

The Petroleum Industry has gone from being perceived as the foundation for modern industry to the bad-boy of post-modernist society. Throughout recorded history, oil and gas have brought people from many fields of knowledge together. Our own lives have admittedly been considerably impacted by the petroleum industry over the past decades. Gasoline and aviation fuel have made us more mobile than ever before, we rely on heating oil and gas for our comfort and well-being, mineral oils are the basis for many chemical products such as fertilizers and plastics. But in spite of it all, recent surveys have indicated that only about one in every five respondents regarded the oil and gas industry in a positive light.

Through the pages of this single-frame thematic exhibit, you will experience the excitement, disillusionment and hope for our culture produced by this provocative industry.

This exhibit presents a brief history and overview of the global industry through this philatelist's eyes. The exhibit presents a selection of stamps, covers and other postal material spanning the last 150 years to explore and illustrate the storyline.

The exhibit starts with a quick history of the industry and run through the different operations of production and attempts to explain where it all leads.

The narrative of the exhibit is displayed in 10 pt. Memphis Light and philatelic text is displayed in 10 pt. *italicized Times New Roman*. Items of significant philatelic value are identified with a **red bold outline**.



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United States:

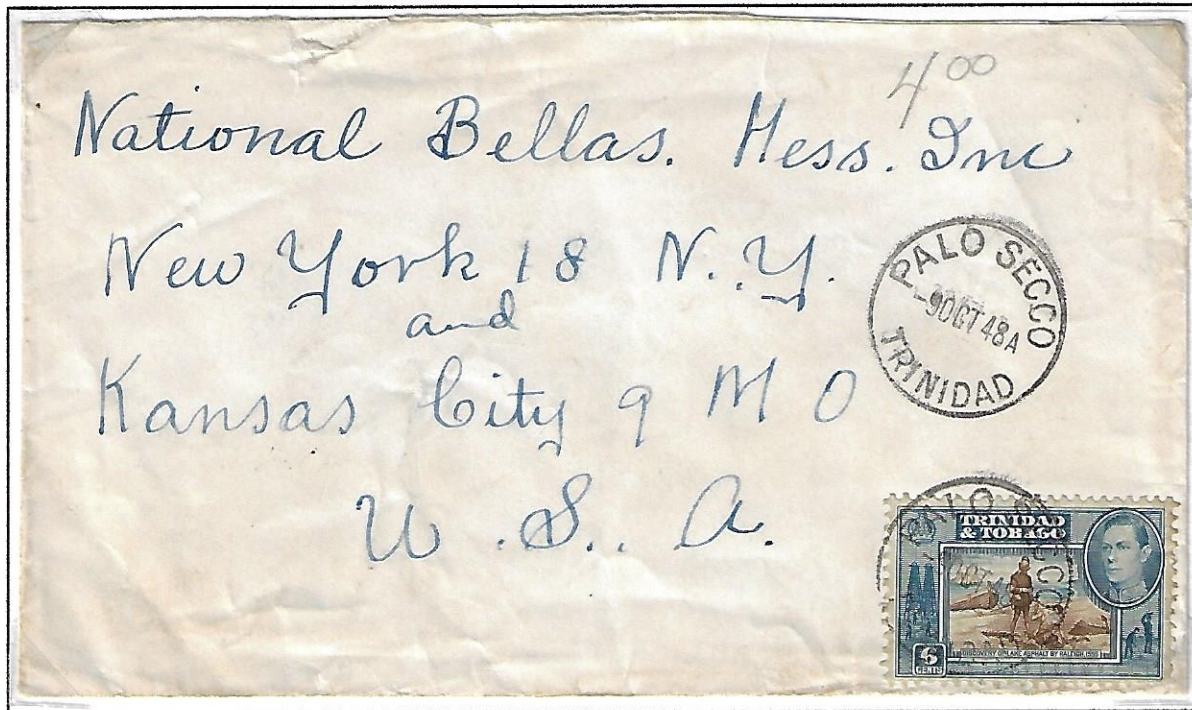
*Centenary of the First Oil Well,  
Titusville, PA - Aug. 27, 1959  
115,715,000 issued.*

*Known Plate Block Numbers: 26416,  
26417, 26419, 26431*

*Autographed block of four:  
Modeler: Victor S. McClosky Picture  
Engraver: A.W. Dintaman Letter  
Engraver: H.F. Sharpless*



Oil has existed on the earth since its creation. Some of the oil and gas, from deep within the earth has pushed up to the surface through rocks to form sticky black scum on the top of pools and springs.



6c Airmail rate, Palo Seco to U.S.A., backstamped Port of Spain and Siparia

Moses was found on the banks of the Nile river in a basket that had been made waterproof with oil seeps in Egypt.

Such practice had been carried out for centuries by the Assyrians who coated their "gufas" with pitch.

Greek Fire, a mixture of petroleum and powdered lime that would catch fire upon contact with moisture was a more feared weapon than gunpowder.

Gas that escaped from the ground usually catches fire from lightning strikes. In Azerbaijan, such "eternal flames" were worshipped as gods.



The ancient Chinese were more practical. They piped the escaping gas through bamboo poles and employed it to heat their homes.





Other uses for the black crude were devised and its value had grown from that of a sealant to much more

**MERCHANT'S GARGLING OIL LINIMENT**

**Cures**  
 Burns and Scalds,  
 Chilblains, Frost Bites,  
 Scratches or Grease, Chapped  
 Hands, Flesh Wounds, External  
 Poisons, Sand Cracks, Galls of All Kind.

**FOR MAN**

Sitfast, Ringbone, Poll Evil, Swellings, Tumors,  
 Garget in Cows, Callous, Lameness, Horse  
 Distemper, Crownscab, Quittor, Foul  
 Ulcers, Farcy, Abscess of the  
 Udder, Swelled Legs,  
 Sprains, Bruises.

**FOR ANIMAL**

Foot Rot in  
 Sheep, Toothache,  
 Thrush, Foundered Feet,  
 Roup in Poultry, Cracked Heels,  
 Epizootic, Stringhalt, Windgalls,  
 Spavins, Sweeney, Rheumatism, Curb,

**AND BEAST**

Lame Back, Hemorrhoids or Piles,  
 Fistula, Whitlows, Old Sores,  
 Corns, Mange, Cramps, Boils,  
 Weakness of the Joints,  
 Contractions of  
 Muscles.

ESTABLISHED 1838

YELLOW WRAPPER FOR ANIMAL  
 WHITE FOR HUMAN FLESH.

MEDIUM SIZE 50 CTS.  
 SMALL SIZE 25 CTS.

**MERCHANT'S GARGLING OIL**

is the oldest and best liniment now in use in the United States.  
 MANUFACTURED BY  
**Merchant's Gargling Oil Co., Lockport, N.Y., U.S.A.**  
 JOHN HODGE, Secy & Manager.

WASHINGTON, D.C. 1882

MERCHANTS WORM TABLETS 25 CTS. PER BOX.

GARGLING OIL LARGE SIZE \$1.00

Besides its ancient use for coating and burning, petroleum was also found useful as a medicine for wounds, gout and even baldness.



*Petrol Hahn for Baldness*

**La collection du millénaire**

Abraham Gesner:  
 Father of the Oil Industry  
 Abraham Gesner:  
 de la médecine au kérosène

It was later discovered that the black substance could be distilled to a clean-burning illuminant. Abraham Gesner developed this process in Canada and Ignacy Lukasiewicz did likewise in Poland. Kerosene as an illuminant replaced the costly whale-oil in use at the time.



The stage was set and the need for more of the stuff was fast realized. However, the oil seeps and creeks where the oil could be found were limited and new ways of finding the oil were needed.

**PETROLINA**

—AND—

**Petrolina Preparations**

MANUFACTURED BY THE  
**Binghamton Oil Refining Company,**  
 BINGHAMTON, N. Y.

August Weber,  
 617 Hamilton St.,  
 Allentown, Pa.



### 3.0 Upstream Operations

### 3.1 Exploration

Upstream operations pertain to the exploration, drilling and production of crude oil.

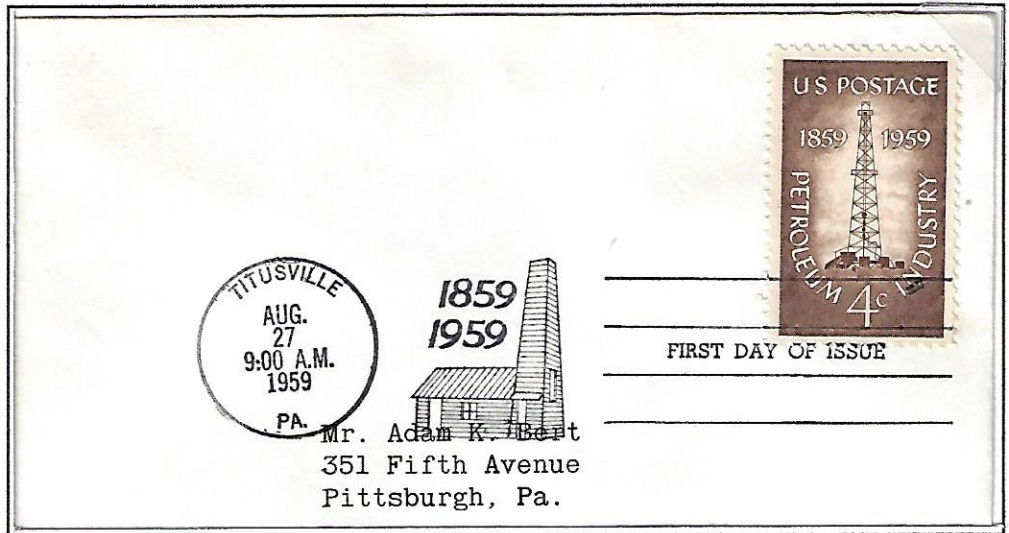
The first commercial oil well, successfully drilled to a depth of 69½ ft. in the town of Titusville, PA on Aug. 27, 1859 was an experiment in exploration.



A seismic survey

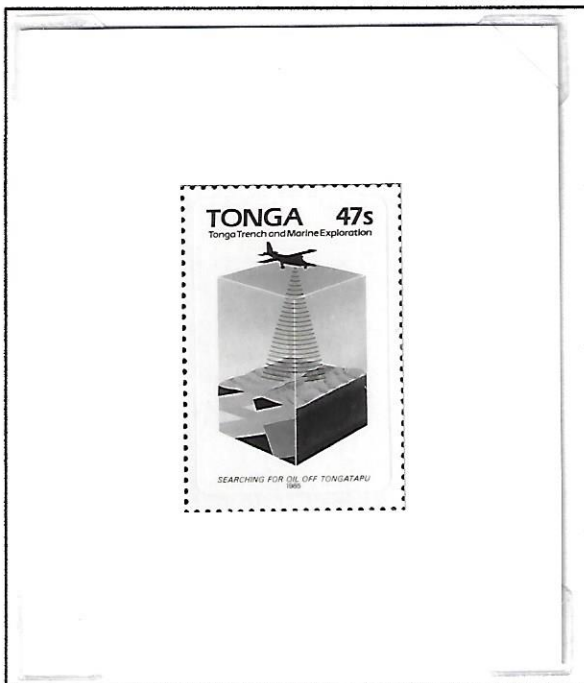


A geological survey

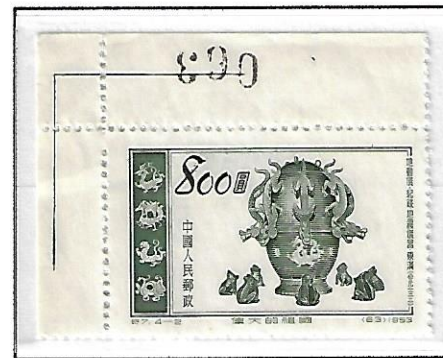


Pitney Bowes Meter 12390, 60 g. rate effective 10/20/1986

Methods of finding the "black gold" other than drilling were developed to aid in exploration. These included seismology, geology, aero-magnetic survey and gravimetric research to name a few.



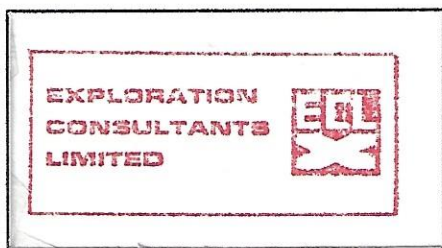
Tonga 1985 47s Black Proof  
Aero-magnetic survey



An ancient seismoscope



Loránd von Eötvös (1848 – 1919) developed a new type torsion balance designed to detect gravimetric imbalances in the earth's surface which led to the detection of anticlines in the earth where oil pools.



Postal Meter: Henley-On-Thames, Oxon



Geophysics has made a great contribution not only to the development of oil resources but to underground resources as a whole.

The geophysical exploration techniques that have been developed do not result in perfect tools to forecast oil discoveries; they only help give the geologist an indication of how good his chances are, whether on land or sea.



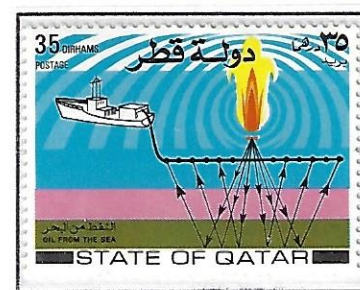
German Democratic Republic block of four, 1980 commemorating Geophysical Exploration; Gravimetry, Borehole Measurement, Seismic Geology and Seismology.



Canada, 1972 commemorating the 24<sup>th</sup> Int'l Geological Conference



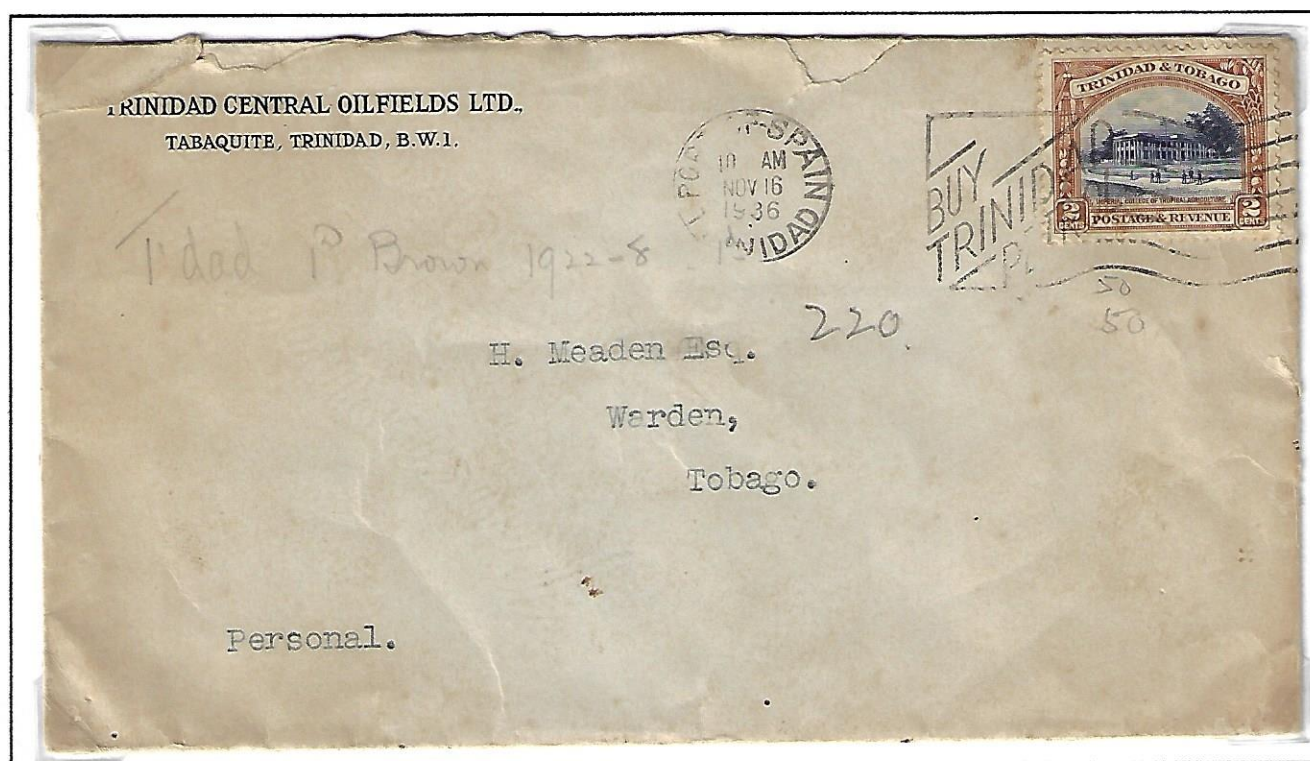
China, 1955, 1<sup>st</sup> 5-Year Plan



Qatar 1972, Offshore Search for Oil



Sometimes, finding crude oil was as easy as looking down. Sir Walter Raleigh discovered the Pitch Lake of Trinidad and Tobago. An entire industry developed to exploit the oil in the area.



Trinidad to Tobago, 2c domestic rate, Note the oil derricks on the left side of the stamp vignette. "Buy Trinidad Petrol"



### 3.0 Upstream Operations

### 3.2 Drilling and Production

Oil drilling is the process by which tubing is bored through the Earth's surface and a well is established.

North American oilfields were the first to be drilled. Canadian, European...



... and Latin American sites were drilled soon thereafter.



Peron Government



Printing error



Imperforate Pair



Misperf.



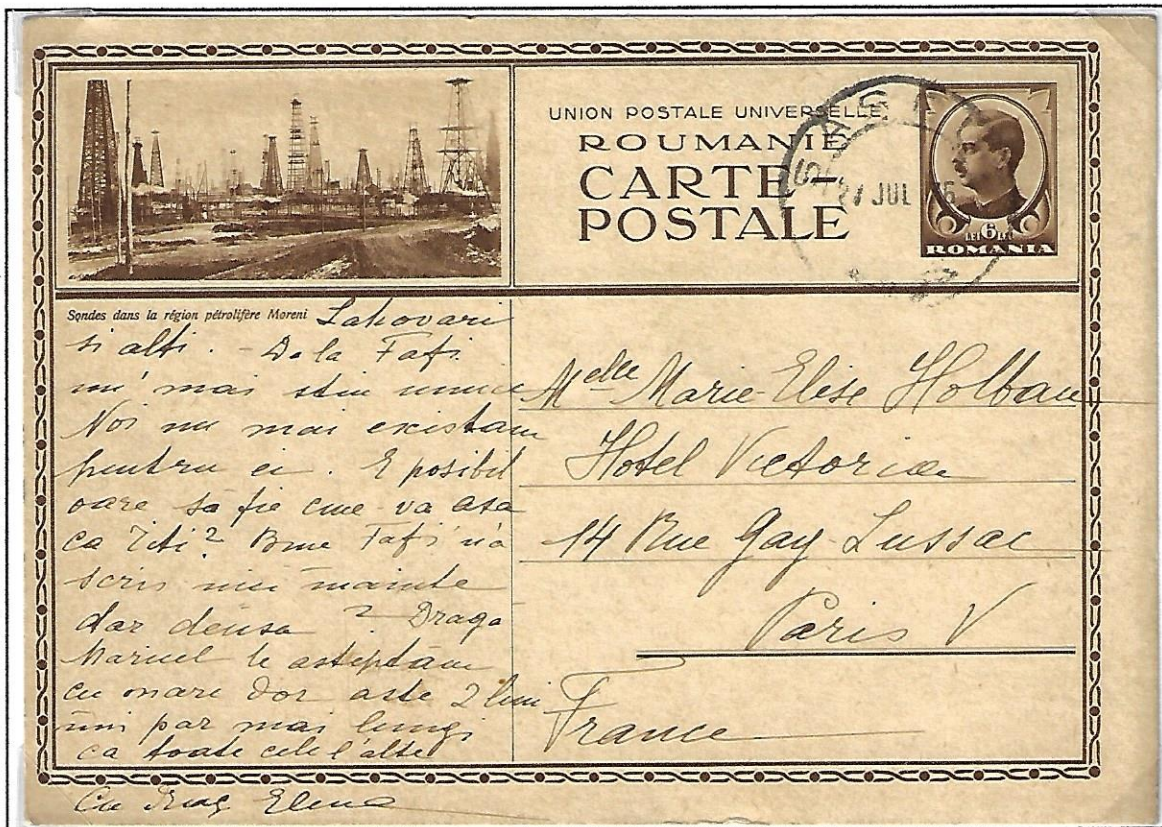
Unissued

In Europe, oilfields in Romania and Poland were first to be exploited.



Black Proof

Percussion bits were replaced with rotary tools for more efficient drilling. Offshore drilling is now successfully done in water depths in the hundreds of feet.



Postal Card, Romania to Paris, 6 lei rate till approx. 1933 - Moreni Oil Field



### 3.0 Upstream Operations

Oil production pertains to the removal of the crude from the ground.



*Imperforate Pair*

Oil flows under its own pressure...



*Revalued*

### 3.2 Drilling and Production



Drill experts do more than just drill. McCullough focuses on well logging.



*Specimen*



A roughneck crew working the drill string.



*Overprinted Tornow Type F48a*



The need to drill opened up an entire industry.



... or is pumped from the ground using a "pumpjack".

*First Class Rate, Type DF3 Pitney Bowes Meter No. 01630, purple ink.*

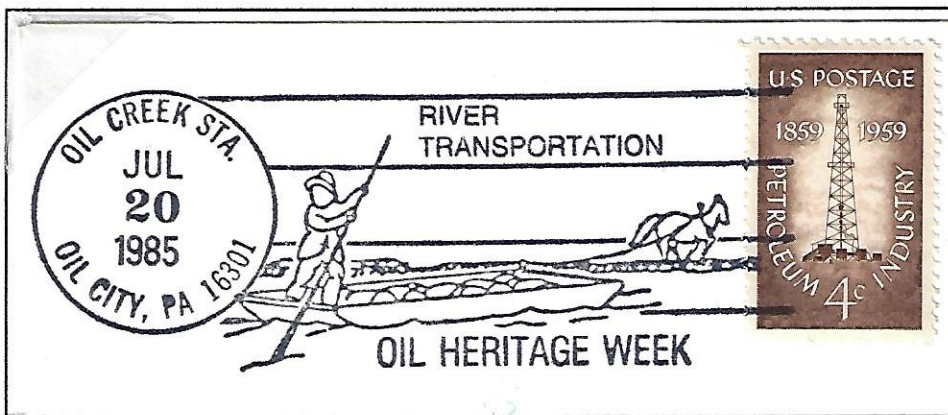
On land or sea, drilling operations are able to be performed in the most extreme conditions and in the most efficient manner. Roughnecks, expert in the handling of the drilling equipment, work around the clock to bring in a well. A "dry hole" is not an option!



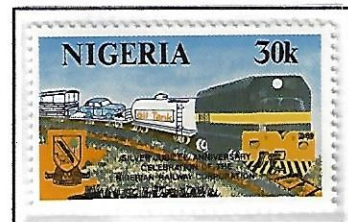


## 4.0 Midstream Operations

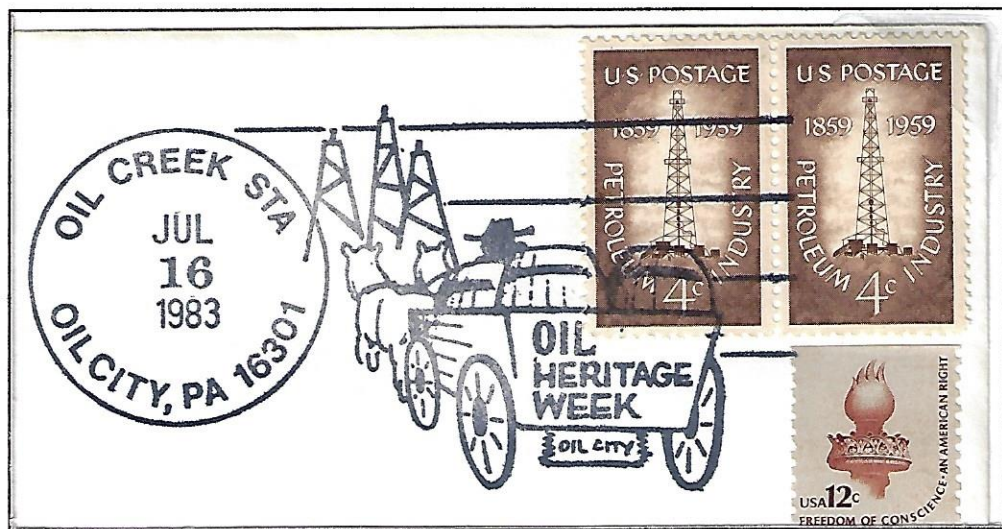
Of course, getting crude oil from the ground to the refinery and refined products to market meant transporting it somehow. Transportation methods have evolved rapidly since the early days.



Transporting oil in barrels by barge down Oil Creek to Oil City was the best method in the early 1860's. Shipping crude oil and product in barrels by railroad made shipment by barge obsolete.



As the first standard unit of measurement the barrel was first used to collect, store and transport crude oil and refined product. The typical barrel of oil is 42 gallons. Officially adopted in 1866, a barrel's refined products include about 20 gallons of gasoline, 12 gallons of diesel and 4 gallons of jet fuel and other products like liquefied petroleum gases and asphalt. Barrels were transported a number of ways.



Railroad oil tank cars became the latest of a growing number of oilfield innovations. As Pennsylvania petroleum production skyrocketed following the Civil War, Densmore oil tank cars first successfully transported oil by rail from booming oilfields to refineries.

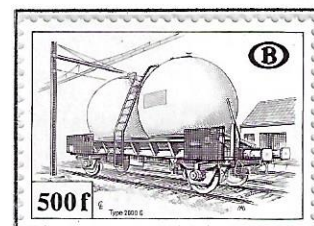


*Densmore tank cars*



*Proof*

John D. Rockefeller used the railroads to build his Standard Oil Co. by offering rebates to the railroads who moved his product. Smaller refiners were thereby forced to pay more to move their product to market.



Although a mere 3% of crude oil and petroleum products are currently shipped by rail, amid a North American energy boom and a lack of pipeline capacity, shipping on rail is suddenly increasing. The trains are getting bigger and towing more and more tanker cars.



As the industry grew, a larger and larger amount of petroleum and natural gas has been moved through pipelines. In addition to transport by river barge, railroads and pipelines crude oil and refined product is carried around the world by tanker ships.



Tanker "Glukhauf"



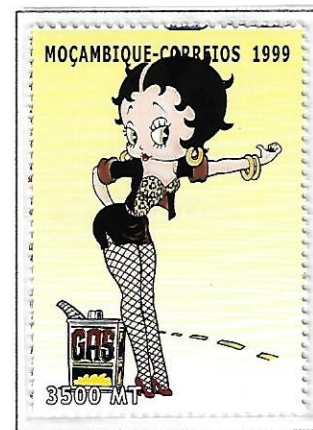
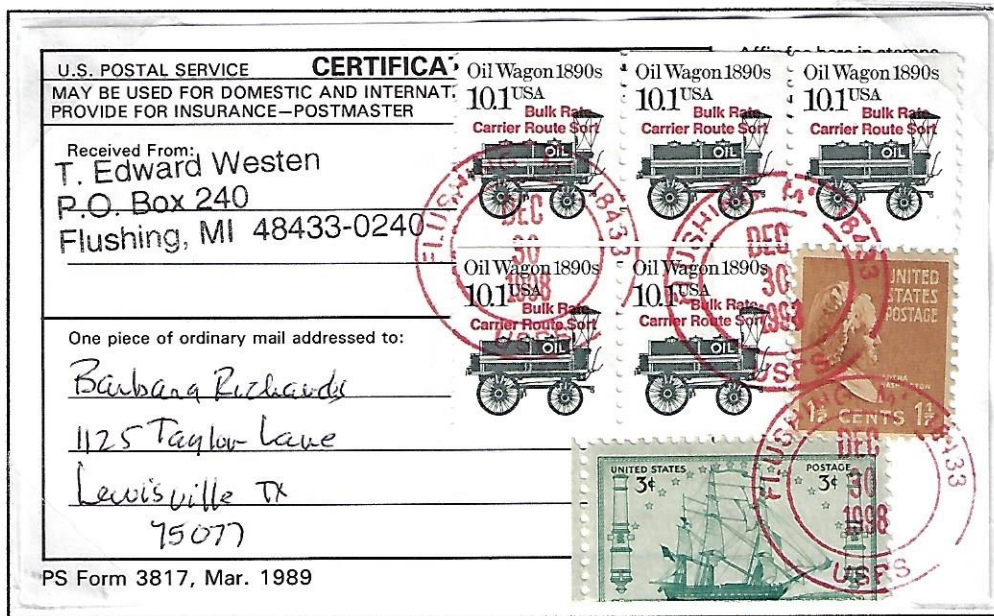
Tanker "Bausk"

Carrying barrels of crude oil in the hold of a ship was dangerous business. Many a vessel caught fire or exploded in transit. New technologies and fresh ideas made the vessels safe and sure. The Glukhauf was the first such vessel.



Although the pipeline is the cheapest mode of transport today, it requires a steady flow in order to justify the large initial capital expense involved.

Road transportation by tank trucks ensures delivery of refined product like fuel oil and gasoline to residences and facilities.



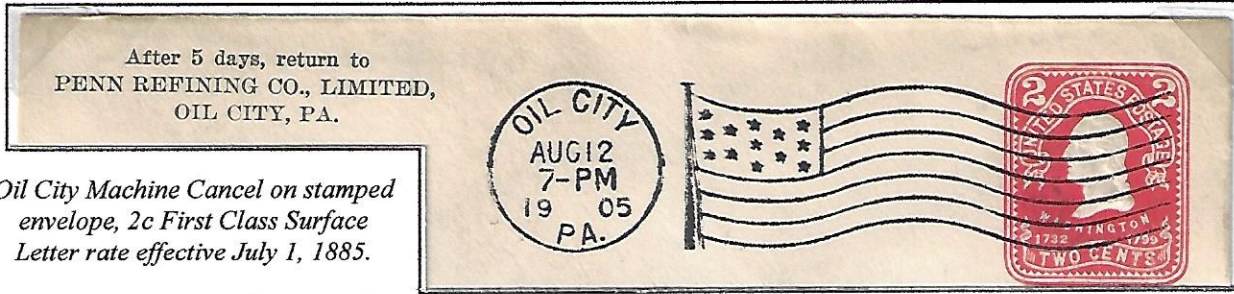
Imperforate



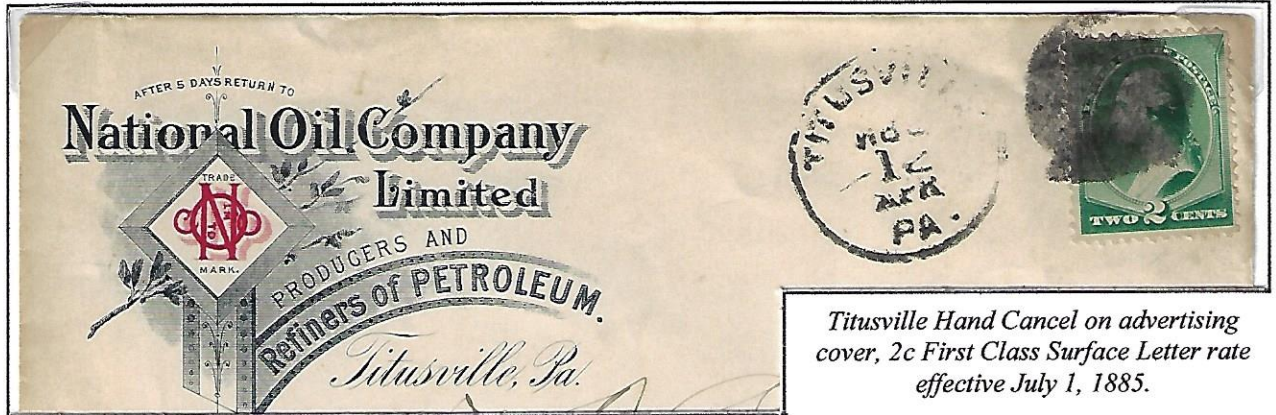
10.1c Oil Wagon used on USPS Certificate of Mailing; making up 50.5c of the \$0.55 rate as of Jan. 1, 1995, and allowed per DMM 604.1.2.



Downstream Operations relates to oil and gas refining, marketing and distribution activities.



Oil City Machine Cancel on stamped envelope, 2c First Class Surface Letter rate effective July 1, 1885.



Titusville Hand Cancel on advertising cover, 2c First Class Surface Letter rate effective July 1, 1885.

The first refinery was built on Oil Creek near Titusville in 1860. Soon after several others followed suit and built refineries.



Cancelled Germania Petroleum Co.



Cancelled National Oil Co.



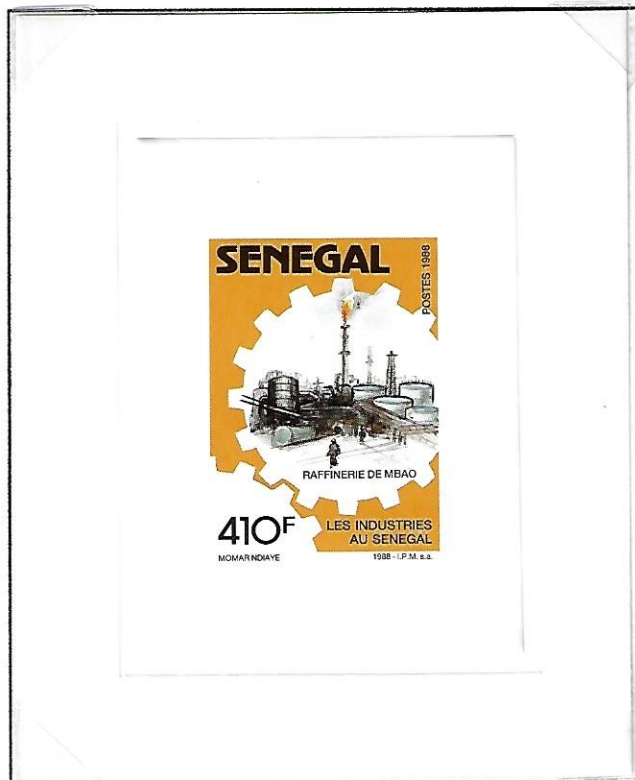
Cancelled Commonwealth Oil Co.



Cancelled North American Petroleum



Cancelled Petroleum Farms



Proof

The refining process essentially "cooks" the crude oil in order to separate its product components at various temperatures.

Imperforate Pair



A Bolivian State oil refinery

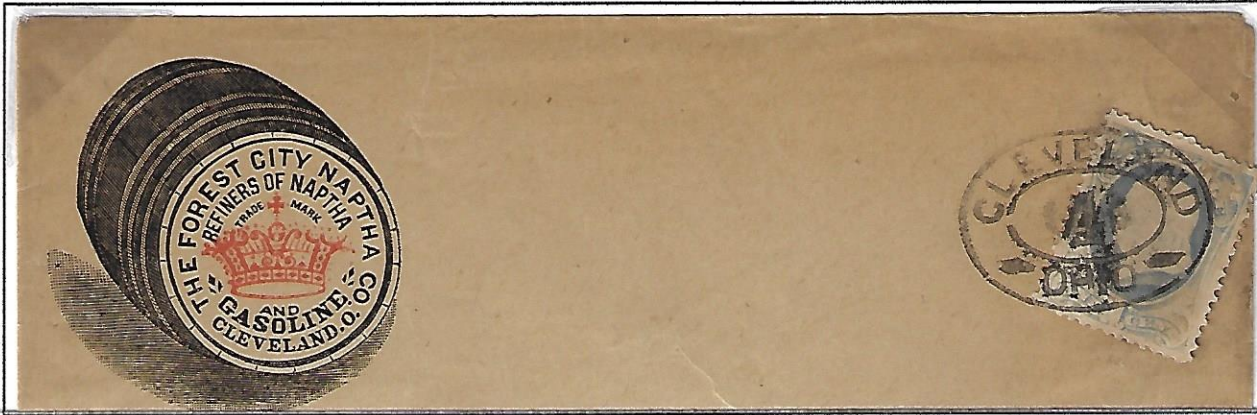


A refinery in Bulgaria



## 5.0 Downstream Operations

Crude oil, by itself is virtually useless. Petroleum refining refers to the process of converting crude oil into useful products.



Advertising cover: Forest City Naphtha Co, Cleveland to Sandusky, OH, Third Class rate, 1c single-piece.

## 5.1 Refining

The typical refinery contains towers that separate the "fractions" of the crude oil which are extracted for finishing into the various products.



The refining process transforms the crude oil into useful products such as liquefied petroleum gas (LPG), gasoline or petrol, kerosene, jet fuel, diesel oil and fuel oils.

Refineries exist the world over, owned by oil companies both large and small. They produce the products required by today's energy-hungry culture.



Staatsolie, Suriname's nationalized oil company refinery

Postal Stationery, 1942: Ploiesti Refinery



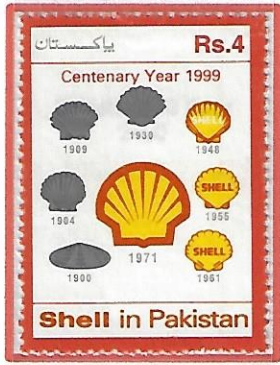
British Petroleum runs a refinery in West Australia



## 6.0 Post-Commercial Use

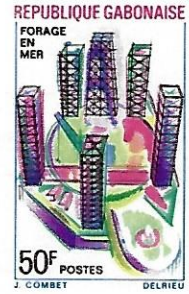
## 6.1 Petroleum Firms

Several petroleum companies have come and gone in the 150-plus years since Drake drilled that first well. From these companies have come some of the most useful products of our time. The world's oil companies are either private or State-run.



DEPUIS  
1949  
AU SERVICE  
DE LA  
REPUBLIQUE  
GABONAISE

**elf** **spaf**



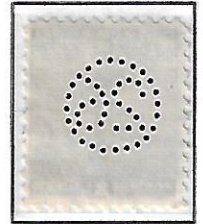
Missing black error

Collectively, the multinational oil companies such as Shell produce 10% of the world's oil reserves.

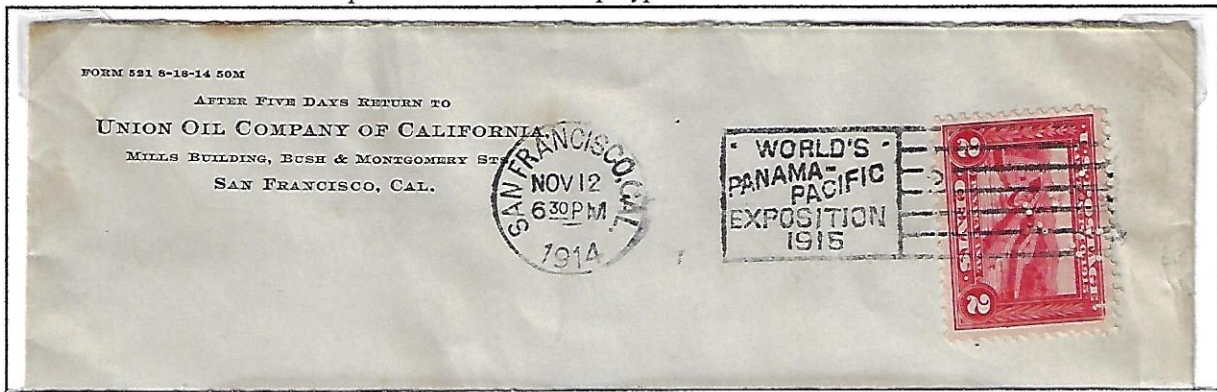


Neopost "205" meter stamp Type H2

Imperforate

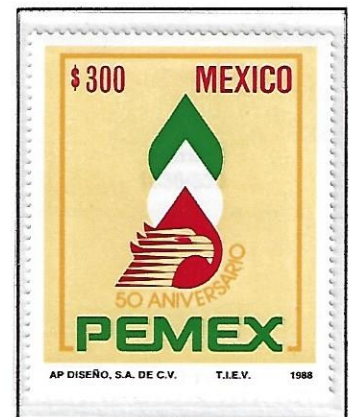


Perfin,  
Standard Oil at  
26 Broadway

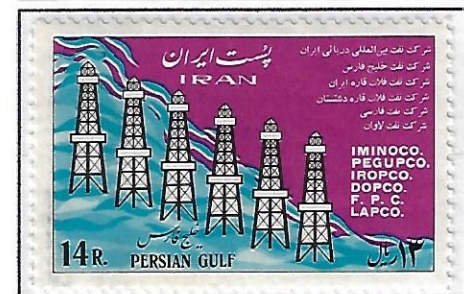


Perfin: "U O C o" on Union Oil Co. Commercial cover

State-owned companies now control more than 75% of all crude oil production and 90% of 2010 proven oil reserves.



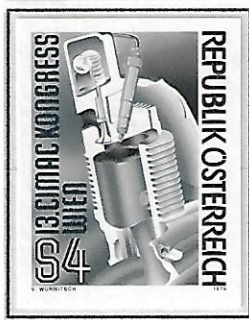
Francotyp-Postalia "MS5/NK4" meter stamp Type C13B





## 6.0 Post-Commercial Use

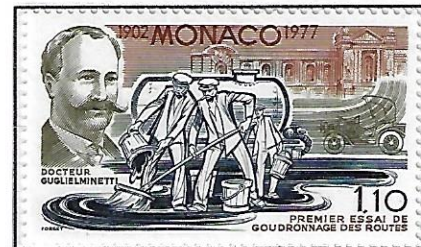
The majority of petroleum is converted to petroleum products, which includes several classes of fuels,



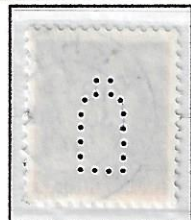
Black proof



synthetic fibers, fertilizers, asphalt,



butane, propane,



Perfin: Kosangas



and plastic products...

Full booklet:  
Paraffin cooking stove



... all are derived from the crude pumped out of the ground.

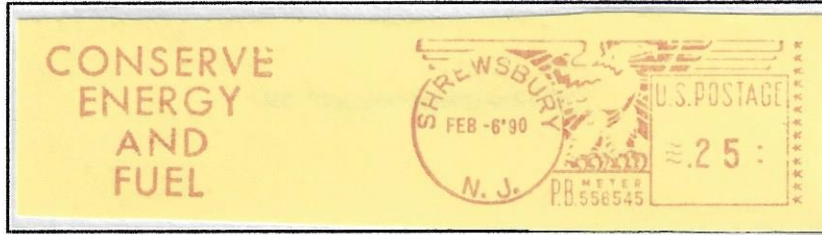


Booklet pane: Primagaz & Whip Petrol



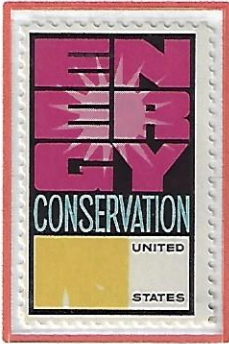
7.0 Industry Outcomes

Conserving oil is vital to most everything we depend upon for our everyday lives.

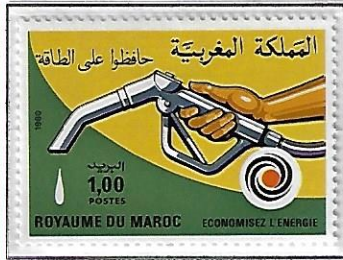


Meter stamp, Pitney Bowes Type IA7, First Class Rate, Lawes Coal Co.

7.1 Conservation

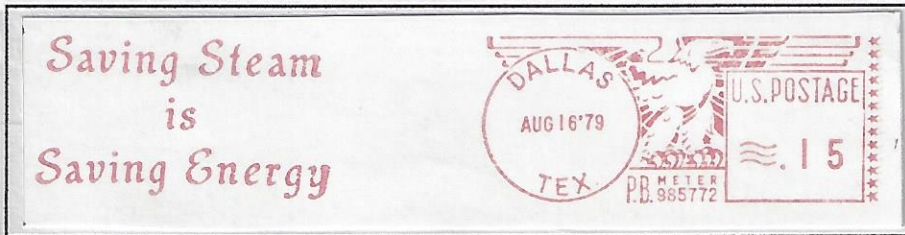
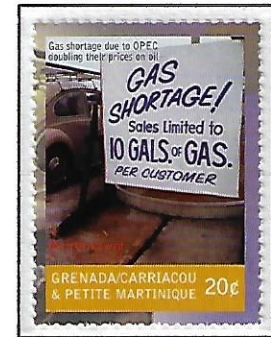


Green missing error



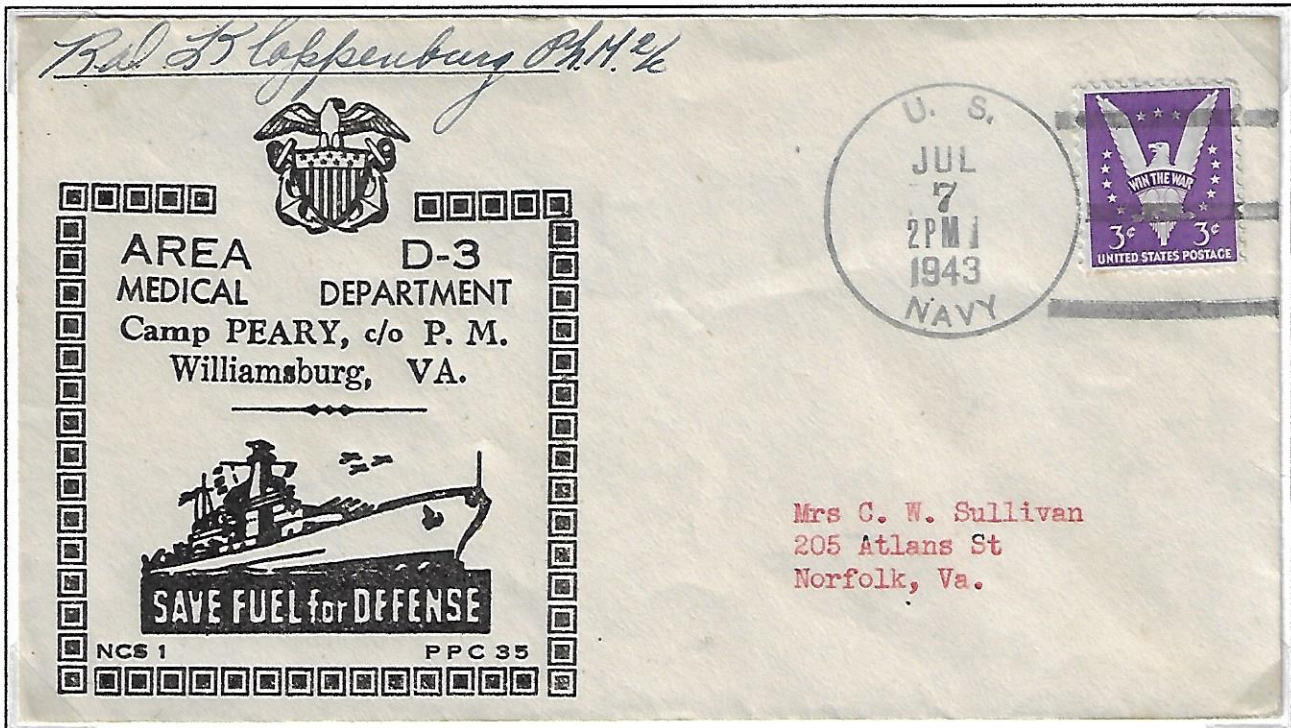
Meter stamp, unknown manufacturer, First Class rate

Although energy conservation became commonplace after the oil embargos of the 1970's, conserving the world's petroleum reserves had been important long before that.



Meter stamp, Pitney Bowes Type IA7, First Class rate

When steam containing Btu's from oil heat leaks, that results in the loss of both latent and sensible energy. The value of the oil used to produce it is wasted as well.



U.S. Navy Postmark Type 3z; First Class Rate

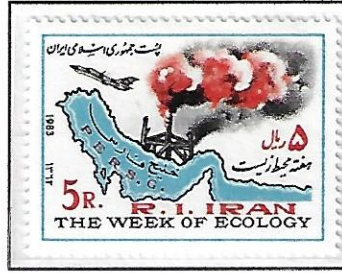


## 7.0 Industry Outcomes



*Imperforate*

Risk comes from threats of war, causing discharges, whether accidental or intentional...



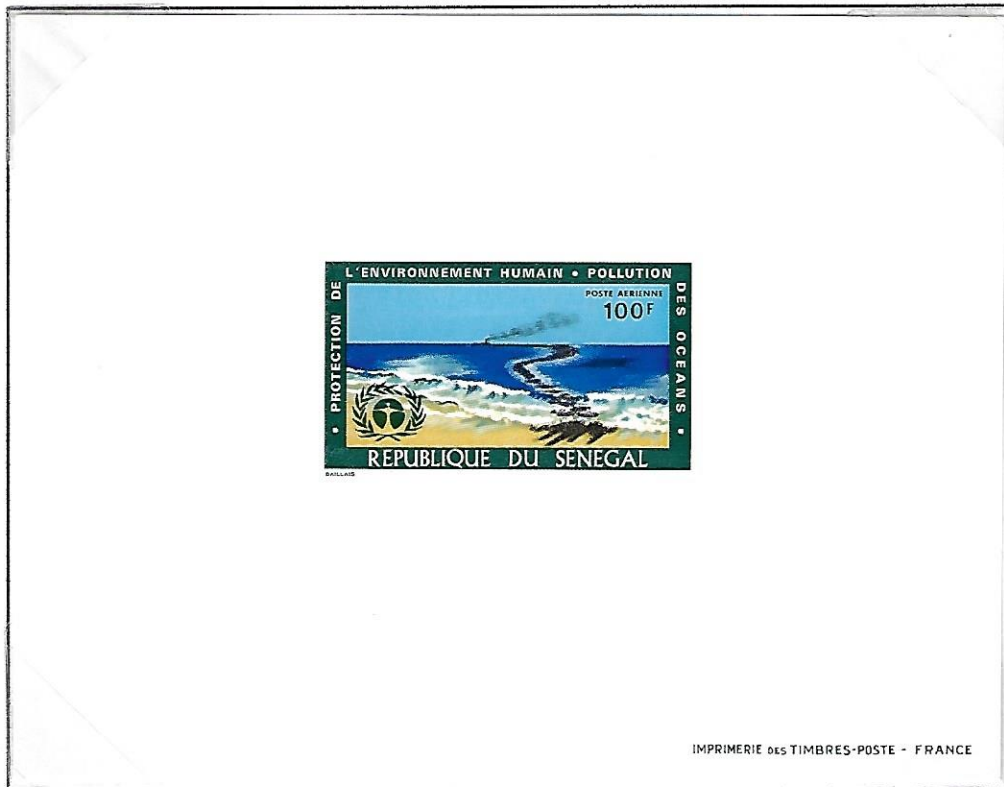
... spills affecting wildlife and the food chain.



*Imperforate*

With increased production comes the responsibility to use our minds to develop safer and more cost-effective techniques to maintain supply while keeping our planet ...

... and its inhabitants safe.





## 8.0 Conclusion

So, in spite of the romantic past; this precious resource being used in the worship of vengeful deities...



*Azerbaijan - Sheet with green color shift*

... and the risks involved in the modern exploitation of its power, man's need, want and desire for greater mobility and energy will never be satisfied.



*Photo essay signed by designer*

Thanks to petroleum, humanity has a higher standard of living than ever before. We all hope the present richness of life could last forever. However, in spite of the unparalleled benefits derived from oil, we must utilize our vast technological skills to wisely use this limited commodity to our full advantage. The future is in our hands.



*Imperforate*