OIL & GAS SUCCESS STORY

Low Emission Wellsites – Venting and Combustion Reduction

ARC Resources Ltd.

Dawson Creek, BC, Canada

OVERVIEW OF OIL & GAS PROJECT:

NAME OF COMPANY: ARC Resources Limited – Low Emission Tight Gas Wellsites (project has been expanded to include oil wells)

LOCATION: Near Dawson Creek, BC (NE British Columbia); upstream (dry and wet gas wellsites, oil wells)

RELEVANT SECTOR OF THE OIL AND NAUTRAL GAS INDUSTRY: Production

DESCRIPTION OF THE METHANE EMISSION REDUCTION OPPORTUNITY, INCLUDING:

- Emission sources: Gas wellsite equipment, gas-driven pumps, controllers, emergency shutdown valves and pumpjack motors on oil wells.
- Emission reduction: Electrification of wellsites allows for an instrument air system and electric-driven pumps; gas-driven pumpjack motors have been replaced with electric motors.
- Fuel gas saved by this project is produced to pipeline.
- The project is made possible via the opportunity to sell carbon offsets from resulting verified emission reductions to Pacific Carbon Trust.

ESTIMATED ANNUAL EMISSION REDUCTIONS: 750,000 m_3 /10,000 t CO_2E

PROJECT DETAILS

The project reduces approximately 100 tonnes CO_2e per well. At full implementation, this likely translates into more than 10,000 t CO_2e/year (roughly 250 mcf/well or over 25 mmcf/year at full implementation).

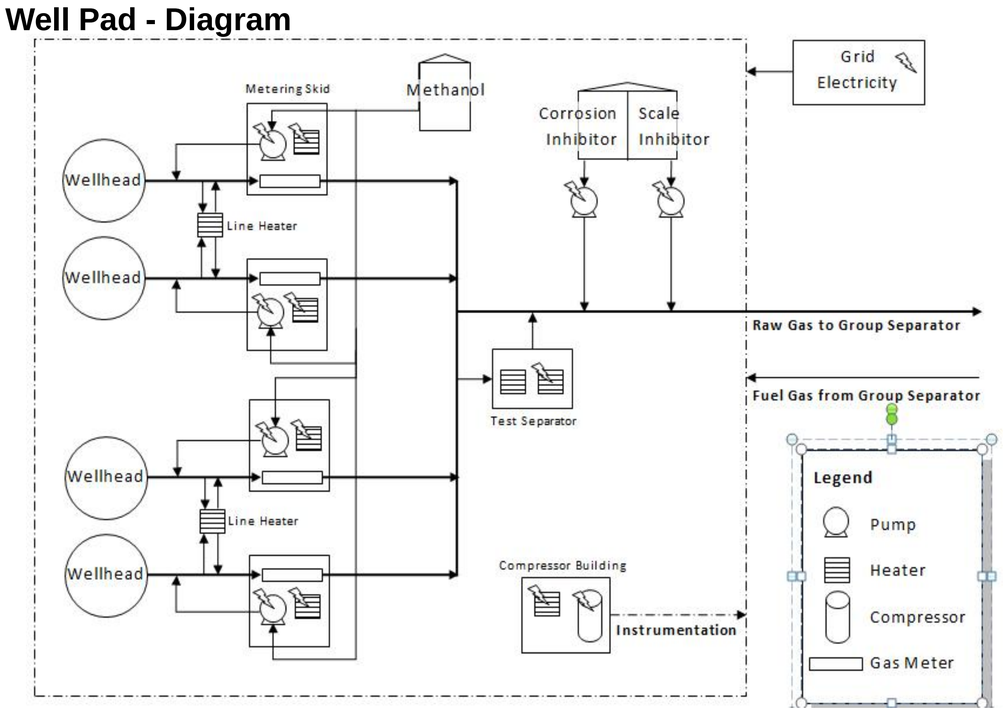
Common practice is for remote wellsites to have gas-driven instrumentation and chemical injection pumps. Under the ARC Resources low emission wellsite program, wellsites are electrified and gas-driven instruments are replaced with an instrument air system, and gas-driven pumps are replaced with electric-driven pumps. The program has been expanded so that ARC oil wells in BC have electric pumpjack motors rather than gas fired motors.

The incremental cost of electric versus gas-driven pumps is minimal, as is the incremental cost of an instrument air system versus gas-driven instrumentation. The major capital cost is the cost of bringing power to the wellsite. Carbon offsets generated by the project, and conserved natural gas provides the revenue to make the electrification of the wellsites cost effective.

PROPOSED TECHNOLOGIES

4 Well Pad

4 Well Pad - Diagram



PROJECT DEVELOPMENT PLAN

The first wellsites were brought online in late 2011/early 2012. Additional wellsites are planned for 2013-2015, depending on drilling schedule and prevailing commodity prices.

PROJECT CHALLENGES

The initial low emission wellsites, located at the Sunrise field, allowed ARC to learn from and resolve challenges related to project implementation before the rollout of additional wellsites in other areas. Some of the challenges include ensuring effective operation of the electric chemical injection pumps as well as data management issues related to the generation of carbon credits. The project is also challenged by well performance. The composition of the gas and the associated production volumes of the new wells both have the potential to impact the ongoing performance of the project.

ECONOMIC ANALYSIS/BENEFITS

The ARC low emission wellsite program allows for a low carbon footprint of Montney tight gas and oil development. The key drivers of project economics are the cost to electrify the well pads, the prevailing price of natural gas and the sale price of the carbon offsets. Via the sale of carbon offsets to Pacific Carbon Trust, the low emission wellsite program achieves returns in line with industry expectations for rates of return and the initial capital investment pays off in under five years. Without the sale of carbon offsets, this emission reduction would not be feasible.

FOR MORE INFORMATION

ARC Resources
Jackson Hegland
Co-ordinator Environmental Strategies
Suite 1200, 308 4th Avenue SW
Calgary, AB
Canada T2P 5E9
(403) 503-8759
jhegland@arcresources.com