



OIL AND GAS COMMISSION

March 14, 2000/1

9000-1725-59240-15

OGC - 01075

Mr. Rick Solinger, P. Eng.
Engineer, South West Business Unit
AEC Oil & Gas
3900, 421 - 7th Avenue SW
Calgary AB T2P 4K9

Dear Mr. Solinger:

RE: EXPERIMENTAL SCHEMES FOR COAL BED METHANE
RED DEER CREEK AREA - GATES FORMATION COALS
GRIZZLY SOUTH AREA - GATES FORMATION COALS
BULLMOOSE AREA - GATES FORMATION COALS

The Commission has reviewed your applications dated February 5, 2001 requesting approvals for experimental schemes for exploration and pilot production of coalbed methane (CBM) gas from the Gates formation coals in the Red Deer Creek, Grizzly South and Bullmoose areas of northeast British Columbia.

Attached are Approvals 01-15-001, 01-15-002 and 01-15-003 for the applications granted under section 100 of the Petroleum and Natural Gas Act. The CBM schemes are considered experimental as they involve a potentially long dewatering period with unknown gas flow rates. Approvals should allow production testing of the wells for a long period with sweet gas flaring. No objections were received following the publication of a notice of your applications in The British Columbia Gazette. It should be noted that the scheme areas for the three approvals are presently covered by Drilling Licenses. Approval amendments must be requested to reflect the lands AEC controls once lease selections have been made.

Disposal of produced water will be to an underground formation as specified by section 94 of the Drilling and Production Regulation (D&P Regulation) unless otherwise approved by the Commission. Similarly, gas analyses and bottom hole pressure measurements will be required as specified by section 90 and 95, respectively, of the D&P Regulation unless otherwise approved by the Commission.

In accordance with section 57 of the D&P Regulation, all well reports and well data within the scheme area will be held confidential for a period of three years.

Sincerely,

[Handwritten signature]

Craig Gibson, P. Eng., Manager
Reservoir Engineering and Geology

Attachments

cc: Petroleums Lands Branch, Ministry of Energy and M.

Approval Letters to Industry
GEP, SWD, CONCURRENT PROD,
PRESSURE MAINTENANCE,
WATERFLOOD, ETC.

Copy 9

- Wellfile (originals)
59240
Daily
Resource Revenue
S. Chicorelli
R. Stefik
G. Farr
P. Attariwala
D. Krezanoski

ENGINEERING AND GEOLOGY

PO Box 9329 Stn Prov Gov't, Victoria BC V8W 9N3 Tel:
Location: 6th Flr 1810 Blanshard

APPROVAL 01-15-002

THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

4-385-1725

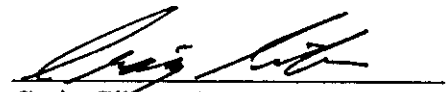
IN THE MATTER of the experimental scheme of AEC Oil and Gas (AEC), for coalbed methane exploration and pilot production from the Gates formation coals of the Grizzly South area of northeast British Columbia.

NOW THEREFORE, the Commission, pursuant to section 100 of the Petroleum and Natural Gas Act, R.S.B.C. 1996, c.361 orders as follows:

1. The experimental scheme for coalbed methane exploration and pilot production from the Gates formation coals in the Grizzly South area as described in the application from AEC to the Commission dated February 5, 2001 is hereby approved, subject to terms and conditions herein contained.
2. The area of the experimental scheme consists of the following lands:

93-I-15	Block A- units 20, 30, 40, 50, 60, 70, 80, 90
	Block B- units 11, 21, 31-33, 38, 39, 41-43, 48, 49, 51-53, 58-60, 61-63, 68-90, 94, 95
	Block C- units 51-53, 61-63, 71-73, 81-83, 92, 93
	Block F- units 2, 3, 12, 13, 22, 23, 31, 41, 51, 61
	Block G- units 4, 5, 14, 15, 24, 25, 36-40, 46-50, 60, 70.
3. Within 60 days after the end of each 6-month period, a report of the progress, performance and efficiency of the scheme during that period must be filed. The following information must be included in the progress report:
 - The daily average rate of gas and water production during each month for each producing well, and for the scheme as a whole;
 - The monthly cumulative gas and water production for each producing well, and for the scheme as a whole;
 - Representative sample analysis of produced water obtained once each 6 months;
 - The date and type of any well treatment or workover for any well in the scheme;
 - All information gathered to evaluate the coal's reservoir qualities such as gas content, desorption analysis, injectivity tests and permeabilities of coal seams.
 - Any other information that is considered necessary, in the opinion of the Commission, to evaluate the progress, performance and efficiency of the scheme.

4. Associated gas produced during the pilot testing may be flared for a maximum period of 6 months with a total volume not to exceed $10 \times 10^6 \text{m}^3$.
5. A well may be drilled anywhere within the scheme area provided that it is not nearer than 250 m to the sides of the scheme area.
6. All information and analysis related to the scheme shall be made available to the Commission upon request.
7. The approval or any condition of it may be modified or rescinded upon application or if deemed appropriate by the Commission.



Craig Gibson, Manager
Reservoir Engineering and Geology
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this ~~17~~ day of March, 2001.

THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

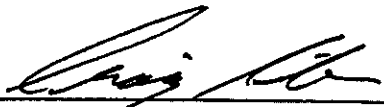
IN THE MATTER of the experimental scheme of AEC Oil and Gas (AEC), for coalbed methane exploration and pilot production from the Gates formation coals of the Bullmoose area of northeast British Columbia.

NOW THEREFORE, the Commission, pursuant to section 100 of the Petroleum and Natural Gas Act, R.S.B.C. 1996, c.361 orders as follows:

1. The experimental scheme for coalbed methane exploration and pilot production from the Gates formation coals in the Bullmoose area as described in the application from AEC to the Commission dated February 5, 2001 is hereby approved, subject to terms and conditions herein contained.
2. The area of the experimental scheme consists of the following lands:

93-P-3	Block G – units 14, 15, 24, 25, 31-39, 41-49, 51-59, 61-69, 78, 79, 88, 89
	Block H – units 40, 50, 60, 70.
3. Within 60 days after the end of each 6-month period, a report of the progress, performance and efficiency of the scheme during that period must be filed. The following information must be included in the progress report:
 - The daily average rate of gas and water production during each month for each producing well, and for the scheme as a whole;
 - The monthly cumulative gas and water production for each producing well, and for the scheme as a whole;
 - Representative sample analysis of produced water obtained once each 6 months;
 - The date and type of any well treatment or workover for any well in the scheme;
 - All information gathered to evaluate the coal's reservoir qualities such as gas content, desorption analysis, injectivity tests and permeabilities of coal seams.
 - Any other information that is considered necessary, in the opinion of the Commission, to evaluate the progress, performance and efficiency of the scheme.
4. Associated gas produced during the pilot testing may be flared for a maximum period of 6 months with a total volume not to exceed $10 \times 10^6 \text{m}^3$.

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6. All information and analysis related to the scheme shall be made available to the Commission upon request.
7. The approval or any condition of it may be modified or rescinded upon application or if deemed appropriate by the Commission.



Craig Gibson
Manager
Reservoir Engineering and Geology
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 19th day of March, 2001.