



**SOLIDEOR**

## *Simple & Sustained Benefits*

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*Maintain elevated well production levels through stick technology*

# What we do

➤ *Supplying Solid Stick technology to the oil & gas industry*

*Solid Stick technology...*

- ✓ *Originates from the hart of the Texas oil belt*
- ✓ *Is proven for over 50 years*
- ✓ *Is easy to apply*
- ✓ *Mobilizes quickly*
- ✓ *Has short interruption times*
- ✓ *Comes at minimal investment*
- ✓ *Uses existing installations*
- ✓ *Is safe in operation*
- ✓ *Is biodegradable*



# EOR Solutions

- *Solid stick technology offers a wide range of EOR solutions to the oil & gas industry*
- *Every well is different and requires a tailor made solution*
- *The chemical make up is designed to actual well data*
- *To clean out wells initially, increase water injection*
- *And then to maintain achieved production levels*

*Sticks work on...*

- ✓ *Removing carbonate scale and rust deposits, lowering injection pressure*
- ✓ *Inhibition of paraffin, salt, scale and corrosion*
- ✓ *Removing liquid columns of gas and gas condensate wells*
- ✓ *There are drilling, anti-freeze sticks and other specialty products*



# Stick Types

- *Stick combination depending on fluid composition per well*
- *Stick sizes to suite bore sizes*
- *Stick densities depending on well target areas*
  
- ✓ ***Soap sticks** – designed to foam water in the tubing, therefore lightening the fluid column and allowing the formation pressure to unload the fluid from the well*
- ✓ ***Oil foam stick** – same principle as a soap stick, used in wells that have a fluid column composed of 75% condensate or greater*
- ✓ ***Acid sticks** – primarily used in water injection wells to removed carbonate scale and rust deposits and also to lower injection pressures*
- ✓ ***Paraffin inhibitor sticks** – oil soluble sticks that release paraffin inhibitor to prevent paraffin deposition from crude oil in production systems*
- ✓ ***Salt inhibitor sticks** – chelating action to keep salt in solution, prevents salt build-up in tubing and perforation of the gas well*
- ✓ ***Scale inhibitor sticks** – prevents carbonate types of scale from developing down hole in oil and gas wells, casing, tubing and flow lines*
- ✓ ***Corrosion inhibitor sticks** – control common corrosion problems found in producing oil and gas well systems, controls breeding grounds of bacteria by reducing under deposit corrosion*





# Application



- *Manual dropping straight in the well head*
  - ✓ *Relative simple procedure*
  - ✓ *Easy and quick mobilization*
  - ✓ *Excellent HSE characteristics*
  - ✓ *Can be undertaken by the Operator*
  
- *Autoloader dropping*
  - ✓ *Periodically automatically dropping sticks*
  - ✓ *Maintaining high production levels*
  - ✓ *Suitable for remote areas*
  - ✓ *Electrical, compressed air solutions*





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# Results

## ➤ *Initial Well Stimulation*

- ✓ *Tailor made solution per well, highly effective*
- ✓ *Well returns to normal production, 5% to 25% extra witnessed*
- ✓ *Short production interruption*
- ✓ *Minimal investment*

## ➤ *Continued Well Treatment*

- ✓ *Continued monitoring of performance*
- ✓ *Stabilized higher production levels and income*
- ✓ *Easy to maintain at relative low cost*
- ✓ *And without interruptions*



# The Process

## **1. Preparation**

- ✓ *Well data – by Operator*
- ✓ *Well selection on well data analysis and financial analysis*
- ✓ *Stick selection and production for the target wells*
- ✓ *Order and supply of sticks to site*
- ✓ *Execution plan, HSE plan*



## **2. Initial well treatment**

- ✓ *Dropping sticks into the well directly from the well head*
- ✓ *Bringing the well back to normal and even elevated production levels*

## **3. Continued well treatment**

- ✓ *Either automatic or manual dropping of sticks as per requirement to maintain production levels*
- ✓ *Training of operational team*
- ✓ *Supply of sticks to operational team*
- ✓ *Dropping sticks/refilling of autoloader – by Operator*
- ✓ *Well performance monitoring and reporting*

# Partnership

## Select Industries

- ✓ *50 years in the Oil & Gas industry*
- ✓ *Texas based*
- ✓ *Largest and oldest solid stick producer worldwide*



## Al-Waid Oil Field Services

- *Oil Service company in the Middle East*
- *Omani based, applying solid stick technology*
- *Hamoud Al Habsy brings 30+ years of oil field experience*

**AL-WAID OIL FIELD SERVICES**



**الوايد لخدمات النفط**

**خدمات النفط**



# The Team

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## **Dirk Geerligs**

- *MSc Civil Engineering*
- *13 years in construction in the Russian Federation*



## **Joep Geerligs**

- *MSc Chemical Engineering*
- *13 years oil & gas engineering in the Middle East*



## **Michael Cordy**

- *BA Political Science*
- *20 years business development in the Russian Federation*





# Business proposition

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*The current low oil price brings extra urgency for Operators to improve profitability quickly. Solideor stick technology allows you to do so virtually tomorrow, at minimal investment, using existing physical and personnel infrastructure, with easy mobilization, simple & safe operation, and minimal deferment.*

*If you like the idea of sticks, and agree with us there is huge upside with little downside, we can start of this long term relationship small and work bigger and better in the future once you have experienced yourself how the technology directly contributes to your corporate business goals.*



*A solid solution*

*A solid team*

*A solid business*