WHAT’S THAT THING?

NATURAL GAS PROCESSING PLANT

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“WHAT’S THAT THING?”

NATURAL GAS PROCESSING PLANT

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“Uncle Billy” strikes oil!
ONE B IN BARREL?

Barrel

WHY?

Barrels (bbls)
Photo is courtesy of the Spindletop Museum -- taken October 1902
Now What?
COMPONENTS OF NATURAL GAS

- Ethane
- Propane
- n-Butane
- i-Butane
- n-Butane
- i-Pentane
- n-Pentane
- i-Pentane
- Heptane
- Hexane
- Methane
- Decane
- Nonane
- Pentane
- Octane
- CO₂
- H₂O
- H₂S
- N₂

Contaminants

Natural Gas Liquids
FROM WELLHEAD TO END USER
Steps of Processing Natural Gas

Legend:
- Green indicates locations at gas wells
- Gray indicates locations in gas processing plant
- Red indicates final sales products
- Blue indicates optional unit processes available
- Condensate is also called natural gasoline or casinghead gasoline
- Pentanes + are pentanes plus heavier hydrocarbons and also called natural gasoline
- Acid gases are hydrogen sulfide and carbon dioxide
- Sweetening processes remove mercaptans from the NGL products
- PSA is Pressure Swing Adsorption
- NGL is Natural Gas Liquids
Amine Treating

Typical operating ranges

Absorber: 35 to 50 °C and 5 to 205 atm of absolute pressure
Regenerator: 115 to 126 °C and 1.4 to 1.7 atm of absolute pressure at tower bottom
GLYCOL DEHYDRATION

Glycol Dehydration Unit

- Wet Gas Feed
- Glycol Contactor
- Flash Gas
- Rich Flash
- Skim Oil
- Cross Exchanger
- Lean Glycol
- Reboiler
- Glycol Pump
- Dry Gas
- Condenser
- Glycol Regenerator
- Water Vapor
FRACTIONATION
DISTRIBUTION
QUESTIONS?

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