



Contract Description	Value USD	Period of Contract
Double Eagle at Helena Bidirectional Pump Station	\$ 1.15M	2014-2015

System Features

- Bi-directional Pump Station
- Inbound Flow Monitoring
- Inbound Pressure Control
- Tanking Valve Manifold Controls
- Sump Monitoring and Interlocks
- Tank Level Monitoring and Interlocks
- Booster Monitoring and Control
- Unit Monitoring and Control
- Meter Prover Monitoring and Control
- Unit Monitoring and Control
- Remote Centralized Monitoring & Control
- Distributed PLC Process Control
- Local O & M Interfaces
- KMCC Client Alert and Interlock Systems
- ClearSCADA® HMI Software
- Redundant Satellite/T1 WAN
- Self-Healing Fiber Ring LAN
- Rockwell Control Logix PLC
- Rockwell PanelView Plus OIT
- Full System Integration
- 24/7/365 Support
- Issue Reporting and Tracking SW
- Emergency Response Services

The Double Eagle pipeline delivers Eagle Ford shale condensate to customers in Corpus Christi, Texas. The Double Eagle pipeline began operation in the second quarter of 2013. The initial capacity of the pipeline is 100,000 barrels per day (bpd) but can be expanded to 150,000 bpd with additional pumps and equipment. Our client recently completed an approximate 10-mile extension of the Karnes leg to interconnect with an existing pipeline at Helena Station. This interconnection facilitates a joint pipeline movement from Gardendale, Texas to the Houston Ship Channel. The additions at our client's Terminal includes bi-directional design, new inbound skid with scraper trap, flow monitoring and pressure control, new storage and manifold additions, new booster and unit pumping, meter skid and prover, and relief system additions.

Cardinal Systems provided complete process control system engineering services for the facility including detailed design, PLC / PanelView programming, SCADA integrated testing, field commissioning and testing, and comprehensive documentation package for the Double Eagle at Helena facility.

About Cardinal Systems Integration

Cardinal Systems Integration is an industry leading engineering group providing full turn-key solutions for the midstream oil and gas industry. Our dedicated team provides customized solutions for projects of any scale. With hundreds of installations completed for North America's largest midstream corporations our goal is to continue our quest for safety while we automate quality and performance.

Automating Quality and Performance.

105 Hembree Park Dr. Roswell, GA. 30076 770. 727. 2223 | <u>sales@cardinalsi.com</u>



