

REFINING

PETROCHEMICAL

Pro-Flo

Applications for the Oil and Gas Industry

- Oil and Gas Production
- Refining Process
- Petrochemical Process



A Proprietary Process Protected By US Patents

McIRISH GROUP

THE COMPANY

The company is located in Midland, Texas and is actively involved in the oil and gas industry service business. The company provides engineering, drilling and re-completion services to various clients in the industry. The company's history dates back to the 1990s when a group of specialists formed an alliance to provide the services listed herein.

THE PRODUCT DESCRIPTION

A major part of the company's consulting business has been involved in the wellbore treatment and re-completion of existing oil and gas wells on a World wide basis. The production in the United States has recently suffered a price below the necessary income levels that encourage additional drilling of new wells in almost the entire onshore US. The area of expansion for the company has become the re-work and wellbore treatment to improve the daily production levels of existing wells in order to provide an income stream that enjoys a lower than average cost basis to the owners and operators of the existing wells. The company has utilized a fairly new product that consists of a metallic base polymer material that has proven to successfully improve both daily production and recovery factors. The product has a huge effect on existing formations in existing wellbores. The company has negotiated the acquisition of the ownership of the patents and trade secrets relating to the product.

THE MARKETS

The product, known in the industry as PRO-FLO, has been successfully utilized in tertiary and secondary recovery programs to the extent that the productive life of producing formations have been extended to as much as three (3) times the initial productive life of the formations. The material is "Green" as accepted by the EPA and does not require any special fluid materials handling systems other than clean fluids that are blended into the mixture for wellbore treatment or recovery programs. Actual testing shows the results of the PRO-FLO will allow app. 90% recovery of hydrocarbons in place. The injected product can be replenished and re-used for continuing treatments to the formations.

The second major application for the materials usage is within the refining industry. PRO-FLO, in conjunction with usage technology, will improve the overall output from a refining process up to 12.5% of refinery output, at a very low cost to the refiner. Among several advantages through the use of the process, the product lowers the required temperatures needed for the refining process which allows for a larger volume of lighter products from the normal process.

In conjunction with the thousands upon thousands of existing wells that need remedial treatment application and the continuing pressure to reduce lifting costs from the

producing formation, the company's product has a highly acceptable potential to penetrate the largest treatment market in the industry since advanced stimulation methods were introduced many year prior to the development to the product. Additionally, the costs pressures on the refining markets have created a potential growth business for the company that is now available due to lower product pricing.

The market provides an application opportunity that will allow McIRISH to acquire equipment to provide treatment services that are almost without competition. The specialized treatment programs developed by the company are adaptable to almost any existing production program anywhere in the World-especially within the USA and especially in conjunction with the current efforts to reduce lifting costs and enhance production levels from those existing production programs.

In addition to the company's treatment and equipment service business, the establishment of International representation by specialized marketing groups that are currently involved in the refining business is well under expansion. The pending sale of the PRO-FLO to the refining industry holds a large income potential that is being established at current date. The ever expanding potential for PRO-FLO and the service applications will generate large income opportunities for many years into the future.

SENIOR MANAGEMENT PERSONNEL

Tom McCormick, Managing Director

Tom is a third generation petroleum industry specialist with over 39 years experience. He brings a strong base of experience in sales and marketing, field engineering, as well as, management and oversight of assets to every project. Tom is uniquely versed in both the domestic and International energy services, and he has founded several energy companies that have operated around the World. He is President of Mc Irish Consulting, Inc. acting as a representative for energy service and consulting companies in the Permian Basin. Tom has experience working with all the majors, major independents, and independents that are currently active in the Permian basin. Previously, Tom has been a part owner, founder and President of A&W Trading Int. Ltd. He has also served as a V.P. for Spectrum Drilling Fluids Inc., a drilling fluids and drilling engineering company services company, and as a V.P. of sales and as a Senior Field Engineer for American Oil Field Service, Inc., a drilling rig manufacturing company. Tom has held management positions as a V.P. of field operations, drilling/production for G Mac O&G Inc., an independent O&G exploration company, and it's affiliate Master Well Logging Inc. Tom was also trained as a field engineer for Baker Packers/Services Inc., C.E. NATCO, and Otis Engineering. Tom understands the necessary financing structures for a successful project, and has earned a lifetime of relationships, which make the difference in his success compared to his competitors.

Bill Bennett

Bill has over 25 years of field experience in the oil and gas business specializing in drilling fluids. Bill has worked as a well-site drilling supervisor and as a drilling fluids engineer. Bill holds degrees from Louisiana Tech University and Louisiana State University.

Additional Training

Hughes Drilling Fluids, Mud School, 1981; Hughes Drilling Fluids, Oil Mud School, 1984; Well Control for Drilling Supervisors Certification; Helicopter Underwater Escape Training; H2S Awareness Training; H2S/ Respiratory Protection Training; Hazardous Waste and Emergency Response; Hazard Communications Training; Hearing Conservation Training; Instructor MFA/CPR/BBP Training; Confined Space; Cranes and Pickers; Defensive Driving; Drug and Alcohol Awareness; General Safety Orientation; Electrical Safety; Excavation Safety; Fall Prevention; Fire Extinguishing and Prevention; Fire Watch and Prevention; Forklift Safety; LockoutiTagout; Personal Protective Equipment; Safety Meeting.



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SUMARY OF APPLICATIONS (1)

- Provide an improved method for treating oil and gas well s to enhance production (either sandstone or shale formations).
- Mac An efficient and cost effective method to extract Oil from Tar Sands (Canada, Russia, Venezuela markets).
- A method to treat, neutralize and remove hydrogen sulfide (H2S) in the gas and / or in the oil stream to meet environmental and economics standards.
- A process for cleaning soil contaminated with heavy hydrocarbons and /or heavy metals.
- A process to control odors in industrial installations
- A method to clean polluting stack emissions from industrial plants.





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SUMMARY OF APPLICATIONS (2)

- A method for increasing the production of hydrogen from an hydrogen plant.
- A method to elimínate PCB's (Polychlorinated Biphenyls)
- Provide a compound that can be used easily in all refining processes including isomerización, polymerization, hydrogenation and hydrocracking Produce improved gasoline, diesel, kerosene and jet fuels with higher octane and performances. The compound is very inexpensive to produce and yields a considerable savings in fuel refining production carbonyl sulfides.
- A process to extract vegetable oil from plant materials.
- Provide a composition and method for eliminating bacteria, fungi, and parasites from vegetation.





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Enhanced Oil & Gas Recovery Non Toxic – No Corrosive

Pro-Flo

Success is in its ability to free Oil and Gas from sand, shale and rock in the production zone.

Pro-Flo

Eliminates the interfacial surface tension between all matter, thus they repel each other like magnets.

The Process

The aqueous solution of Pro-Flo induces a process of chemistry changes of the elements. (Oil, salt, sediments, bed rock, asphaltens, paraffin's) when they make contact with the Pro-Flo

When in the formation Pro-Flo lays a barrier giving the soil and the oil a constant negative polarity. The Pro-Flo interact with the oil that has adhered to the formation structure over the years, changing its surface tension, and breaking the oil into small coated droplets that can be remove from rock pores simply by water drive.

Pro-Flo : THE SOLUTION TO REMOVE 90 TO 100% OF THE OIL IN PLACE





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Oil and Gas

Pro-Flo

- Pro-Flo An excellent cleaning agent. It cleans the perforations and fractures, dissolve carbonates deposits from drilling activities and Fracturing jobs
- Pro-Flo High pH (13.0 13.7) has been very successful in killing bacteria's.
- Pro-Flo No VOCs (Volatile Organic Compounds)
- Pro-Flo Is an excellent surfactant.
 - Pro-Flo Makes water wetter. The ability to increase the wet-ability of total solution allow the disbursement of Pro-Flo into the formation and allows for it to penetrate into the smallest fraction of the pay zone.
- Pro-Flo Impacts the viscosity of the oil. In thick, slow moving oil the Pro-Flo increases flow ability
- Pro-Flo Precipitates out the salt, but does not create a salt plug. Allows the salt to precipitate out into the water phase providing lighter and cleaner oil.





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Pro-Flo (Cont.)

- Pro-Flo Is a corrosion inhibitor. The ability of Pro-Flo to enter into the metallurgical environment associated with downhole equipment has established that corrosion can be eliminated under most conditions.
- Pro-Flo A very efficient product to dissolve scale deposit.
- Pro-Flo Reduce drag in pipelines carrying oil and fuels.
- Pro-Flo Neutralizes common industrial acids, including sulfuric and hydrochloric acids.
- Pro-Flo A clay stabilizer
- ▼ Pro-Flo -A weighting agent (Sp.Gr. de 1.014 a 1.536 according to pH level). Could be used as an oil well completion fluid.

Pro-FloIS NOT MISCIBLE WITH CRUDE OIL





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Pro-Flo Characteristics

All Treatments (Diluted form)

pH: 13.0 a 13.7

Non - Toxic

Non - Caustic

Non - Corrosive

Non - Hazardous

Non - Flammable

Contains No VOCs

Stable Up to 1,500°C

Easy to Store and Transport

Environmentally Friendly

Color, Light Yellow

Olor, Citric Light

24 to 48 Hours Application time

water base solution





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Pro-Flo

THE CLEAN SOLUTION TO RECOVER OIL FROM TAR SANDS

■ Tar Sands are extracted using strip mining, hot water extraction, of various in-situ heat processes. In Canada the "Clark Hot Water Process" uses hot water, sodium hydroxide, and naphta. Unfortunately, this process has created, and continues to create, one of the largest environmental problem s facing Canada today.

Major Problems with the Clark Hot Water Process:

- Sodium hydroxide is a hazardous product and its use makes it nearly imposible to separate water cleanly from bituminen.
- The middle layer of the tailing ponds forms a sodium silicate salt caused by the reaction of the sodium hydroxide with the bituminen and clays. This sodium silicate salt is very damaging to fish and other wildlife.
- A naphthenic acid derived by the fraction of bitumen with sodium hydroxide and subsequent acidification, remains on top of the tailing ponds to be evaporated into the atmosphere, where it forms acid rain.





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THE CLEAN SOLUTION TO RECOVER OIL FROM TAR SANDS (cont'd)

- Most importantly for the environment, Bitumen extraction according to the Pro-Flo process, eliminates the use of caustic soda and naphta, thus avoiding the creation of highly contaminated and environmentally destructive tailing ponds, which actually are good size lakes and very toxic for humans and animals.
- Tar Sands recovery can be even more easily performed by in-situ methods. The compounds of Pro-Flo are pumped directly into the tar sands. Because the specific gravity of the bitumen is lower than that of the soil, and because the Pro-Flo solution reduces the interfacial tension between the oil and soil molecules, the bitumen rises to the surface, where it can be skimmed. The result is much less excavation of dirt, which again saves a substantial portion of the production cost. .
- Pro-Flo compounds can also be used to remediate existing tailing ponds and removed bitumen which otherwise is permanently lost.



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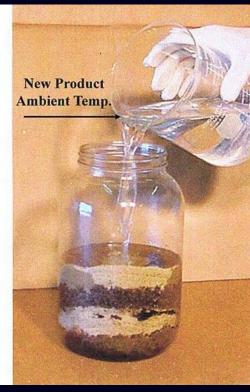
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LABORATORY SIMULATION

(Sandstone – Tar sands)

PRO-FLO





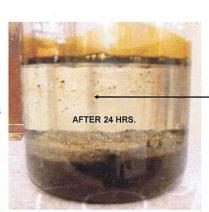
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LABORATOTY SIMULATION (Sandstone – Tar Sands)

PRO-FLO

New Product Tank Bottoms, sludge, Tar Sands



Oil Droplets floating To the top. No stirring







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Oil & Gas Wells – Field Testing

PRO-FLO

Type of Formation Treated

Frió Sand, (Sandstone) South East Texas.

Woodbine, (Deltaic Sandstone) East Texas Basin.

Greyburg, (Limestone, Gypsum, Claystone) SWT

San Andrés, (Limestone, Claystone) West Texas

Seven Rivers, (Siliclastic, Carbonate, Sandstone) WTX

Queen, (Stratified Limestones, Claystone, Gypsum) ARK

Austin Chalk, (Interstratified Limestone, Calcite) SWT





FORMATION

GREYBURG

QUEEN

SAN

ANDRES

SAN

ANDRES

SEVEN

RIVERS

SEVEN

RIVERS

WELL N°

8

15-A

1

2

14

9

FIELD TESTING AND DESLILTS

PROD.

AFTER

BOPD

9.1

21.0

14.0

10.0

6.5

8.7

PROD.

INCR.

BOPD

7.0

19.0

12.3

8.7

5.5

7.5

STABLE

7 MTHS

9 MTHS

8 MTHS

6 MTHS

5 MTHS

5 MTHS

"YATES FIELD ", MIDLAND, PECOS & CROCKET COUNTY, WEST TEXAS
CRUDE OIL , API +/- 30°

TYPE OF

FORMATION

DOLOMITE

SILTSTONE

DOLOMITE

SILTSTONE

SANDSTONE

LIMESTONE

DOLOMITE

CALCITE

LIMESTONE

DOLOMITE

CALCITE

DOLOMITE

SANDSTONE

SILTSTONE

DOLOMITE

SANDSTONE

SILTSTONE

PROD.

BEFORE

BOPD

3.0

1.5

1.5

3.0

0.5

1.5



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Sour Gas Treatment With

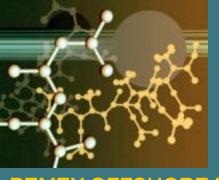
Pro-Flo

- Sour Gas is treated with compounds of Pro-Flo to remove the Hydrogen.
- A diagnostic module is incorporated into the injection unit so that the gas treating system can be continually adjusted to conform to the composition of the gas.

Most Important

- The diagnostic module used addresses every change in the flow of sour gas percentages of contamination of H2S, and reformulates the treating solution to accurately and efficiently remove or reduce the hydrogen sulfide in the gas, to meet customers and environmental standards.
- A conventional alkanolamine unit is used to treat the gas with the Pro-Flo solution. In the event that levels of H2S change in the gas stream, the diagnostic module has access to a series of nine solutions. The diagnostic module automatically makes corrections needed and modify the existing treatment solution in the Alkanolamine plant to properly and efficiently continue to treat the sour gas stream.





FIELD TESTING TO NEUTRALIZE H2S CONTENT IN THE OIL & GAS STREAM WITH PRO-FLO SOLUTION

PEMEX OFFSHORE FACILITIES ARENQUE FIELD, ALTAMIRA, MEXICO

FIELD TESTING RESULTS (APRIL 28 & 29, 2008)

DATE	TIME	INITIAL H2S CONCENTRATION PPM	FINAL H2S CONCENTRATION PPM	SOLUTION Pro-Flo LTS/MIN	SOLUTION Pro-Flo LTS	TOTAL ACCUM. LTS
28/04	08:30	1,800	-	1.25		
28/04	11:00		1,700	1.25	238	238
28/04	11:10	1,700		1.25		
28/04	13:30		1,600	1.25	225	463
28/04	13:40	1,600		1.25		
28/04	16:40		1,300	1.25	238	701
29/04	08:00	400		5.00		
29/04	11:00		90	5.00	900	1,601
29/04	11:15	90		5.00		
29/04	14:00		80	5.00	900	2,201
29/04	14:15	80		8.00		
29/04	17:15		40	8.00	1560	3,761



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Pro-Flo Super Fuels (PFSF)

(Pro-Flo Super Fuel)

- Fuels produced with Pro-Flo solutions have increased octane as compared with conventional fuels.
- Because PFSF burns a lower temperatures than conventional fuels, it minimizes knocking and burns cleanly. Needs less oxygen for combustion than conventionals fuels and improves lubricity of fuels.
- PFSF and related compounds added to fuels add hydrogen and at the same time release and reduce sulfurs and nitrates
- Normal fuel molecular mass is greatly affected, so that the fuel is converted to a more flammable, cleaner burning fuel
- PFSF reformulated fuels process can be used for gasoline, diesel, kerosene and jet fuels.
- PFSF reduces hydrocarbon emission by 83% and carbon monoxide emission by 96%
- In PFSF, the amount of benzene is lowered to produce a more energy efficient and less polluting fuel.
- ■PFSF is a perfect fuel that is not affected by high temperature or by altitude changes and not affected by turbulent fluctuations. The density and viscosity of PFSF remain constant.





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Benefits Of Heavy Crude Oil Processing With Pro-Flo Compounds

- Heavy crude oil have a low light oil base.
- To create additional light fuels, heavy oils are reprocessed in Alkylation, Isomerization, Cracking and Hydroreforming. During theses stages undesirable products are formed.
- It is possible to increase the yield of light fuel in the distillation end which would leave less heavy oil to treat.
- Pro-Flo compounds introduced into the distillation system, through the steam injection creates hydrogen cracking and iso forming without additional heat and pressure change than in the normal operation of a distillation system.
- With Pro-Flo present during distillation, It would help prevent structure of olefins, aromatic solvents and alkynes from being formed under heat. It would also prevent a low percentage of low boiling point hydrocarbon structures during the gaseous formation





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Benefits Of Heavy Crude Oil Processing With Pro-Flo Compounds (cont'd)

- The chemical reasoning to this compound is its polar kinetic charge which inhibits hydrogen placement and structure formation in hydrocarbons while displacing sulfurs, using nitrates to activate a nitration reaction.
- Hydrogen is a big part of the **Pro-Flo** composition, which creates ready available hydrogen used in hydrocarbon structuring.

Alkylation Of Thermal Cracking

- Pro-Flo is a promoting reactant, also has a use in Alkylation and Cracking with same or better success in reforming.
- In Alkylation H2CL+magnesium aluminum silicate + Pro-Flo is a perfect mix for reforming and de-sulfurizing hydrocarbon. With Pro-Flo present, less pressure and less heat is needed, which will prevent unwanted aromatic hydrocarbon being produced. No remodeling to the present system is needed to introduce the new mix.
- In Thermal cracking the same process is used by introducing the Pro-Flo solution as a promoting reactant prior to injection.





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LABORATORY TESTING

Pemex, México – Maya Crude Oil Test 1 20 API Gravity

Test Location : Villahermosa, Tabasco, México

Test Process: Lab Model Distillation Unit

Test N°1:

Time Test Started: 8:40 am - 500ml of Maya Cr.Oil

Bubbling Started at 275° F

Time: 9:25 am: Starting Light Fuels Dripping.

Time: 9:40 am: Good Bubbling, Light Fuels Dripping

Temperature: 592.5° F

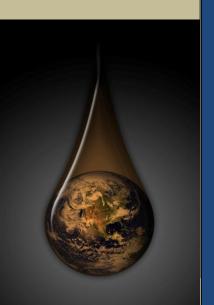
Time: 11:30 am: Turn Off System

Temperature: 758° F

Total Light Fuel Produced: 64.0 ml.

Total Condensate Produced: 0

Time Of Processing: 2 Hrs. 50 Min.





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LABORATORY TESTING

Pemex, México – Maya Crude Oil Test 2

20 API Gravity

Test Location : Villahermosa, Tabasco, México

Test Process: Lab Model Distillation Unit

Test N°2:

Time Test Started: 1:23pm-500ml of Maya Cr.Oil - W/ PRO-FLO

Bubbling Started at 1:30pm

Time: 1:39pm: Started making light fuel Temp=433F.

Time: 1:54pm: Good gassing, Making light fuels

Temperature: 603° F

Time: 2:40pm: Turn Off System

Temperature: 748° F

Total Light Fuel Produced: 76.0 ml.

Total Condensate Produced: 10 ml.

Time Of Processing: 1 Hrs. 17 Min.





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LABORATORY TESTING RESULTS

Pemex, México – Maya Crude Oil
20 API Gravity

ADDITIONAL LIGHT FUEL PRODUCED=12ML. 18.75% INCREASE WITH PRO-FLO

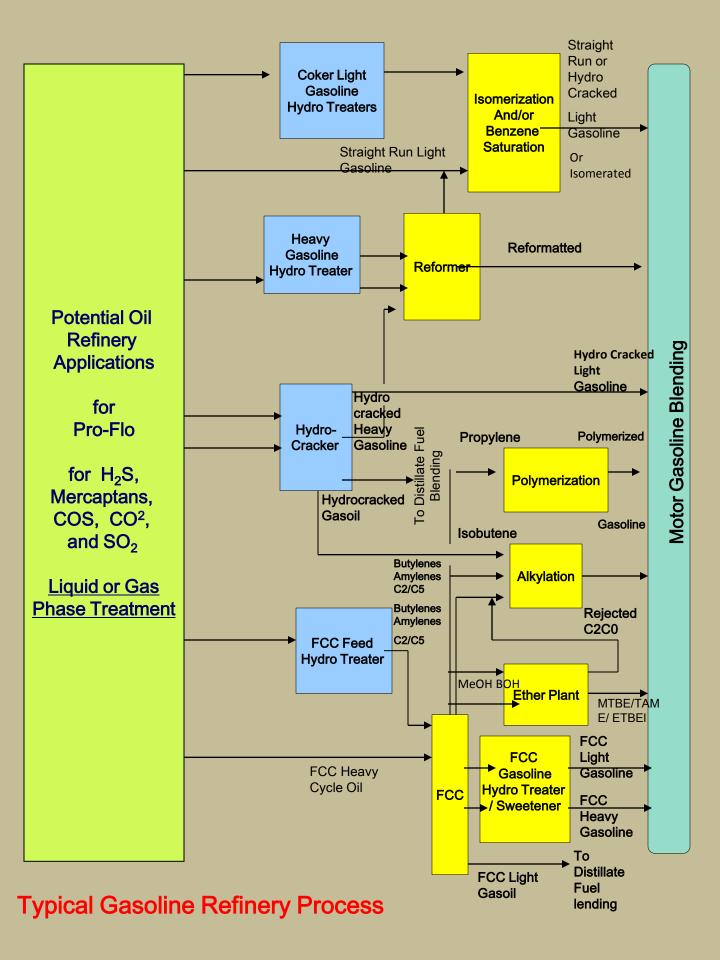
ADDITIONAL CONDENSATE PRODUCED= 10MLWITH RO-FLO

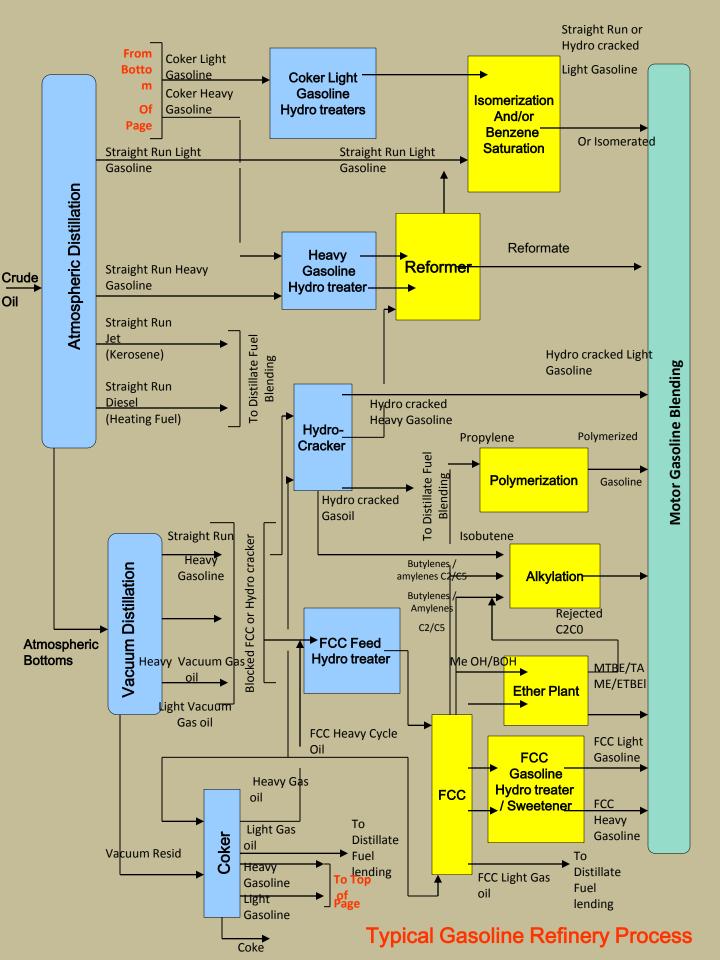
REDUCTION OF PROCESSING TIME= 1HR.33MIN. WITH PRO-FLO

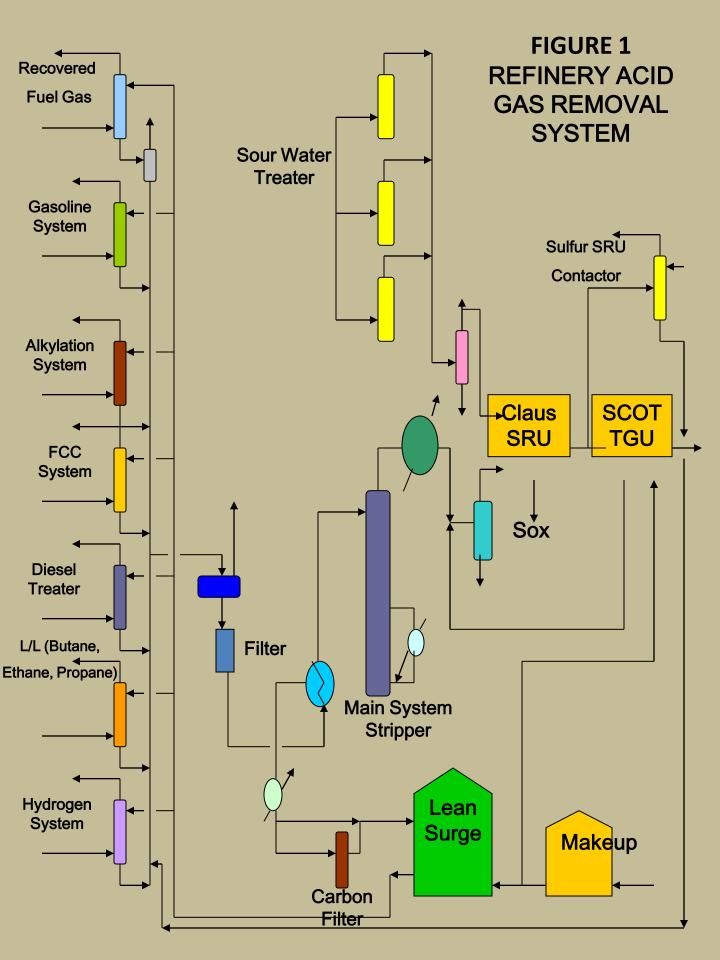
REPRESENTS AN INCREASE IN THE VALUE OF A BARREL OF CRUDE OIL

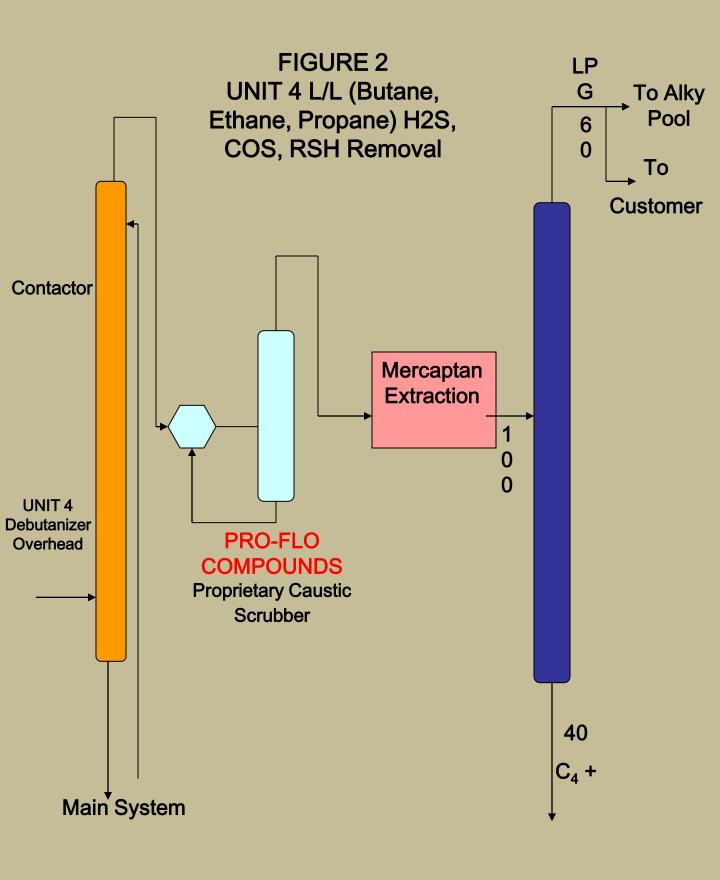
REPRESENTS A REDUCTION IN ENERGY REQUIRED
TO PROCESS A BARREL OF CRUDE OIL













REFINING

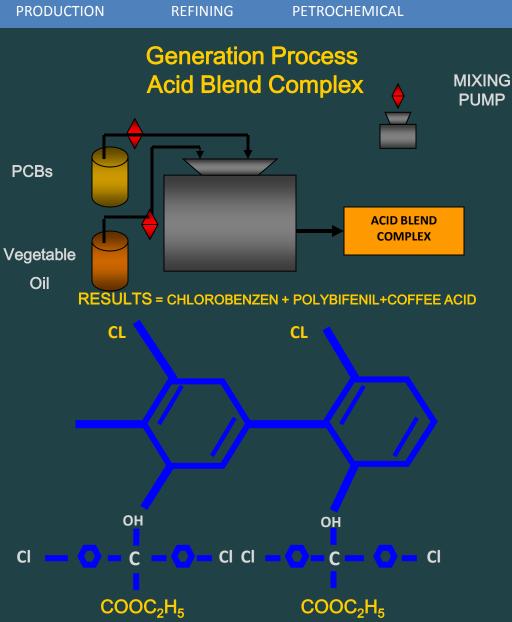
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PCB's (Polychlorinated Biphenyls Neutralization with Pro-Flo compounds

- In the process the PCBs molecules are chemically altered by removing the chlorine atoms there from. The resulting compounds are safe, non-toxic solids which can be disposed of safely without special precautions.
- During testing it was found that the Pro-Flo compounds successfully lowered very high concentrations of PCBs in oils down to non-detectable or nominal levels. (Test conducted highlight a 99.17% destruction of PCBs)
- No hazardous vapors were found to be emitted during the PCB treatment process, Moreover, no hazardous by products were generated during the process.
- The process can operate at fixed site, or as a mobile unit, moving from site to site. The mobile approach eliminates the needs to transport PCBs, which is a hazardous activity, providing the opportunity for additional exposure to these toxic compounds.









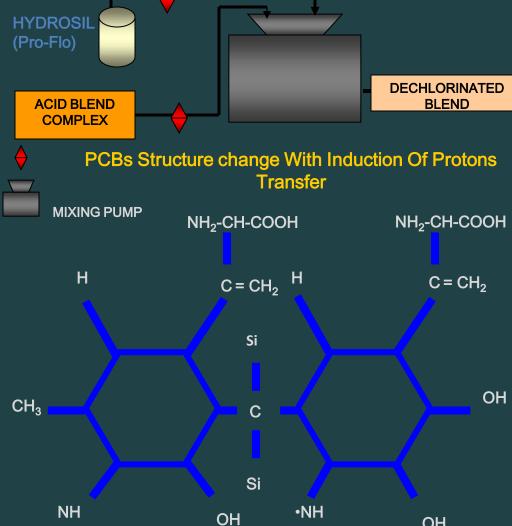


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OH

De-Chlorination and Neutralization Of PCBs







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PCBs MOBILE PROCESSING UNIT







Treating Rate:1000 Lt / Hour

Heavy Metals Extraction - Electrochemistry Process with PRO-FLO

By: Universidad Autonoma de Mexico- Mexico D.F.

City Location: Lerma River- Agriculture & Cattle Zone- in Quarantine

Current: 200 Milliamps per square meter

	ANTIMONY			ARSENIC			BISMUTH		
	Before	After	% Red	Before	After	% Red	Before	After	% Red
Sample 1	0.500	0.300	40%	5.100	3.200	37%	0.18	0.118	34%
Sample 2	0.150	0.090	40%	4.050	2.500	38%	0.04	0.027	32%
Sample 3	0.390	0.230	41%	3.550	2.050	42%	0.11	0.068	38%
Sample 4	0.260	0.140	46%	4.850	2.600	46%	0.08	0.470	41%
Sample 5	0.190	0.100	47%	3.550	2.200	39%	0.075	0.510	32%

	CADMIUM			COPPER			CHROMIUM		
	Before	After	% Red	Before	After	% Red	Before	After	% Red
Sample 1	0.32	0.17	47%	30	16.8	44%	55.1	18.2	67%
Sample 2	0.285	0.165	42%	23.95	14.4	40%	68	23.8	65%
Sample 3	0.29	0.165	43%	26.15	14.05	46%	49.8	19.9	60%
Sample 4	0.25	0.15	40%	19.25	9.31	52%	42.8	17.1	49%
Sample 5	0.23	0.14	39%	23	13.1	43%	46	14.8	68%

Heavy Metals Extraction - Electrochemistry Process with PRO-FI O

By: Universidad Autonoma de Mexico- Mexico

City Location: Lerma River- Agriculture & Cattle Zone- in Quarantine

Current: 200 Milliamps per square meter **IRON MERCURY NICKEL Before** After % Red Before After % Red **Before** After % Red Sample 1 179.3 91.44 49% 0.41 0.246 40% 45.1 13.95 69% 41% Sample 2 45% 0.29 64% 88.45 48.65 0.172 39.45 14.15 Sample 3 130.06 65.08 50% 0.47 0.305 35% 43.00 14.60 66% 38% Sample 4 86.11 40.47 53% 0.43 0.266 36.15 13.55 63% Sample 5 93.17 41.93 55% 0.43 0.270 37% 31.25 10.70 66% Sample Sample Sample Sample Sample **LEAD** Notes: % Red. **Before** After **Normal** Sample 1 35 54% 16.1 Resistivity 1630 **Before** 2310 1925 1410 1580 Sample 2 10 5.86 41% Resistivity Sample 3 32.6 14.35 56% **After** 680 810 720 430 540 **AMC** First, each sample was wetted (damp) with plain fresh Sample 4 26.15 12.3 53% water. Second, each sample was wetted (damp) with PRO-FLO at 2% ratio

Treatment: Once per week each Monday Morning.

Sample 5

24.55

10.32

58%

PRO-FLO



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