



**Archer Oiltools**

**Archer**  
The well company

- The road from Seadrill to Archer The Well Company
- Services that Archer provide
- Archer's Global Footprint
- Archer Oiltools Global Footprint
- Archer Oiltools - What we do.....
  - Cflex - Well Integrity
  - Lock Series - Well Integrity
  - Perf & Was – P&A - Well Intervention
  - Greenlight - Well Integrity
  - BOP Cleaning, TORNAR - Well efficiency
  - Remote Controlled Cement Head - Operational Safety
  - Greenlight – Digital Pressure Testing System

# Oiltools main product lines



**Cflex** gas tight stage cementing system

**LOCK** gas tight suspension plugs

**Perf & Wash P&A** system

**Tornar** well bore cleaning and fishing

**X-it** one trip whipstock

**Wireless and Remote** cementing head

## LOCK Suspension Plugs (VMB™)

Retrievable, resettable gas tight barrier plug

- Proven in over 1,500 deployments
- 100% retrievability record and mill tested
- Easy, rapid set and retrieve

### Applications

- Temporary well suspension
- Emergency well control
- Pressure or leak-off testing
- Short-trip and RIH for BOP test

Flexibility, Reliability and far greater Security



# The LOCK series—Products

The LOCK series comprises four application-specific products

## SAFELOCK

*For short or medium term well suspension*

## TIMELOCK

*For long term suspension or harsh well conditions*

## STORMLOCK

*For rapid storm suspension, long term suspension or harsh well conditions*

## LASTLOCK

*For total security in permanent well abandonment*



- Use the strongest magnetic elements available
- Unique design create a powerful cyclone effect
- Carrying debris safely away from the wellbore

## Benefits

- Large flow areas
- Cyclone effect keeps solids afloat
- More effective cleaning
- Junk-basket and Magnets incorporated
- Reduced BOP maintenance



**Tornar** well bore  
cleaning and fishing

# Tornar use Cyclone effect for BOP Cleaning

Effective debris removal from BOP and Well Head cavities.

- Rotating column of Drilling fluid cleans ram and annular cavities
- Cyclone effect is more effective removing debris than jetting
- Debris free cavities when operating BOP Reduces Downtime
- Circulate pass cavities without leaving debris inside
- Junk-basket and Magnets incorporated
- Extreme Hallbach Magnets



Tornar well bore cleaning and fishing

**Reliable well cleaning**

## High circulation fishing magnet

### Features :

- Tornar flow ports
- One piece mandrel
- Stabilizer blades for support on low side.
- Up to 75 rpm rotation
- Multi-magnet element



**Tornar** well bore  
cleaning and fishing

### Benefits :

- Tornar flow ports clear particle debris to ensure full contact
- More than 2,000 lbs lifting capacity
- No limitations in running speed
- No run in hole restrictions

**Reliable well cleaning**



## Perforate & Wash Tool (P&A)

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Novel P&A Tool allows cleanup of the casing/liner annulus through perforations.

- Possibility of multiple ball seats for cleaning of multiple sections of perforations
- Simple modular design, easy to change configuration
- Perforation guns can be installed and activated below the PWT
- Permanent BP can be set on the same run
- High flow rates

### Benefits

- Eliminates need for section milling
- Time and Cost Saving
- Rig Friendly, no vibration generated



Perf & Wash P&A system

## Wireless Controlled Cement Head - WCCH

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Safe and efficient well cementing.  
Controlled release of setting balls and drill-pipe darts  
without need to stop circulation, rotation, or break connections.

- Wireless control through digital radio communication
- Designed to the highest standards of safety, consistency and reliability.
- Cementing through Top Drive

### Applications

- Casing and Liner Cementing
- Drilling w/ Casing and Liner Cementing
- Expandable Screen Deployment



## Remote Controlled Cement Head - RCCH

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**Archer**

- Fully compatible with drilling/cementing kelly and top drive systems
- No man-riding
- Controlled entirely from the rig floor, using rig air
- Multiple operations can be completed without the need for redress
- High pump rate during washing and clean-up
- No externally mounted valves and manifolds
- Large plug holder I.D. minimizes plug wadding
- Can be stored safely in the derrick



## Cement Head (WCCH and RCCH)

- Large 4" ID through Cement Head
- Compatible with both liner and casing SSR cementing
- 10,000 psi working pressure.
- 1,500 000 lbs tensile and 50 k ft/lbs torque.



Dart placed in 2.8" ID



Dart placed in 4" ID

## X-it Whipstock System

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Reliable sidetracks, proven in over 200 successful operations. Hydraulic & mechanical set single-trip casing exit system

- Unique multi-ramp whipstock geometry and fourth generation mill provide a step change in sidetrack drilling performance
- Efficient, reliable and far greater accuracy

### Applications

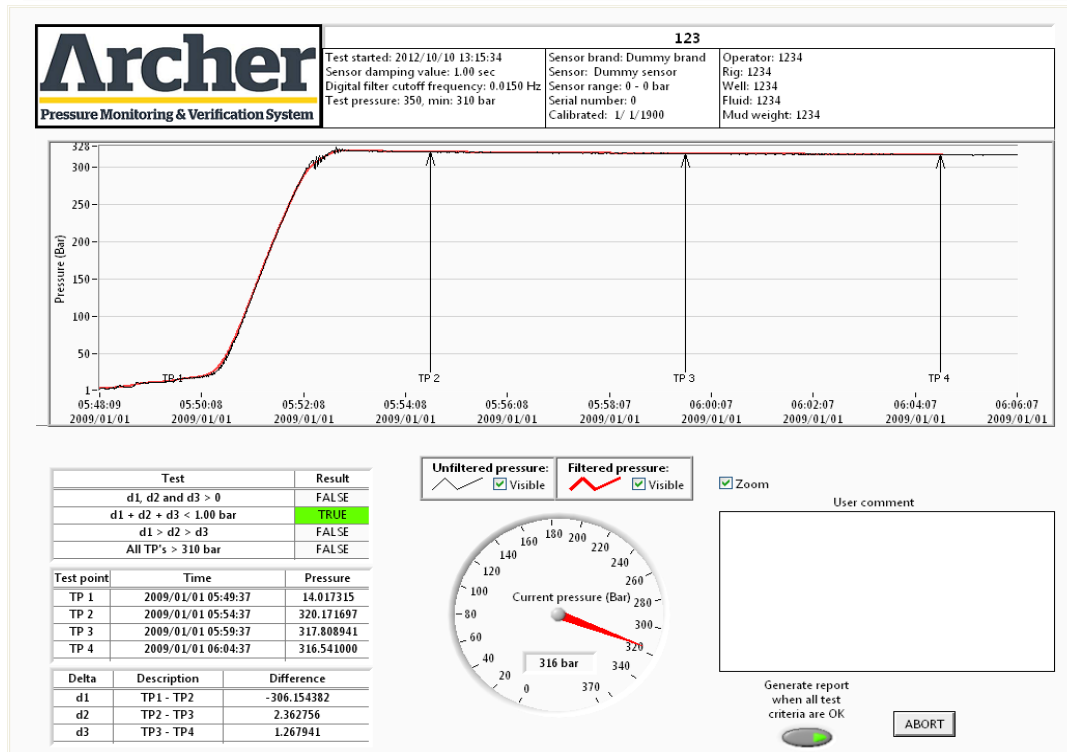
- Sidetracks
- Multilaterals

Archer is Building up a full range Fishing portfolio



X-it one trip whipstock

## Oiltools main product lines



Test	Result
d1, d2 and d3 > 0	FALSE
d1 + d2 + d3 < 1.00 bar	TRUE
d1 > d2 > d3	FALSE
All TP's > 310 bar	FALSE

Test point	Time	Pressure
TP 1	2009/01/01 05:49:37	14.017315
TP 2	2009/01/01 05:54:37	320.171697
TP 3	2009/01/01 05:59:37	317.808941
TP 4	2009/01/01 06:04:37	316.541000

Delta	Description	Difference
d1	TP1 - TP2	-306.154382
d2	TP2 - TP3	2.362756
d3	TP3 - TP4	1.267941

### Greenlight - Digital Testing System

- Improved integrity management
- Consistently approves or rejects pressure tests against predetermined test criteria
- Removes the subjective element
- Generates a detailed pressure test chart (.pdf) which can be annotated, e-mailed and filed
- Provides auditable record and unambiguous proof of compliance

**Questions?**

**THANK YOU**

**Tor Odegard**