Active



“ Z-Trendz will manage and trend any wellsite data including downhole gauge data, surface parameters, electrical parameters and well test data. ”

“ Intelligent data entry checking empowers users with full control of individual well parameters, enabling scenario analysis to highlight production optimisation opportunities within your well and equipment limitations. ”

## PVT check

- » Use accurate data to perform your analyses

## Well inflow and outflow analysis

Confirm surface & downhole flow rates

Calculate bottom hole flowing pressure

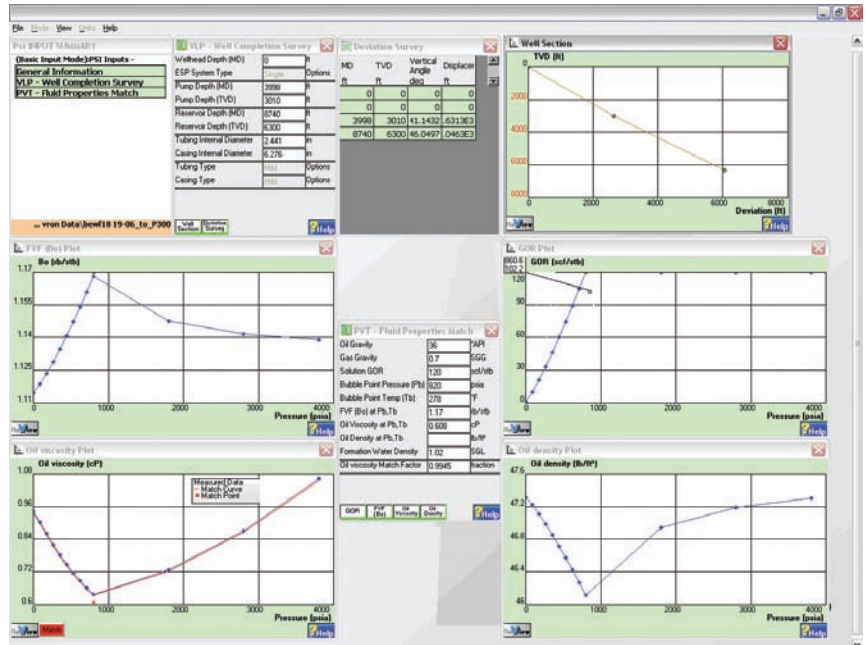
Confirm fluid properties

- » Watercut / GOR

Validate PI

Analyse pump performance

Automated data entry error checking



## ONLINE DATA ANALYSIS

Zenith also offer our online data analysis service where established techniques of diagnosing artificial lift production data are utilised and accessed simply by filling in our online form, collating all necessary information to enable a thorough diagnosis of your pump and well performance.

For a nominal fee the service delivers a full diagnosis report including PVT validation, inflow performance validation, well test validation as well as pump operating point assessment.

With the Z-Trendz Data Management Suite, used in the online analysis service, available to customers, exchange of data files following the analysis is made simple. This enables full interaction throughout the diagnosis process alongside the final report delivery.

Visit [www.zenithoilfield.com](http://www.zenithoilfield.com) for your user name and password.

## DATA TRAINING

“ Zenith provides client training workshops ensuring understanding and effective use of your data. ”

3-day course covers in-depth training on:

- » Z-Trendz Data Management Suite
- » Use of pressure gradient techniques to analyse pump & well performance
- » Data validation
- » Pump operation
- » Problem diagnosis

# TRENDZ DATA DIAGNOSIS

Check for lift problems such as...

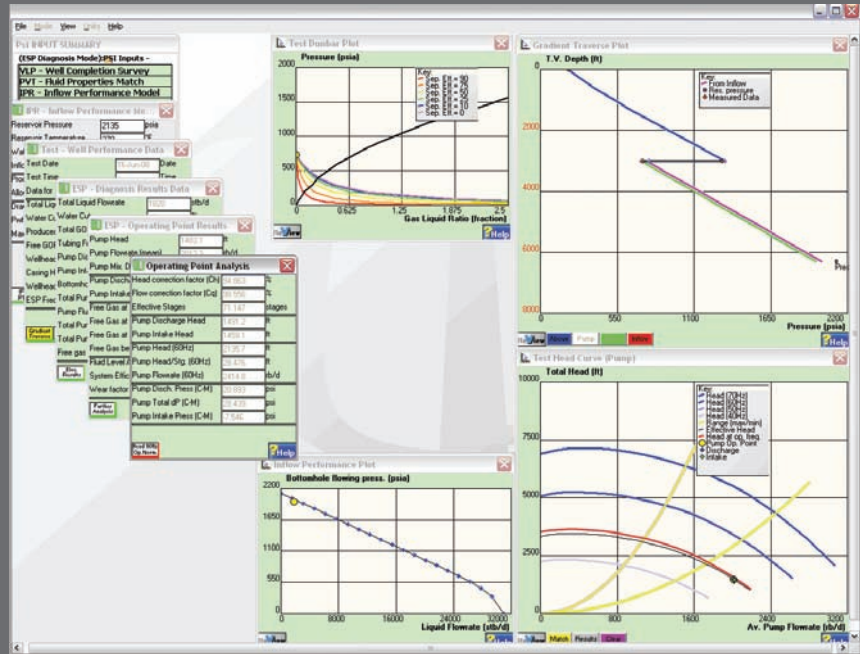
- » Tubing leaks
- » Worn pumps
- » Blocked pumps
- » Broken shafts
- » Other common lift problems

Check for well related phenomenon...

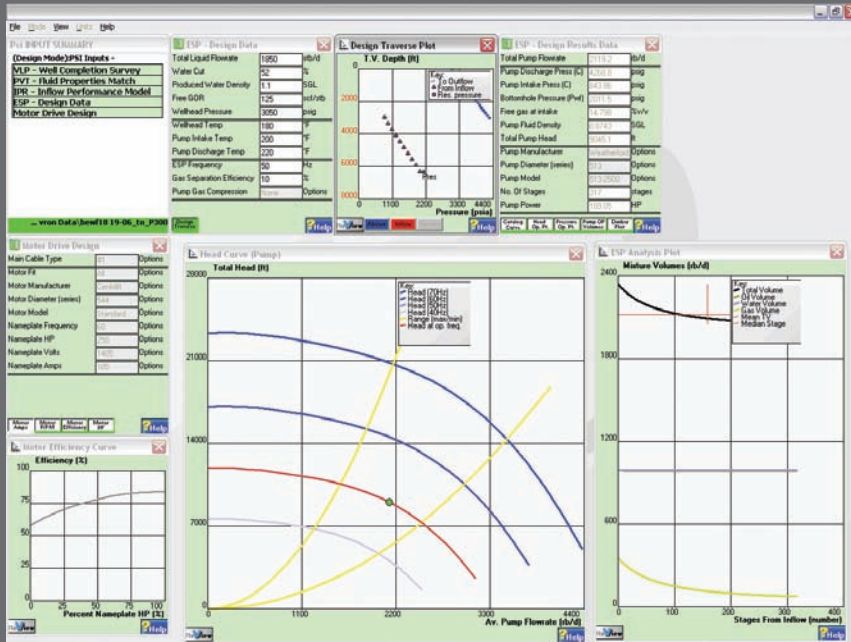
- » Reduction of inflow
- » Increased watercut
- » Gas volumes through the pump
- » Critical drawdown levels
- » Other well related phenomenon

Heat and flow deprecation calculations

Automatic report generation



# TRENDZ ESP DESIGN



Utilise validated well information to ensure an accurately sized ESP design

Includes facility to add pump and motor curves for custom or new equipment

