

# ANNUAL IMPLEMENTATION WORKSHOP (AIW)

TRABAJAMOS  
PARA PRODUCIR

**BARRILES  
LIMPIOS**

## Methane recovery Project in Ecopetrol:

### Study cases



13th MAYO 2014



# ABOUT OR COMPANY

## ECOPETROL

Is the largest and primary petroleum company in [Colombia](#). As a result of its continuous growth, Ecopetrol belongs to the group of the 30 largest petroleum companies in the world, and it is one of the four principal petroleum companies in [Latin America](#).



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LIMPIOS



# WHY DOES ECOPETROL WORK IN GHG REDUCTION?

TRABAJAMOS  
PARA PRODUCIR  
BARRILES  
LIMPIOS

STRATEGIC FRAMEWORK  
2012-2020

## Why?

It supports the corporate strategic in the **Environmental management** aspect.

## In Order to...

Identify and to generate reduction strategies, making itself in a essential element for the **sustainability** development in the company.







# REPORTS

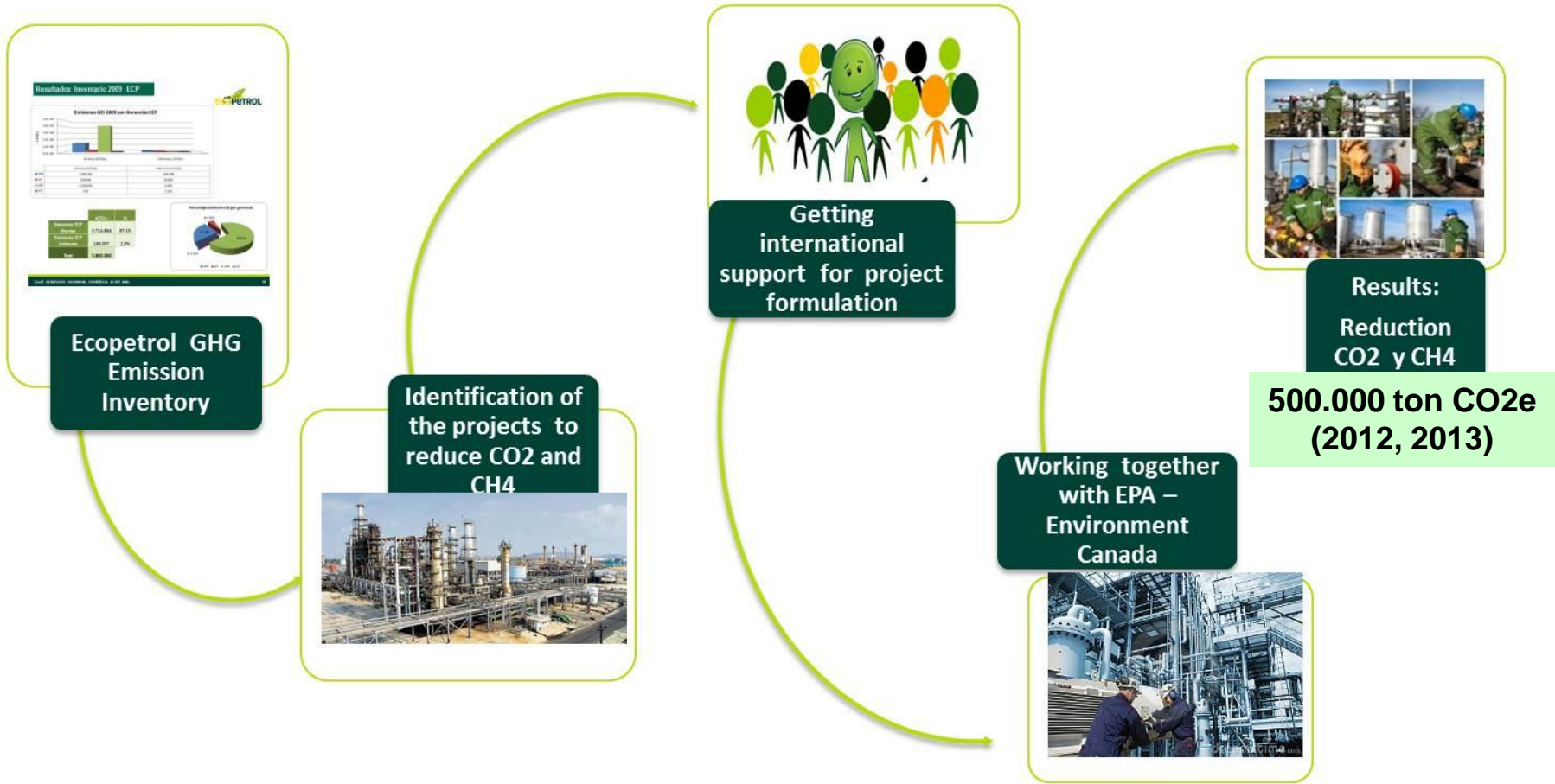


MEMBER OF  
**Dow Jones  
Sustainability Indices**  
In Collaboration with RobecoSAM

Reporte Integrado  
de Gestión Sostenible  
2013



# ECOPETROL GHG MANAGEMENT







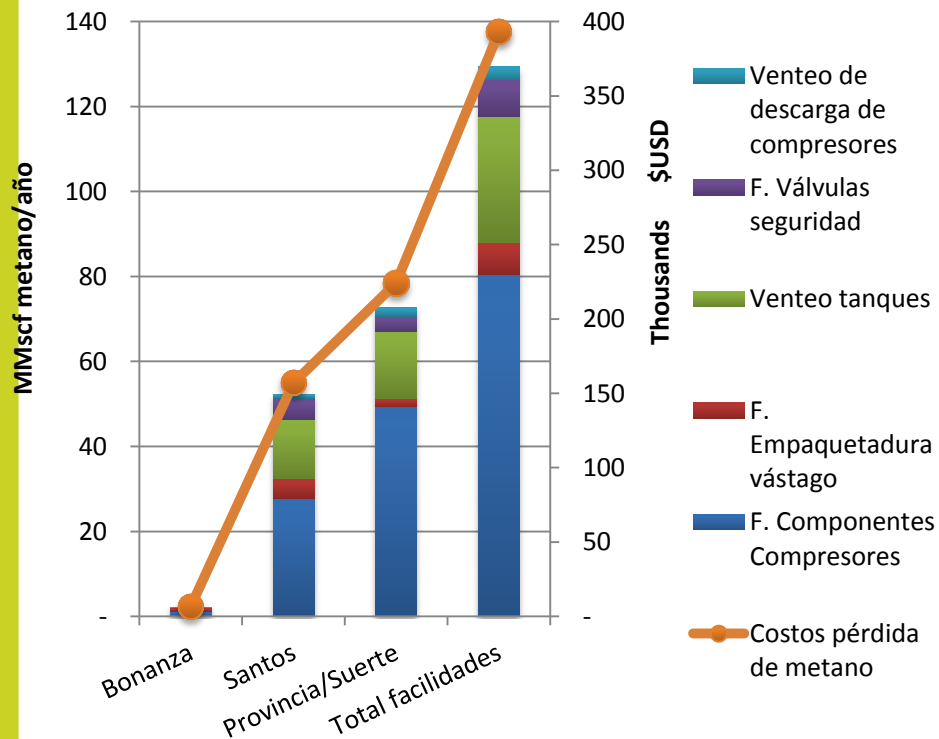
## SHARING EXPERIENCES

- To promote the reduction initiative in all the company, we are showing benefits getting until now.
- Diffusion of the next CH4 mitigation activities in production areas in the short time.
- To spread the initiative to all the company in medium and long time.
- [Video](#).

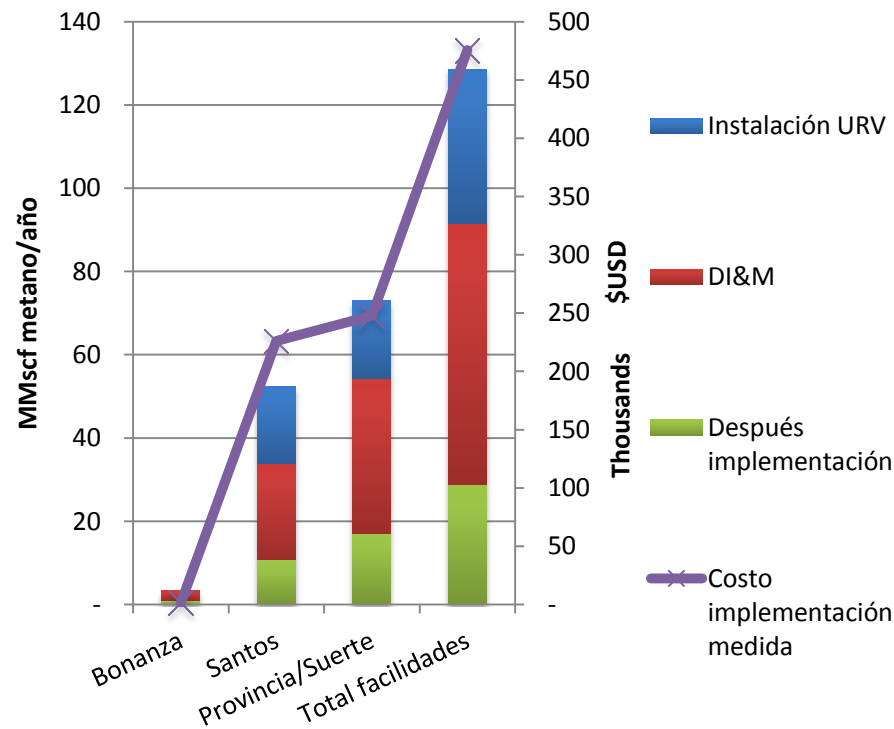




# Fugitive Emission at Production Facility + GasPlant (SOM)



**Total Emissions: 131 MMscf/yr Methane**



**Total Recovery Methane : 100 MMscf/yr**

\* Gas Price assumed US\$ 3.00/ Mcf

**2013: 15.000 ton CO2e Reports as a goal**











# IMPLEMENTATION OF THE RING NET

- \* Improving the actual gathering systems.
- \* Working on **a standard for the new projects.**

## COMPRESSION SYSTEM LOCATED

### PILOTS

- Installation of 6 BGC (2014)
- Installation 2 Portatil Compressors.

Pozo Llanito 114, Montaje tipo Samson .



Pozo llanito 114, facilidades



## AUTOGENERATION

- Autogeneration with Diesel : ct\$35 KWh.
- National Grid : ct\$12 to ct\$16 KWh.
- Autogeneration with gas: ct\$ 8 KWh



# Results by Installing BGC

Pozo Llanito 114, Montaje tipo Samson .



Pozo Llanito 114, facilidades



- Elimination of the venting practice & Recovery of gas.
- Pressure maintenance in the casing of 35 / 45 psig.
- Improvement of 10% in the pump efficiency.

Pozo Nutria 32, Montaje tipo frontal .



Pozo Nutria 39, Montaje tipo Sanson









# IN ADDITION:

## Technical guide for Measurement and LDAR



ESTACIÓN MODIFICADA O NUEVA

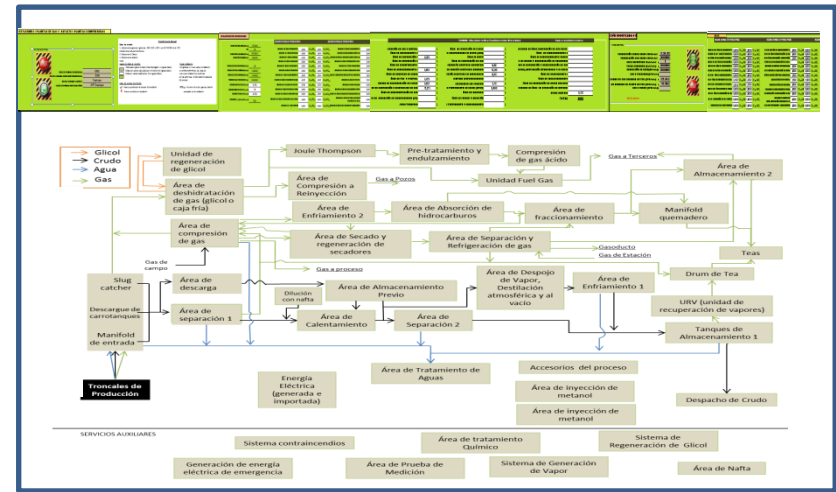
DATOS DE ENTRADA

PRODUCCIÓN CRUDO ANUAL (bbl_cubo)	7.303.066
PRODUCCIÓN GAS ANUAL (bbl_cubo)	285.781.477
ENERGÍA ELÉCTRICA IMPORTADA (kWh_cubo)	0
ENERGÍA ELÉCTRICA GENERADA (kWh_cubo)	78.146.581,5
PRODUCCIÓN DE AGUA (m3_cubo)	1.588.627,15
GAS A TERCIERO (bbl_cubo)	
VOLUMEN DE GAS QUEMADO EN TEA (bbl_cubo)	699.294,0
VOLUMEN DE GAS QUEMADO EN PILOTO DE TEA (bbl_cubo)	
GAS A PISOS (bbl_cubo)	

(\*) Área Alagadero

Alternativa Actividad

Volumen de Gas Quemado en Teas (bbl_cubo)	2,0
Volumen de Gas Quemado en Piloto (bbl_cubo)	
Type de Equipos	Teas y piloto Coltague
Indicador de Emisión de productivitat TEAS (bbl_cubo)	Teas Coltague
Indicador de Emisión de productivitat TEAS (bbl_cubo)	Teas Coltague
Indicador de productivitat de piloto de teas (bbl_cubo)	2,59E-03
Indicador O&E del Area (bbl_cubo)	1,10E-03
G&E de Piloto de Teas (bbl_cubo)	0,0
G&E de Teas (bbl_cubo)	0,2
G&E (bbl_cubo)	0,2



### Tools to:

- Estimate emissions reduction for the new projects and modifications.
- Estimate CH<sub>4</sub> emissions



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**THANK YOU**

GRACIAS  
ARIGATO  
SHUKURIA  
JUSPAXAR

TASHAKKUR ATU  
YAQHANYELAY  
SUKSAMA  
EKHMET  
MEHRBANI  
MAALIK  
KOMAPSUNIDA  
GOZAIMASHITA  
EFCHARISTO

DANKSCHEEN  
TASHAKKUR ATU  
SUKSAMA  
EKHMET  
MEHRBANI  
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BĪYAN  
SHUKRIA  
TINGKI  
BOLZĪN  
MERCİ

