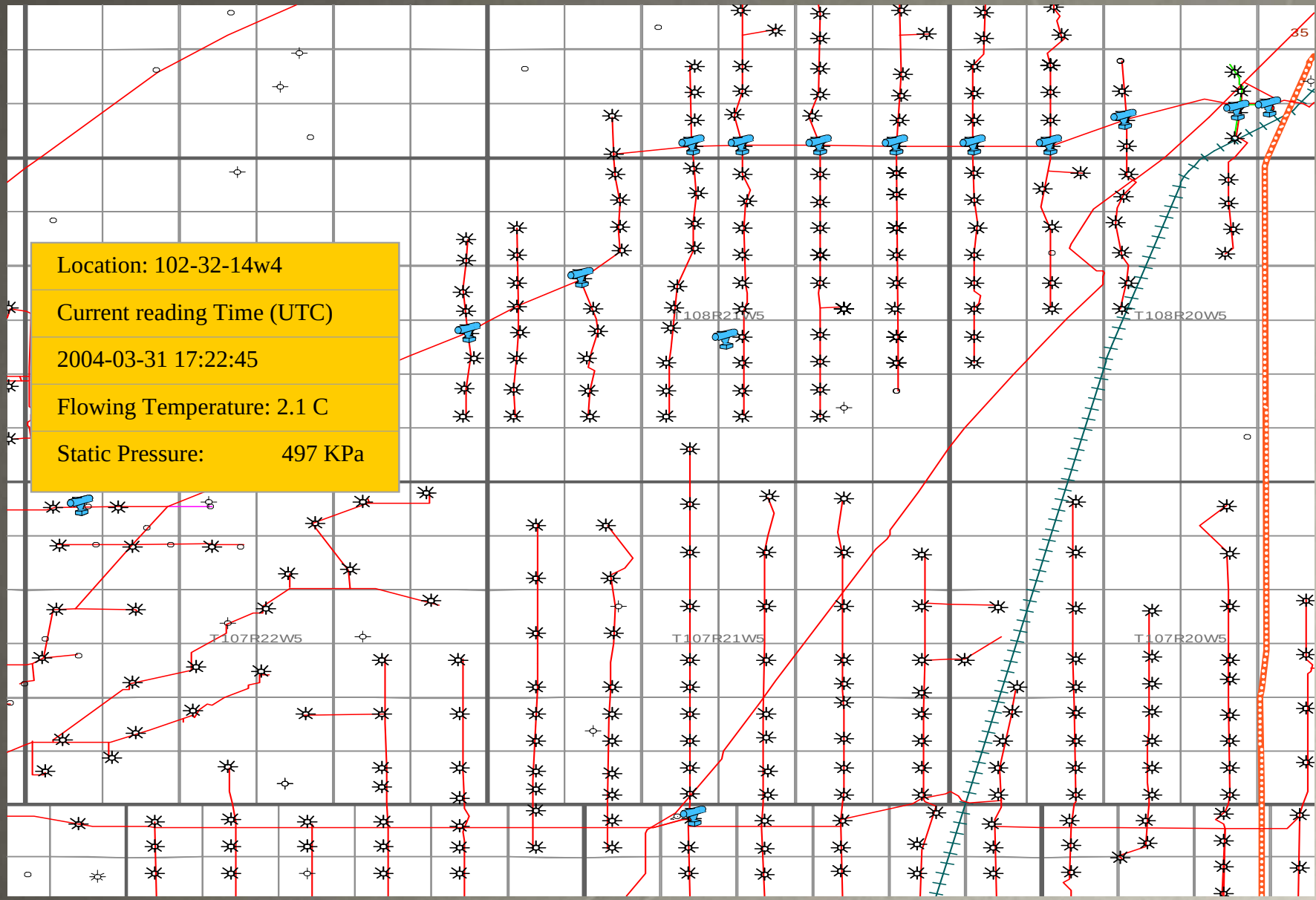
Shallow Gas Monitoring with Smart-Alek

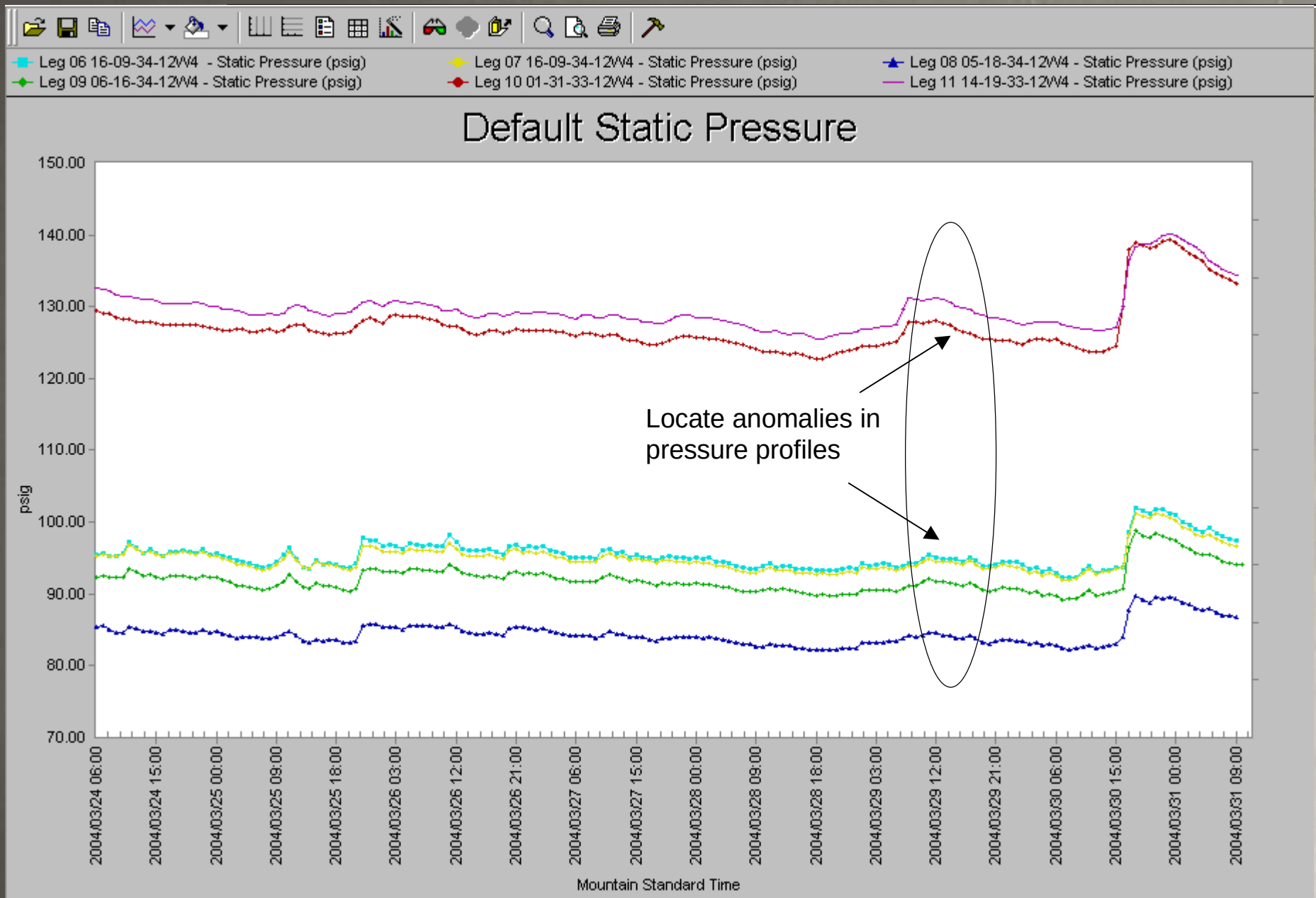
- No meter run required
- Locate freeze-offs faster
- Cost effective pipeline profiles
- Accurate time synchronization for effective analysis
- Fast Deployment

zed.i solutions

Shallow Gas Monitoring with Smart-Alek



Shallow Gas Monitoring with Smart-Alek



Elliptical Tube – Orifice Meter Replacement

zed.i solutions

Orifice Meter Problems

- Physical design restricts flow
- Wear and tear results in measurement inaccuracies
- Multiple plates needed for wide range of pressure
- Flow conditioning increases size and cost of skids

zed.i solutions

Benefits of the Elliptical Tube

- Maximizes throughput
- Virtually eliminates wear and tear
- Accurate over a wide range of pressures
- Flow conditioning not required
- Increases revenues, reduces costs

zed.i solutions

Maximizes Throughput

- Streamlined flow- Little energy loss = $
- Field trial – 10 to 15% volume increase over orifice plate on low productivity wells
- Field Trial - 10% increase over V-cone on low productivity wells
- Field trials underway to quantify benefits on higher productivity wells

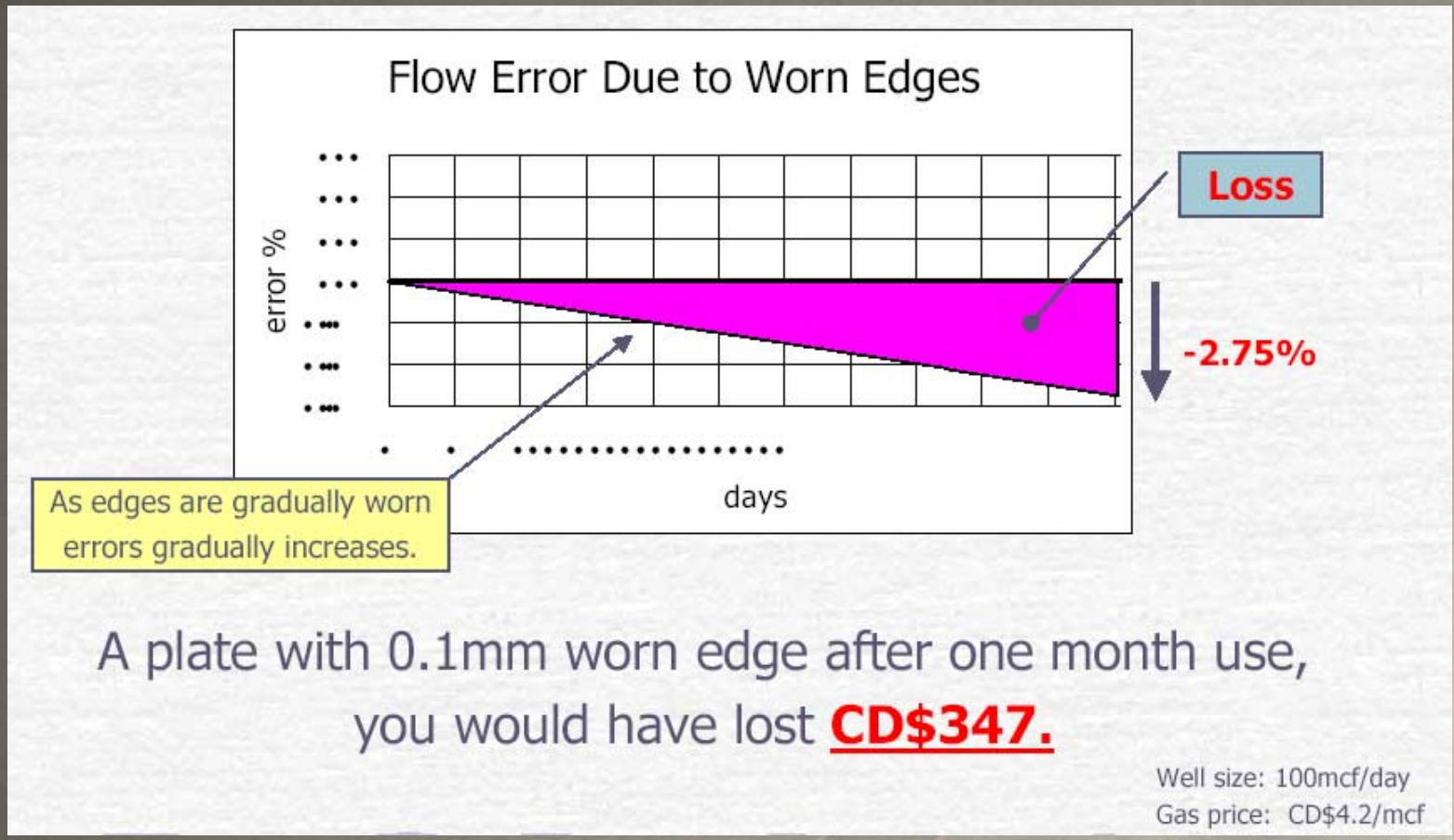
zed.i solutions

Eliminates Wear and Tear

- Sustained accuracy = $
- No moving parts
- Stainless steel
- Not impacted by dust or liquids
- Proven accurate in slurries

zed.i solutions

Orifice Impacts Profit



A plate with 0.1mm worn edge after one month use, you would have lost **CD$347.**

Well size: 100mcf/day
Gas price: CD$4.2/mcf

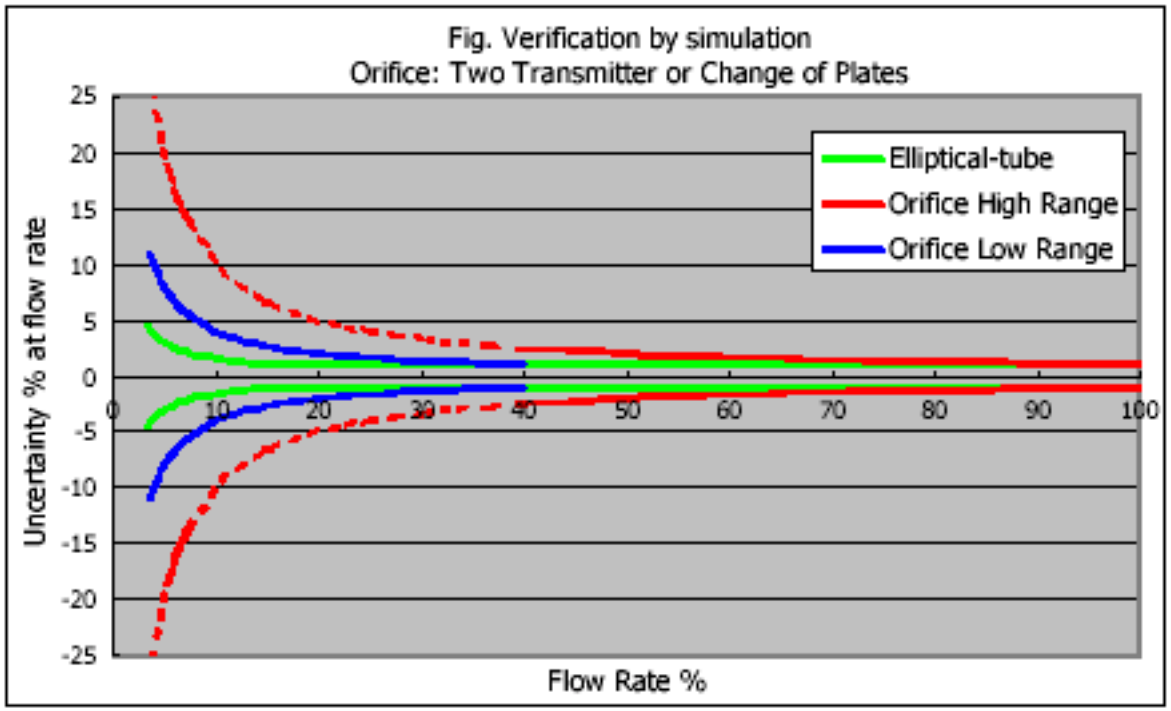
zed.i solutions

Pressure and Flow Range

- Covers the equivalent of 6 orifice plate changes
- Differentiator = high accuracy over wide pressure

zed.i solutions

Flow Range Comparison



YAMATAKE *'s Elliptical-tube Flowmeter covers more than two sets of orifice flowmeters.*

* Combination of Uncertainties : Root-Sum-Square method

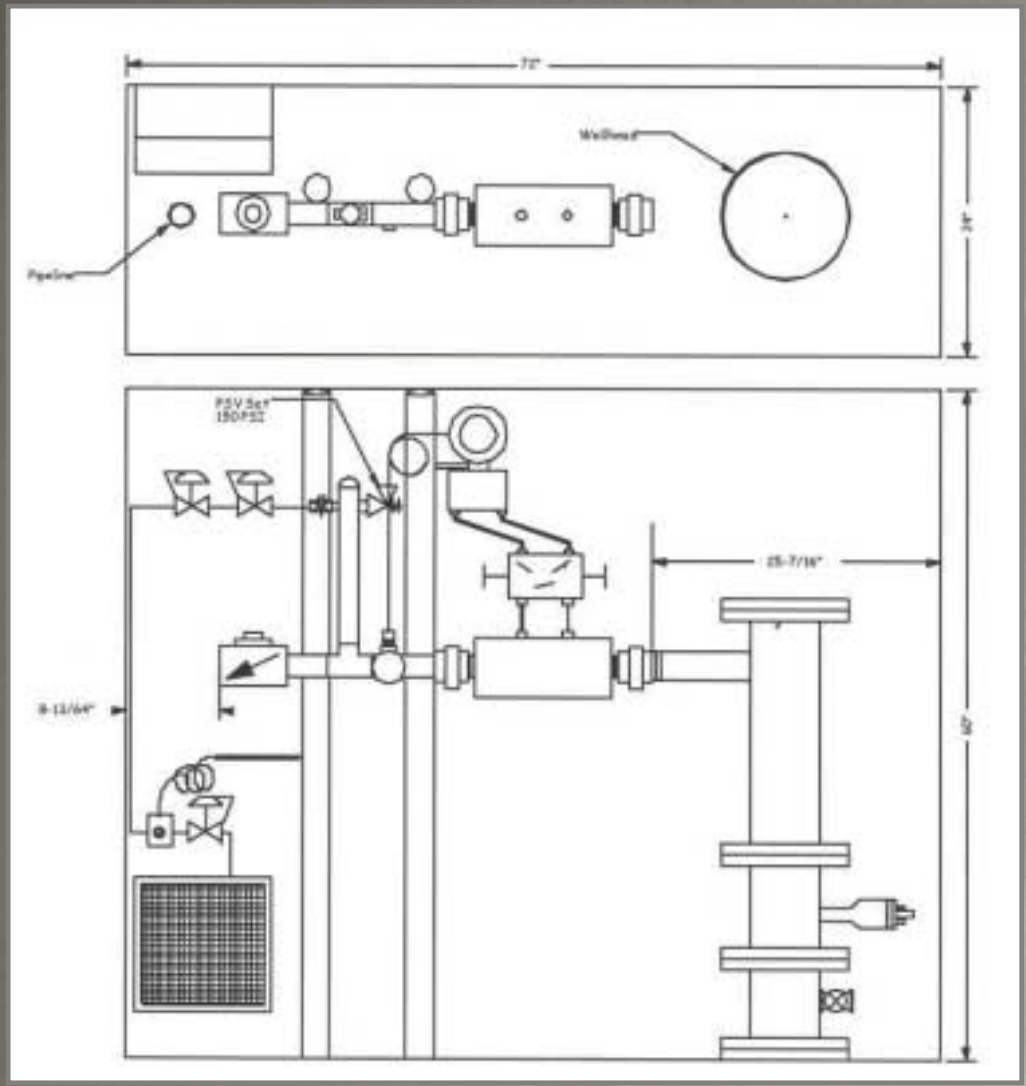
zed.i solutions

Flow Conditioning: Smart-Skid

- None required - “0 pipe diameters” = $
- Compact
- Plug and Play
- Remove EPC
- Fast Deployment

zed.i solutions

Flow Conditioning: Smart-Skid



zed.i solutions