

MINISTERIAL ORDER

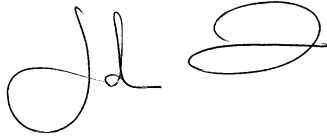
Subsection 116(2) THE OIL AND GAS ACT

WATERFLOOD ORDER NO. 15

Pertaining to Waterflood Operations in South Pierson Unit No. 1

- 1.0 The Unit Operator shall conduct waterflood operations by injecting water into the South Pierson Lower Amaranth – Mission Canyon 3b A Pool underlying South Pierson Unit No. 1 ("the Unit") through the wells listed in Schedule A. The Director may approve the conversion of additional wells in the Unit to water injection.
- 1.1 Every injection well shall be completed as approved under Section 47 of the Drilling and Production Regulation ("the Regulation").
- 1.2 The maximum wellhead pressure at which water may be injected is 5000 kPa.
- 1.3 The Director may, from time to time, establish a maximum or minimum rate at which water may be injected into a well.
- 1.4 The annulus of each injection well shall be pressure tested in accordance with Section 50 of the Regulation.
- 2.0 The Unit Operator shall conduct an annual survey to determine the level and distribution of reservoir pressure in the Unit. A summary of the results of any pressure surveys conducted during the year are to be included in the annual waterflood progress report required under Section 73 of the Regulation.
- 2.1 The frequency of pressure surveys may be reduced where the Director is satisfied that more frequent surveys will not assist the Unit Operator in monitoring the effectiveness of the waterflood.
- 2.2 The Unit Operator is responsible for monitoring the effectiveness of the waterflood and for collecting such reservoir data and other information as is necessary to evaluate and optimize waterflood performance.
- 2.3 The Unit Operator shall advise the Petroleum Branch of the suspension of water injection at any well, any indication of channelling or breakthrough of injected water to a producing well or out of zone and any other detrimental effects that may be attributable to the waterflood operations.
- 3.0 The Unit Operator shall file a report of production or injection for each well in the Unit in accordance with Section 120 of the Regulation.

- 4.0 The Unit Operator shall file an annual waterflood progress report in accordance with Section 73 of the Regulation.
- 5.0 Board Order No. PM 70 dated June 1, 1993 is rescinded.

A handwritten signature in black ink, consisting of a large, stylized 'J' followed by a smaller 'd' and a large, looped 'S'.

December 24, 2004

Date

Director of Petroleum for
Minister Industry, Economic Development and Mines

SCHEDULE A

WATERFLOOD ORDER NO. 15

SOUTH PIERSON UNIT NO. 1

WATER INJECTION WELLS

WELL_NAME	LSD	SEC	TWP	RGE
South Pierson Unit No. 1 Prov. WIW	10	04	02	29 WPM
South Pierson Unit No. 1 WIW	12	04	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	14	04	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	16	04	02	29 WPM
South Pierson Unit No. 1 WIW	16	05	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	02	08	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	06	08	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	08	08	02	29 WPM
South Pierson Unit No. 1 WIW	10	08	02	29 WPM
South Pierson Unit No. 1 WIW	12	08	02	29 WPM
South Pierson Unit No. 1 WIW	14	08	02	29 WPM
South Pierson Unit No. 1 WIW	16	08	02	29 WPM
South Pierson Unit No. 1 WIW	02	09	02	29 WPM
South Pierson Unit No. 1 WIW	04	09	02	29 WPM
South Pierson Unit No. 1 WIW	06	09	02	29 WPM
South Pierson Unit No. 1 WIW	08	09	02	29 WPM
South Pierson Unit No. 1 WIW	10	09	02	29 WPM
South Pierson Unit No. 1 HZNTL WIW	12	09	02	29 WPM
South Pierson Unit No. 1 WIW	12	09	02	29 WPM
South Pierson Unit No. 1 WIW	14	09	02	29 WPM
South Pierson Unit No. 1 WIW	16	09	02	29 WPM
South Pierson Unit No. 1 WIW	04	15	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	02	16	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	04	16	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	06	16	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	08	16	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	10	16	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	12	16	02	29 WPM
South Pierson Unit No. 1 WIW	02	17	02	29 WPM
South Pierson Unit No. 1 WIW	04	17	02	29 WPM
South Pierson Unit No. 1 WIW	06	17	02	29 WPM
South Pierson Unit No. 1 WIW	08	17	02	29 WPM
South Pierson Unit No. 1 WIW	12	17	02	29 WPM
South Pierson Unit No. 1 WIW	14	17	02	29 WPM
South Pierson Unit No. 1 Prov. WIW	08	18	02	29 WPM
South Pierson Unit No. 1 WIW	16	18	02	29 WPM