

Meeting between Outrider Energy/ Norwest Corporation and BVCRB
re: potential development of coal-bed methane in the Telkwa Coal Basin
14 March 2006

In attendance: Outrider: Burns Cheadle, President & COO (oil/gas geologist)
Anthony Polini, VP, Land (acquisitions manager)
Norwest: Geoff Jordan, Senior VP (coal geologist)
BVCRB: Adrian de Groot, Rosemary Fox, Ray Carrier, Rob Boyce

The BC government Ministry of Energy and Mines (MEM) began the initiative in December 2003, of new guidelines for coal-bed methane (CBM) exploration/development, which begins with “stakeholder engagement”. Proposals were sought for exploration/development of CBM in the Telkwa coalfield, from which Outrider Energy was the only applicant. (Government’s initial attempt to solicit interest in the area was in 2001.) The next step, following successful engagement with communities, First Nations, and other affected groups; is the proponent’s exploration/development proposal, which, if successful, leads to “tenure referral”. Tenure is a license to explore, not a right to production. A separate license is required to drill. A production license is the final step.

The proponent’s purpose in public consultation is to educate affected parties, and draw out problems and concerns. These concerns are to guide preparation of the submitted proposal for development.

This new model comes as reaction to public opposition to previous CBM projects in BC, conducted using the exploration process for conventional oil and gas. The Telkwa coalfield project is the only project currently operating under the guidelines. As such, the proponent, government, and public groups are all challenged in figuring out how the new process will actually work.

Outrider Energy is a small, private corporation headquartered in Calgary. Its business is development of “unconventional energy” (CBM, oil shale and tar sands) in Western Canada, though it doesn’t yet have any revenue operations. Norwest Corp. is their technical consultant.

Outrider wants to be seen as a good corporate citizen. A successful project will have them in the community for a generation. It considers some regulations of OGC to be too lax. Their plan for “produced water” is to never discharge it on surface, even if it is judged benign. They will always re-inject the water, through another drillhole, to a reservoir deeper, and/or isolated from, the source reservoir. They also plan, at all stages of the project, to use directional drilling, to reduce the number of drillsites and resultant density of infrastructure.

Their target production, if successful, is 10 million cu ft of gas per day (apparently this is small scale). Connection to the PNG mainline would be by a pipeline whose size resembles plumbing. If, at time of production, pipeline grid connection is judged to be not the best use of produced gas; they may consider building a gas-fired power plant, of

target size 35-40 megawatts (this is considered micro-scale). In such case they are considering capture/treatment of produced CO₂.

Outrider tentatively plans an Open House in Smithers on April 10th. They also plan to have appropriate experts from Norwest meet with BVCRB at future stages of the project. This would include a hydrologist who would explain how they could determine that an aquifer selected for water re-injection is secure from domestic/agricultural aquifers.

Talks have been held to date with town councils in Telkwa and Smithers, the Wetsuwet'en, and BVCRB.

Notes on the nature of work planned by Outrider:

- few drillholes: early stage: 5 or 6 holes at 2.75" diameter
 - later stage: 10 to 15 holes at 3.5" diameter
- use local diamond drill contractor
- restricting operations to south of the Telkwa R. in area previously explored for coal
- exploring target depths of 500m to 700m below surface (contrast to depths to 250m considered by previous operators for open-pit coal mining)
- may consider conducting high-resolution aircraft-borne magnetic survey, which will avoid use of high-impact seismic surveys

Expected timeline of operations (once tenure received, one or two years hence):

Year 1: Drill 5 to 6 vertical core holes for study of coal composition and gas content. Drilling will take 5 or 6 days per hole. Abandon and grout all holes, and reclaim site. Core tested in lab 3-5 months to monitor gas release.

Year 2: (subject to positive results of year 1 work): Drill 10 to 15 vertical core holes to test flow capacity of produced water and emitted gas. Several weeks of testing conducted on site. Abandon and grout all holes, and reclaim site.

Year 3-5 (subject to positive results of year 2 work): Install production pilot: access to coal through horizontal holes, radiating from "about three" wells; as well as a re-injection well for produced water. They would chart gas and water production rates, duration and decline. This operation would span a minimum of 6 months, but more likely take 2 years.

Production phase: (subject to positive results of year 3-5 work): More horizontal holes drilled from existing central wells. Compression and connection to pipeline as appropriate. Footprint of production infrastructure will be approx 5 x 10 metres. Production from CBM wells expected to last 20 to 25 years.

From this timeline, it could reasonably be eight years before any production of gas occurs, and over thirty years before the gas field is exhausted.

Note: Coal-bed Methane (CBM) has other names:
Coal-bed Gas (“CBG”) (BC government)
Natural Gas from Coal (“NGC”) (Alberta)
Coal Seam Methane (“CSM”) (Australia)

More information can be found in the following websites:

- <http://www.outridernrg.com/>
- <http://www.em.gov.bc.ca/Mining/Geosurv/coal/Coalmeth/coalmeth.htm>
<<http://www.em.gov.bc.ca/Mining/Geosurv/coal/Coalmeth/coalmeth.htm>>
<http://www.em.gov.bc.ca/subwebs/coalbedgas/Regions/Northwest/northwest.htm#Telkwa%20Coalfield>
<<http://www.em.gov.bc.ca/subwebs/coalbedgas/Regions/Northwest/northwest.htm#Telkwa%20Coalfield>>
- http://www.em.gov.bc.ca/subwebs/coalbedgas/About_CBG/default.htm
<http://www.em.gov.bc.ca/subwebs/coalbedgas/About_CBG/default.htm>.

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Rob Boyce, Mining/Energy subcommittee chair