

NGL / LPG Plant for Sale

Capacity

Design 45 MMSCFD
Minimum 6 MMSCFD
Maximum 50 MMSCFD

Inlet Gas

Natural gas containing large quantity of CO₂ (up to 86 mole %)

Products

Natural gas liquids (propane, Y grade)
Condensates
Residual fuel (pipeline quality)

Plant History

1996 Commissioned
2019 Shut down

Major Equipment

Glycol / glycol exchanger
Dehydrator beds (4)
Inlet gas compressors (2)
Propane compressors (4)
Propane recovery column
PRC reboiler
PRC reflux condenser & accumulator
PRC side & bottom coolers
Stabilizer column
Stabilizer reboiler
Demethanizer
NGL condenser
NGL treater
Propane condenser
Propane economizer
Refrigeration subcoolers (2)



BRIEF PLANT DESCRIPTION

This plant is designed for two purposes: (1) remove CO₂; (2) convert hydrocarbons to liquid petroleum gas / natural gas liquid products. The plant consists of several process sections: dehydration, compression, propane recovery column, demethanizer, refrigeration, hot oil and drain. Inlet gas goes to tri-ethylene glycol (TEG) dehydration unit to remove water. Dried, compressed and cooled gas goes to propane recovery column (PRC). The PRC is a column containing 67 bubble-capped trays and 2 chimney trays, and provided with a partial condenser using propane refrigerant. It separates CO₂ from hydrocarbon in the inlet gas using absorption and cryogenic fractionation. The PRC overhead is sent to the reflux accumulator where liquids and gas are separated. The vapor steam goes to the demethanizer that is an 8-trayed column. Liquid accumulating in the base of the demethanizer is CO₂ product. The overhead vapor from the demethanizer goes to a reflux accumulator and then to gas/gas exchanger as residue gas and is utilized as plant fuel gas. The bottom from the PRC is a heavy product composed mostly of C₅+, that is discharged to the gas/gas exchanger. The PRC also produces natural gas liquids (NGL) from the middle of the column. The condensate stabilizer column separates the NGL to propane / butane mix and stabilizer condensate. The heat for the condensate stabilizer column is provided by the hot oil system of the plant.

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