Implementing Best Management Practices
Garden City, KS Operations

Methane Reduction

- Reducing Methane Emissions
- Increasing Efficiency
- Maximizing Profits
- Utilizing Field Employee Experience & Knowledge

www.epa.gov/gasstar
Garden City Field Office
From 11/1/2007 thru 11/10/2008

- Reduced Equipment Emissions by 226,078 MCF
- Average Gas Price $6.83

Total Emission Savings $1,544,078

Site Before Upgrade
(with Production Unit)
Site After Upgrade
(with Mechanical Dump Separator)

Site After Upgrade
(with Mechanical Dump Separator)
Top BMP Categories for Garden City

- Replace Production Unit with Mechanical Dump Separator • 174,019 MCF
- Plunger Lifts • 24,187 MCF
- No-Bleed Chem Pump • 12,575 MCF

Solar Chemical Pump
Plunger Lifts

12 Volt Pump Utilizing Telemetry Solar Panel
12 Volt Pump and Backup Battery

12 Volt Pump Utilizing Compressor Batteries
Unused Equipment (Solar Panel’s) in Inventory

*Can be retrofitted into new Solar Pumps built by our people in the field.

Projects We Have Recently Implemented for improved utilization of 12 Volt LMI Pumps

Use Existing Telemetry Solar Panels Already on Site

Use Existing Power from Compressor Batteries Already on Site
Always Look For Reductions

- No Blow Setups For Compressors
- 12 Volt Starter instead of Gas Start on Compressors
- Pumping Units, Foamer & Plunger Lifts installed on Flowing Gas Wells
- Green Completions
- Electric Compression
- Solar Pumps Built with Used Solar Panels

Auto Start Gas-Jack Converted to No Blow System
Blow Line Shut Off

Gas start compressor converted to 12 volt starter
Compressor Site Before Electrification

Site After Electrification
Added Bonus From BMPs

- Methanol usage is 25% to 30% less on Solar & Electric pumps compared to pneumatic.
- Credit back to lease for refurbished Production Units used elsewhere in company.
- No down time in pumps because of frozen gas supply.
- Electric compression eliminates need for Air Permit.
- Electric compression cleaner to operate.

2009 & Beyond