WOGI OIL FIELD SERVICES PRODUCT INFORMATION

WOGI is a geotechnical manufacturer specializing in environmentally safe Enhanced Oil Recovery and Flow Optimization products.

WOGI Oil Field Services feature the exclusive use of PARAFFIN REMEDIATION SOLUTION and OIL FIELD SOLUTION.

- WOGI. is not associated or connected with the U.S. Environmental Protection Agency. **WOGI PARAFFIN REMEDIATION SOLUTION** and **WOGI OIL FIELD SOLUTION** are listed in the US EPA Sub Part J list and the NCP Product Schedule. This listing does NOT mean that US EPA approves, recommends, licenses, certifies or authorizes the use of **WOGI PARAFFIN REMEDIATION SOLUTION** and **WOGI OIL FIELD SOLUTION** on an oil discharge. This listing only means that data has been submitted to the US EPA as required by subpart J of the National Contingency Plan, Sec. 300.915.

- **WOGI PARAFFIN REMEDIATION SOLUTION** and **WOGI OIL FIELD SOLUTION** are Material Safety Data Sheet of the U.S. Department of Labor listed OMB No. 1218-0072.

WOGI can schedule its mobile office and response team to any situation. WOGI will be opening its oil field service base of operations in the Houston, TX in order to be located within the heart of the oil production industry in the U.S.

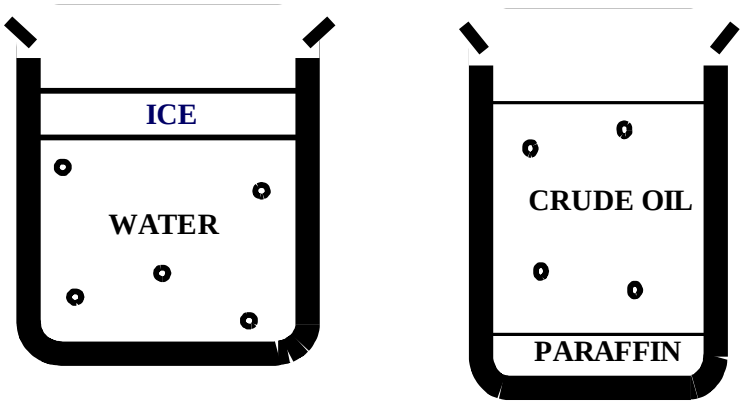
Primarily developed for use in storage tank cleaning operations, **WOGI PARAFFIN REMEDIATION SOLUTION** and **WOGI OIL FIELD SOLUTION** **(herein "The Products")** are recognized as a remedy for all types of paraffin- related problems found in the Oil Industry. Both are essentially the same, but formulated differently to address the issues of different types of paraffin.

The Products are:

- **100% WATER BASED**
- **ENVIRONMENTALLY SAFE**
- **NON-POLLUTING TO WATER AQUIFERS**
- **NON TOXIC/NON CARCINOGEN**
- **HAZMAT RATED AT 0000**
- **NON FLAMMABLE**
- **ENGINEERED TO INCREASE OIL WELL FLOW**
- **ENGINEERED TO REDUCE WELL HEAD PRESSURE**
- **ENGINEERED TO DECREASE TOXIC WASTE**
- **ENGINEERED TO INCREASE PROFITS**
- **ENGINEERED TO TO RESTART OLD/ABANDON PARAFFIN CLOGGED OIL WELLS**

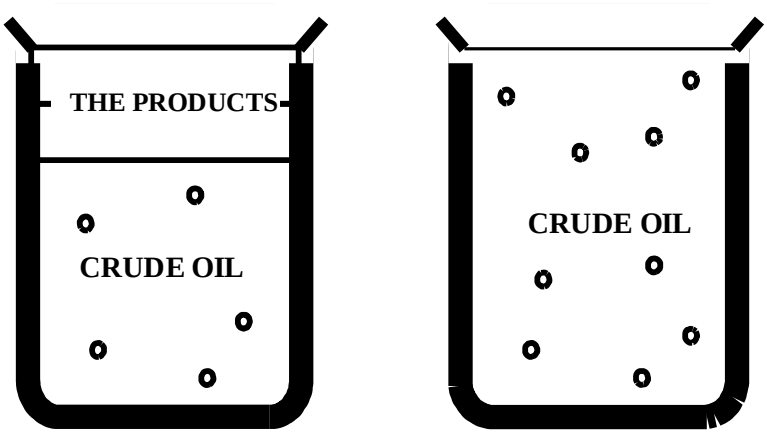
HOW THE PRODUCTS WORK

The Products are not a **PARAFFIN SOLVENT**, but rather a **TENSION BREAKER**, which lowers the water/paraffin molecule surface tension.



Paraffin, like ice in water when cooled, was always there in the oil, we just didn't see it

Paraffin formation is triggered by either a change in temperature or a chemical change such as an evaporation of a lighter end compound in the fluid.

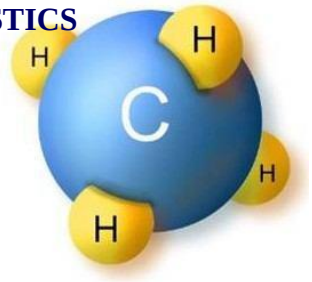


THE PRODUCTS ALLOWS THE PARAFFIN TO RECOMBINE WITH THE OTHER COMPONENTS OF THE CRUDE OIL AND REENTER THE OIL PHASE

The Products are a non-flammable and non-toxic paraffin-removal treatment for use in all phases of the oil industry. It can be applied at any point in the oil production process where paraffin build-up occurs, particularly down- hole flow line, tank bottom, pipeline, and tank farm facility operations.

The Products are applied to paraffin build-up by using the product with adequate amounts of good crude oil and agitation. It breaks down the paraffin, causing the oil in the paraffin to go into solution and stay in solution with the good crude until refining may take place. In this process all other known basic substances and solids will be suspended with agitation and can be easily pumped off. This process may also be applied to saltwater disposal systems. Not only does the process work effectively, it is also one of the most cost-effective paraffin treatments available to the industry. It offers the most viable and effective solution to paraffin-related problems.

DESCRIPTION, PHYSICAL PROPERTIES & CHARACTERISTICS



The Products are an effective water-dispersible paraffin-removal additive that breaks the oil-paraffin-water emulsion. Being comprised of a proprietary mixture of detergents and surfactants, it works to lower the surface tension between the paraffin emulsion and water phases so that the paraffin emulsion can be dehydrated.

PARAFFIN CLOGGED OIL WELLS

75% to 85% of the world's oil suffers with paraffin and asphaltenes paraffin precipitate. It solidifies on the side wall of wells, clogs up tubing, casing and perforations, pump strings, rods, and the complete oil transfer system of flow lines, pipelines etc. If the paraffin is left untreated it can actually block the well and oil transfer system and cause the pumps and pump strings to break. Many nodding donkeys stand up in paraffin and when they do they have a tendency to break the pump strings which can result in expensive maintenance work. When this break occurs then a "fishing" procedure for the string down hole and all the work associated with the repair procedure is required.

The usual method to remove paraffin is by chemical wash, hot water wash or hot oil washing, which stops production sometimes for several days at a time dependent on the severity of the paraffin precipitation. Stopping production
costs money, chemical/water/oil washing. The washing procedure requires a wash truck, acids and water or oil and extra manpower compared with the simple down hole discharge treatment with The Products. The cost comparison are obvious.

The Products have been formulated to treat oil wells, flowlines, pipelines, storage tanks, transport tankers including oil carrying tanker ships. All of those areas in the oil industry need the product, especially if the wells have not been treated.

To ensure that we better serve the needs of the oil industry, we always advise that the actual oil wells are the first to be treated. Thereafter, all parts of the system that the product treated oil flows through will receive treatment, from the well, through the flowlines and interconnecting pipe work to the storage tanks. The export pipelines or exporting road and rail tankers through to the tank farms or ships all benefit from the well treatment. As soon as all those elements have been treated from the initial well treatment the system will be clean.

The entire system will remain clean and free of paraffin wax and asphaltenes while The Products are being used continuously and consistently. Consistency is the key element as there is no point injecting our product down the well and leaving it to dissipate out of the oil over several months. It is important to maintain a treatment regime that maintains control throughout the period between treatments. Wells should be treated every 12 weeks at a minimum to maintain the system free from any further precipitation of wax or buildup of asphaltic crystals.

There occasionally will be wells that may require treatment more often than every 12 weeks due to a higher percentage of paraffin in the oil. When the operator can see that the amount of oil per day has decreased by 1 or 2 barrels per day then the well should be treated again to prevent wax build up and to return the production to the maximum attainable volume.

When injected down hole, which is the most effective application method, The Products remove all the paraffin and asphaltenes and puts them back into the oil phase of the crude oil. They will remain in the oil phase and will never precipitate out of the oil again.

By treating wells with The Products, the wells will then not require being hot water washed or hot oil washed every 3 to 4 weeks to dissolve the paraffin wax from the walls, from pumping equipment, from the casing and from clogged tubing and perforations. This hot washing operation melts the waxes and drops them back down the well.

HEAVY CRUDE OIL PRODUCTION

When applied to producing wells, The Products disperses paraffin deposits as well as scale-like deposits, which occur in the well bore, perforations and pump during down-hole operations.

In addition to eliminating paraffin build-up around the tubing and pumping components, any existing and future paraffin deposits will also be eliminated and prevented from accumulating in flow lines and separators. The Products also keep the heater-treater operating more effectively by reducing internal build-up.

By lowering the oil viscosity, there is an increase in the amount of flow from the well. This provides improved above-ground handling as it lowers costs due to less heating of oil to make it flow. By keeping the paraffin build- up low, there is a reduction in pressure increases normally resulting from the plugging of formations. Improved overall well production is obtained by maintaining an improved degree of internal well cleanliness. Also, by adding The

Products to down-hole operations, one can increase the effectiveness of scale and corrosion inhibitors, plus keep waxy deposits out of water-handling facilities.

SUBSEA/OFFSHORE WELLS

Use of organic solvents in sub-sea flow lines, especially in deep water, has never been efficient. The generation of paraffin crystals are caused by the initial temperature of crystals with the lightest temperatures at which the solid phase in the oil is first initiated. When oil producers have oil submitted to a previous thermal treatment at a controlled cooling rate they are going to have paraffin problems. The best way to prevent paraffin problems is by injecting The Products on a continuous daily basis. This will avoid the use of expensive mechanical methods such as pigs, scrapers, knives, hot oil and the use of organic solvents.

Removing paraffin deposits by circulating cold organic chemicals sometimes means having to replace costly flow lines to return acceptable production. This type of process can be deadly to various types of sub-sea flexible flow lines.

STORAGE FACILITIES

Dirt, gums, waxes and resins settle out of fuel in storage tanks. When sludge hardens, it forms a heel which cannot be pumped out. This heel remains in the tank when the tank is emptied and filled, the heavier or darker the fuel, the more sludge is left behind. Oil pumped in on top of this layer of sludge can become contaminated. When bottom samples indicate there is contamination, either from dirt, rust, and bacteria or from gauging which reveals that too much sludge has built up, the tank should be cleaned. This operation is normally performed by pumping off the remaining liquid, then digging out the layers of sludge for disposal.

When The Products are applied to the surface of solid sludge or heavy oil, it penetrates the surface and decreases the viscosity level of the build-up, resulting in a return to solution. By adding The Products to storage tank bottoms, the build-up is softened, then by adding water and agitating, The Products suspend the oil and iron sulfide on the surface of the sludge. This will allow impurities to be settled out and removed by pumping. This process eliminates digging out solid layers in tank. Regular use of The Products will lower the costs of removal, both in the present and in future operations, and will result in a reduction of storage tank bottom build-up.

TRANSPORTATION OPERATIONS

The Products ca n be used in all phases of transport in the oil industry. From routine preventive maintenance scheduling to regular clean-up operations, The Products can eliminate paraffin build-up problems associated with normal day-to-day operations, concerning the transportation and movement of crude oil and other petroleum
products that suffer from paraffin build-up problems. The most common uses found in transportation operations are for tankers, barges, pipeline operations and rail tanks cars and tank vehicles.

MARINE TANKERS & LIQUID-CARGO BARGES

As with tank farm operations, both marine tanker and liquid-cargo barge operations will benefit from the use of The Products in their regular cleaning operations. From cargo line systems to stripping systems to tank compartments, The Products clean out paraffin deposits and ensures a greater level of operating efficiency, plus reduce maintenance and repair costs

in the future. The Products are an essential and very important component of barge cleaning operations, where the vessel is used for removing oil sludge from tankers and delivering it to shore tanks.

REFINERY AND PIPELINES

Over a period of time, debris collects or builds up in a transport pipeline. This debris may be small fragments, slag and filings left over from the construction and repair of pipelines. It may also be particles that settle out of the oil during daily operations or scales of rust caused by moisture. When rust flakes off the inside of the pipeline and debris starts to collect, the pipeline becomes rough. Friction builds up in the line, slowing the flow of fuel. As the oil stream slows down, more debris settles out and the diameter of the pipeline becomes smaller. Less oil passes through the line and the capability of the pumps to push the fuel through is reduced. If the buildup of debris is allowed to continue, sand traps log, oil is contaminated and eventually the pipeline is blocked. A pipeline can corrode on the inside as well as the outside. Internal corrosion is caused by the accumulation of moisture, paraffin and mill scale in the pipeline. Friction in the pipeline caused by the rapid movement of oil produces heat, which speeds up the corrosion process. Pipeline build-up and internal corrosion can be reduced by the use of line scrapers and corrosion inhibitors.

When The Products are added to pipeline operations, it enhances effectiveness of the corrosion inhibitors and reduces the scheduled number of line scraping operations over time. This results in a lower number of pipeline repairs due to build-up problems and increases the flow of oil, while keeping the pipeline from accumulating additional and potentially harmful paraffin deposits in the future.

RAIL TANK CARS & TANK VEHICLES

While this type of operation is not as complex as other operations such as marine tankers or tank farm facilities, the same dangers that are present during the cleaning of bulk storage tanks are also present during the cleaning of tank cars and tank vehicles, therefore the cleaning detail should observe the same precautions.

The Products may be used in rail tank car and tank vehicle cleaning operations to assist in removing the sludge and other deposits that have formed from repeated usage during the transporting of products in the oil industry.

The Products may be used on both uncoated and coated steel interiors, and can be a very cost-effective supplement because it can be used in areas that cannot be cleaned by hand, unlike those found in large-scale operations such as tank farms.

BOILERS

When The Products are used in boiler operations, increased boiler efficiency can be obtained. The Products raise oil viscosity which requires less steam to move the fuel oil. This helps eliminate burner “clinkers,” resulting in less danger of wind-box fires, a lower number of burned gas rings, and a reduction in the number of damages to the air register.

By causing less ash build-up on boiler tubes, the use of The Products will result in better heat transfer, less fuel utilization, and increased overall efficiency in this type of operation. Also, there is less air preheater clogging, which results in less downtime to wash air heater and provides a longer heater life.

RECLAMATION

The Products can be used as a cost-effective benefit to most reclamation operations. From waste pits to tanker bottoms to storage facilities at tank farms, The Products can be effectively used to recover any appreciable paraffin or heavy ends contained in the bottom sediment and waste (BS&W).

The BS&W can be recovered and sold, either for profit or to help offset the costs resulting from cleaning operations. The recovered EXTRA oil may be sufficient enough to pay for cleaning costs. In this case, the cost factor could be eliminated from future cleaning operations.

WASTE PITS

The Products have been effectively used in waste and storage pit operations. When sprayed on top, The Products will separate the BS&W and hydrocarbons. The liquids can be pumped off, products can be separated and reclaimed, and the hydrocarbons will disperse into the soil. Recent field testing on contaminated waterfowl at waste pit sites has also determined that The Products can be safely used in any clean-up operations where emergency animal rescue is needed or required, without harming the ecology of the affected area.

IRON SULFIDE

A scale of iron sulfide forms when hydrogen sulfide corrodes the inside surface of a tank. Hydrogen sulfide is in crude oils and leaded fuel products that contain a high sulfur content.

Tests conducted for iron sulfide in crude oil have determined that The Products react and produce the same results with iron sulfide as it does with paraffin. Iron sulfide goes into suspension with water and can then be pumped off. This results in clean lines, tanks and wells.

PHYSICAL PROPERTIES

- Flash Point: >95°F
- Pour Point: -2°F
- Viscosity: 1.137368 SUS @40°F
- Specific Gravity: 1.11 @60°F
- pH: 13.4
- Surface Active Agents: Nonionic, proprietary, surfactants
- Solvents: Proprietary
- Additives: None
- Solubility: Miscible in oil, water and solvents

ANALYSIS FOR HEAVY METALS, CYANIDE AND CHLORINATED HYDROCARBONS

- Cadmium <0.0600
- Chromium <0.300
- Copper <0.300
- Lead <0.200
- Mercury <0.200
- Nickel <1.00 (ug/l)
- Zinc 2.31
- Cyanide <0.0100
- Chlorinated Hydrocarbons <250 (ug/l)

FOR MORE INFORMATION PLEASE

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Material Safety Data Sheet

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info@epaworldwide.com

Date prepared: July 14, 2011

Date revised: N/A (first edition)

Material Safety Data Sheet U.S. Department of Labor May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910 1200. Standard must be consulted for specific requirements.	Occupational Safety and Health Administration (Non-Mandatory Form) Form Approved OMB No. 1218-0072

1. Identification of the Substance/Preparation and the Company/Undertaking:

Substance or preparation trade name: EPA hydrocarbon solutions – EPA Paraffin Remediation Solution, EPA Oil Field Solution, EPA Global Environmental Cleaner and EPA Hydro Clean
Unique reference numbers(s): Proprietary Blend of Surfactants and organic solvents in aqueous solution

Company/undertaking name & address:
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www.epaworldwide.com
info@epaworldwide.com

2. Composition

(Substance, % content, CAS Number, Classification, And EINECS)

This product is a blend of surfactants and organic solvents in aqueous solution.

3. Hazards Identification

(Most important hazards & Specific hazards)

No Hazardous Materials: The product is a blend of surfactants and organic solvents in aqueous solution. There are no hazards known to be associated with this product.

4. First Aid Measures:

If Inhaled: If adverse effect occurs, move to fresh air.
If ingested: Drink plenty of water to dilute.
Skin contact: Wash off skin with soap and water
Eye contact: Flush eyes with water or saline solution. Call your doctor if eye irritation persists.
8
Ingestion: If ingested in volume it may cause diarrhea

5. Fire Fighting Measures

The formula is stable, non-flammable, and will not burn. No special procedures necessary.

Flammability: Non-flammable
Flash Point: Non-flammable

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6. Accidental Release Measures

Personal precautions: Wash Hands With Soap And Water
Environmental precautions: None Known
Methods for cleaning: No Harmful Ecological Effects, Just Rinse with Water

7. Handling and Storage

Handling: ***Technical measures/precautions:***

1. Use absorbent material to mop up and dispose in trash can. Then rinse the area thoroughly and apply all safety spill cleanup measures.
2. Waste Disposal Method May be safely poured down the drain.
3. Precautions to Be Taken in Handling and Storing -None Known.

Storage: ***Technical measures/storage conditions:***

1. **SHELF LIFE:** Unlimited in sealed polydrums or totes (as delivered). Avoid Direct Sunlight
2. **Maximum Storage:** 120F Continuous, 140F up to 5days
3. **Minimum Storage:** 35F
4. **Optimum Storage:** 40F to 120F

8. Exposure Controls

Engineering measures: None Known
Control Parameters: None Known
Personal protection equipment: Personal Protective Equipment is not required but as needed or required by work site policies and procedures.
Eye protection: Safety goggles are always suggested when using this product or any other products.
Hand protection: Not Required
Hygiene measures: No Additional measures only as needed or required by work site policies and procedures.

9. Physical and Chemical Properties

1. **Appearance:** Green/Blue Liquid
2. **Odor:** Slight Citrus Odor
3. **Boiling point:** 212F
4. **Flash Point (ASTM D-56):** >93 F
5. **Pour Point (ASTM D-97):** -2 F
6. **Viscosity (ASTM D-445):** 1.137368 cst @ 40 C
7. **Specific Gravity (ASTM D1298):** 1.11 @ 60 F
8. **PH (ASTM D-1293):** 13.4

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9. **Surface Active Agents:** Nonionic, proprietary, surfactants
10. **Solvents:** Proprietary or None
11. **Additives:** None
12. **Solubility in Water:** Miscible in oil, water, and solvents

10. Stability and Reactivity

Conditions to avoid:

1. None known, unless water is evaporated
2. If all aqueous phase is evaporated, components will completely volatize.

Materials to avoid: Hydrocarbon-based substances primarily aluminum and silicon.
Hazardous decomposition products: None Known

11. Toxicological Information

"EPA products are NON-TOXIC, NON-HAZZARDOUS, & NON- CARCINOGENIC"

Excessive exposure may affect human health as follows: Hands may redden if immersed for several hours.
Skin contact: Gloves or other skin protection are generally not needed under normal use conditions will cause irritation with prolonged contact.
Eye contact: Flush eyes with water or saline solution. Call your doctor if eye irritation persists.
Inhalation/ingestion: NONE/May cause diarrhea if volume ingested

12. Ecological Information

1. Mop up and/or use absorbent material.
2. Dispose in trash.
3. Rinse surface thoroughly
4. Apply local safety/spill clean-up measures as needed or required.
5. May be safely poured down drain.

13. Disposal Considerations:

- **Unused Product:** Dilute with water to use concentration and dispose by sanitary sewer.
- **Used Product:** This product can enter into clarifiers and oil/water separators
- May be safely poured down drain.
- Dispose of used or unused product, and empty containers in accordance with the local, State, Provincial, and Federal regulations for your location.

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14. Transport Information:

U.S. Department of Transportation (DOT) / Canadian TDG: Not Regulated
IMO / IDMG: Not classified as Dangerous
ICAO/ IATA: Not classified as Dangerous
ADR/RID: Not classified as Dangerous
U.N. Number Not Required Proper Shipping Name: Detergent Solution
Hazard Class: Non-Hazardous Marine Pollutant: No

15. Regulatory Information:

This product is not regulated by OSHA. No components listed under: Clean Air Act Section 112; Clean Water Act 307 & 311

16. Other Information:

Questions about the information found on this MSDS should be directed to:
Environmental Protection Associates, Inc. – TECHNICAL DEPARTMENT
2578 Enterprise Rd, Suite 141, Orange City, FL 32763
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