

Coal Bed Methane (CBM) producer reduces maintenance costs

Oil and Gas

Result

- Over 80% reduction in compression maintenance costs
- 99%+ uptime with no operator intervention
- Weekly/Monthly maintenance reduced to annually
- Eliminated nuisance trips for maintenance
- 24/7 service since installation in 2004
- Reduced emissions - no shaft seals to leak gas or oil

Application

Coal Bed Methane production at 110 thousand cubic feet per day (mcf/d), 10 psig suction, 145 psig discharge. Variable speed controlled Copeland Scroll® compressor used to compress gas at the wellhead.

Customer

Large independent oil and gas producer in Western Canada.

Challenge

CBM is clearly one of the most exciting unconventional gas plays for North America. However, unconventional gas recovery requires unconventional production solutions. CBM production tends to be wellhead compression intensive right from the start due to the naturally lower downhole gas pressures. With vast numbers of CBM gas wells being drilled and produced, any wellhead compression deployed has to be low-maintenance. This is particularly important because the lack of human resources continues to be a problem for oilfield companies.



“The Copeland Scroll compression package has proven to be a low-maintenance alternative to other compression technologies.”

Field Supervisor,
Southwest Alberta Operations



This producer struggled to find a low-maintenance compression technology that could cost effectively produce the lower flow rates and deliver the needed discharge pressure. A traditional single stage reciprocating compressor installed on this well did not produce enough gas and discharge pressure. This CBM well had operational issues due to the maintenance intensive reciprocating compressor and required regular operator intervention.

Solution

The producer investigated the use of Copeland Scroll® compression technology and its ability to reliably deliver the needed flow and pressures with less maintenance. Utilizing suction pressure control, the package can be set up for full bypass flow by driving it to minimum speed on downstream shutdowns. A 30 HP scroll package was deployed. The welded hermetic design means no emissions, shaft seals, or external moving parts. Annual maintenance for this application includes changing oil and installing new oil filters. With no belts, gears, couplers, alignments, shaft seals or lube points, the scroll package has delivered value to this producer by increasing production and providing trouble-free operation. The operator was able to take advantage of the electrical grid nearby to use an electric compression package. The Copeland Scroll® compressor package has been running 24/7 since the original installation in 2004.

Resources

To learn more about Copeland Scroll® compression solutions visit EmersonClimate.com/oil_gas



CBM producers are putting in wellhead compression right from the start. Scroll compressors can take low suction pressure and boost it to 70-190 pounds discharge, which gives the producer more flexibility.

EmersonClimate.com

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