



Production Testing of Gas Wells

Basic Requirements for Measurement of Gas Production

Pursuant to section 79(2) of *The Oil and Gas Conservation Regulations, 1985*, the operator of a gas well shall use an orifice meter for the measurement of gas production with:

1. a circular chart that is not longer than seven days per cycle;
2. a suitable strip chart; or
3. an approved recording device.

Applications for waiver of the above requirement may be made to the Department's Engineering Services Branch or for the Milk River/Medicine Hat and Second White Specks gas zones to the Swift Current Field Office.

Waiver of Basic Requirements – Milk River / Medicine Hat Zones

Monthly Production Spot Testing:

Applications for approval of monthly production spot testing are evaluated on an individual well or group basis subject to the following:

1. Low, stable production (i.e. less than $5.6 \times 10^3 \text{m}^3/\text{day}$ (200 mcf/day))
 2. All wells reporting prorated production at a battery must produce from the same horizon. If horizons are different, then:
 - (a) the reservoir pressures and production rates of the wells must be similar; and equity concerns should not exist.
 3. The maximum number wells reporting prorated production to a battery shall be the number of wells located in a nine-section block, unless otherwise approved by the department.
 4. Certain wells (Control Wells) are to be continuously metered.
-

Quarterly Production Spot Testing:

The following shall apply to all gas wells producing from the Milk River and Medicine Hat zones:

1. Production test frequency for wells previously granted a monthly 5-minute spot test may be reduced to one 5-minute spot test every three months.
2. To qualify for the quarterly production spot testing, wells must have produced a minimum of 24 months and must have reached a stabilized production rate.
3. Monthly testing must be resumed for a minimum three month period or longer, if stabilization has not been achieved, following:
 - (a) well workovers, i.e. reperforation, stimulation etc.;
 - (b) well shut-ins in excess of thirty days; or
 - (c) changes in system operating pressures.
4. Meet the necessary requirements of Monthly Production Spot Testing.

Waiver of Basic Requirements – Second White Specks ZoneChange of 7-Days/Cycle Chart to 31-Days/Cycle Chart:

Applications for approval of a 31-days/cycle chart for Second White Specks gas wells are evaluated subject to the following:

1. Measured monthly production rates must be stable and less than or equal to $3.0 \times 10^3 \text{m}^3/\text{day}$ (+ 10 %); and
2. The 7-days/cycle chart lines must be stable with less than or equal to 30 % variance.

Example:

A well produces for 696 hours in a month. The 7 days/cycle charts show that for 190 hours in the month the chart lines deviate significantly from the average. The variance is equal to 27% ((190 hr/696 hr X 100).

Monthly Production Spot Testing:

Applications for approval of monthly production spot testing for Second White Specks gas wells are evaluated subject to the following:

1. For wells having less than one year of measured monthly production:
 - (a) the production must be stable and less than or equal to $1.4 \times 10^3 \text{m}^3/\text{day}$; and
 - (b) chart lines must be stable with less than or equal to 20 % variance.

2. For wells having greater than two years of measured monthly production:
 - (a) the production must be stable and less than or equal to $2.0 \times 10^3 \text{m}^3/\text{day}$ (+10%); and
 - (b) chart lines must be stable with less than or equal to 20 % variance.
3. All wells reporting prorated production at a battery must produce from the same horizon. If horizons are different, then:
 - (a) the reservoir pressures and production rates of the wells must be similar; and equity concerns should not exist.
4. The maximum number wells reporting prorated production to a battery shall be the number of wells located in a nine-section block, unless otherwise approved by the department.
5. Certain wells (Control Wells) are to be continuously metered.

Department Contacts:

Field Offices:

Estevan	Ph. (306) 637-4541	Fax 637-4547
Kindersley:	Ph. (306) 463-5400	Fax 463-5405
Lloydminster:	Ph. (306) 825-6434	Fax 825-6433
Swift Current:	Ph. (306) 778-8252	Fax 778-8256

Engineering Services Branch:

Rick McLean:	Ph. (306) 787-2596	Fax 787-2478
Mike Montenegro:	Ph. (306) 787-4285	