

# PARALAX®

## NAMST

# Non Acid Matrix Stimulation Technology for Production Optimization

Restore/Enhance your  
well/formation/pipeline productivity  
with proven non-conventional Matrix  
Stimulation methodology

**Contains no VOC, no aromatics,  
no polymers and no silica.**

**OVER 12 YEARS OF SUCCESS!**



OIL CONTROL

# Formation Damage addressed by PARALAX®

1. **SKIN DAMAGE (Organic deposition such as paraffin, asphaltene, resins, etc.)**
  - **Statistical Fact\*:** the most common formation damage problem reported in the mature oil-producing regions of the world is SKIN DAMAGE (organic deposits) forming both in and around the wellbore.
2. **Wettability alteration, water blockage, workover fluid invasions**
3. **Emulsions, sludge's**
4. **Acidizing Damage**

\* Lafayette Formation Damage Control,  
SPE International Conference

# Impaired oil flow in the Rock Matrix

rock matrix section along the radial flow

- Rock face is oil-wet
  - Pores plugged
  - Restricted flow
- wellbore

Resin,  
Wax/Asphalten  
e coating

Sand Grains or  
carboniferous  
matrix

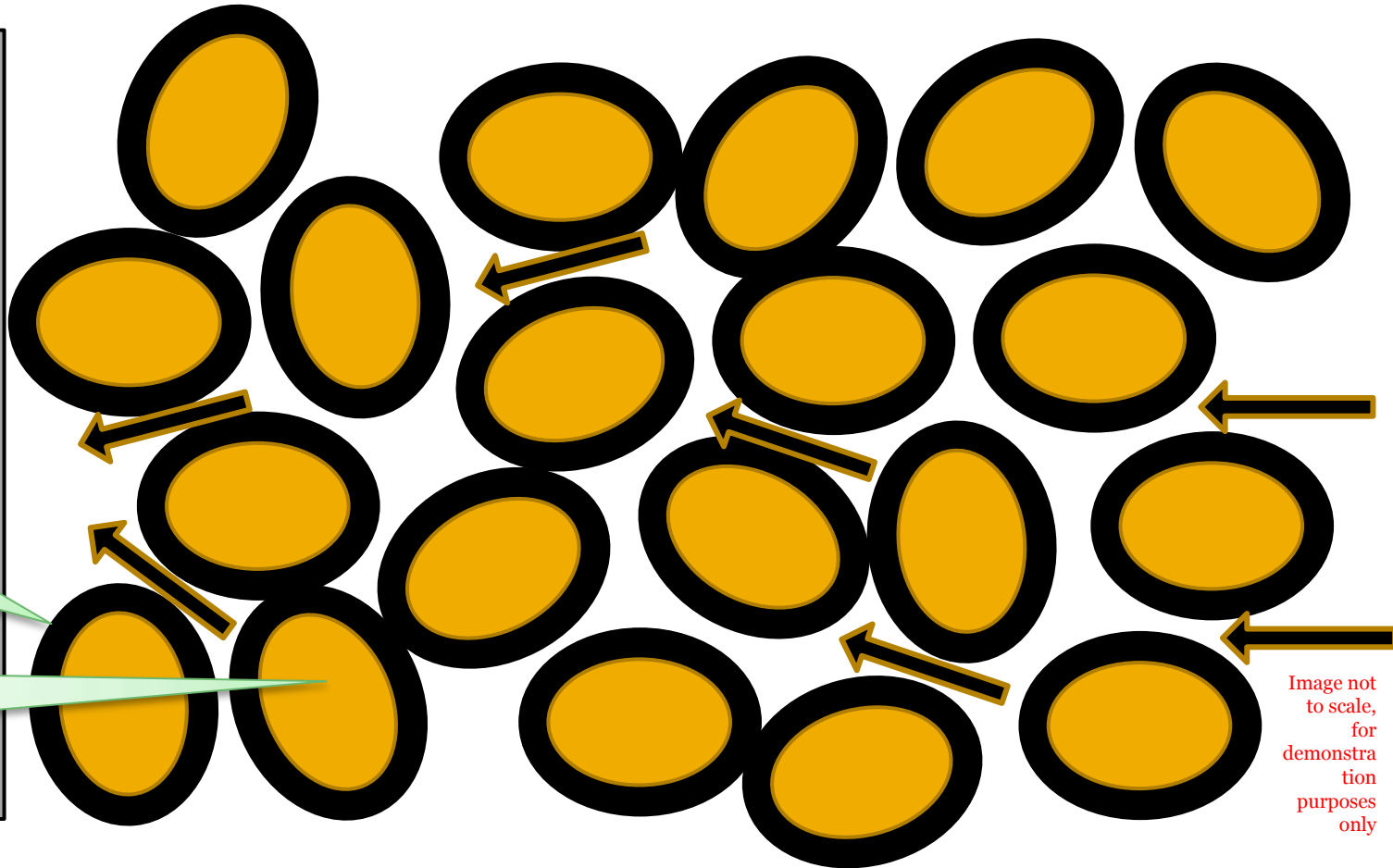
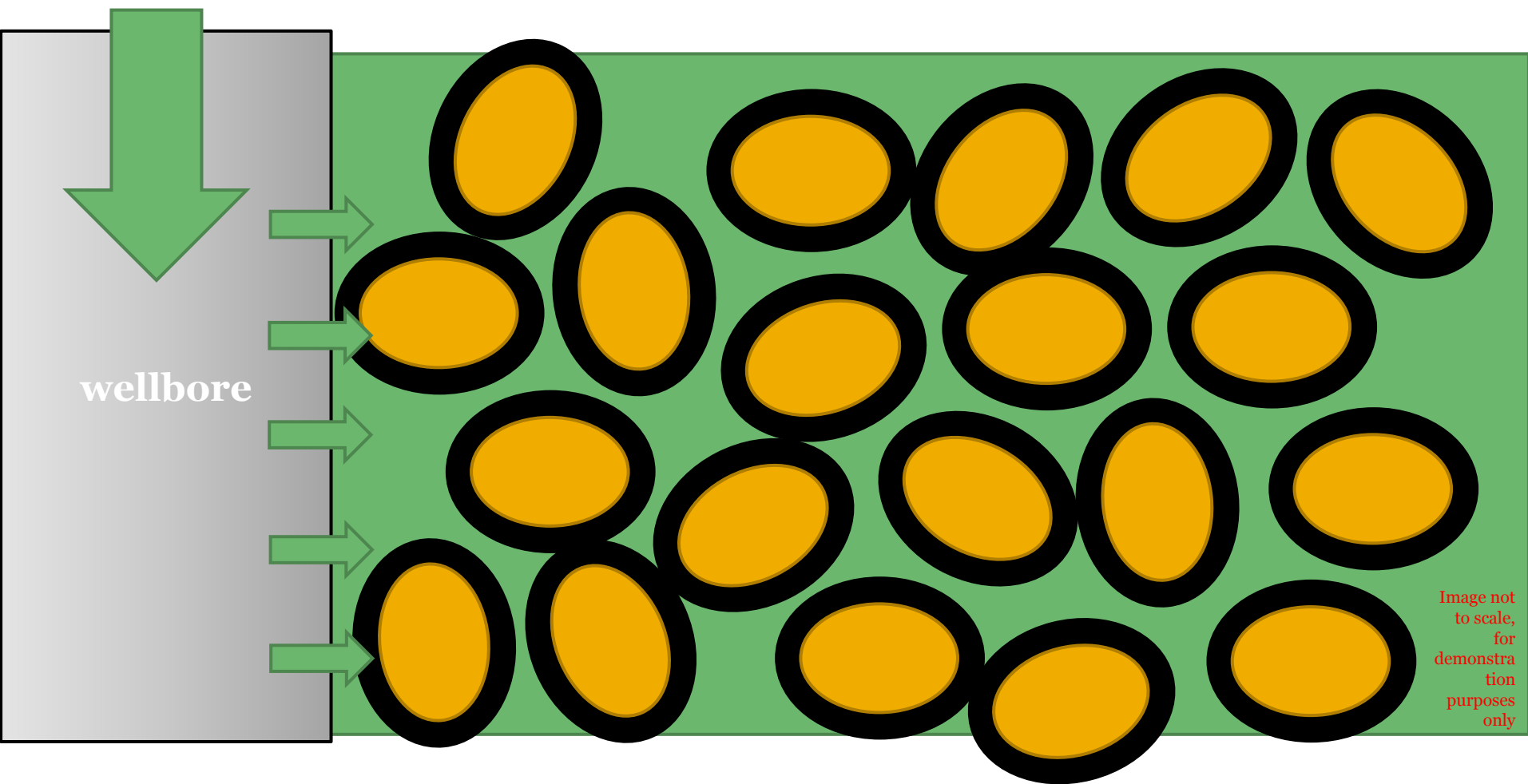
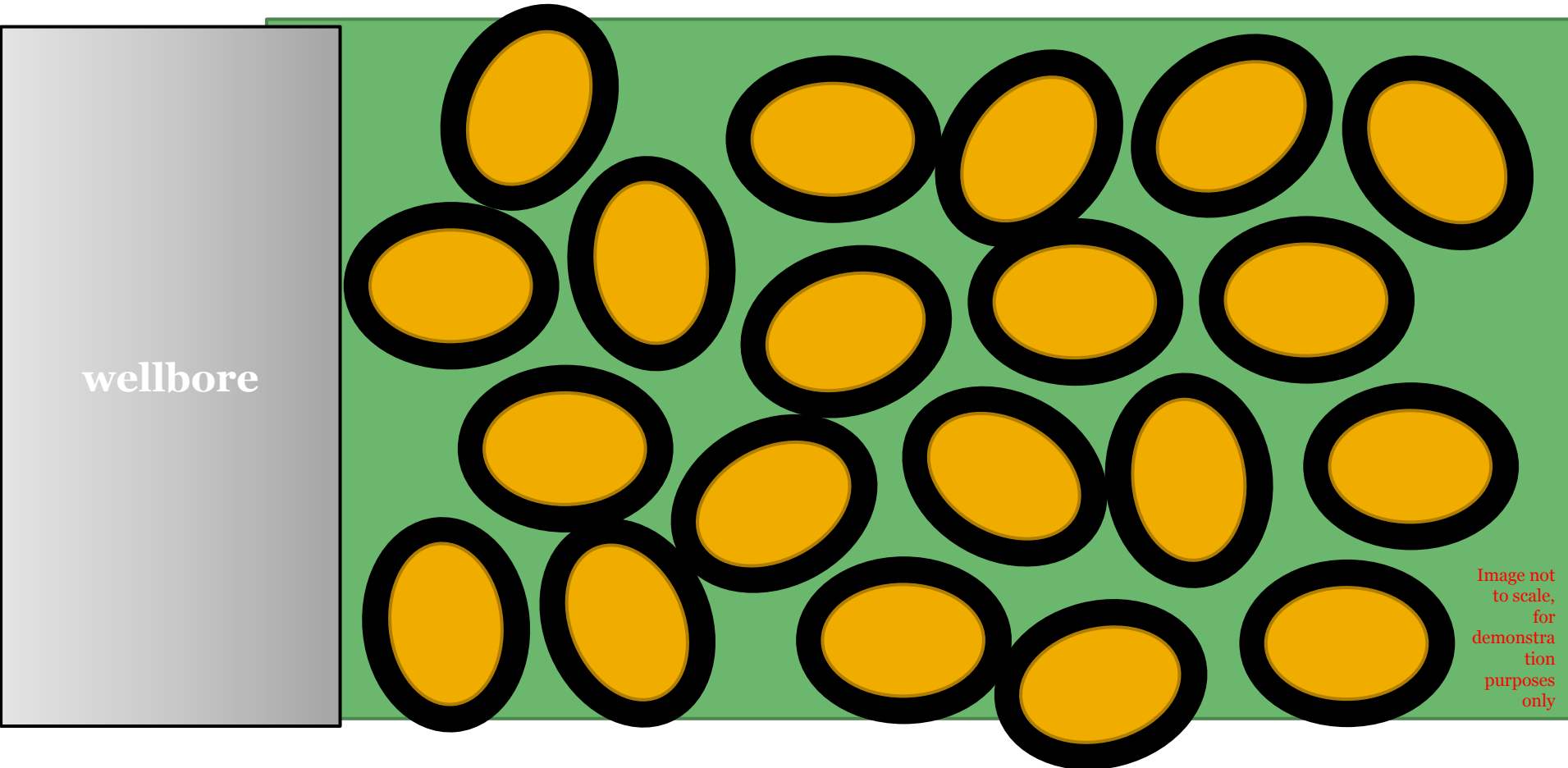


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# PARALAX<sup>®</sup> Injection



# PARALAX® Soak for few hours



# PARALAX® long lasting result

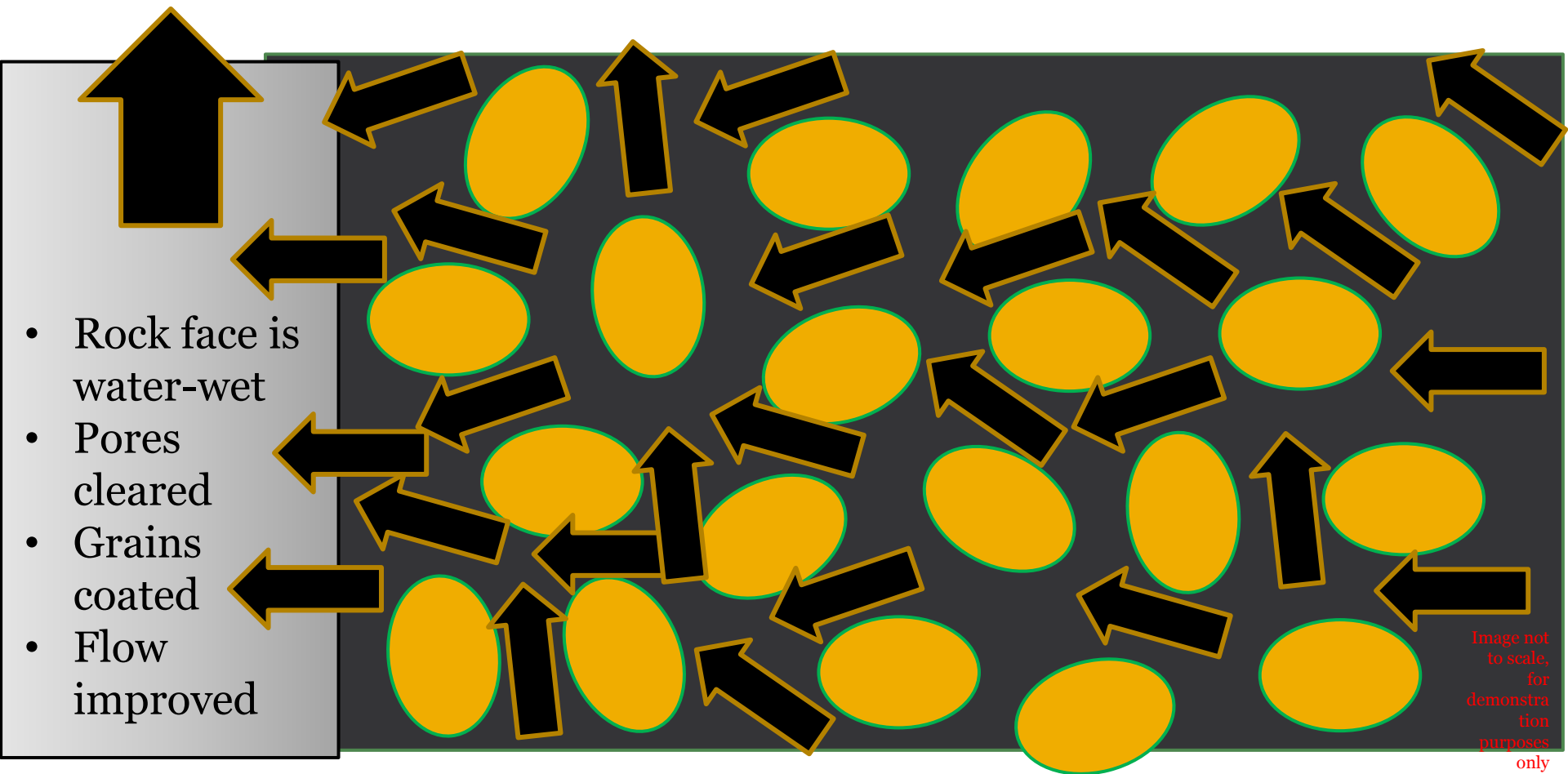


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# PARALAX<sup>®</sup> action summary

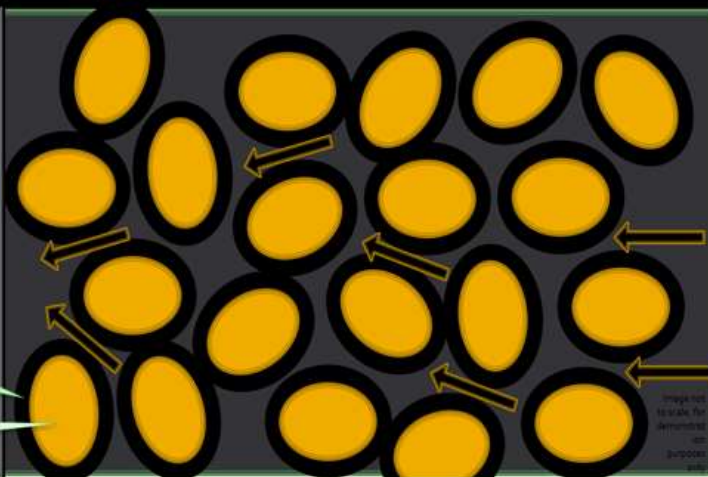
## Impaired oil flow in the Rock Matrix

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- Rock face is oil-wet
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- Restricted flow wellbore

Wax/asphaltene coating

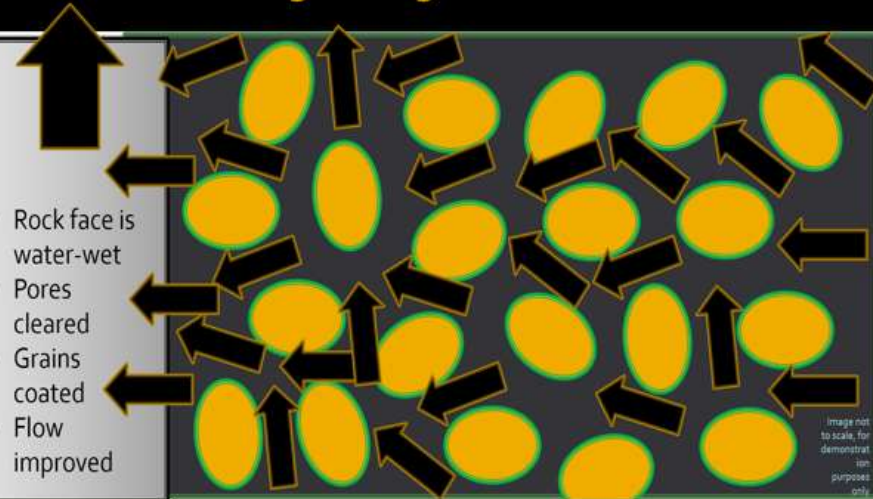
Sand Grains



Before

## PARALAX<sup>®</sup> long lasting result

- Rock face is water-wet
- Pores cleared
- Grains coated
- Flow improved



After

- Solid surfaces are left coated with molecular film
- Surfaces left water-wet, hence:
  - Better relative permeability to oil
  - Lower relative perm. to water
- Lasts at least 3-4 months

# Benefits

1. **Extra Revenue** due to stimulation effect and unobstructed oil flow
2. **Less Manpower** usage due to lower frequency treatments
3. **Lower Cost** than conventional stimulations
4. **Remediate** damage from fracturing, acidizing, workover, oil-based drilling fluids AND AGE RELATED SKIN DAMAGE.
5. **Better than acidizing** in majority wells that are candidates for stimulation
6. **Safe** for your well's, pipelines, matrix and your personnel



# Typical example PARALAX job vs. Conventional Stimulation job

Parameter	Conventional	PARALAX
Job cost (service, equipment, personnel, chemical, design, evaluation, etc.)	\$100,000	\$30,000
Incremental oil production $\Delta Q$	50 BOPD	50 BOPD
Duration of $\Delta Q$	50 days	120 days
Accumulated <b>Incremental Oil</b>	2500 bbl	6,000 bbl
Efficiency - “cost of an extra barrel”	\$40	\$5
	Marginally economical	Super economical

# Case History. PEMEX

## Materials used

- PARALAX 600 liters, 165 gallons
- Carrier oil for PARALAX 30 m<sup>3</sup>, 180 bbls
- Hot Oil Unit

Brief procedure. Rigless job, pumping down the tubing

- Pump PTO (PARALAX-Treated Oil) while heating it on the fly to 90°C
- Pump tubing volume with oil to bullhead/squeeze PTO



# PEMEX

Relación de costos y beneficios de intervenciones reales convencionales\*. Pozo Rabasa 215

Pozo	Fecha	Tipo de Intervención	Incremental reportado (bpd)	Costo real (MM\$)	Días Operando	**Factor de declinación (%)	Acumulada de Aceite (Mbls)
Rabasa 215	03-mar-21	Limpieza c/TF	55	1.60	39	1.05	2.13
	13-abr-21	Estimulación no ácida	31	0.87	48	4.30	1.44
	02-jun-21	Limpieza c/TF	30	1.30	43	8.50	1.21
	28-ago-21	Limpieza c/TF	30	1.37	82	16.90	1.93
	1-ene al 31-dic	Dosificador inhibidor	N/A	0.91	240	N/A	N/A
Rabasa 215	Intervención		Total de intervenciones	Tot. incremental reportado (bpd)	Costo real Total (MM\$)	Días totales Operando	Acumulada total de Aceite (Mbls)
	Limpiezas c/TF		3	115	4.27	164	5.27
	Estimulación no ácida		1	31	0.87	48	1.44
	Dosificador de inhibidor continuo		N/A	N/A	0.91	N/A	N/A
	Total		4	146	6.05	212	6.71

Stimulation Treatments done at PEMEX prior to PARALAX job

- 3 coiled tubing jobs
- 1 non-acid stimulation
- Continuous inhibitor injection

# Example from Mexico

USD367,000

USD33,000

Comparativo de costos y beneficios reales (USD) de las intervenciones tecnológicas vs. las convencionales en el POZO RABASA 215

Pozo	Tipo de Tratamiento	Tipo de Intervención	Número de Intervenciones	Incremento reportado (bpd)	Costo real (MM\$)	Días Operando	Acumulada de Aceite (Mbls)	Factor de declinación (%)
Rabasa 215	Convencional	3 Limpieza c/TF 1 Estimulación no ácida Dosificador de inhibidor	4	146	6.05	212	6.71	variable
	PARALAX*	1 Estimulación no ácida con limpieza de aparejo	1	102	0.55	90	8.98	1.54
	Diferencias Tecnológico - Convencional		-3	-44	-5.50	-122	2.27	N/A

\*Fuente: Resultados de la Prueba Tecnológica PARALAX (Nov-21 a Mar-22)

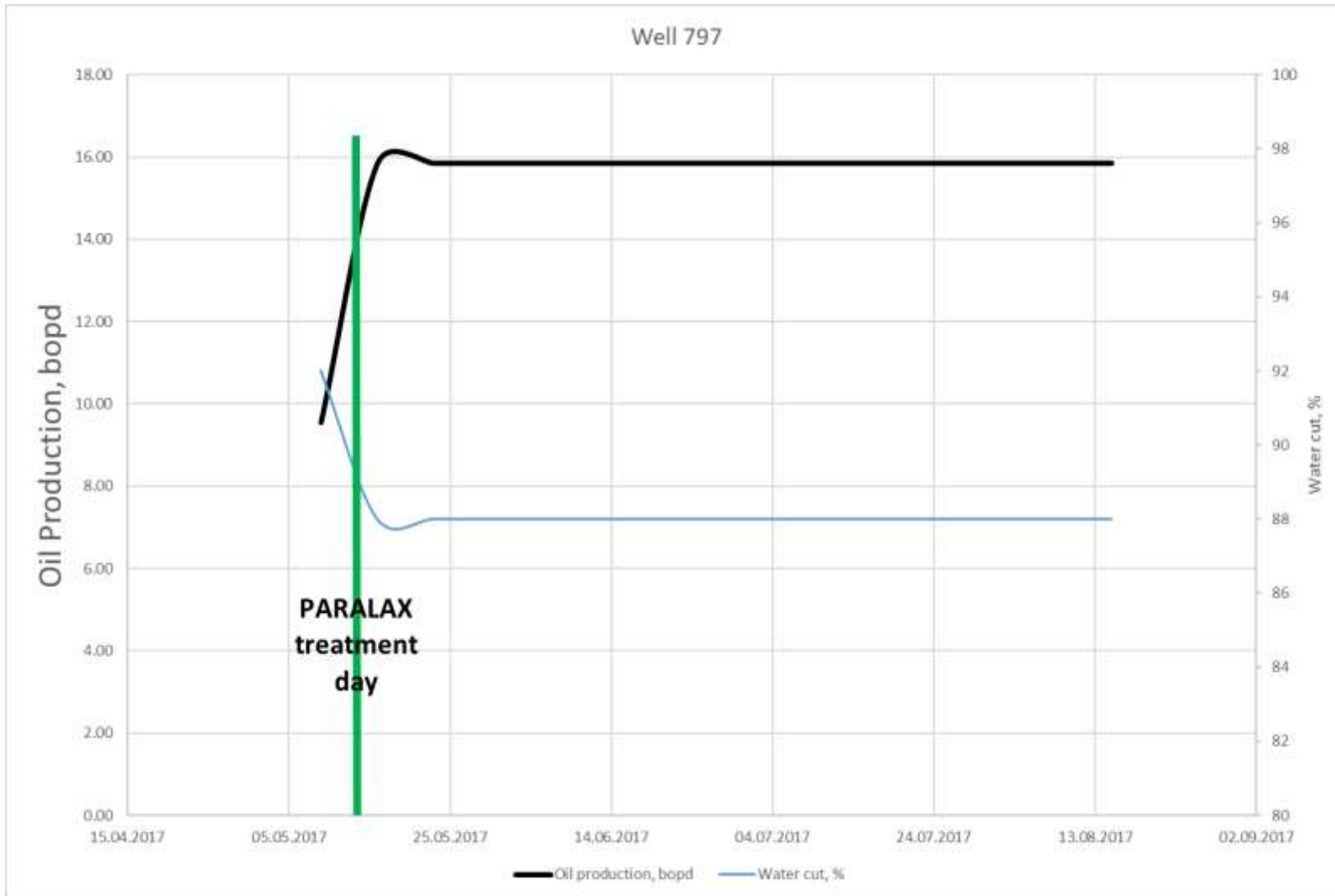
## PARALAX® treatment compared to 3 CT & 1 xylene job at PEMEX

- One treatment's Incremental oil production 102 BPD vs. 36.5 BPD (146/4)
- Total Cost 11 times less (6.05/0.55) in millions MXN
- Total accumulated oil produced more in less than half time (90 days vs. 212 days)
- Lower than expected production decline rate 1.54% vs. acceptable 4.5%

# Example. High water cut wells in Indonesia LR-171



# Example. High water cut wells in Romania 797



# 3 Dead Indonesian wells

An operator in Indonesia had 3 wells that had been shut in for over 2 years. They wanted to see if we could bring them back to life. We treated the wells in August 2022. All 3 wells had to have new pumps installed so the operator calculated the cost of the pumps in their overall gain.

**All 3 dead wells came back online and netted over \$165,929.60**  
**We are in the process of treating 8 more wells in their fields.**

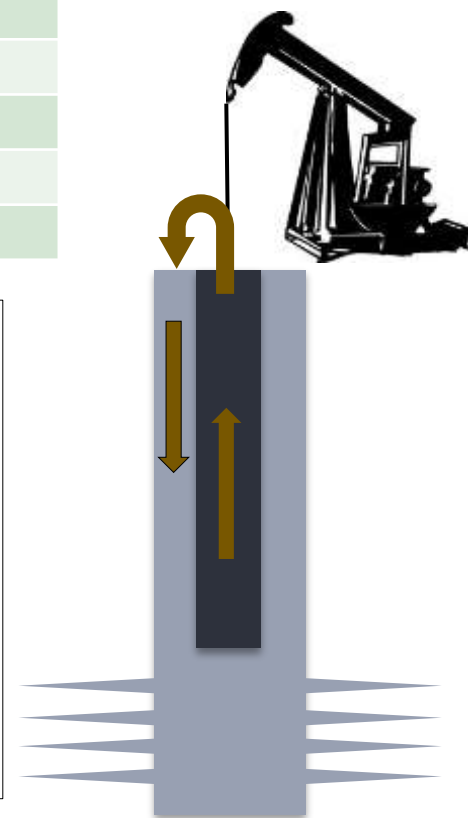
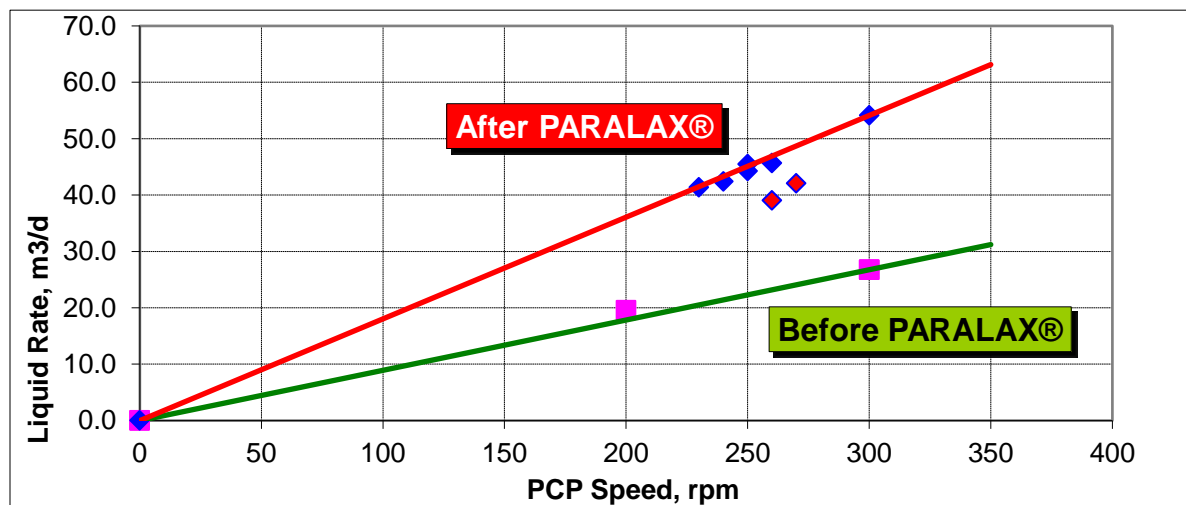
1 bbl      \$ 80

WELL	DATA (days)	Consumed PARALAX (Liter)	cost PARALAX (\$41/Liter)	PCP RENTAL (\$/Day)	Total PCP Rental	Total Cost PARALAX + PCP	Target Production Oil to Cover PARALAX treatment in (BBL)	Total Gain Production	Rata-Rata Production per day (BBL)	NET OIL GAIN AFTER PARALAX TREATMENT		
Well 1	95	400	\$ 16,400	\$ 100	\$ 9,500	\$25,900.00	323.8	1,218.37	12.8	894.6	bbl	\$ 71,569.60
Well 2	61	240	\$ 9,840	\$ 100	\$ 6,100	\$15,940.00	199.3	604.00	9.9	404.8	bbl	\$ 32,380.00
Well 3	71	360	\$ 14,760	\$ 100	\$ 7,100	\$21,860.00	273.3	1,048.00	14.8	774.8	bbl	\$ 61,980.00

**Net OIL GAIN all 3 wells \$165,929.60**

# Example treatment in Atyrau, Kazakhstan

	Before PARALAX®	After PARALAX®
Pump RPM	300	250
Amperage load, amp	22	18
Torque	52	40%
Dynamic level Above Pump	185	330
Oil flow, m3/day (bopd)	28m3 (176 bopd)	46 m3 (289 bopd)



**Well had to be hot oiled every 4 days to not plug with asphaltene and paraffin prior to treatment. After PARALAX® no hot oiling, production increased, lowered amperage and torque so less wear on equipment. Well went 4 months at this rate of production.**



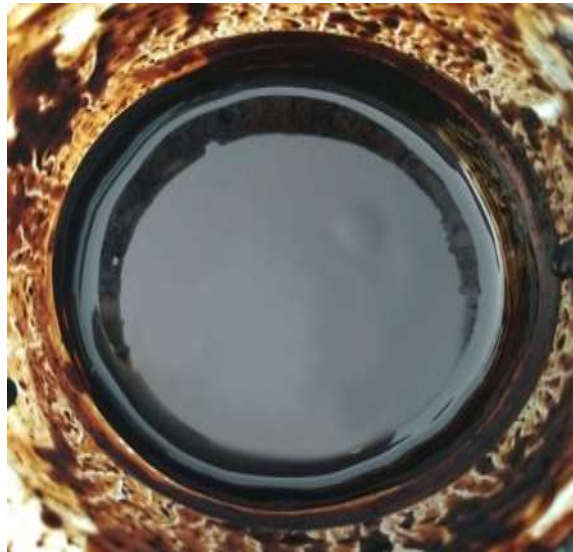
# Sludge Liquefaction

Formation damage aborted! Asphaltenes, paraffins and resins softened then liquefied to keep matrix, near wellbore and production string clear.

**What you see below is what is happening downhole! ASK US HOW!**



**Sludge before  
treatment**



**Sludge after  
treatment  
PARALAX®**



**Total liquefaction of  
Sludge after  
PARALAX® treatment**

*Thank  
you!*



OILCONTROL

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