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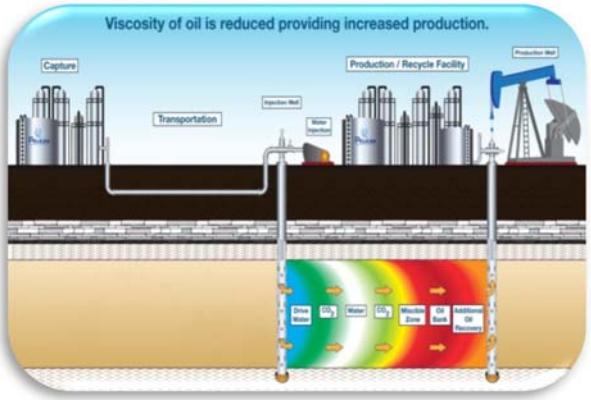
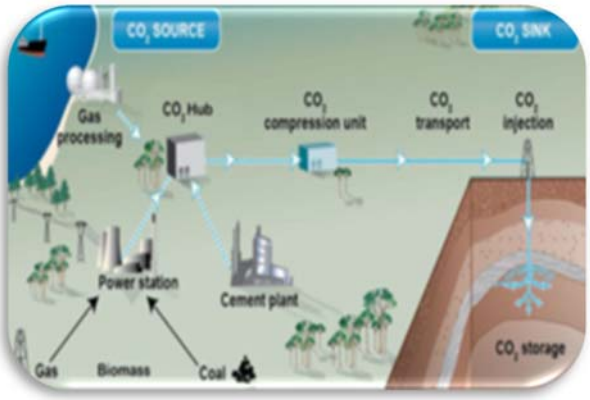
CO_2 Projects Experience

Carbon Capture, Utilization, Sequestration Facilities, Pump/Compressor Stations, and Pipelines





Project Experience – Partial List

Pelican has extensive experience and expertise in the design of carbon capture, transportation, utilization, EOR (Enhanced Oil Recovery) and sequestration facilities, with over 250 executed CO_2 projects in excess of $2 billion in TIC (not including pipelines), both in cold and warm climate regions. Our project experience also extends to Canada, South America, Asia and Europe. Pelican has been designing and executing the installation of anthropogenic CO_2 capture facilities since 2009. As part of Pelican's portfolio, our team has been executing CO_2 Enhanced Oil Recovery (EOR) projects since the late 90s, with experience extending to all of the major CO_2 flooded basins in the US, which have been operating since the 1960s.

A partial listing of these projects is as follows:

CO_2 Capture / Compression / Storage Facilities

- Central Kansas
  - Project Description: CO_2 Capture Facility, Pipeline and Recycle Facility
  - Provided Complete Mechanical, Civil/Structural, Pipeline and I&E Design Packages
  - Design of a CO_2 Treatment and Capture Facility from Existing Ethanol Plant
  - Design of a 14-mile 2,220 psig Pipeline with Design Rate of 0.2MM tonnes/yr (Approx. 10 MMSCFD CO_2) to Connect Capture Facility with Oil Field
  - Design of Recycle Facility Including CO_2 Injection and Production Flowline Systems and Well Hookups
  - Facility Production Design Rate: 1,600 BOPD, 5000 BWPD, 25 MMSCFD CO_2 Recycle
  - Test Design Rate: 200 BOPD, 1,500 BWPD, 3.0 MMSCFD CO_2
  - Incoming Working Pressure: 250 psig
  - CO_2 Recycle / Well Injection Pressure: 1,800 psig

- Pennsylvania
  - Project Description: Capture of CO_2 from Boiler Flue Gas
  - 0.32MM tonnes/year (Approx. 16.7 MMSCFD) Captured; 97% Recovery from Flue Gas with 8.7% CO2
  - CAPEX (+/- 25%) and OPEX for Two Location Options and 3 Recovery Options (97%, 95%, 85%)
  - Capture From 3 Natural Gas Fired Boilers
  - Adjustment of Process Simulation to Account for Promoted Amine Solvents

- USA
  - Project Description: CO_2 Compressor Station
  - Phase 1 Design Rate: 3.2MM tonnes/year (Approx. 170 MMSCFD) from Ammonia Processing Plant
  - Future Expansion to 10MM tonnes/year (Approx. 530 MMSCFD)
  - Pre-Cast Concrete Structure (Waskey Type)
  - High Speed Reciprocating Compressors with Dual 7,000 HP Compressors for Initial Phase with 6-7 Compressors for Ultimate Case
  - Inlet and Outlet Leak Detection Metering Skids
  - Inlet Separation/Scrubber and Coalescing Unit for Removal of Upfront Liquids
  - Incoming Pig Receiver and Outgoing Pig Launcher
  - Produced Water Tank
  - Vent and Sump Systems
  - PDC and PLC/Control Buildings

- Offshore USA
  - Project Description: CO_2 Central Platform Facility (CPF), CO_2 Injection Well Platforms and Distribution Pipeline Systems
  - Structures and Facilities for Deep Zone Monitoring Wells, Shallow Water Monitoring Wells, Passive Seismic and Soil Gas Stations
  - CO_2 Pump Station for Sequestration
  - Injection Rate of 10.5MM tonnes/year at 2,300 psig in Future
  - Modular Steel Deck Design on Steel Piles for CPF in 5 ft. Water Depth with Provisions for Future Expansion
  - Steel Monopile Deck for Injection Well Platforms
  - DAS/DTS Fiber System Integration
  - MCC/PDC Building
  - Safety Systems, Communications, Power Control and Utility Infrastructure

- USA
  - Project Description: Capture of CO_2 from Multiple Sources and Development of Hub Gathering Concept
  - Total CO_2 Capture of 5.6MM tonnes/year (Approx. 280 MMSCFD) from 9 Sources Along a 9 Mile Corridor
  - Scoping Document, Detailed Project Schedule, and CAPEX (+/- 20%) and OPEX for 5 Processing Options
  - Adjustment of Process Simulation to Account for Promoted Amine Solvents
  - CO2 Captured from Refinery FCC, Hydrogen SMR, and Natural Gas Fired Equipment

- USA
  - Project Description: CO_2 Capture Facility – Refinery
  - Provided Study to Capture CO_2 and Deliver as Chemical Feedstock for Methanol and Gasoline; Secondary Option is to Transport CO_2 for Sequestration
  - Design of a CO_2 Treatment and Capture Facility from Post Combustion Utilizing Specialty Amines – Capture Rate of 850,000 tonnes/yr (Approx. 45 MMSCFD)
  - Feed Operating Pressure: Near Atmospheric
  - Blower/Reciprocating Compressor and TEG Dehydration

- USA
  - Project Description: CO_2 Capture Facility
  - Provided Study to Capture CO_2 from a Steam-Methane Reforming Hydrogen Plant
  - Design of a CO_2 Capture Facility from Pressure-Swing Absorber (PSA) Utilizing Specialty Amines
  - Carbon Capture Rate of 207,500 tonnes/yr (Approx. 11 MMSCFD)
  - Blower/Reciprocating Compressor and TEG Dehydration
  - 2,000 psig Compressor Discharge Pressure

- Louisiana
  - Project Description: CO_2 Capture Facility from Steel Mill Direct Reduced Iron (DRI) Process
  - Provided Study to Capture CO_2 from DRI process with phased expansion from 0.8 MM to 2.8 MM tonnes/yr
  - Consisting of Multiple Blower/Reciprocating Compressor Options
  - TEG Gas Dehydration System
  - 1,500 psig Compressor Discharge Pressure

- Various Locations – Texas, Louisiana, Oklahoma, Mississippi, California, Alabama
  - Project Description: CO_2 Capture Facility – Landfill Gas
  - Provided Complete Project Development, Economic Comparisons and Facility Designs for All Disciplines
  - Design of a CO_2 Treatment and Capture Facility from Existing Landfills – Rates Ranging from 1 MMSCFD to 6 MMSCFD Per Site
  - Designed Pipelines and Determined Suitable CO_2 Dispositions Including Sequestration and Utilization Sites
  - Feed Operating Pressure: Near Atmospheric
  - CO_2 Discharge / Well Injection Pressure: 1,800 psig – 2,500 psig

- USA
  - Project Description: Capture of 9 MMSCFD with Expansion to 18 MMSCFD of CO_2 from Amine Plant
  - Neuman & Esser Combined Screw / Reciprocating Package (Total of 3,200 HP)
  - TEG Gas Dehydration System
  - CO_2 Transportation Pipeline
  - Sulfa Treat H_2S Removal System
  - 2,100 psig Compressor Discharge Pressure

- Southwest Colorado
  - Project Description: CO_2 Compression Station
  - Design Rate: 200 MMSCFD
  - Two (2) Dresser Rand HHE frame compressors at 5,500 HP each
  - Suction pressure: 550 psig with discharge pressure of 2,200 psig
  - Gas Dehydration Utilizing Glycol Dehydration (DEG) System

- USA
  - Project Description: Capture of CO_2 from Multiple Amine Sources Ranging Up to 1.4 MM tonnes/yr (Approx. 70 MMSCFD)
  - Consisting of Multiple Screw/ Reciprocating Compressor Options
  - Dexpro Gas Dehydration System
  - CO_2 Transportation Pipelines Ranging in Sizes from 4” Through 10” in Diameter
  - 2,100 psig Compressor Discharge Pressure

- Louisiana
  - Project Description: Capture of CO_2 from Multiple Amine Sources Ranging Up to 0.48 MM tonnes/yr (Approx. 24 MMSCFD)
  - Consisting of Multiple Blower/ Reciprocating Compressor/Multi-Stage Pump Options
  - TEG Gas Dehydration System
  - 1,600 psig Compressor Discharge Pressure

- Louisiana
  - Project Description: Capture of CO_2 from Multiple Amine Sources Ranging Between 0.05 MM to 0.46 MM tonnes/yr totaling 1.6 MM tonnes/yr (Approx. 85 MMSCFD)
  - Consisting of Multiple Electric Blower/Engine Driven Reciprocating Compressor
  - Multiple H_2S Removal Options

- TEG Gas Dehydration System
- 1,800-2,160 psig Compressor Discharge Pressure

- New Mexico
  - Project Description: Capture of CO_2 from Multiple Amine Sources Totaling Approx. 1.1 MM tonnes/yr (60 MMSCFD)
  - Full Acid Gas Injection to Class II Well
  - Phase 1 – Compression to 2,400 psig Injection
  - Phase 2 – Installation of CO_2 Multistage Pumps from 2,400 to 4,500 psig Injection

- Kansas
  - Project Description: CO_2 Capture Facility
  - Provided Mechanical, Civil/Structural, and E/I Design Packages
  - Design of a CO_2 Treatment and Capture Facility from Existing Ethanol Plant
  - Blower/Reciprocating Compressor and TEG Dehydration
  - 0.28 MM tonnes/year (Approx. 14 MMSCFD) Capture Rate
  - 1,400 psig Compressor Discharge Pressure

- USA
  - Project Description: CO_2 Capture Facility from Ethanol Plant Totaling 250,000 tonnes/yr (Approx. 13.5 MMSCFD)
  - Captured CO_2 Feed Stream at 91.2 wt% on Wet Basis with Primary Contaminants of H_2O, N_2 and O_2
  - CO_2 to be Dried to Product Stream Specification of <20 lb/MMSCF
  - O_2 to be Controlled to <200 ppm Prior to Feeding Capture System
  - CO_2 to be Compressed to 2,100 psig for Onsite Sequestration

- USA
  - Project Description: CO_2 Capture Facility from Ethanol Plants (Total of 173 MM gal/yr Capacity) for Sequestration
  - Capture Facility with Compression Train to Capture CO_2 from Three (3) Batch Process Ethanol Plants
  - Blower System with Suction Scrubber
  - Blower After Cooler
  - TEG System to Dehydrate Supercritical CO2 to <30 lbs/MMSCFD
  - Inter and After Coolers
  - E&I Infrastructure, Utilities, Liquid Handling, Safety and Control Systems

- Texas, USA
  - Project Description: Post Combustion CO_2 Capture Facility

- Capture from Exhaust of Three (3) Natural Gas Fired Compressors and Two (2) Natural Gas Fired Hot Oil Heaters Using an Amine Capture Process
- 24,000 tonnes/year of CO_2 Captured (Approx. 1.3 MMSCFD)
- Recovery from Exhaust Stream with 12.6% CO_2
- CO_2 Treating Utilizing Proprietary Amine Solvent
- CO_2 to be Compressed, Transported Through an Existing Pipeline and Sequestered into an Adjacent Well

- North Dakota
  - Project Description: CO_2 Storage Facility
  - Injection Flow Rate of 1.7 MM tonnes/yr (Approx. 85 MMSCFD)
  - 1950 psig Topside Injection Pressure
  - 3 Mile Lateral from Main CO_2 Trunk Line
  - Facilities to Produce CO_2 from Storage Reservoir and Treat to Pipeline Quality

- Wyoming
  - Project Description: CO_2 Compression Facility
  - Provided Complete Mechanical, Civil/Structural, Pipeline and I&E Design Packages
  - Multi-Discipline Expansion Project to Install Two New 30 MMSCFD (Total of 10,000 HP) Reciprocating CO_2 Compressors
  - Variable Frequency Drives, PDC / MCC Building, 15MVA Transformers, Compressor Building with 20-Ton Overhead Crane, Interstage and Final Discharge Air Coolers, 2-Phase Separator, Cooling Water Tower
  - 200 MMSCFD Flare Knock Out Drum and Flare
  - Pipe Rack and Access Roads

- Louisiana
  - Project Description: Methane Removal and NGL Production Project
  - Separating methane and NGL from existing facility CO_2 Recycle Stream Designed for 200 MMSCFD.
  - Major equipment consisted of Silica Gel Dehydration and Regeneration, 2-Stage Membranes, Chiller, Stabilizer, Dewpoint Control, Dresser Rand 2 Section 20,450 HP Centrifugal Compressor, LP and MP Screw Compressors, Hot Oil Systems and NGL Storage and Truck Loading.

- Bulgaria
  - Project Description: CO_2 EOR Project
  - Provided Process Design FEED Study to Capture CO_2 from an Existing Fertilizer Plant, Treat / Dehydrate CO_2 and Deliver to Pipeline System for Transport to Existing Oil Fields

- Feasibility Study Included Study of All Compression Types Including New Shockwave Technology for CO_2 Compression
- Designed CO_2 Rate of 50 MMSCFD for Phase 1 Development and Future Expansion of 100 MMSCFD for Phase 2 Development with Inlet Pressure of 5 psig and Discharge Pressure of 2,000 psig

- Alberta, Canada
  - Project Description: CO_2 EOR Facility Project
  - Provided Process Design Review to Capture CO_2 from an Existing Fertilizer Plant and Transport the CO_2 for Enhanced Oil Recovery at Existing Fields
  - Railcar and Pipeline Options were Considered for Transportation
  - Utilized Aspen HYSYS to Determine Ideal Transport Conditions for Each Case
  - Feasibility Review of the Central Processing Plant with Recommended Process Changes, Material Selection and AFEs, Project Schedules and Execution Plan

CO_2 EOR Processing Facilities

- Texas
  - Project Description: CO_2 Recycle Pilot Facility/Pipeline Design
  - Provided Complete Mechanical, Civil/Structural and I&E Design Packages
  - Design of an 8" - 2,220 psig Pipeline with Design Rate of 200 MMSCFD CO_2 from Kinder Morgan Pipeline to Goldsmith, Texas
  - Facility Production Design Rate: 840 BOPD, 13,660 BWPD, 3 MMSCFD CO_2 Recycle
  - Test Design Rate: 120 BOPD, 2,380 BWPD, 0.5 MMSCFD CO_2
  - Incoming Working Pressure: 70 psig
  - CO_2 Recycle / Well Injection Pressure: 1,800 psig

- Mississippi
  - Project Description: Central Facility, Production / Injection System
  - Design Rate: 2,000 BOPD, 5,000 BWPD, 40 MMSCFD CO_2 Recycle
  - Incoming Working Pressure: 850 psig
  - CO_2 Recycle / Pipeline Injection Pressure: 3150 psig
  - Utilized Dresser Rand 6HOS/2 20 MMSCFD Recycle Compressors
  - Utilized Two (2) Woodgroup TJ9000 20 MMSCFD Horizontal Centrifugal Pumps

- Louisiana
  - Project Description: Central Facility, Production / Injection System
  - Design Rate: 2,500 BOPD, 5,000 BWPD, 60 MMSCFD CO_2 Recycle
  - Incoming Working Pressure: 850 psig
  - CO_2 Recycle / Pipeline Injection Pressure: 3,150 psig

- Utilized Three (3) Dresser Rand 6HOS/2 20 MMSCFD Recycle Compressors
- Utilized Three (3) Woodgroup TJ9000 20 MMSCFD Horizontal Centrifugal Pumps

- Louisiana
  - Project Description: Central Facility, Production / Injection System
  - Design Rate: 12,000 BOPD, 100,000 BWPD, 390 MMSCFD CO_2 Recycle
  - Incoming Working Pressure: 400-700 psig
  - CO_2 Recycle / Pipeline Injection Pressure: 1,350 psig
  - Utilized Two (2) Dresser Rand 7HOS/4 60 MMSCFD Recycle Compressors
  - Utilized Four (4) Dresser Rand 7HOSS/6 130 MMSCFD Recycle Compressors
  - Utilized Screw Compressor for Vapor Recovery

- Louisiana
  - Project Description: CO_2 Recycle Methane Removal and NGL Production
  - Separation of Methane and NGL from Existing Facility CO_2 Recycle Stream.
  - Major Equipment Consisted of Silica Gel Dehydration, 2-Stage Membranes, Chiller, Stabilizer, Dewpoint Control, Dresser Rand 2 Section 20,450 HP Centrifugal Compressor, and NGL Storage/Truck Loading

- Texas
  - Project Description: Central Facility, Production / Injection System
  - Design Rate: 8,000 BOPD, 40,000 BWPD, 200 MMSCFD CO_2 Recycle
  - Incoming Working Pressure: 400-850 psig
  - CO_2 Recycle / Pipeline Injection Pressure: 2,200 psig
  - Utilized Two (2) Dresser Rand 5HOS/4 15 MMSCFD L.P. Recycle Compressors with CAT G3608 TALE Engine with SCR/OC Emission Controls
  - Utilized One (1) Dresser Rand 5HOS/4 38 MMSCFD H.P. Recycle Compressors with CAT G3606 TALE Engine with SCR/OC Emission Controls
  - Utilized Three (3) Dresser Rand 5HOS/6 50 MMSCFD Recycle Compressors with CAT G3608 TALE Engine with SCR/OC Emission Controls
  - Utilized Combination of Centrifugal Blowers and Screw Compression for Atmospheric and Low-Pressure Vapor Recovery

- Montana
  - Project Description: Central Facility, Production / Injection System
  - Design Rate: 15,000 BOPD, 55,000 BWPD, 260 MMSCFD CO_2 Recycle
  - Incoming Working Pressure: HP: 400-700 psig, LP: 100-200 psig
  - CO_2 Recycle / Pipeline Injection Pressure: 2,100 psig
  - Utilized One (1) Dresser Rand Small HP 7HOSS/4 40 MMSCFD Recycle Compressors

- Utilized Two (2) Dresser Rand Large HP 7HOSS/6 80 MMSCFD Recycle Compressors
- Utilized Two (2) Dresser Rand LP 7HOSS/6 35 MMSCFD Recycle Compressors
- Utilized Screw Compressor for Vapor Recovery

- Texas
  - Project Description: Central Liquids Handling and Compression Facility, Production / Injection System
  - Design Rate: 3,000 BOPD, 30,000 BWPD, 35 MMSCFD CO_2 Recycle
  - Incoming Working Pressure: 175 psig
  - CO_2 Recycle / Well Injection Pressure: 1,500 psig
  - Utilized One (1) Oil-flooded Screw VRU Compressor
  - Utilized One (1) Oil-flooded Screw LP Compressor
  - Utilized One (1) Dexpro Unit for Dehydration with Five (5) 3-Stage Reciprocating HP Recycle Compressors 7 MMSCFD
  - Utilized four (4) Horizontal Multistage Centrifugal Pumps
  - Water Recycle / Well Injection Pressure: 1,050 psig

- Louisiana
  - Project Description: CO_2 Recycle Facility Design
  - Provided Complete Mechanical, Civil/Structural, I&E Design Packages
  - CO_2 Source from Truck Loading Facility
  - Design of a 1,500 psig Injection System Utilizing Flex Steel Injection Materials
  - Design of Recycle Facility including CO_2 Injection, Production Flowline Systems, Separation and Glycol Dehydration
  - Facility Production Design Rate: 1,000 BOPD, 1,000 BWPD, 6 MMSCFD CO_2 Recycle
  - Test Design Rate: 200 BOPD, 750 BWPD, 1.0 MMSCFD CO_2
  - Incoming Working Pressure: 285 psig
  - CO_2 Recycle / Well Injection Pressure: 1,250 psig

- Utah
  - Project Description: McElmo Unit Water / CO2 Flood Upgrade FEED Study and Execution of Upgrades to Existing Facilities and Centralization of Processing Capabilities
  - Additional Production Design Rate: 30 MMSCFD CO2, 3,000 BOPD, 28,000 BWPD

CO_2 Pipelines, Pipeline Booster / Meter Stations

- Mississippi
  - Project Description: Pipeline Design with Booster / Meter Station
  - 150 MMSCFD CO_2 Station Capacity
  - Utilized Two (2) Woodgroup TM24000A 75 MMSCFD Horizontal Centrifugal Pumps
  - Design of CO_2 Cooling System Utilizing Water Cooling Tower and Heat Exchangers

- Mississippi
  - Pipeline Design with Booster / Meter Station
  - Booster Station Design for 800-1000 MMSCFD CO_2 Capacity with Discharge of 2,160 psig
  - Integrate NEJD and Barksdale Pipeline
  - Utilized Eight (8) Woodgroup TN3500 100 MMSCFD Horizontal Centrifugal Pumps
  - Utilized Suction and Discharge Wet Surface Air Coolers (WSAC)

- Mississippi
  - Project Description: Pipeline Design with Booster / Meter Station
  - Booster Station Design for 650 MMSCFD CO_2 Capacity with discharge of 2,160 psig at 90°F
  - Utilized Four (4) Woodgroup TN2500 260 MMSCFD Horizontal Centrifugal Pumps
  - Utilized Wet Surface Air Coolers (WSAC)

- Louisiana
  - Project Description: Pipeline Design with Booster/Meter Station
  - Booster Station Design for 650 MMSCFD CO_2 Capacity with discharge of 2160 psig at 90° F
  - Utilized Three (3) Woodgroup TX2500 260 MMSCFD Horizontal Centrifugal Pumps

- Louisiana
  - Project Description: 60 mile, 24” Pipeline for Anthropogenic CO2 Capture from Multiple Sources of CO2
  - Pipeline Design from 300 MMSCFD to 900 MMSCFD Capacity with Operating Pressure of 1250 psig to 2350 psig
  - Future Midline Booster Stations Included in Design

- Wyoming
  - Project Description: CO_2 Pipeline Scoping Report
  - Provided a Feasibility Study and Scoping Report for Installation of a 90 mile CO_2 Pipeline with Operating Pressures of 2,400 psig
  - Provided Elevation Profile with Pressure Drop Calculations Utilizing HYSYS with Initial Flowrates of 32.5 MMSCFD and Future Flowrates of 70 MMSCFD

CO_2 Test Site Facilities

- Mississippi
  - Project Description: Field / Test Site #1
  - Production Design Rate: 2,523 BOPD, 24,550 BWPD, 33 MMSCFD CO_2
  - Test Design Rate: 200 BOPD, 1,000 BWPD, 16 MMSCFD CO_2
  - Incoming Working Pressure: 425 psig

- Mississippi
  - Project Description: Field / Test Site #2
  - Production Design Rate: 5,000 BOPD, 50,000 BWPD, 45 MMSCFD CO_2
  - Test “A” Design Rate: 200 BOPD, 1,000 BWPD, 6 MMSCFD CO_2
  - Test “B” Design Rate: 200 BOPD, 1,000 BWPD, 6 MMSCFD CO_2
  - Incoming Working Pressure: 425 psig

- Mississippi
  - Project Description: Field / Test Site #1
  - Production Design Rate: 3,000 BOPD, 30,000 BWPD, 45 MMSCFD CO_2
  - Test Design Rate: 300 BOPD, 1,500 BWPD, 3 MMSCFD CO_2
  - Incoming Working Pressure: 400 psig

- Mississippi
  - Project Description: Field / Test Site #2
  - Production Design Rate: 3,000 BOPD, 30,000 BWPD, 45 MMSCFD CO_2
  - Test Design Rate: 300 BOPD, 1,500 BWPD, 3 MMSCFD CO_2
  - Incoming Working Pressure: 400 psig

- Mississippi
  - Project Description: Field / Test Site #1
  - Production Integrated with Martinville Central Facility
  - Test Design Rate: 200 BOPD, 750 BWPD, 3 MMSCFD CO_2
  - Incoming Working Pressure: 850 psig

- Mississippi
  - Project Description: Field / Test Site #1
  - Production Design Rate:7,000 BOPD, 20,000 BWPD, 80 MMSCFD CO_2
  - Test Design Rate: 3,000 BLPD, 7 MMSCFD CO_2
  - Incoming Working Pressure: 400 - 900 psig
  - Including Infield Flowlines

- Texas
  - Project Description: Field / Test Site #1
  - Production Design Rate: 800 BOPD, 8,500 BWPD, 5.8 MMSCFD CO_2
  - Test Design Rate: 1,050 BLPD, 0.65 MMSCFD CO_2
  - Incoming Working Pressure: 300 - 1,000 psig
  - Infield Flowlines Included

- Texas
  - Project Description: Field / Test Site #2
  - Production Design Rate: 400 BOPD, 4,000 BWPD, 2.8 MMSCFD CO_2
  - Test Design Rate: 1,080 BLPD, 0.7 MMSCFD CO_2
  - Incoming Working Pressure: 300 -1,000 psig
  - Infield Flowlines Included

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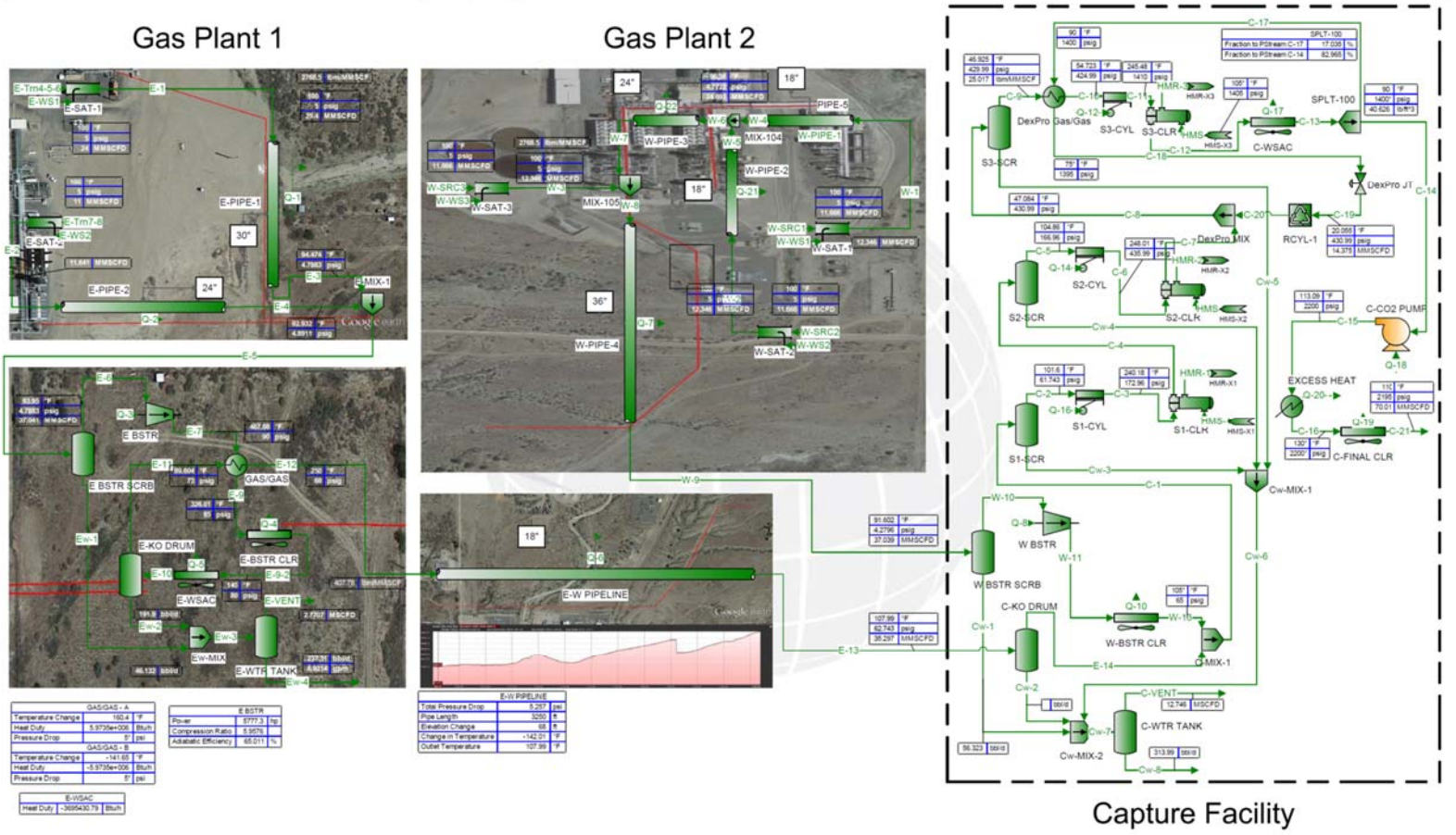
Facility Process Modeling Example

CO_2 Capture PFD



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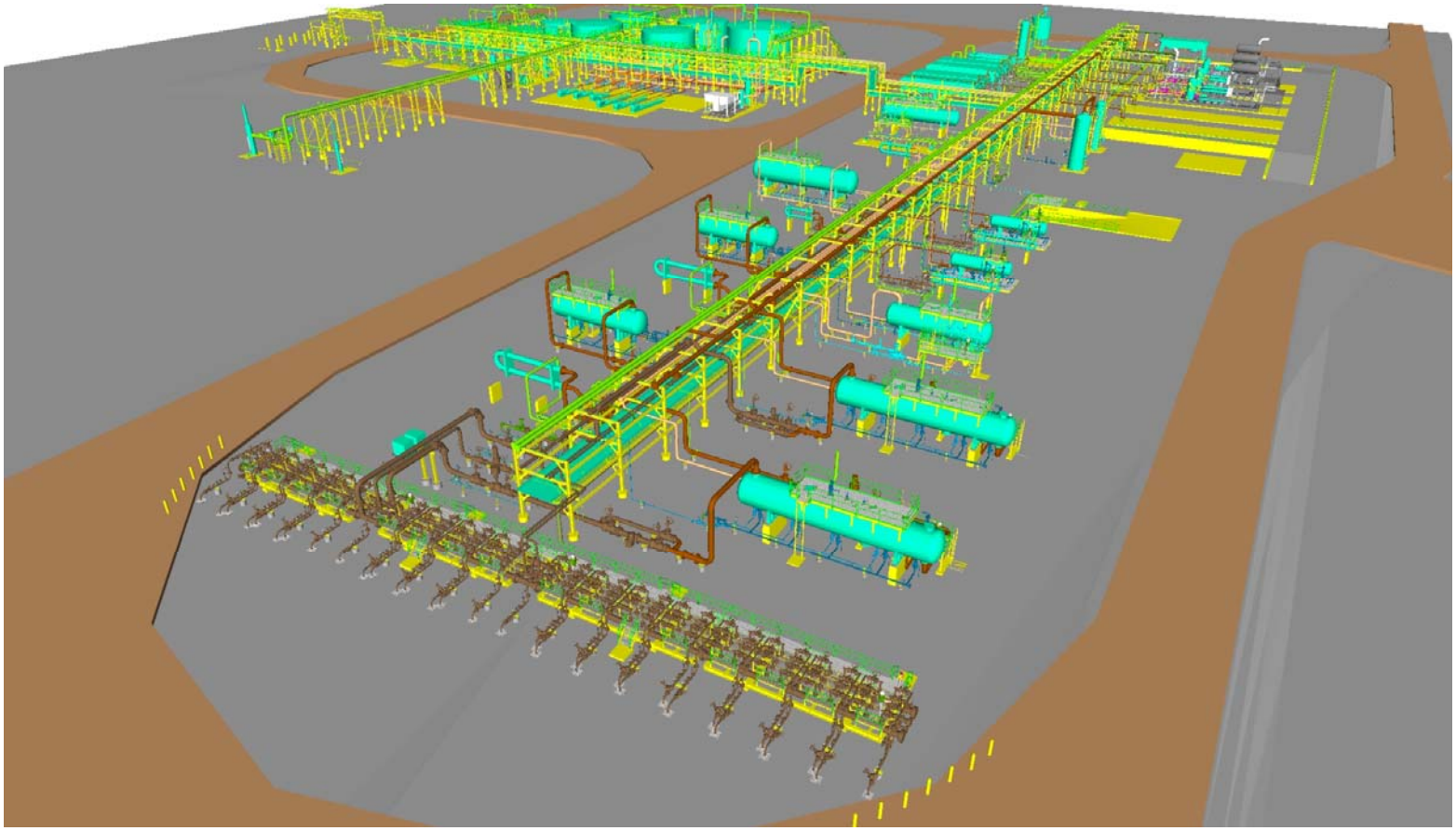
Facility Model Examples

Central Facility

Design Rate: 10,000 BOPD, 40,000 BWPD, 200 MMSCFD CO_2 Recycle
Incoming Working Pressure: 400-850 psig
CO_2 Recycle / Well Injection Pressure: 2,200 psig



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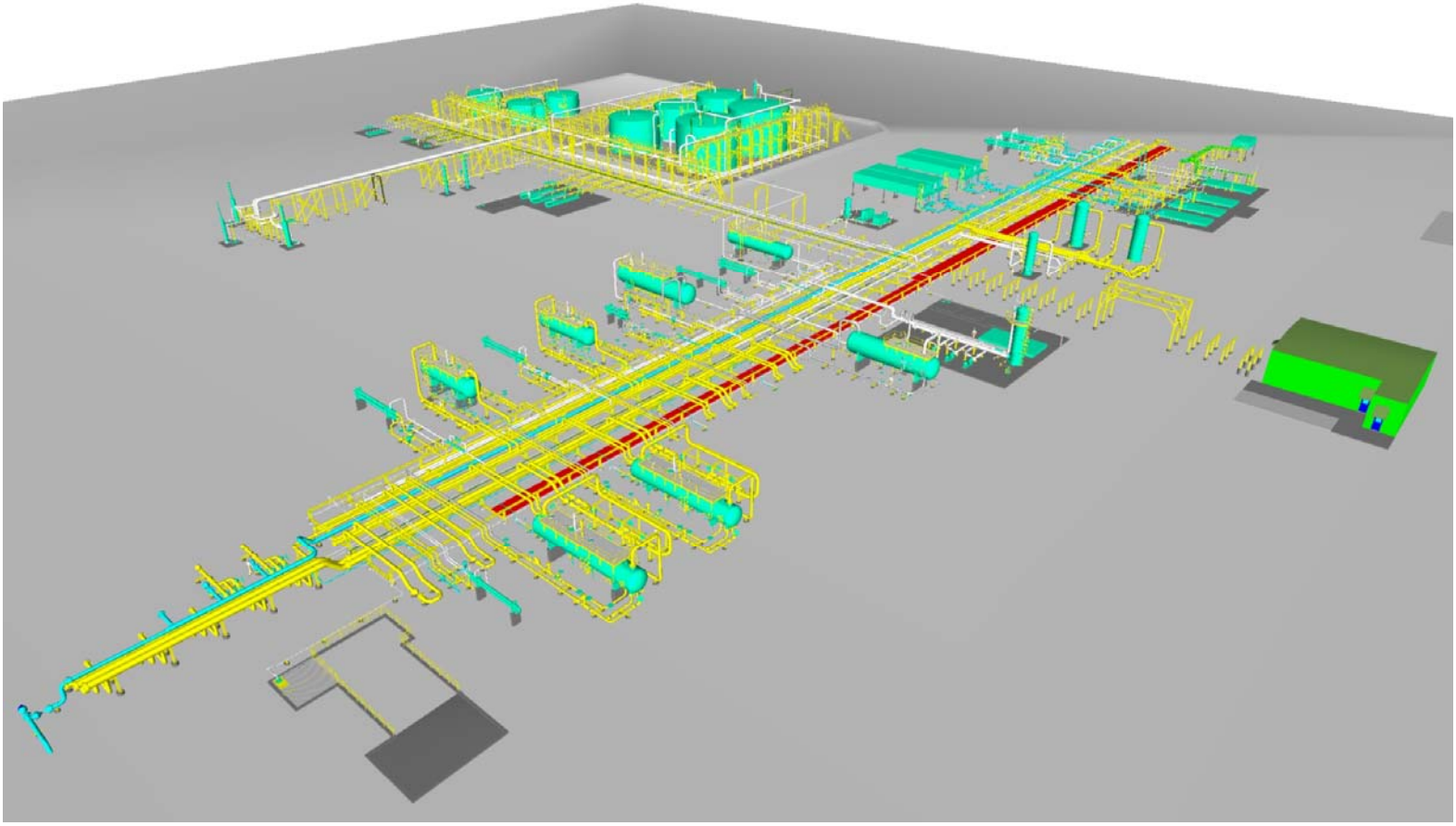
Louisiana
Central Facility

Design Rate: 12,000 BOPD, 100,000 BWPD, 390 MMSCFD CO_2 Recycle
Incoming Working Pressure: 400-700 psig
CO_2 Recycle / Well Injection Pressure: 1,350 psig



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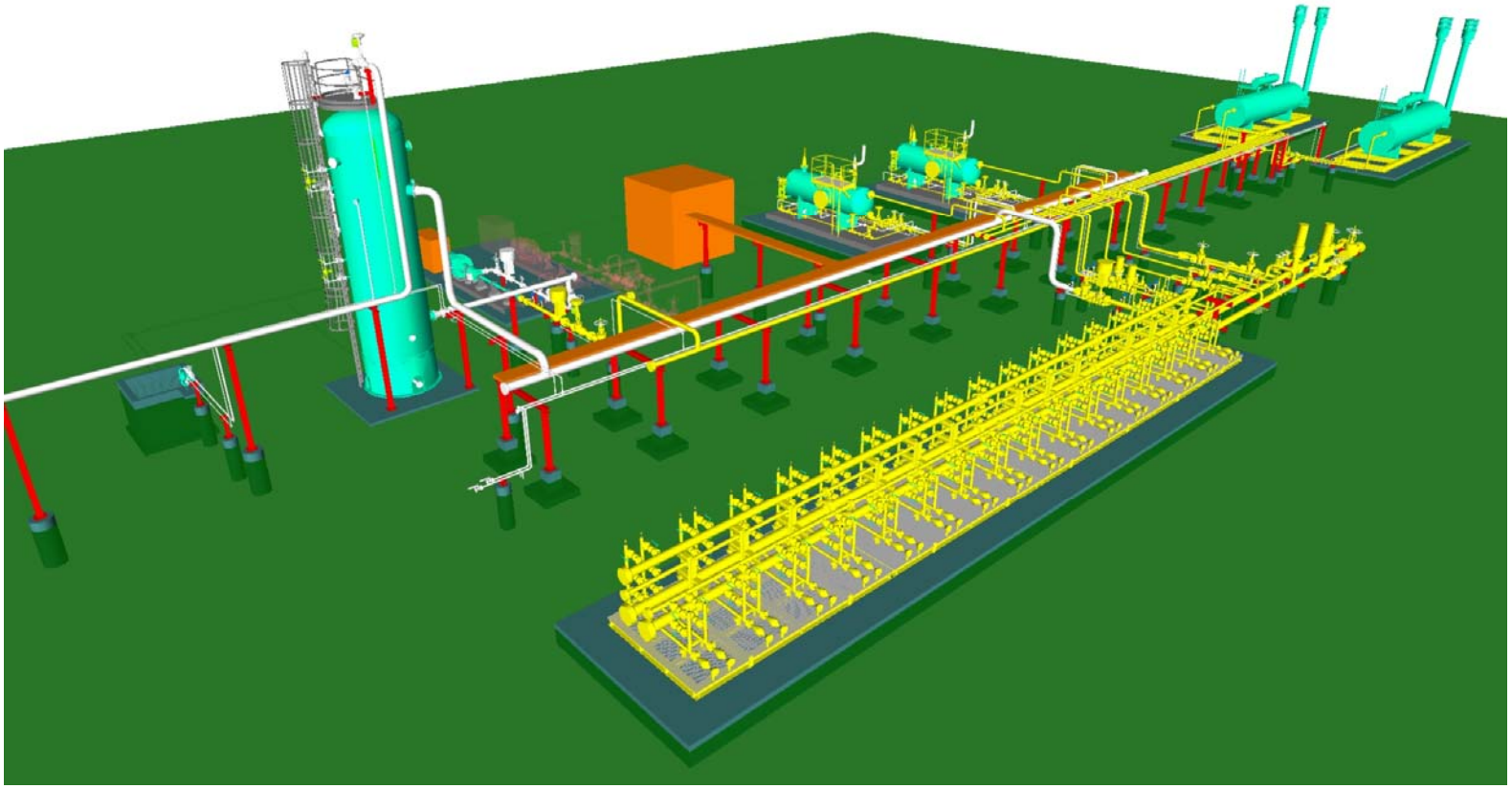
Mississippi
Field/Test Site

Production Design Rate: 3,000 BOPD, 30,000 BWPD, 45 MMSCFD CO_2
Test Design Rate: 300 BOPD, 1,500 BWPD, 3 MMSCFD CO_2
Incoming Working Pressure: 400 psig



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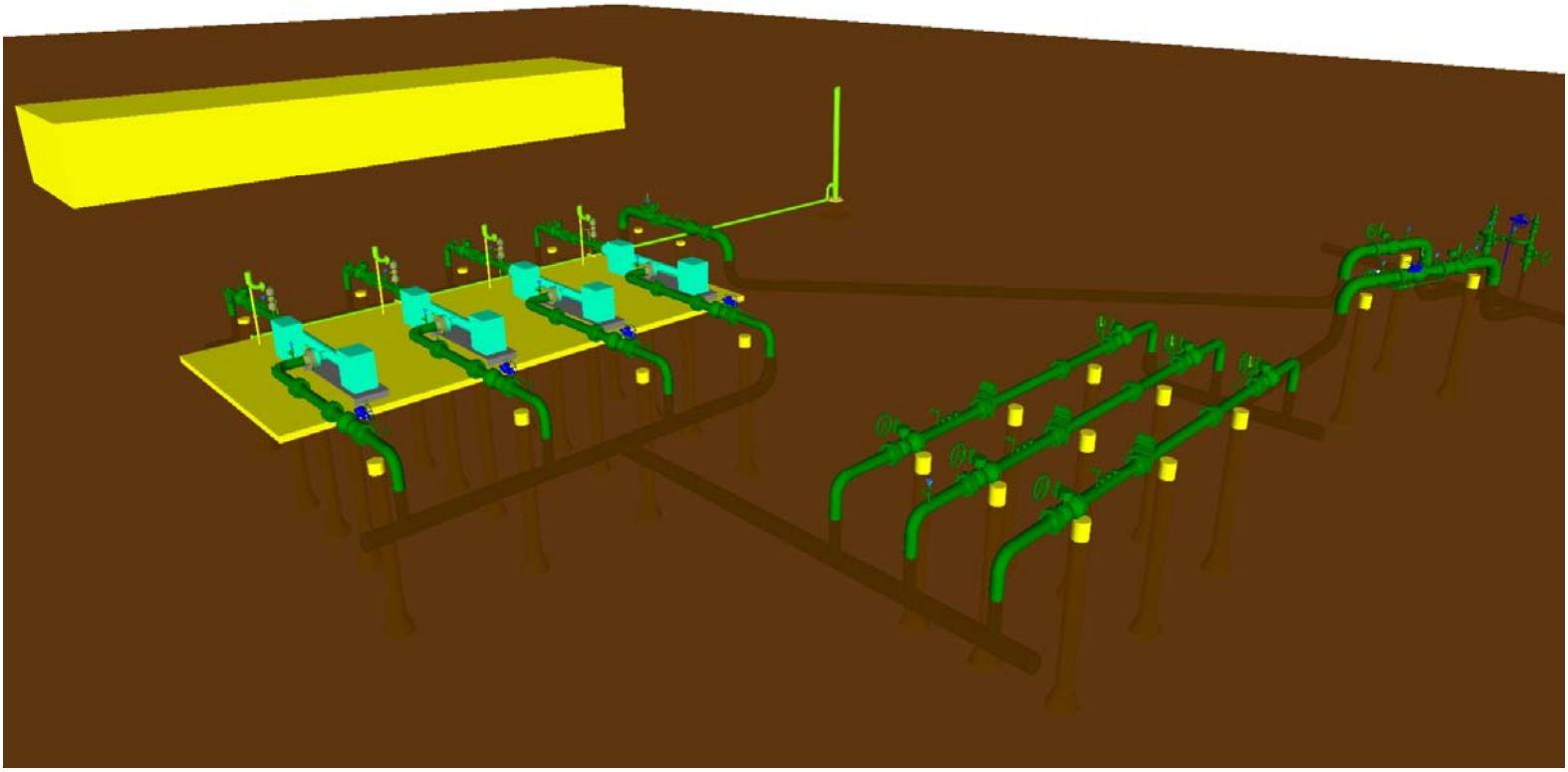
Mississippi
Booster/Meter Station

Booster Station Design for 650 MMSCFD CO_2 Capacity with Discharge of 2,160 psig at 90° F
Utilized Four (4) Wood Group TN2500 260 MMSCFD Horizontal Centrifugal Pumps



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Wyoming
Compression Facility

Design Rate: 60 MMSCFD CO_2, 10,000 HP Reciprocating Compressors
Incoming Working Pressure: 190 psig
CO_2 Recycle / Well Injection Pressure: 2,350 psig

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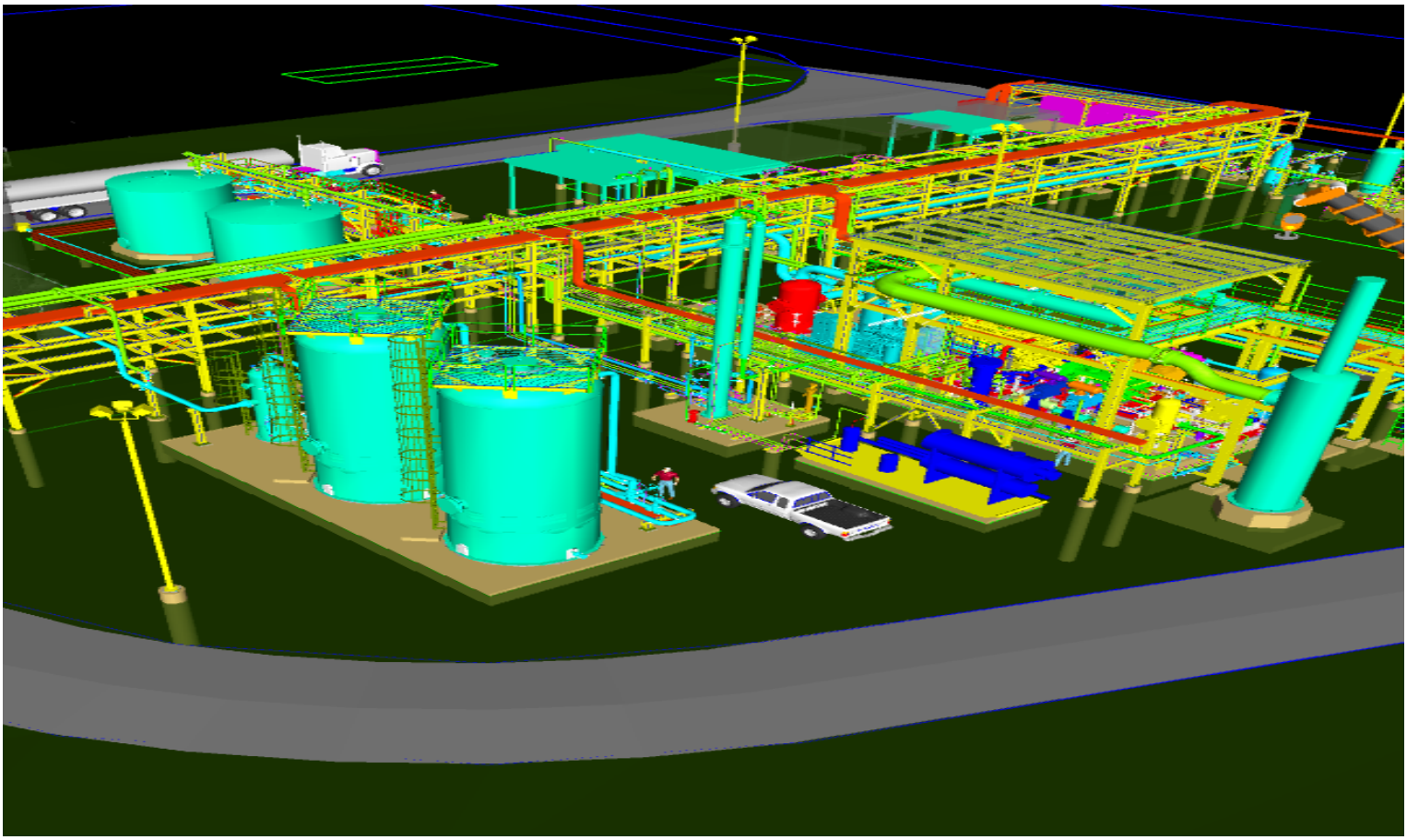
Texas
Capture Facility

Design Rate: Capture of 9 MMSCFD of CO_2 from Amine Plant
TEG Gas Dehydration System
CO_2 Transportation Pipeline
Sulfa Treat H_2S Removal System
Discharge Pressure 2,100 psig



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Kansas
Capture Facility

Design Rate: 0.2MM tonnes/yr - 10 MMSCFD CO_2
Capture Facility from Ethanol Plant with 14 mile 2,220 psig Pipeline to Oil Field

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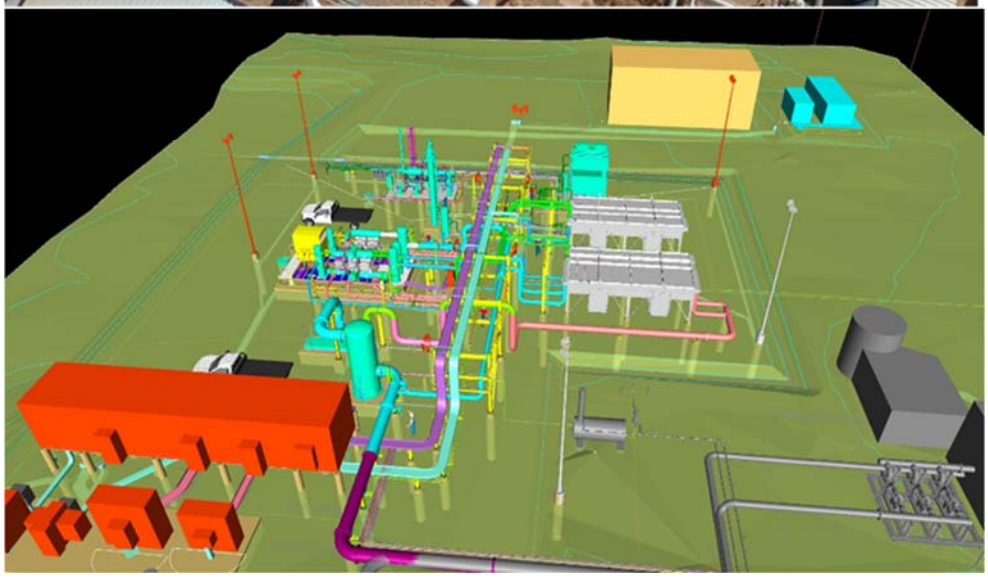
Kansas
Capture Facility

Design Rate: 0.28 MM tonnes/yr - 14 MMSCFD CO_2 Capture Facility from Ethanol Plant with final WSAC to 1,400 psig Pipeline to EOR Field



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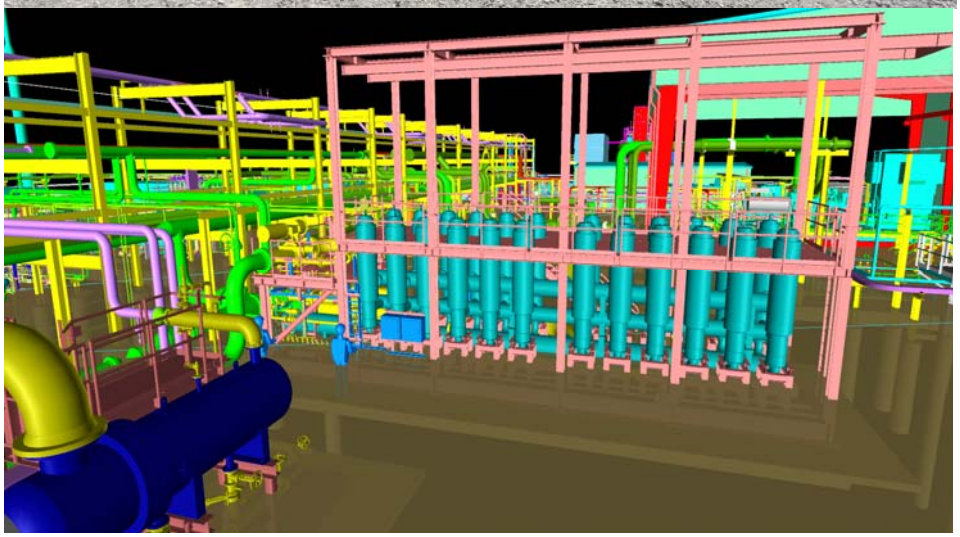
North Louisiana CO_2 / Methane NGL Separation Facility

200 MMSCFD CO_2 Recycle Methane Removal and NGL Production



PELICAN
Energy Consultants, LLC

Colorado
Compression Station

Design Rate: 200 MMSCFD
Suction pressure 550 psig with discharge pressure of 2,200 psig
Gas Dehydration Utilizing Glycol Dehydration (DEG) System