
Oilfield Production Chemicals
▶▶ **Paraflux™ Paraffin & Wax Control**

Uk Industrial Chemical Manufacturer Specialising in
Upstream & Downstream Oilfield Chemical Solutions.

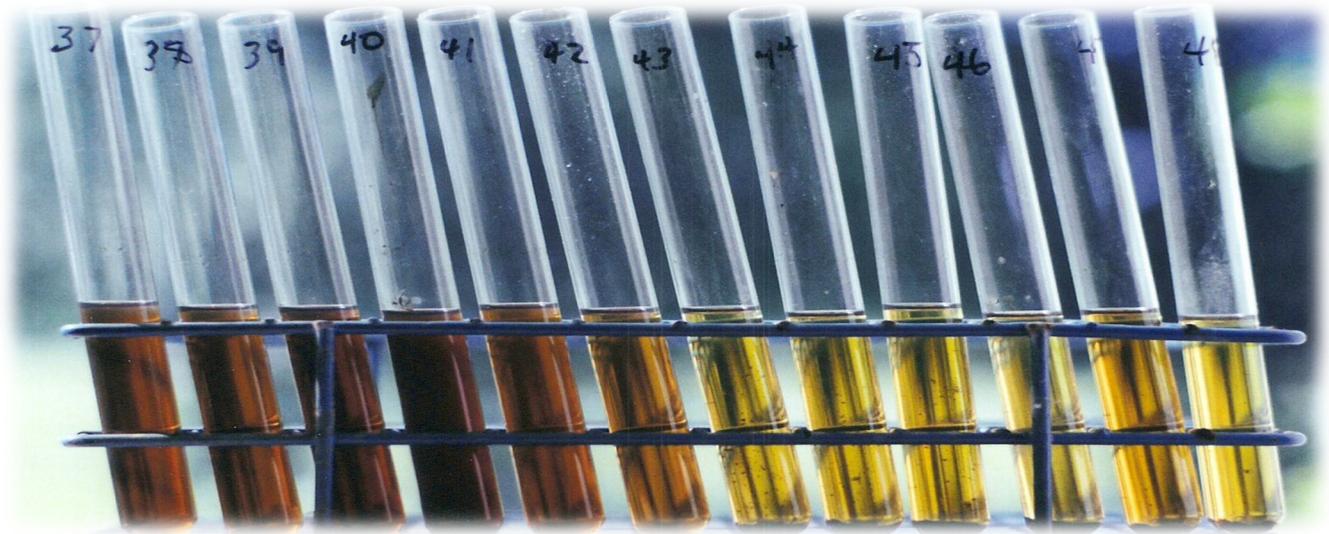


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Paraflux™ Paraffin, Wax & Asphaltene Control

Downhole remediation range for the control of paraffin, wax & asphaltene's



Features of Paraflux™

Paraflux™ is a range of highly effective paraffin, wax and asphaltene control agents designed for oilfield operating applications. Every oilfield is as unique as its locations differ, for this reason we have developed a wide range of treatments which offer outstanding performance & reduced treating costs with a smoother operation.

This is determined from on site analysis of wax/paraffin/asphaltene testing on site and then fully re-checked back in the laboratory to ensure that the product we recommend is the best possible fit. Once a product has been recommended we offer on-site technical assistance for the product dosage rates and application points. This on-site technical service will continue to ensure that the product remains the best solution as the oilfield changes over the years.

Part of the Paraflux™ range are designed with environmental impacts in mind. Our formulations have been shown to be inherently biodegradable. None of them are considered to be bioaccumulating.

When determining the correct Paraflux™ Treatment by the Chemiphase Technical Team, the following parameters will be assessed :

- ◇ Design of system and typical flow rates.
- ◇ Operating Temperatures
- ◇ Contact Time & Mixing Available
- ◇ Analysis of Carrying Fluid

Benefits of Paraflux™

- The Paraflux™ range has been proven to increase open flow potential for oil where wax, paraffin and asphaltene problems exist. Paraflux™ has been proven to be effective Worldwide producing drier oil, cleaner water and a sharper interface.
- Paraflux™ will quickly & effectively dissolve the paraffin and wax build ups down hole and on pipework. Paraflux™ prevents reformation using its unique crystal modifier and additives which holds the asphaltenes and paraffin's in suspension which stops accumulation downhole in perforations, pumps, tubing and rods.
- Typical results show in excess of three months of zero wax and paraffin build up (results have shown on some wells this can be in excess of 12 months) when the well or pipeline is treated with the Paraflux™ range
- Paraflux™ has a specially formulated coating agent which prevents paraffin and wax from settling on pipework. This reduces the negative effects of wax build up with downhole operations, pipelines and on strings and has been shown to increase productivity and flow potential.
- Paraflux™ will improve water quality with fewer hot oiling and pigging operations and is safe to handle and store and environmentally responsible.
- Chemiphase is committed to providing the highest quality products and services to its customers. Many of the products are produced in Lancashire, UK where the sites adheres to strict ISO:9001 standards.

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Cost Effective & Highly Concentrated Range of Paraffin Control Agents

Product	Application	Primary Function			
		Paraffin	Wax	Asphaltene	Hybrid
Paraflux CT-C32-01	One Drum Treatment Concentrate WB			●	●
Paraflux CT-C32-01	One Drum Treatment Concentrate EB	●	●		
Paraflux CT-C32-01	Paraffin Dispersant	●			
Paraflux CT-C32-02	Paraffin Dispersant	●			
Paraflux CT-C35-01	Pour Point Depressant	●			
Paraflux CT-C35-02	Pour Point Depressant		●		
Paraflux CT-C35-03	Pour Point Depressant			●	
Paraflux CT-C35-04	Pour Point Depressant				●
Paraflux CT-C35-05	Pour Point Depressant				●
Paraflux CT-C54-01	Wax Inhibitor		●		
Paraflux CT-C45-01	Wax Modifier		●		
Paraflux CT-C45-02	Wax Modifier		●		
Paraflux CT-C46-01	Well Cleaning (General Deposit Remover)		●	●	
Paraflux CT-C46-02	Well Cleaning (General Deposit Remover)		●	●	
Paraflux CT-C47-01	Well Cleaning (Paraffin Deposit Remover)	●			
Paraflux CT-C47-02	Well Cleaning (Paraffin Deposit Remover)	●			
Paraflux CT-C48-01	Well Cleaning (Asphaltene Deposit Remover)			●	
Paraflux CT-C48-02	Well Cleaning (Asphaltene Deposit Remover)			●	
Paraflux CT-C50-01	Well Wash (Paraffinic Emulsions)	●			
Paraflux CT-C50-02	Well Wash (After Drill Wash)		●		
Paraflux CT-C50-03	Well Wash (Underbalance Drilling Deposits)				●
Paraflux CT-C50-04	Well Wash (High Barium / Scale)				●
Paraflux CT-C51-01	Well Wax Dispersant		●		
Paraflux CT-C51-01	Well Wax Inhibitor		●		
Paraflux CT-C51-01	Well Wax Inhibitor		●		

Case History 1 - Paraflux™ CT32-01

THE PROPOSITION

A large UK onshore oil producer approached us to treat one of their wells that had significant waxing problems. The well produces steadily for 20 days at a high production rate. After this time, production begins to drop off. After 30 days, production noticeably decreases. After 32-33 days the well will hang up. To prevent the well hanging up and costly time on rod jobs, the company actively hot oil washes the well, every 28-30 days. To reduce the wax build up and extend the time between hot oiling procedures.

WELL STATUS

- ⇒ Well Type - Beam Pump with injection/ recirculation pump
- ⇒ Average- BOPD - 400 bbls
- ⇒ Gross Fluid - 1000 bbls
- ⇒ Time between Hot oil Procedures - 30 days

THE TREATMENT PROCESS

1. Switch off the beam pump
2. Pump **CT32-01** down the annulus
3. Isolate flow line at the manifold
4. Restart the beam pump allowing flow to return to the annulus
5. Leave well on circulation for 24 hours
6. Switch of beam pump
7. Reopen flow line at manifold, isolate and vent down
8. Restart beam pump and commence standard production



Sample of paraffin which caused the well to hang up after 28 days

SHORT TERM EFFECTS

Immediately after the well was put back onto production an increase of 5% BOPD was recorded. This was sustained for the 8 days of production. This increase then returned to the pre-application levels after 10 days. After 20 days, when without application of the **CT32-01** the well would begin to lose production, the production levels maintained at the levels experience directly after a hot oil procedure.

The well was run for 90 days. At this point, the production began to drop off, at 95 days a second application of **CT32-01** was undertaken. This had the same effect as the first application, with an initial increase in production levels of **7% BOPD**.

LONG TERM EFFECTS

The operators performed a rod job, 150 days after the first application. The rods showed no signs of the hard wax build up on the rod strings and only a slight build up of soft wax on the rod boxes.

THE CONCLUSION

The operators perform an **CT32-01** application every 90 days. Hot oiling procedures are no longer needed and complete rod jobs are carried out much less frequently.

The operator has reduced costs from hot oiling procedures and minimized the time off production, due to hot oiling and rod jobs, to only 36 hours every 90 days.



Rod Strings after 150 days on production showing no hard build up on the rod strings and only small amounts of soft wax build up around the rod boxes.

CT32-01

- **Non Hazardous**
- **Reduced Downtime to a Minimum**
- **Substantial Savings Downstream**
- **Downhole Remediator**

Case History 2 - Paraflex™ CT18-12

Sampling point: Northern UK Crude Oil

Temperature: 24-25°C

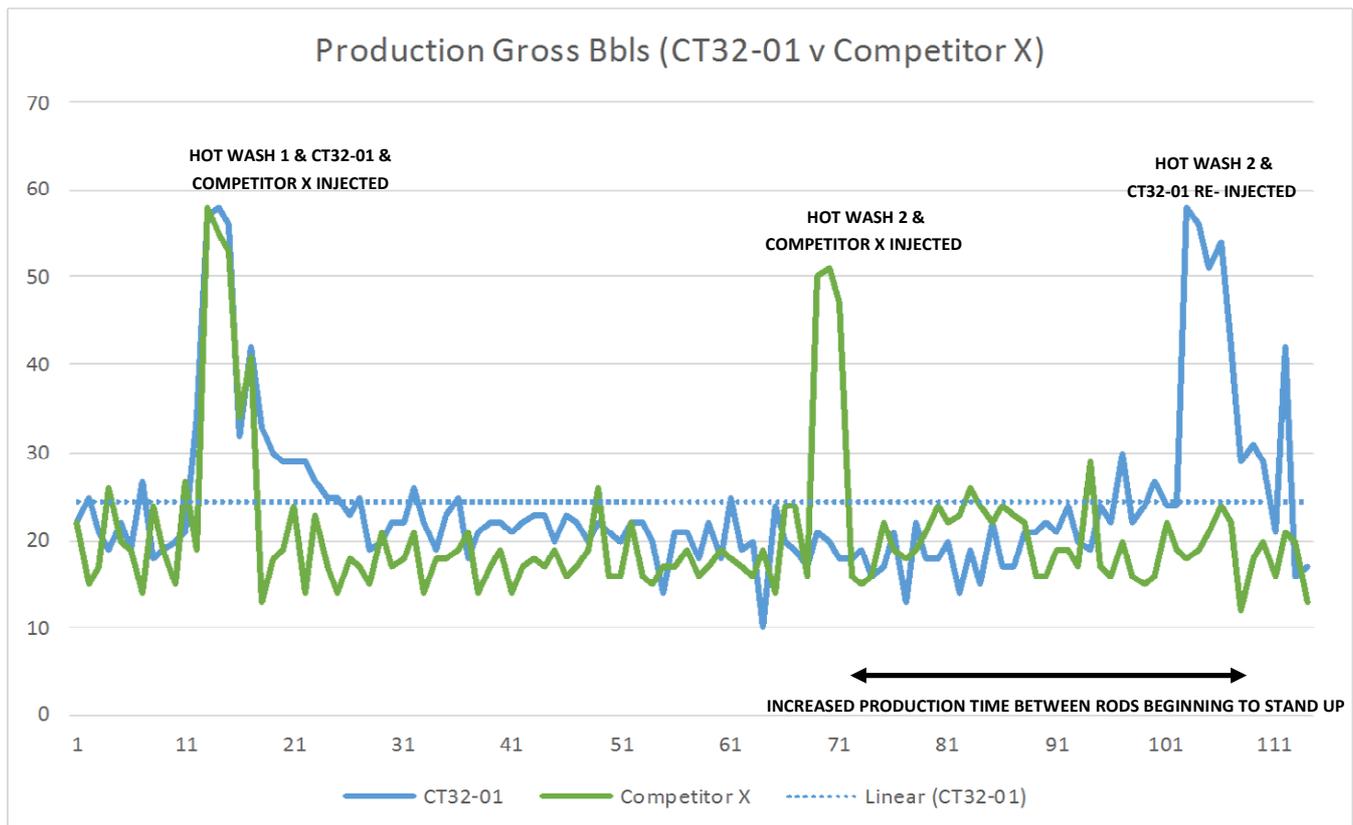
Nature of crude oil: Sweet crude oil

API: 18 (as given)

Density: 0,967 g/mL (as given)

Test method: ASTM D4007

Water cut: 38% at sampling point (as given)



SHORT TERM EFFECTS

Immediately after the well was hot water washed it was dosed with Competitor X for the first testing phase. The second testing phase was the dosing of CT32-01 immediately after hot water washing to create a fair bank of data for results.

As you can see from the graph an immediate increase after hot washing and the dosing of each product was noticed for each product with an increase of Bbls returning. The majority of these figures will be the water returning back from the hot wash. As each product settles down and begins to work you can see a distinct increase in production of oil using CT32-01 in comparison to Competitor X which almost immediately dropped back to pre treatment results.

MID TERM EFFECTS

As you can see from the graph, CT32-01 maintained an increase in oil production right the way through the testing and the **average increase in oil production via net Bbls of oil reported was 16% calculated.**

Using the well monitoring equipment to distinguish signs of the production rods beginning to stand up, Competitor X had to be hot water washed on day 71 to save the well from damage. **CT32-01 was able to continue running for another 34 days (101 days) in comparison to Competitor X.**

THE CONCLUSION

1. Using CT32-01 has produced an average increase in oil production across 111 days of 16% in comparison to using Competitor X.
2. Using CT32-01 has reduced operating costs dramatically as previously the operator would have had to hot water wash the well and apply **Competitor X 5.14** times a year. **Using CT32-01 the well only needs to be treated 3.61 times a year.**

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The Chemiphase Treatment Procedure & Safety Commitment

- ⇒ On site analysis usually bottle testing & then fully re-analyse back in the laboratory to ensure that the product that Chemiphase recommend is the best possible fit, highly effective, safe & cost effective.
- ⇒ Once a product has been recommended we offer on-site technical assistance for the product dosage rates and application points. This will include regular monthly site visits to ensure customer satisfaction.
- ⇒ This on-site technical service will continue to ensure that the product remains the best solution as the oilfield changes over the years.
- ⇒ At Chemiphase we take great pride in offering green, environmentally sustainable chemical solutions and as such all the products in the range are produced using environmentally friendly methods and where possible, are formulated to be fully biodegradable.
- ⇒ All our chemical ranges are formulated by our highly trained and vastly experienced chemists and are put through rigorous in house testing in our purpose built research and development laboratory. We subject our chemical ranges to the most stringent of testing to make sure our customers receive the best products, whilst also satisfying our need for constant product improvement.



Chemiphase Oilfield Chemical Solution's

- ◇ Oilfield Emulsifier's & Demulsifier's
- ◇ Oilfield H₂S Scavenger's
- ◇ Oilfield Corrosion Inhibitor's
- ◇ Wax & Paraffin Treatment Regimes for Oilfield Applications
- ◇ MEOR- Enhanced Oil Recovery Techniques
- ◇ Biocide & Scale Management
- ◇ Environmental Drilling Fluids



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