September 1, 2000

9000-2852-59240-15 OGC 000215

Mr. Todd Werner AEC Oil and Gas 3700 - 707 8<sup>th</sup> Ave SW Calgary AB T2P 1H5

Dear Mr. Werner:

RE: EXPERIMENTAL SCHEME FOR COAL BED METHANE ELK VALLEY AREA, ELK AND MIST MOUNTAIN FORMATION COALS

The Commission has reviewed your application dated July 10, 2000 requesting approval of an experimental scheme for exploration and pilot production of coal bed methane (CBM) gas from the Elk formation and Mist Mountain formation coals in the Elk Valley area of southeast British Columbia.

Attached is Approval 00-15-001 for the application granted under section 100 of the <u>Petroleum and Natural Gas Act</u>. The CBM scheme is considered experimental as it involves a potentially long dewatering period with unknown gas flow rates. Approval allows 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 application in the B.C. Gazette.

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 3 years.

Craig Gibson, P. Eng. Manager Reservoir Engineering and Geology		Approval Letters to Industry GEP, SWD, CONCURRENT PROD, PRESSURE MAINTENANCE, WATERFLOOD, ETC. Copy 10 Wellfile (originals) 59240 Daily Resource Revenue S. Chicorelli R. Stefik
Attachment		G. Farr P. Attariwala
cc:	Petroleums Lands Branch Ministry of Energy and Mines	D. Krezanoski

## APPROVAL 00-15-001

## 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 Elk formation and Mist Mountain formation coals in the Elk Valley area of southeast British Columbia.

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

- 1. The experimental scheme for coalbed methane exploration and pilot production from the Elk formation and Mist Mountain formation coals in the Elk Valley area as described in the application from AEC to the Commission dated July 10, 2000 is hereby approved, subject to terms and conditions herein contained.
- 2. The area of the experimental scheme consists of the following lands:
  - 82-J-2 Block E units 11-15, 21-25, 31-35, 41-45, 51-55, 61-65, 71-77, 81-87, 91-97
    - Block F units 12-20, 22-30, 32-40, 42-50, 54-60, 64-70, 74-80, 84-90, 96-100
    - Block K units 6-10, 18-20, 28-30, 36, 37, 40, 46, 47, 50, 58-60, 68-70, 78-80, 88-90, 98-100
    - Block L units 1-7, 11-19, 21-29, 31-39, 41-49, 51-59, 61-69, 71-79, 81-89, 91-97
  - 82-J-6 Block I units 71, 81, 91-93
  - 82-J-7 Block C units 8-10, 20, 30, 38-40, 48-50, 58-60, 68-70, 78-80, 88-90, 100
    - Block D units 1-7, 11-17, 21-27, 31-35, 41-45, 51-56, 57F, 61-66, 67F, 71-76, 77F, 81-85, 86F, 87F, 91-95
    - Block E units 1-5, 11-15, 21-25, 31-36, 37F, 41-46, 47F, 52, 53, 56, 57, 62, 63, 66, 67, 72-77, 82-87, 92-97
    - Block F units 10, 20, 30, 40, 50
    - Block L units 2-7, 14-19, 24-29, 36-39, 46-49, 54F, 55-59, 64F, 65F, 66-69, 78-80, 88-90, 96F, 97F, 98-100
  - 82-J-10 Block D units 7F, 8-10, 18F, 19, 20, 28F, 29, 30, 60F, 70F
  - 82-J-11 Block A units 1-3, 11-14, 15F, 21-25, 32-34, 35F, 42-44, 45F, 51-54, 55F, 61F, 62-65, 74, 75, 84F, 85F, 94F and 95F.

- 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 e<sup>6</sup>m<sup>3</sup>.
- 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 / flay of September, 2000.