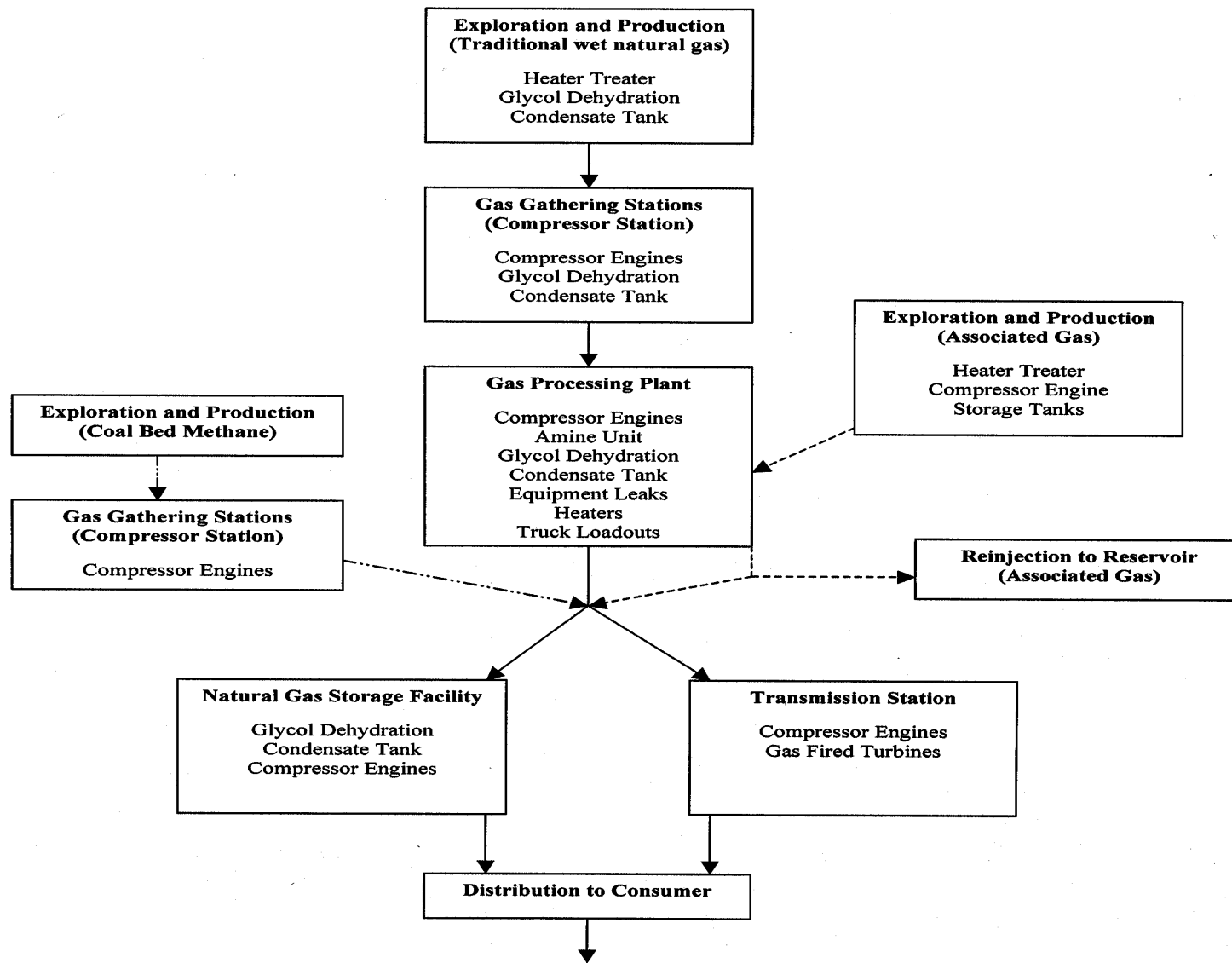


COLORADO OIL AND GAS OPERATIONS

- Traditional Wet Natural Gas
- Associated Gas
- Coal Bed Methane

BASIC OIL AND GAS FLOW DIAGRAM



EQUIPMENT & EMISSIONS

- Wellhead
 - Casing Protects Water Aquifer
 - Directional Drilling
- Heater Treater
 - Drops down hole pressure to SOP
 - Separates three phases

EQUIPMENT & EMISSIONS

- Condensate Tank
 - Condensate is...
 - Flashing / Working / Breathing / Loading
 - O&G first report to CO in 2002
 - Statewide VOCs went from 48,630 TPY to 103,051 TPY

EQUIPMENT & EMISSIONS

- Condensate Production Varies By...
 - Reservoir
 - Zone within reservoir
 - Time of year
 - Age of the well
 - Gas Composition
 - Pressure Drop

EQUIPMENT & EMISSIONS

- Glycol Dehydrator
 - Removes water
 - Regeneration of glycol creates emissions
 - E&P (2-10 TPY of VOC)
 - Large gas plant (150 TPY of VOC with 50 TPY of HAPs)
 - Condensers

EQUIPMENT & EMISSIONS

- Compressor Engines
 - 2-cycle lean burn (high NO_x – low CO)
 - 4-cycle lean burn (NO_x = CO, but high formaldehyde)
 - 4-cycle rich burn (low NO_x – high CO)

P2 opportunities = not dropping pressure

EQUIPMENT & EMISSIONS

- Natural Gas Processing
 - Gas Plant
 - J/T Valve – simple drop in pressure causes refrigeration
 - Propane Refrigeration
 - Fractionation Plant
 - Truck Loadout
 - Make sure NGL hose has block valve