

ABSTRACT

DEVELOPING CAVERN STORAGE IN WESTERN CANADA

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Northwestern Utilities Limited of Edmonton, Canada, has constructed the first salt cavern storage facility for natural gas in Alberta after identifying a need for a peaking facility in 1980.

The facility, capable of currently delivering 420 terajoules per day ( $11265 \times 10^3 \text{ M}^3/\text{D}$  or 400 MCFD) from four caverns, started construction in 1982. It was brought on stream in the fall of 1984, but full commissioning was not completed until the winter of 1985-86. During 1986 a fifth cavern will be brought on stream after some further development has taken place using natural gas as the control fluid. The total storage capacity will then be 4725 TJ (4.5 BCF).

This paper will explain some of the studies and considerations that were taken into account during site selection and design of the facility and the subsequent modifications made during the development of the caverns. Some of the unique considerations of the bedded salt formation and the problems and solutions will be discussed.