

RAW's EOR treatment program increases production and reduces lift costs.



RAW's EOR formulation rectifies pH levels in the well bore and suspends paraffins/asphaltenes to increase production and extend well maintenance cycles.

### RAW Biochem Is

Readily Biodegradable  
Non-Reactive  
Non-Toxic  
Non-Corrosive  
Non-Hazardous  
Not Flammable  
Contain No VOC's

### RAW Biochem Products Do NOT Contain

Petroleum Distillates  
Glycol Ethers  
Caustics  
Ozone Depleting Agents  
Nonylphenols  
Endocrine disruptors

RAW's EOR formulas is a breakthrough method of stimulating well flow using domestically grown, readily biodegradable plant ingredients. Proprietary micelle formulation quickly and effectively emulsifies well blockages and allows hydrocarbons to enter the revenue stream. EOR formula increases productivity and reduces lift costs.

There is no need to separate chemicals from the flow as product flows through to the processing plant. It will not affect any upstream activities or damage critical infrastructure. RAW's EOR formula is not a solvent and will not mix with, degrade or compromise oil quality.

Eliminates the need for toluenes, benzenes, acids and a host of other chemicals. All ingredients are readily biodegradable; plant-based ingredients and offer a host of additional benefits including:

- It will not corrode or scar metals.
- It will not react with other chemistries.
- It aids in the treatment of calcium buildup down hole.
- Dramatically reduces iron forming bacteria which can produce slime which restricts flow through screens and casing.
- Reductions to work safe procedures and equipment normally needed in optimizing well production.
- Reduces environmentally hazardous procedures as EOR formula with >98% biodegradability in less than 30 days.
- EOR formulation encapsulates and suppresses volatile organic compounds (VOC's) which enhances worker safety.

## TECHNICAL DATA SHEET

### Description

HD EOR (Enhanced Oil Recovery) formula is a super-concentrated blend of readily biodegradable ingredients derived from domestically grown sources. The EOR formula will stimulate production and increase length between well maintenance cycles.

The active ingredients are safe to use on all substrates and will not damage steel, glass, fiberglass or plastic.

Physical State	"A" Formula
Colour	Dark Amber
Odour	Soapy
pH	9.2 – 9.6
Base	Plant Extracts
Persistence & Degradability	Readily Biodegradable

Physical State	"B" Formula
Colour	Opaque White/Amber
Odour	Soapy
pH	4.1 – 4.4
Base	Plant Extracts
Persistence & Degradability	Readily Biodegradable

### Directions for Use

RAW's EOR program combines a unique chemical formulation with proprietary processes that are sure to remove heavy wax obstructions at or near the well bore while also cleaning arterial pathways between the well bore and the formation

EOR chemicals are a concentrated blend of readily biodegradable ingredients which revert back to their natural state when in contact with naturally occurring micro-organisms, oxygen and water.

RAW's EOR products are safe to store and transport and for use on all substrates. It will not damage steel, glass, fiberglass or plastics.

- Wells must be operating for a minimum of 3 months prior to the EOR treatment.
- A well candidate survey must be completed and submitted to RAW for evaluation and process development.
- Recommendations on product strength and quantity as well as process are submitted to client or service team.
- Products are thoroughly mixed with clean produced or 2% saline water before treatment begins.
- Products are discharged down annulus (backside) of well.
- Recommended equipment for discharge process includes use of a hot oiler.
- Well will be shut in for a period of 36 - 48 hours duration before production resumes.
- There is no requirement for product evacuation prior to resuming production.

**Please Note:** Precise information, processes and recommendations are made available only after a thorough review of each individual well characteristics.