



**STATS GROUP**

Managing Pressure, Minimising Risk

**Case Study highlighting a safe and cost effective isolation  
technology for smallbore distribution lines**

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- Who are STATS?
- History
  - 5/8" Steel Tubing
  - Pre Bi-Stop Tool
  - Safety
- The Tool
  - How it works
  - Where we used it
- Going Forward
- Conclusion



Established in 1998, STATS provide a range of products services enabling pipeline and piping isolation, intervention, repair, and shutdown services.

- 18 years in operation, Globally employing around 200 people
- Headquartered in Aberdeen, UK, and also operating through eight additional branch entities.
- Full Turnkey Provider with In house manufacturing capabilities
- Full ISO Accreditation, DNV Type Approval for High Pressure Isolation

Tooling

***“Managing Pressure, Minimising Risk”***



## History: 5/8" Steel Tubing

### Service Installations – 1960s & 1970s

#### Advantages Over 26mm Steel

- No welding required
- Fast installation
- Compression fittings

#### Disadvantages

- Thin wall, easily damaged, couldn't weld
- Could not stop gas flow between main and riser
- Leak points with compression fittings



# History: Pre-2012 Tubing Alterations

## Pre-2012 Method

- “Point of Release” work

## Issues

- No controls for blowing gas
- Allowed for small escape of gas, which had potential to exceed OHS air-concentration limits
- Needed a safer way for operators to work on tubing





# Current Methods: Controls & Isolation

## Controls

- Isolation methods
- No blowing gas

## Alberta OHS Code

- Workers cannot enter or work in areas above 20% LEL

## If a Hazard is Identified, Employer Must Take Measures to:

- Eliminate
- Control hazards





# History: 2012 Tubing Alterations

## 2012 Service Tee Method

- Gas shut off at service tees, no blowing gas

## Issues

- Labor intensive
- Time consuming
- Expensive
- Inefficient



# Service Tee Isolation

## Excavation to Shut Off Service Tee Quite Intensive (Costly):

- Locates
- Excavation: 2 workers required
- Removing/re-taping service tee
- Compaction
- Difficulties in frost conditions
- Rehab surface cover, if required







## Existing Options

### Steel Tubing Services Required an Isolation Tool:

#### Isolation equipment available to ATCO Gas

- Mechanical fittings at a cost of \$1,500 each; suitable for our needs

#### Significant cost impact if these were used

- Based on 15,000 meter moves; approx. \$22.5M

#### Reached out to employees for ideas

- Suggestion of looking at what STATS Group had to offer

## **New Tool: What Does It Need to Do?**

### **Unable to Weld to Tubing**

- Effective isolation at all pressures in system
- Capable of above and below ground use
- Pressure test and verification of isolation and pressure bleed off within the tool
- Readily available parts
- Easy to use



## Mini Bi-Stop





## Mini Bi-Stop

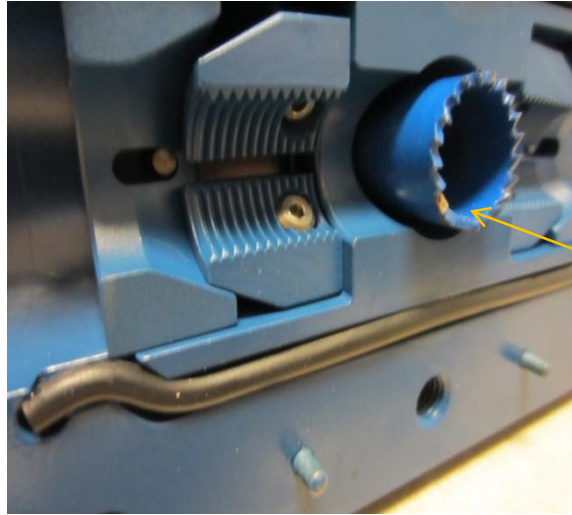
### R&D Done by STATS Group

- Multiple prototypes
- Appropriate engineering approvals (CSA Approved)

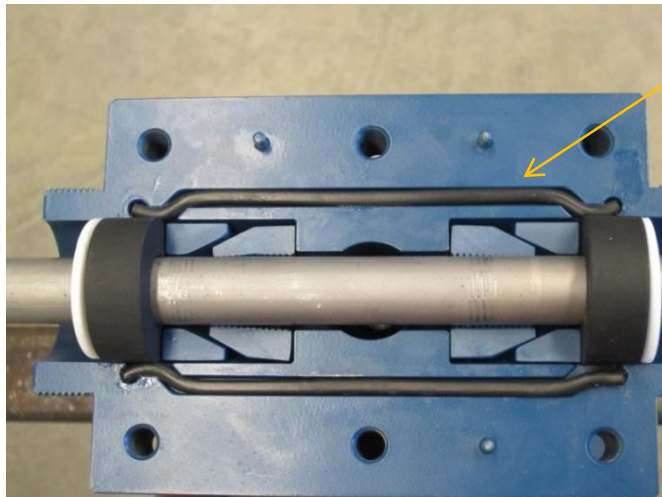
### Tool design Input From Field Operators and End Users

- 15.9mm or (5/8") tubing can now be effectively isolated
- Improved safety

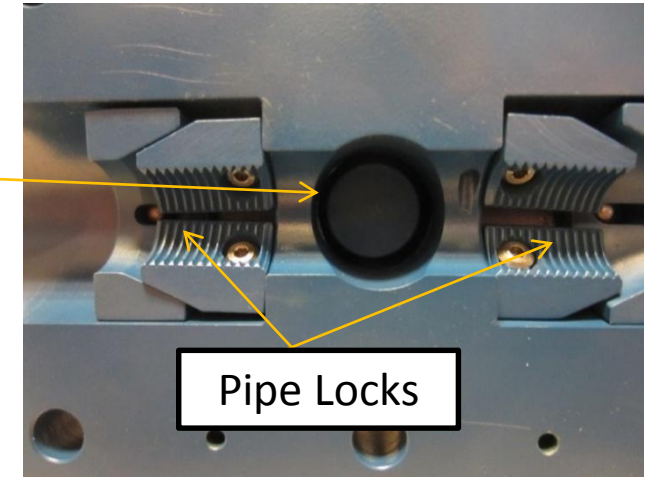
# Mini Bi-Stop



Cutter



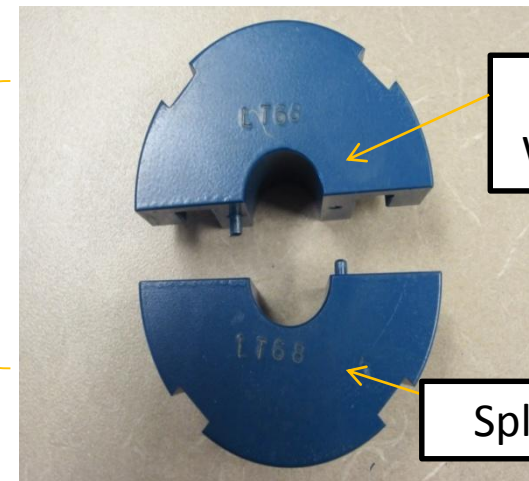
Lantern Ring



Primary Stop

Pipe Locks

Split Seal Compression Nut



Split Washer

Split Seal



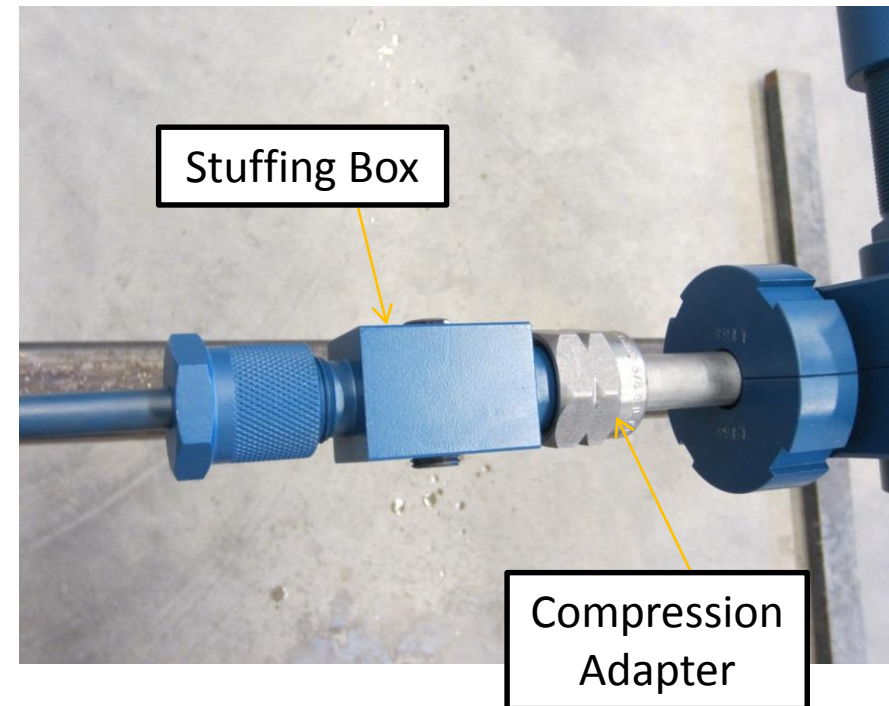
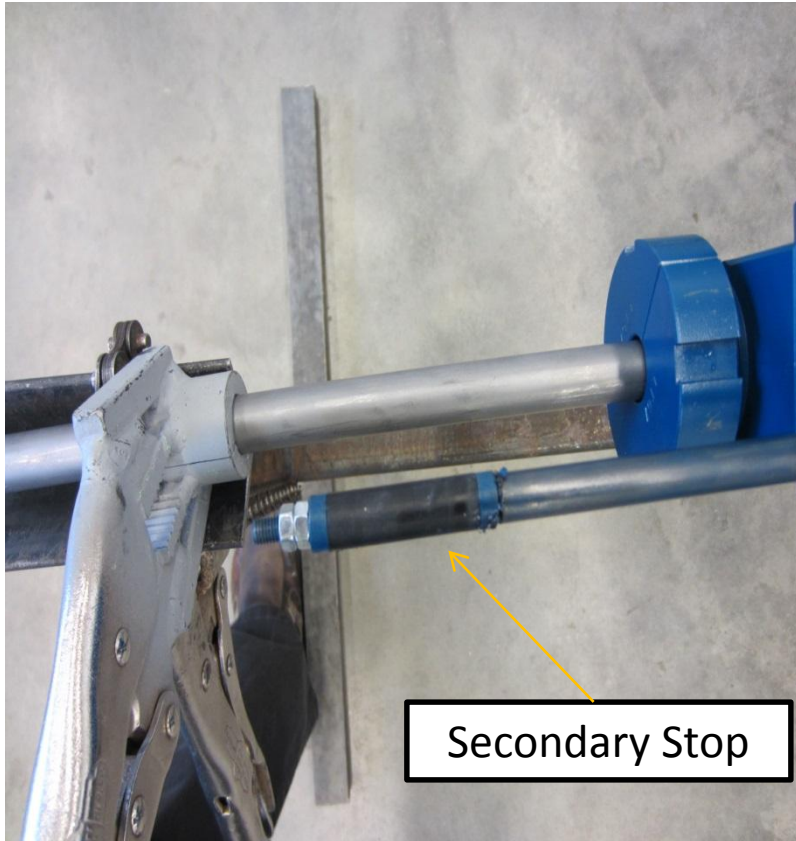


## Mini Bi-Stop





## Mini Bi-Stop





## Mini Bi-Stop





# Mini Bi-Stop Animation



# Going Forward

- **Issues**
  - Minor issues from field
  - Fine threads on tool
  - Pins where the locks slide in to grab pipe
- **Continual improvements and maintenance**
  - Issues brought up to STATS Group and addressed
  - Tool sent back for maintenance at end of year
- **Development of tool for other applications**
  - Use what we learned on tubing and use it for other difficult isolation situations



## Conclusion

- Challenges can transform into new improved methods.
- These tools allow for safer, controlled conditions to complete the tasks.
- They are simple, fast and cost effective and user friendly.

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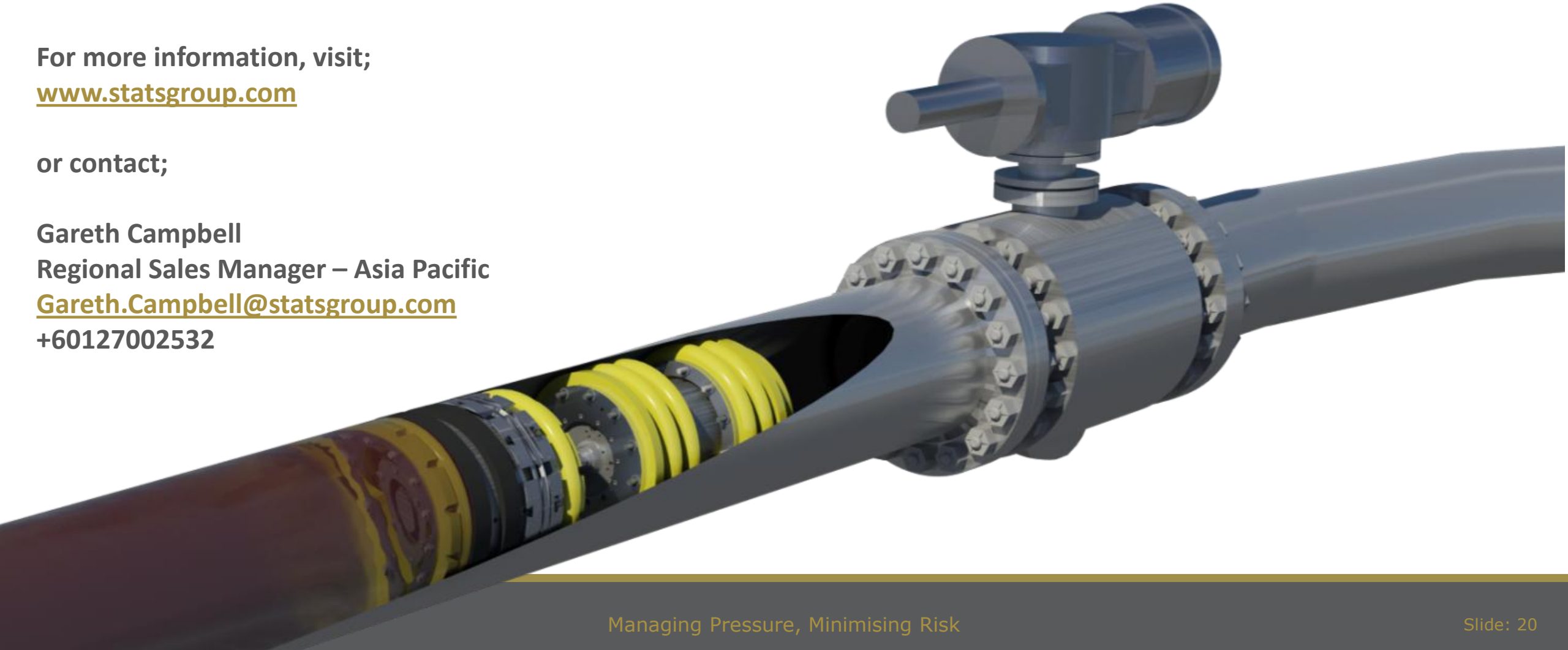
Special Thanks To: 

**Thank You For Your Attention  
Questions?**

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