A Late XIX Century Petroleum Exploitation and Refining Enterprise in the Escuque Area, Northern Mérida Andes, Venezuela*

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Abstract

The Petrolia del Táchira was the first successful commercial company to exploit the petroleum resources of Venezuela. They operated in the state of Táchira during four decades starting in 1878. Six years latter in the Caraño valley, state of Trujillo at the northwestern part of the Mérida Andes, the Serbian Engineer Christopher Dacovich (1845-1928) started a little known and small enterprise to produce kerosene for domestic use.

In the Caraño area we studied 12 known water springs forming metric to decametric diameter pools in which drops of a very light greenish oil seep and accumulate as films on the water. The seeps are controlled by a fault affecting the Eocene Misoa Formation. Such oil has been used since pre-Hispanic times medically and for illumination. In 1824, British interests sent samples to England and tried to commercialize it with the name of "Aceite de Colombia". This denomination has derived to "Colombio" as it is known today.

After preliminary exploration by Mr. Dacovich, in 1883 he and other partners started a company and hired the oil expert William L. Lay from Oil City, Pennsylvania, in order to assess and analyze the oil. His positive opinion was published in a brochure (1885) trying to attract more capital but with little success.

They bought hand powered water pumps from The Gould Manufacturing Company, which were used to transfer the water-oil mixture to separating barrels. A small refinery was also installed nearby to produce kerosene. The raw and refined products were transported through the winding mountain trails on mule trains to Escuque, the nearest town, were it was sold. The enterprise ended in 1887. Local inhabitants tell that their elders were against foreigners exploiting their "Colombio" and besides, the Standard Oil Company of New Jersey was already commercializing cheaper kerosene cans in Western Venezuela.

The use of "Colombio" which has the appearance of car engine oil is well embedded in the local population and even today, it is sold in local hardware stores and used for wood treatment to prevent insect infestation and as a varnish. It is recommended as an ointment to be applied as frictions in case of local aches in arms and legs. It is also used in cattle to heal skin sores due to worms and ticks and to strengthen debilitated horse hooves. In the scattered houses of the remote Caraño valley in which electricity has not arrived yet the "Colombio", it is still used in oil lanterns.

Reference Cited

Galarraga, F., F. Urbani, M. Escobar, G. Marquez, M. Martinez, and R. Tocco, 2010, Main factors controlling the compositional variability of seepage oils from Trujillo State, Western Venezuela: Journal of Petroleum Geology, v. 33/3, p. 255-268.

A Late XIX Century Petroleum Exploitation and Refining Enterprise in the Escuque Area, Northern Mérida Andes, Venezuela

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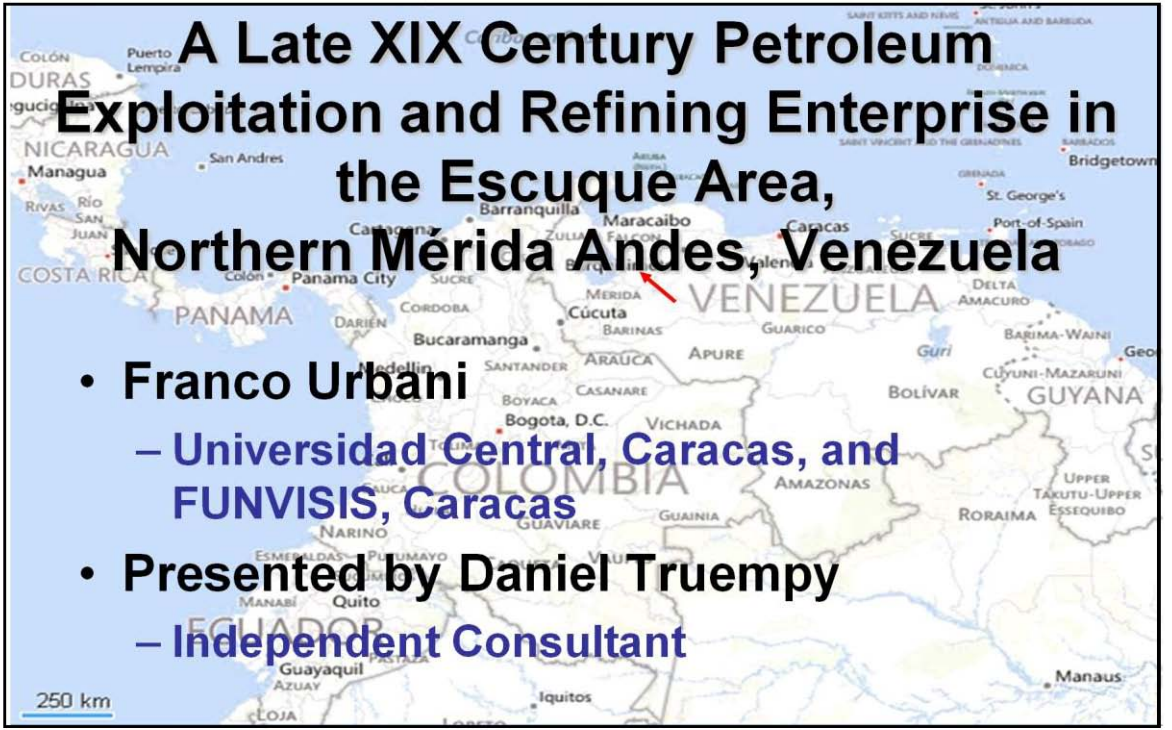
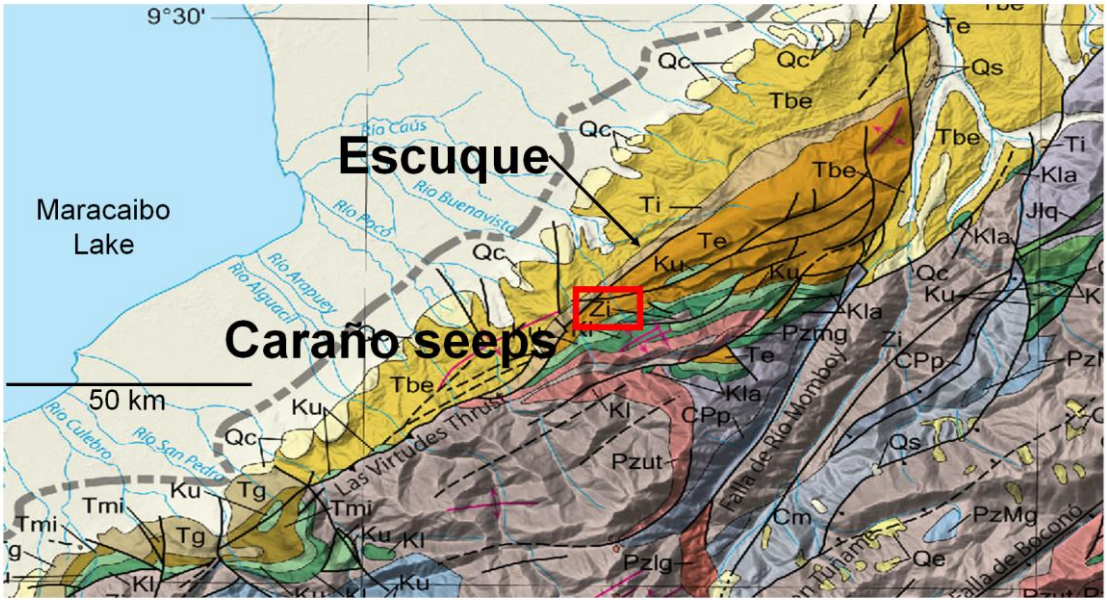
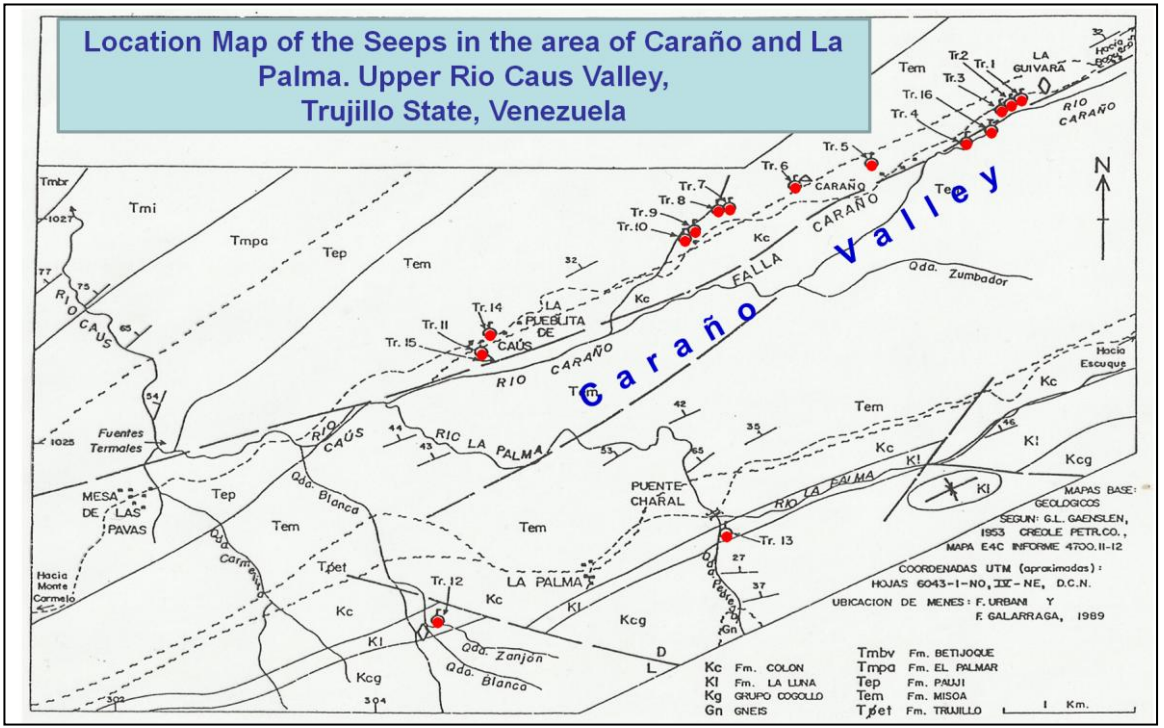


Escuque Area, Trujillo State

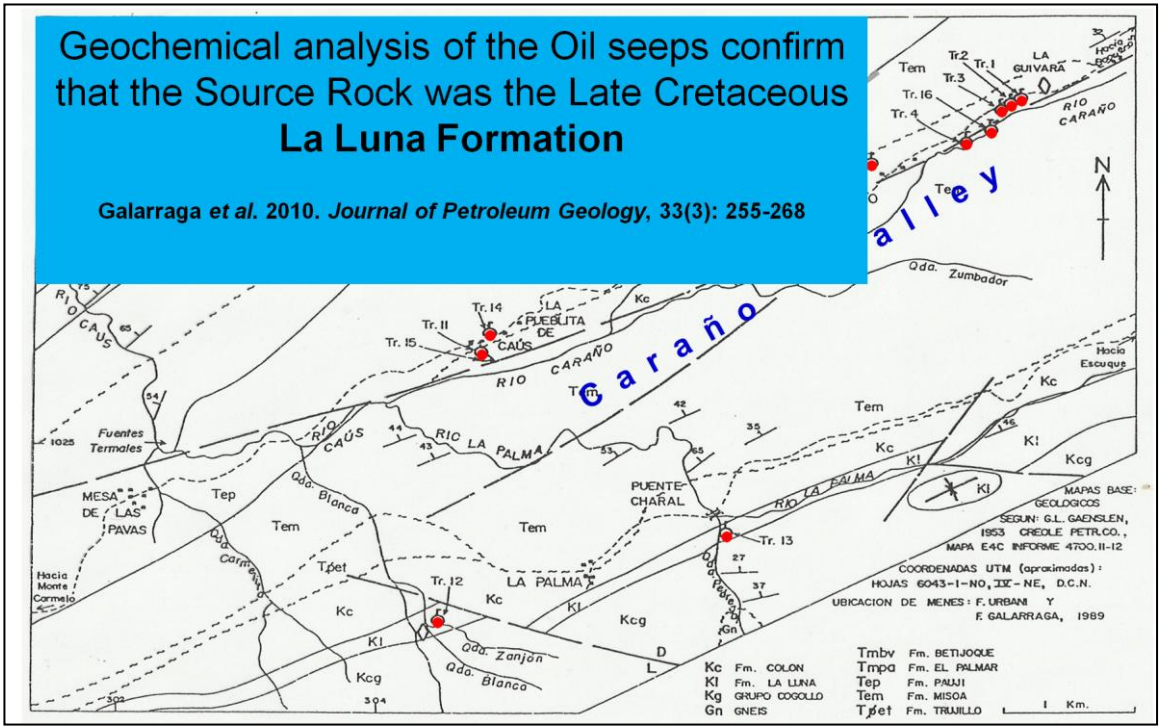
Escuque Area, Caraño Seeps



Presenter's notes: The oil seeps of Caraño in the Escuque region are located in the northwestern flank of the Venezuelan Mérida Andes, with major NE trending faults. They all occur at the Cretaceous-Tertiary boundary.



Presenter's notes: The rock units in the region start with Early Cretaceous limestones from the Cogollo Group, following with La Luna Formation the major source rock from western Venezuela, grading up to the shales of Colón Formation, which are unconformably covered by the Eocene Misoa Formation one of the main reservoir unit of the Maracaibo basin. The 13 oil seeps of the Caraño Valley appear near the unconformity of the Colón and Misoa formations, also near a major Northeastern trending high angle fault.



Presenter's notes: The oils were geochemically analyzed (latest by Gallaraga et al., 2010), and undoubtedly are sourced from the La Luna Formation, THE source rock par excellence of the northern rim of the South American continent.

Oil from the Caraño Seeps

- The oil accumulates on the surface of water pools (the largest is 10 m wide)

Presenter's notes: Seeps are scattered in pools surrounded by a dense cloud forest. The Caraño Valley is very remote and the people are quite reserved with strangers; only after four visits and hiring two locals as guides, they started to tell their oral traditions and stories.

Oil from the Caraño Seeps

- Local traditions tell that the oil has been used since pre-Columbian times
- 1824-1826. The Bristish owned the "*Colombian Association for Agricultural and other Purposes*"; they sold small quantities of the oil in the USA, France and England
- The local name is ***Colombio*** (Oil from Colombia); it has the appearance of car engine oil

Colombio from the Caraño Seeps

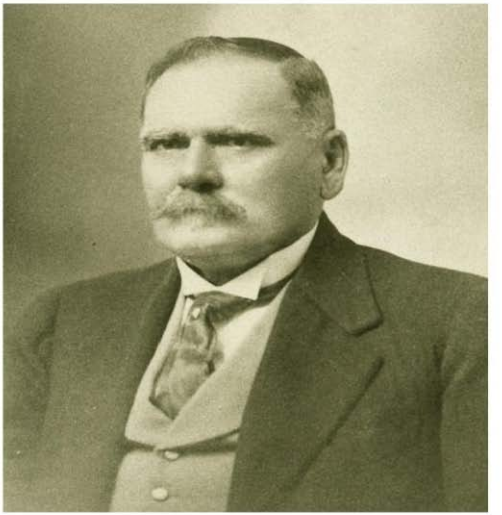
- Initial reports by
  - Dr. José María Vargas (1839),
  - Geographer Agustín Codazzi (1841)
  - Geologist Hermann Karsten (1850)

- Francisco de Paula Acosta, 1869 destilled *Colombio* in the University of Caracas and obtained kerosene

Presenter's notes: Amongst the scientists analyzing the Caranho seeps, one figures prominently Agustin Codazzi, adventurer and geographer who prepared the first maps of Venezuela and, after his exile in Colombia after 1850, also Colombia.

Colombio and C. Dácovich

- 1883. The Serbian Mining Engineer **Christopher Dácovich** (Montenegro, 184x – Caracas, 1928)
  - Explored the area
  - Obtained preliminary authorization to start exploitation



Christopher Dacovich

Colombio and C. Dácovich

- 1883. **C. Dácovich,** together with other capital-investing partners such as **Manuel Cadenas Delgado** and **Heriberto Gordon,** create the company "Constancia Dch"

Heriberto Gordon

Colombio and C. Dácovich (1)

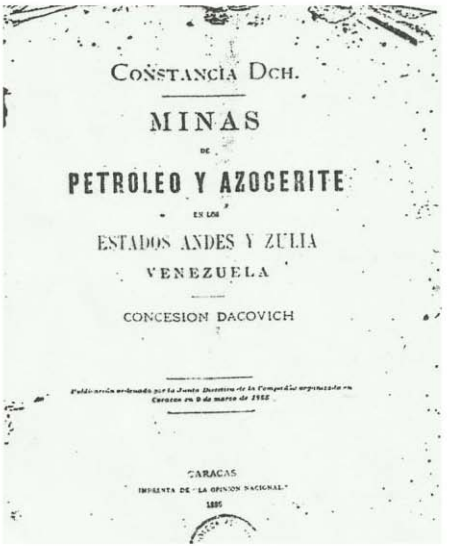
- 1883. The company hires **William L. Lay** (1827-?) an Oil Expert from Pennsilvannia

  - He visits the region and takes samples for analysis. He writes a report in 1884

William L. Lay

Colombio and C. Dácovich (2)

- 1884. The Company receives final permits for the "Concession Dácovich"
- 1885. To promote company share sales, the company publishes a 24 p. booklet with a description of the enterprise, and includes the report and analysis of W. L. Lay



CONSTANCIA DCH.

MINAS

DE

PETROLEO Y AZOCERITE

EN LOS

ESTADOS ANDES Y ZULIA

VENEZUELA

CONCESION DACOVICH

CARACAS

IMPRENTA DE "LA OPINION NACIONAL"

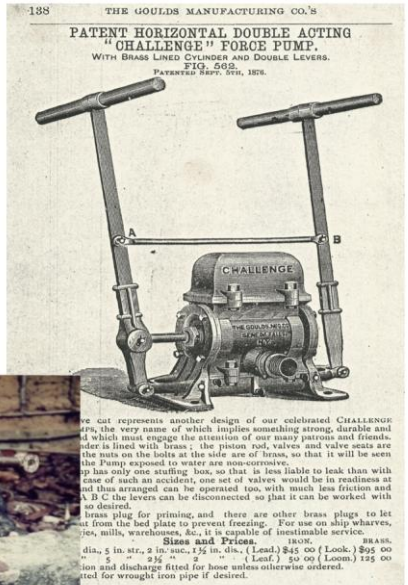
1885

Colombio from the Caraño Seeps

- 1884-1887. Oil is exploited in a rudimentary fashion
- According to elderly local inhabitants, Dácovich built a small refinery and produced kerosene near Boquerón (of which no remains exist today)
- In the nearby towns in Trujillo State the company comercialized kerosene and also sold kerosene lamps.

Colombio from the Caraño Seeps

- Dácovich workers used a Goulds manual pump to bring the water-oil mix to separation in wooden barrels



Presenter's notes: The photo are the remains of a manual water pump that according to local tradition was used to move the water-oil to big wood barrels which had a lower valve to liberate the water. Then the oil was taken on mule packs to the refinery. The very reserved inhabitants of Caraño, only after several visits and conversations, agreed to let us photograph the pump that is kept as a local treasury. At right, a brochure of the "The Gould Manufacturing Co" that describes of pump.

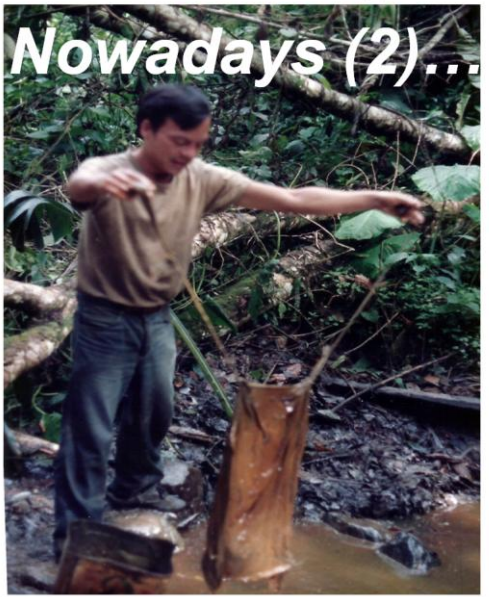
Colombio from the Caraño Seeps

- Exploitation of the oil lasted until 1887
- *According C. Dácovich´s grandson,* the enterprise failed due to the competition of cheaper and better kerosene imported and distributed by The Standard Oil Company of New Jersey.
- *According to elders from the Caraño Valley* the failure was due to increasing hostility of the locals that resisted the exploitation of "their resource" by foreigners.

Colombio from the Caraño Seeps

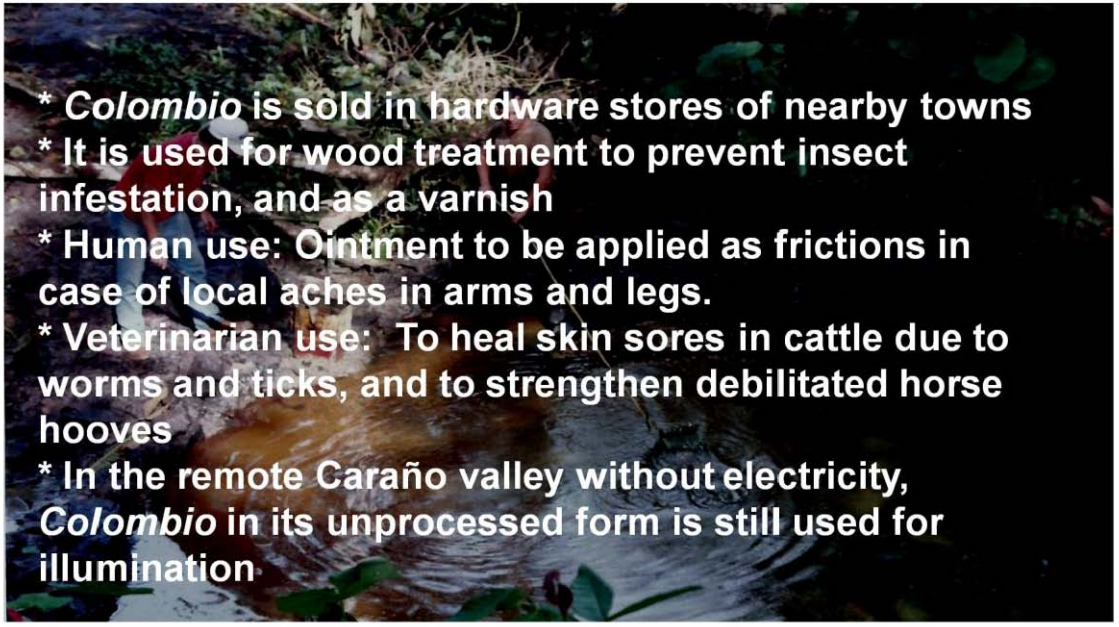
Presenter's notes: Today the main seeps are covered, to keep the oil clean from vegetation debris.

Colombio from the Caraño Seeps



Presenter's notes: The oil collection starts cutting a large branch leaving some leaves at the extreme. With it they move the oil that covers the water pool to the margin (upper left photo). Then they take a rag with ropes in its corners (upper right photo) and throw it on the oil. The rag is impregnated with oil and is then hand squeezed into a bucket.

Colombio from the Caraño Seeps



* *Colombio* is sold in hardware stores of nearby towns
* It is used for wood treatment to prevent insect infestation, and as a varnish
* Human use: Ointment to be applied as frictions in case of local aches in arms and legs.
* Veterinarian use: To heal skin sores in cattle due to worms and ticks, and to strengthen debilitated horse hooves
* In the remote Caraño valley without electricity, *Colombio* in its unprocessed form is still used for illumination


Thanks…