Step-Scale and Sliding-Scale Royalty Rates

Some Federal onshore leases have step-scale (Schedule B and C) or sliding-scale (Schedule D) variable royalty rate schedules. This document includes the variable royalty rate schedules and instructions for determining well counts and the royalty rate on sales from inventory.

General:

Step-scale schedules for both **oil** and **gas** royalties, and the sliding-scale schedule for **oil** royalties are based on the average daily production per well per month on a given property; i.e., lease, communitization agreement (CA), or unit participating area (PA). The average daily production per well for a property is computed based on a 28-, 29-, 30-, or 31-day month; the number of wells on the property counted as producing; and the gross production (this includes production from wells not considered countable). The term "gross production" is interpreted to mean all production from the lease or agreement, excluding any production used on the lease or agreement and/or unavoidably lost volumes. In other words, volumes that are not subject to royalty (i.e., production used on the lease or agreement and/or unavoidably lost as shown on the production report) are not included in the determination of royalty rates. Gas production sold in the same month it is produced is synonymous with sales from a lease. Since sales from oil inventory often includes production from a previous production month, more than one royalty rate could apply to oil sales during the month.

The sliding-scale Schedule D for **gas** royalties is based on the total gas produced or allocated to the lease from all sources per month. If a lease has lease-basis production and participates in one or more agreements, allocated production for the lease is totaled from all agreements in which the lease receives an allocation, and that total allocated production is added to the lease-basis production. The average daily production rate yields a royalty rate of either 12 1/2 percent or 16 2/3 percent - see tables. The royalty rate is based on the average daily production and is calculated based on the days of the month and is not based on well counts or on days of actual production.

Well Counts:

Countable wells include:

1. Commercially productive wells:
    - Existing (producing in a previous month) oil wells must produce at least 15 days during the month
    - New oil wells must produce at least 10 days during the month
    - Gas wells - any wells that produce gas during the month are counted

2. Injection wells (includes all injection wells; gas, water, steam, etc.) must be operated at least 15 days during the month and the total days operated includes production and injection days added together. Injection wells count for gas and oil. Water and gas injection wells can be included in the well count for oil if the wells are used in secondary and tertiary recovery operations.

3. On previously producing properties, if no wells produce 15 days or more during the month, the average daily production rate is computed based on actual producing well days.

   Countable wells are considered producing for the entire month. Oil and gas wells are counted separately based on the production from each well. In other words, a producing oil well (POW well status, as classified by the Bureau of Land Management) would be counted in the well counts for the oil royalty rate calculation. Producing gas wells (PGW well status, as classified by the Bureau of Land Management) that have condensate production would be counted in the well counts for the condensate royalty rate calculation. The average daily condensate production should be determined separately from oil, and the wells that produce condensate should be counted in the same manner as oil wells are counted.

   Example: The following property has a Schedule B (step-scale) royalty rate and has 8 producing oil wells. For the month of June, the summary of operations is:

Well No. and Record	**Count**	**Production per well**
Produced full time for 30 days	Y	200 bbl
Produced for 26 days; down 4 days for repairs	Y	200 bbl
Produced for 28 days; down June 5 for 12 hours, down June 14 for 6 hours, and down June 26 for 24 hours	Y	200 bbl
Produced for 12 days; down June 13-30	N	75 bbl
Produced for 8 hours every day (head well)	Y	75 bbl
Not operated	N	
New well, completed June 17; produced for 14 days	Y	150 bbl
New well, completed June 22; produced for 9 days	N	100 bbl
		Total Production: 1,000 bbl

   In this example, 5 of the 8 wells are counted as producing for 30 days. The average production per well per day is determined by dividing the total production of the property for the month (including the production from the wells not counted) by 5 (the number of wells counted as producing), then by the number of days in the month.

   1,000 ÷ 5 ÷ 30 = 6.67 bbl/well/day (12 1/2 percent royalty rate - see Schedule B for oil)

Inventory:

The applicable royalty rate is determined by the production volume in the month in which that oil or gas is produced, not the month in which it was sold. The first-in first-out method should be used when calculating royalty rates on inventory.

Example:

Lease ABC	Beginning Inventory (bbl)	Oil Produced (bbl)	Oil Sold (bbl)	Ending Inventory (bbl)
June	0	1,000	700	300
July	300	2,000	1,200	1,100

In June, the lease or agreement produced 1,000 barrels and sold 700 barrels, leaving 300 barrels as the ending inventory. The royalty rate for the 700 barrels sold in June was determined to be 12 1/2 percent (see above well count example).

In July, the lease or agreement produced 2,000 barrels and sold 1,200 barrels, leaving 1,100 barrels as the ending inventory. The inventory carried over into July will be the first oil sold in July. The royalty rate on the 300 barrels produced during June and sold in July would be determined based on the royalty rate established for June production (i.e., 12 1/2 percent). The royalty rate for the 900 barrels produced and sold in July is the royalty rate established for July based on the 2,000 barrels produced. The royalties on the 1,100 barrels remaining in inventory at the end of July will be paid using the royalty rate calculated for July when the production is sold.

Schedules:

The following tables and descriptions define what royalty rates should be used based on production.

Schedule B Step-Scale Royalty Rates

1. Oil - When the average production for the month in barrels per well per day is:

Over	Not Over	Royalty Rate	Over	Not Over	Royalty Rate
	50 bbl	12 1/2%	130 bbl	150 bbl	19%
50 bbl	60 bbl	13%	150 bbl	200 bbl	20%
60 bbl	70 bbl	14%	200 bbl	250 bbl	21%
70 bbl	80 bbl	15%	250 bbl	300 bbl	22%
80 bbl	90 bbl	16%	300 bbl	350 bbl	23%
90 bbl	110 bbl	17%	350 bbl	400 bbl	24%
110 bbl	130 bbl	18%	400 bbl		25%

2. Leases issued between August 21, 1935 and May 3, 1945, have an expanded version of the above oil royalty rate schedule; however, the maximum royalty rate is 32 percent when the production exceeds 2,000 barrels per well per day.

3. Gas - Including inflammable gas, helium, carbon dioxide, and all other natural gases and mixtures thereof, and on natural or casinghead gasoline and other liquid products obtained from gas, when the average production for the month in Mcf of gas per well per day is:

Over	Not Over	Royalty Rate
	5,000 Mcf	12 1/2%
5,000 Mcf		16 2/3%

<u>Schedule C Step-Scale</u>
<u>Royalty Rates</u>

1. Oil - A royalty rate of 12 1/2 percent on the production removed or sold from:

    a. Land determined by the Director, Geological Survey, not to be within the productive limits of any oil or gas deposit on August 8, 1946;

    b. An oil or gas deposit which was discovered after May 27, 1941, by a well or wells drilled on the leased land and which is determined by the Director, Geological Survey, to be a new deposit; or

    c. Allocated to the lease pursuant to an approved unit or cooperative agreement from an oil or gas deposit which was discovered on unitized land after May 27, 1941, and determined by the Director, Geological Survey, to be a new deposit, but only if at the time of discovery the lease was committed to the agreement or was included in a duly executed and filed application for approval of the agreement.

2. Oil - Leases not subject to the general section above: On production of oil removed or sold, where a flat royalty rate of 5 percent was fixed on the original lease:

    When the average production for the month in barrels per well per day is:

Over	Not Over	Royalty Rate	Over	Not Over	Royalty Rate
	110 bbl	12 1/2%	200 bbl	250 bbl	21%
110 bbl	130 bbl	18%	250 bbl	300 bbl	22%
130 bbl	150 bbl	19%	300 bbl	350 bbl	23%
150 bbl	200 bbl	20%	350 bbl	400 bbl	24%
			400 bbl		25%

3. Gas - Including inflammable gas, helium, carbon dioxide, and all other natural gases and mixtures thereof, and on natural or casinghead gasoline and other liquid products obtained from gas; when the average production for the month in Mcf of gas per well per day:

Over	Not Over	Royalty Rate
	5,000 Mcf	12 1/2%
5,000 Mcf		16 2/3%

Schedule D Sliding-Scale Royalty Rates

1. Oil - A royalty rate of 12 1/2 percent for lands subject to the same provisions shown for Schedule C above, under number 1.

2. Oil - On production of oil removed or sold from lands not subject to the same provisions shown for Schedule C above, under number 1.

On that portion of the average production per well per day for the month:

a. For all oil produced at **30 degrees API or over**:

Over	Not Over	Royalty Rate
	20 bbl	12 1/2%
20 bbl	50 bbl	16 2/3%
50 bbl	100 bbl	20%
100 bbl	200 bbl	25%
200 bbl		33 1/3%

For example, the royalty rate will be 12 1/2% on the portion of the average production per well not exceeding 20 barrels per day for the month; 16 2/3% on the portion of the average production per well of more than 20 barrels and not more than 50 barrels per day for the month, etc.

b. For all oil produced at **less than 30 degrees API**:

Over	Not Over	Royalty Rate
	20 bbl	12 1/2%
20 bbl	50 bbl	14 2/7%
50 bbl	100 bbl	16 2/3%
100 bbl	200 bbl	20%
200 bbl		25%

For example, the royalty rate will be 12 1/2% on the portion of the average production per well not exceeding 20 barrels per day for the month; 14 2/7% on the portion of the average production per well of more than 20 barrels and not more than 50 barrels per day for the month, etc.

3. Gas, **including total gas produced or allocated to the lease from all sources,** when the average production for the month in Mcf of gas per day:

Over	Not Over	Royalty Rate
	3,000 Mcf	12 1/2%
3,000 Mcf		16 /3%

4. On casinghead gasoline, including NGL plant products, the royalty rate is 16 2/3% of the value of the casinghead gasoline/NGLs extracted from the gas produced and sold.

Note: Additional step- and sliding-scale royalty rate information can be found at 43 CFR, Part 3162.7-4.

Under what circumstances can a Schedule C or D variable royalty rate lease have a royalty rate limitation of 12 1/2 percent?

The 1946 revision of the Mineral Leasing Act provided for a royalty rate limitation of 12 1/2 percent on new discoveries. Specifically, the royalty rate limitation of 12 1/2 percent applies to any production on a lease which was discovered after May 27, 1941, and which the Secretary deemed to be a new deposit. The same royalty rate limitation applies to agreement production on or allocated to a lease within an agreement where that production was discovered after May 27, 1941, and for which the Secretary deemed it to be a new deposit. In addition, the revision allowed the 12 1/2 percent royalty rate limitation on production removed from lands determined to be outside the productive limits of any known oil or gas deposits on August 8, 1946. The Director of the U.S. Geological Survey was charged with making that determination. The determinations issued by the Director under the 1946 Act are rulings as to:

1. whether a discovery on a lease or unit after May 27, 1941, qualifies as a new discovery under the 1946 Act, or
2. whether lands which may constitute all or part of the lease or unit are outside the productive limits of any oil or gas deposits on August 8, 1946.

The charge for the productive limit and new discovery determinations now rests with the Director of the Bureau of Land Management (BLM). Contact the applicable BLM field office for productive limit and new discovery determinations on Schedule C or D variable royalty rate leases.

For information regarding the reporting of oil and gas royalties on step- and sliding-scale royalty rate leases, contact ONRR’s Royalty Valuation group at RoyaltyValuation@onrr.gov.

Sources:

- 43 CFR § 3162.7-4 - Royalty rates on oil; sliding and step-scale leases (public land only).
- Federal Register/Vol. 56, No. 234, December 5, 1991, Page 63661- 63662
- Department of the Interior, Geological Survey, Conservation Division Manual/Release CDM 647.13, January 1979.