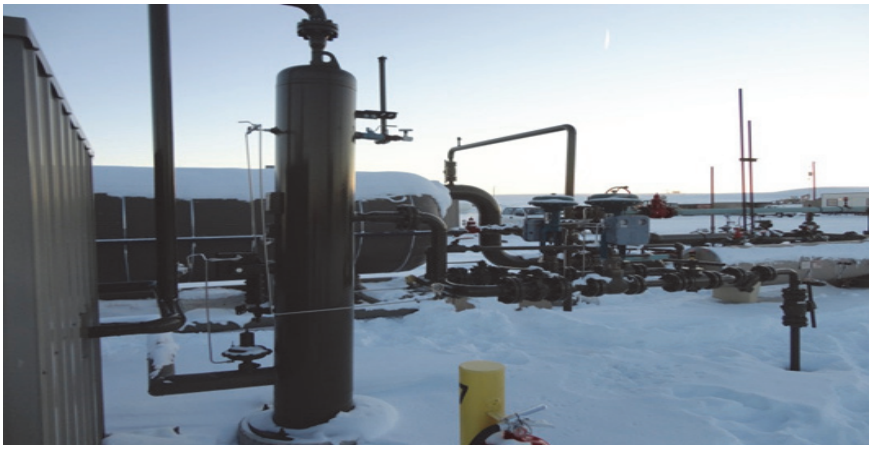
CASE STUDY: PROCESS FACILITY DESIGN

Processing



PROJECT OVERVIEW

Certain business needs require the use of existing infrastructure. Brownfield construction often allows for permitting ease, use of existing owned land and overall centralization favored by operations and management alike. These modifications and expansions must provide for the unique needs of each project ; e.g. this project's pipelines were above ground, thus sales pipeline dew point was of critical concern as well as fuel gas distribution back to the field.

GCC first built this expandable compressor facility in 2011. The new owners used GCC for the addition of more compression, fuel gas treating for field distribution and NGL storage.

ACTION

As-built drawings were provided to integrate the newly planned equipment correctly. Next, GCC managed and designed a new building for compression; new JT fuel cut system for a field fuel gas system, installed and integrated 5 MMscf/ propane refrigeration skids, and 90K gallons of Y-Grade storage capacity. The facility was designed to PSM requirements, with custom modifications per the client's discretion. A process flare was added to compliment the expanded functionality of the plant. Inlet bypass was allowed and sales gas to flare incorporated. ESD systems were upgraded and provided extensively throughout the site. A control room with PLC and readout for most necessary plant data was also added. Site power generation was also incorporated to allow for electric refrigeration.

RESULT

GCC successfully changed a simple compressor station into a fully functioning mini-processing facility in under four months. The addition of the process flare allowed the operations to never have the oil wells shut-in on overpressure due to not moving the gas. The flare allowed for processing the gas during sales line shut-ins and greatly increasing gas value in the event of no sales. The addition of the JT fuel cuts to the field fuel gas distribution system allowed for seamless operation even if the MRU is down for dew point control into the fuel pipeline. The addition of refrigeration created value from gas going to field fuel and greatly enhanced sales pipeline efficiency and receiving end liquids handling. A simple gas facility was transformed into a powerful tool for expanded oil production.

GCC INCORPORATED

Project at a Glance

Timeline	4 Months
Compressor station	Mini-processing facility : ∗New Process Flare ∗Added Refrigeration ∗NGL Storage ∗MRU.JT Treating
Overall results	Expanded Oil Production

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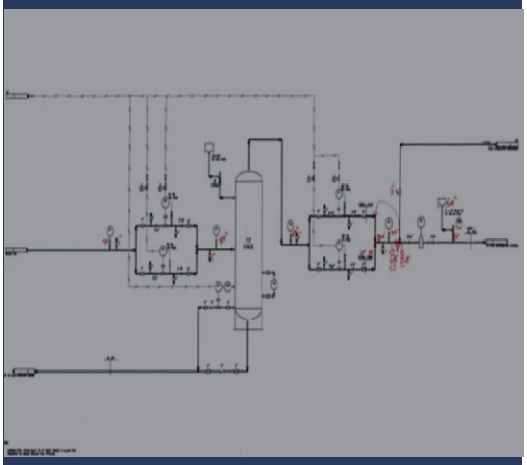

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