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Federal Oil & Gas Valuation

February 28, 2023

Royalty Valuation – Matt Coakley & Gina Liles

Polling Question

How long have you been working with oil and gas royalties?

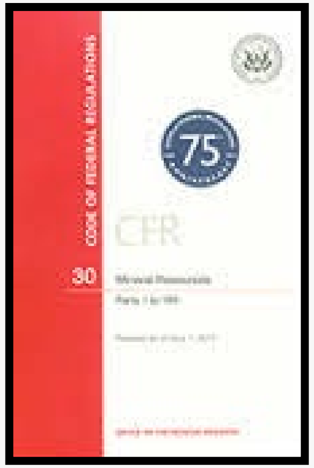
A. 0-2 years
B. 2-5 years
C. 5-10 years
D. More than 10 years

Valuation Regulations

30 CFR Part 1206

- Definitions: § 1206.20
- Federal Oil: §§ 1206.100 - 1206.119
- Federal Gas: §§ 1206.140 - 1206.165

Electronic Code of Federal Regulations: http://www.ecfr.gov/



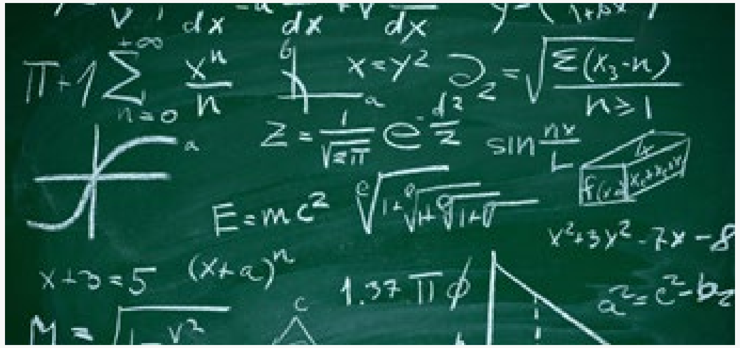
Agenda

- **ONRR Royalty Equation**
  - Volume
  - Value
  - Allowances
- Gas Valuation
- Oil Valuation

ONRR Royalty Equation

Royalty due =

[volume x unit value x royalty rate] – allowances



Oil example:

Volume sold = 100 bbl.

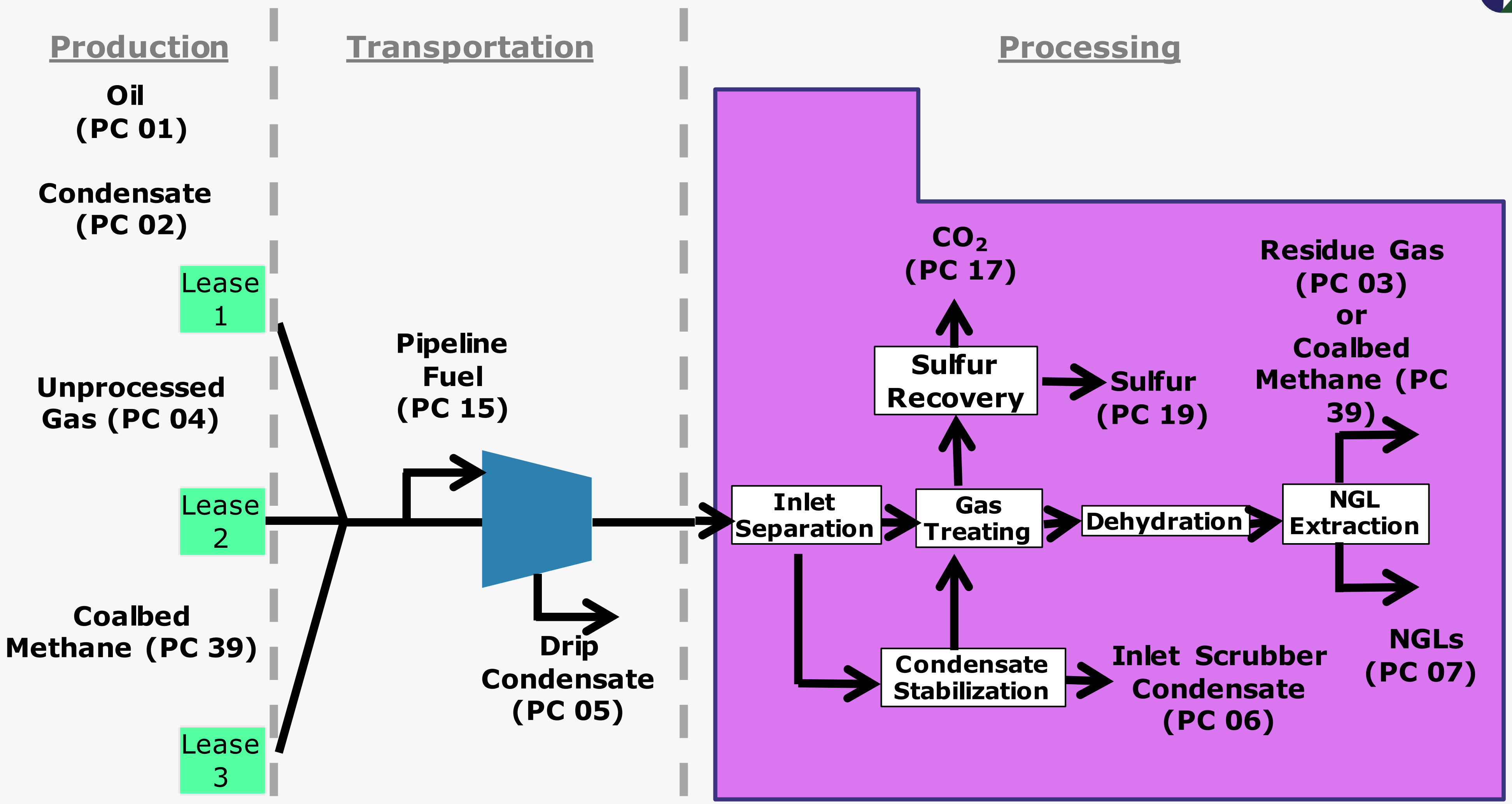
Unit value = $90/bbl.

Royalty rate = 12.5%

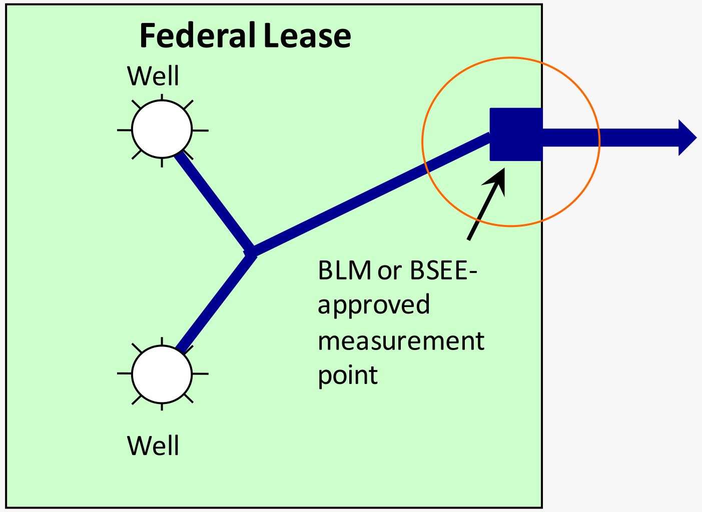
Allowable transportation cost = $2.00/bbl.

[100 bbl. x $90/bbl. x 0.125] – [$2.00/bbl. x 100 bbl. x 0.125] =$1,100.00

Form ONRR-2014 Common Product Codes



Volume Overview



Royalty is due on the quantity and quality of production as measured at the Bureau of Land Management (BLM) or Bureau of Safety and Environmental Enforcement (BSEE)-approved royalty settlement point

Regs: 30 CFR Part 1202; §§ 1206.119 & 1206.150

Volume – Oil and Gas Reporting

Oil reporting requirements

- Reported in barrels (42 gal)
- 60 degrees F
- Reported as clean barrels, adjusted for basic sediment and water (BS&W)

Gas reporting requirements

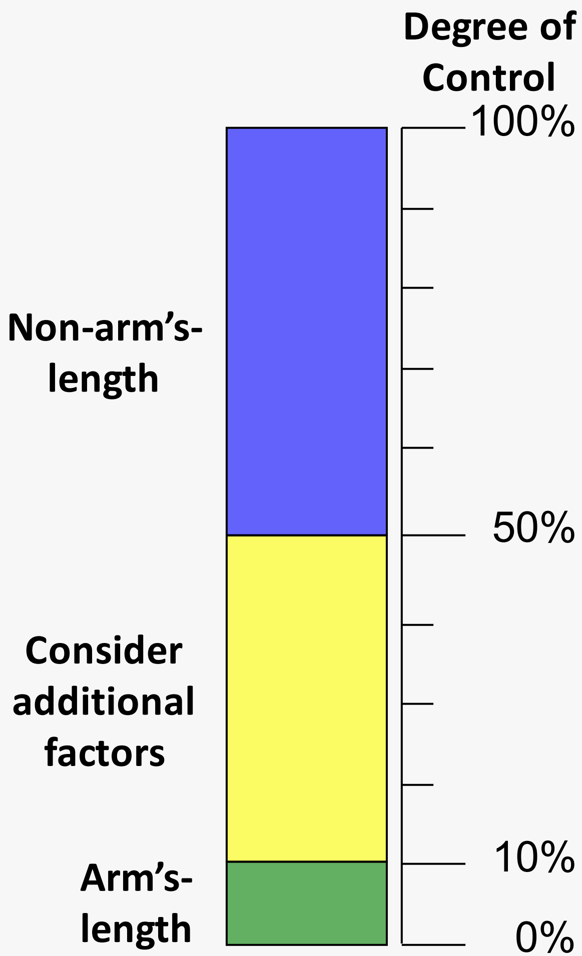
- Report using Mcf and MMBtu
- Adjust the Mcf to a pressure base of 14.73 psi
- Report using the dry heating value, unless the water vapor content has been measured, then use the "real" or "actual" heating value
- Report natural gas liquids (NGLs) using gallons

Regs: 30 CFR 1202.152

Arm's Length or Non-Arm's Length?

Are the parties…

- Affiliated?
  - Does the entity control, is it controlled by, or is it under common control with another entity?
- Negotiating with opposing economic interests?
  - Factors outlined in Vastar Resources, Inc. 167 IBLA 17 (2005)
- Related by blood or marriage?



Regs: 30 CFR § 1206.20

Gross Proceeds

Gross proceeds means the total monies and other consideration accruing to an oil and gas lessee for the disposition of production. It includes certain tax reimbursements and includes costs of marketing or marketable condition-related services.

You produce 1 barrel of oil from Federal land that is adjacent to your back yard and sell it to your neighbor at arm’s length for:

- $20
- 5 chickens
- 1 goat

Polling Question

What are your gross proceeds ("total monies and other consideration")?

A. $20 

B. $20 and the market value of the 5 chickens and 1 goat   

C. NYMEX + roll

Marketable Condition Overview

Marketable condition means lease products which are sufficiently free from impurities and otherwise in a condition that they will be accepted by a purchaser under a sales contract typical for the field or area.

Gas
- Separation
- Gathering
- Compression
- Dehydration
- Sweetening

Oil
- Separation
- Gathering
- Free of Impurities (BS&W limit)

Regs: 30 CFR §§ 1206.20, 1206.107, & 1206.146

Marketable Condition – Key Concepts

- The lessee must place the production into marketable condition at no cost to the Federal government
- The lessee cannot reduce royalties by transferring the costs to the purchaser for a lower sales value
- The lessee should increase its gross proceeds to the extent they were reduced for costs associated with placing the production into marketable condition
- If the lessee meets or exceeds the marketable condition requirements, they may be able to deduct a portion of their costs

Regs: 30 CFR §§ 1206.20, 1206.107, & 1206.146

Agenda

- ONRR Royalty Equation
  - Volume
  - Value
  - **Allowances**
- Gas Valuation
- Oil Valuation

Allowances

Royalty due =

[volume x unit value x royalty rate] – allowances

Netting

Netting means reducing the reported sales value to account for an allowance instead of reporting the allowance as a separate entry on the Report of Sales and Royalty Remittance (Form ONRR-2014) or the Solid Minerals Production and Royalty Report (Form ONRR-4430)

Polling Question

In what situations do the regulations permit netting?

A. POP Contracts
B. Transportation factors
C. Fractionation costs
D. All of the above
E. None of the above

Transportation Allowances

Transportation allowance means a deduction in determining royalty value for the reasonable, actual costs that the lessee incurs for moving:

- Oil, gas, or gas plant products to the point of sale or delivery off the lease, unit area, or communitized area
- The transportation allowance does not include gathering costs

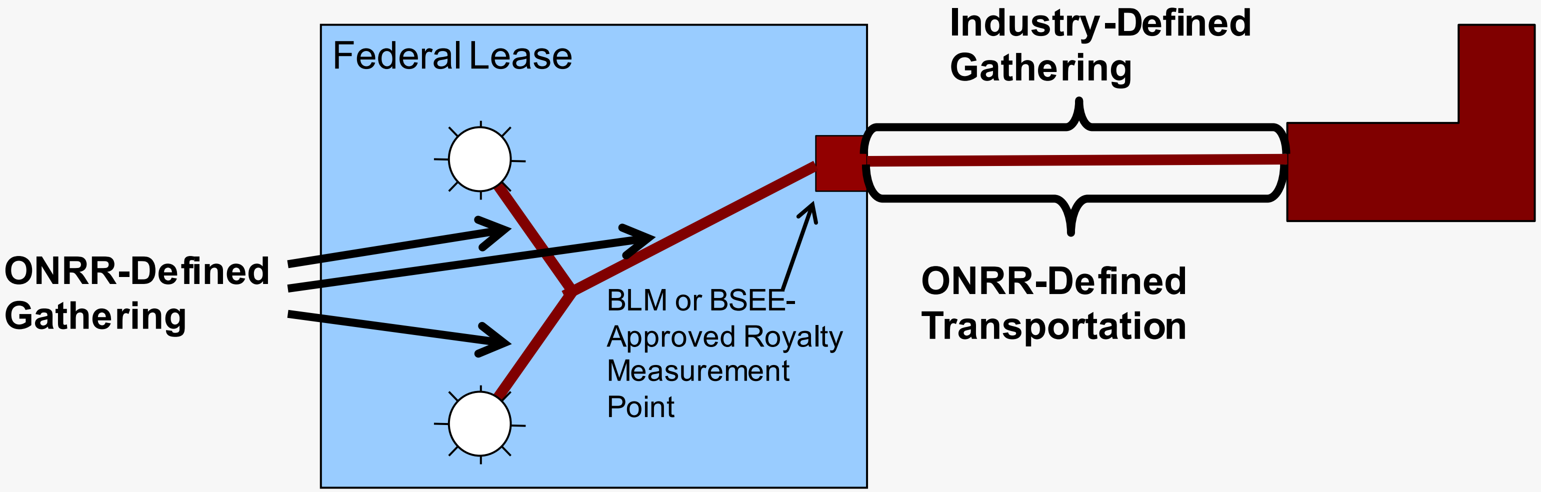
Regs: 30 CFR § 1206.20

Transportation Factors

Transportation factors are transportation costs within a sales contract that adjust the sales price. For data-transparency purposes, lessees should report all transportation costs (whether in the sales contract or a separate transportation contract) as an allowance.

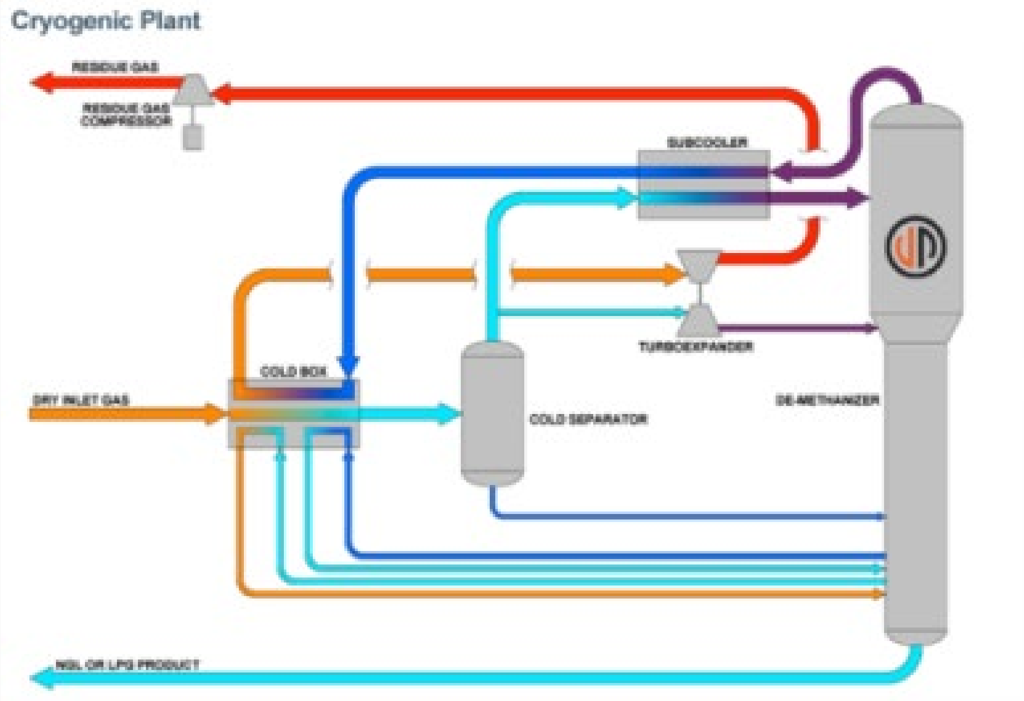
Gathering

Gathering means the movement of lease production to a central accumulation or treatment point on the lease, unit, or communitized area, or to a central accumulation or treatment point off of the lease, unit, or communitized area that BLM or BSEE approves for onshore and offshore leases, respectively, including any movement of bulk production from the wellhead to a platform offshore.



Regs: 30 CFR § 1206.20

Processing Allowances



Processing allowance means a deduction in determining royalty value for the reasonable, actual costs the lessee incurs for processing gas.

Processing means any process designed to remove elements or compounds (hydrocarbon and nonhydrocarbon) from gas, including absorption, adsorption, or refrigeration.

Regs: 30 CFR § 1206.20

Allowances – Key Concepts

Arm's-Length	Non-Arm's-Length
Based on contract charges	Based on the lessee's or their affiliate's actual capital and operating costs

- Allowances should not include any costs associated with marketing or placing the production into marketable condition
- Allowable costs should be allocated across all the products being transported/processed
- May not deduct costs for moving or processing lease production that is not royalty-bearing
- May not deduct costs incurred for moving or processing anything other than Federal production

Regs: 30 CFR §§ 1206.110 - 113, 1206.152 - 165

Polling Question

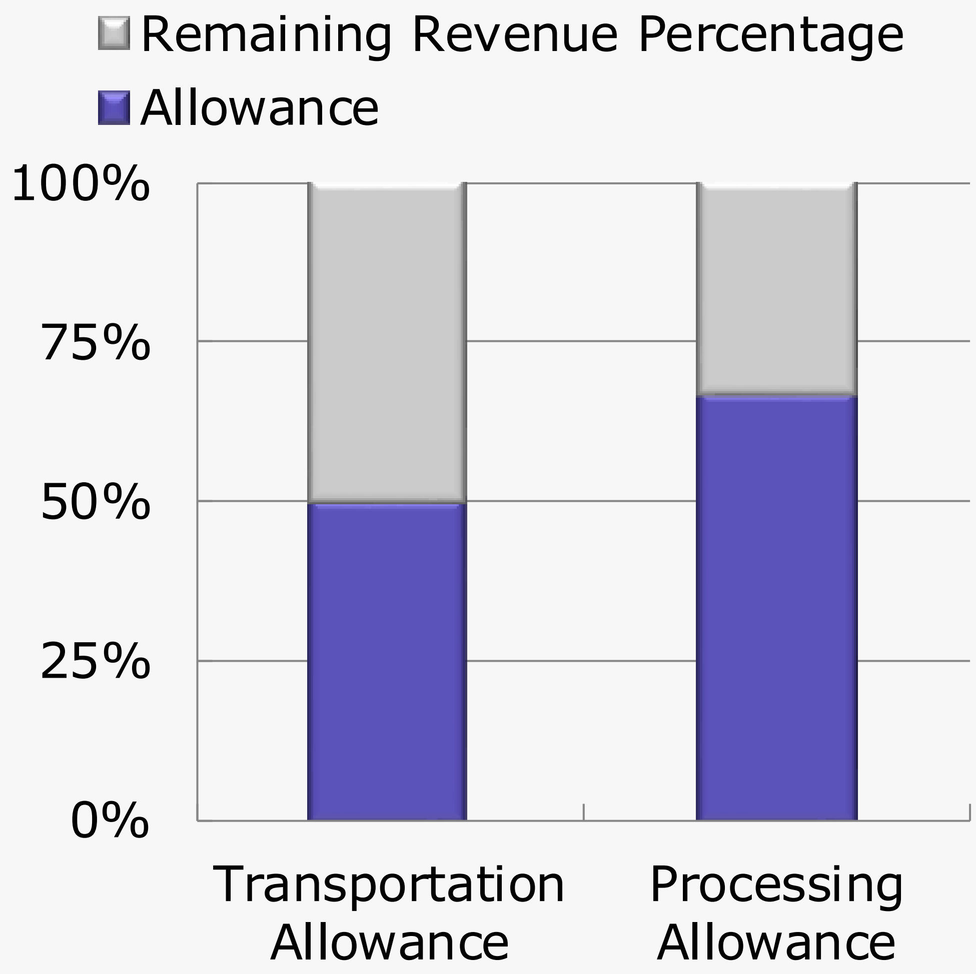
The lessee transports a rich gas stream from the lease to a gas processing plant. They pay royalties on residue gas (PC 03), NGLs (PC 07), and pipeline fuel (PC 15). Which products should be allocated a share of the transportation allowance?

A. Only PC 03
B. Only PC 07
C. PC 03 and 07 only
D. PC 03, 07, and 15

Allowance Limits

Allowance Limits

- Limits based on the royalty value of each product
- 50% transportation
- 66 2/3% processing
- For gas plant products, the combination the of transportation and processing allowances cannot exceed 99% of the value of the product

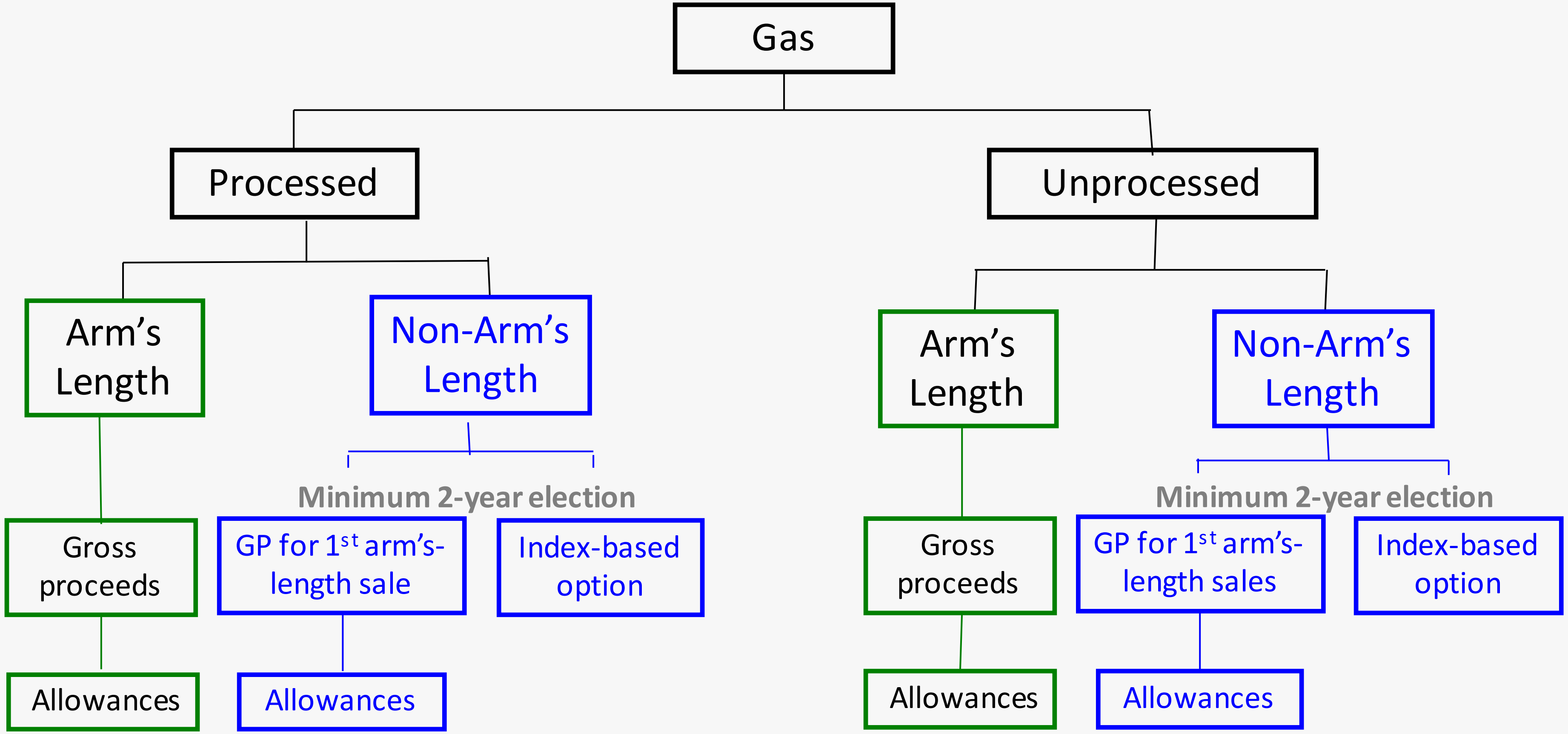


Regs: 30 CFR §§ 1206.110, 1206.152, & 1206.159

Agenda

- ONRR Royalty Equation
  - Volume
  - Value
  - Allowances
- **Gas Valuation**
- Oil Valuation
- Reporting

Gas Valuation



Processed vs Unprocessed Gas

Unprocessed Gas

- Only valuing one commodity (unprocessed gas) on a $/Mcf or $/MMBtu basis and one product code:
  - Unprocessed gas (PC 04) ***or***
  - Coalbed methane (PC 39)

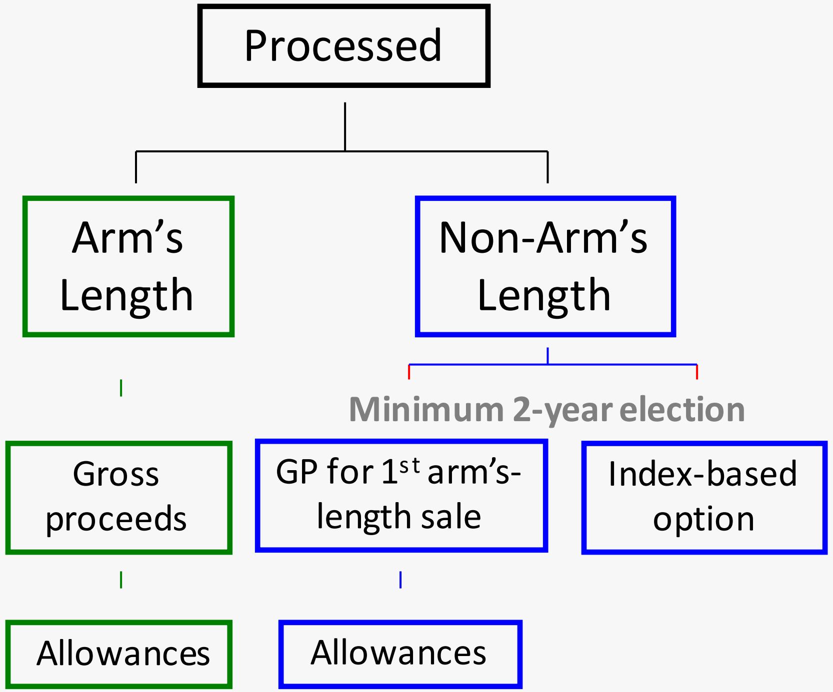
Processed Gas

- Valuing multiple commodities and multiple product codes:
  - Pipeline condensate (PC 05)
  - Pipeline fuel (PC 15)
  - Coalbed methane (PC 39)
  - Residue gas (PC 03)
  - NGLs (PC 07)
  - Possibly others (plant inlet scrubber, CO2, sulfur, etc..)

Regs: 30 CFR §§ 1206.141 - 1206.142

Gas Basics – Arm’s-Length Sales

- If your first sale is arm’s-length, base your value on gross proceeds
- If your first sale is to an affiliate, you must elect one of the following options:
  - Gross proceeds under your affiliate’s arm’s-length sale or
  - Index-based valuation option



Regs: 30 CFR §§ 1206.141 - 1206.142

Gas Basics – No Sale Situation

If some of your gas is used, lost, unaccounted for, or retained as a fee under the terms of a sales or service agreement, that gas will be valued for royalty purposes using the same royalty valuation method for valuing the rest of the gas that you do sell.

Regs: 30 CFR §§ 1206.141(d) & 1206.142(e)

Polling Question

Your transporter, Frank's Pipeline and Coffee Company, retains gas that Frank uses for compressors along the pipeline and to run his espresso machine in Carlsbad. How do you value the PC 15 that Frank keeps under your contract?

A. Use the same method you're using for the rest of your gas under that contract.

B. Use the index-based option.

C. Weren't the indexes negative? For this month let's say 23 cents sounds about right.

Gas Basics – Vented or Flared Gas

- If you do not have a written contract or if your gas is not sold but you are required to pay royalties (vented or flared gas), you must value it using the index-based option
- If a valid index price point is not available, value is determined under the default provision

Regs: 30 CFR §§ 1206.141(e) & 1206.142(f)

Unprocessed Gas

If the value of your gas is based on unprocessed gas and you sell it before it is processed, you must report and value it as unprocessed gas:

- Unprocessed gas (PC 04)
- Unprocessed gas volume x unit price

Regs: 30 CFR § 1206.141

Percentage-of-Proceeds (and similar) Contracts

If the value of your gas is based on processed products, you must report and value it as processed gas. This includes:

- Arm's-length POP contracts
- Gas sales based on processed products even when the sales point is before processing occurs

Regs: 30 CFR § 1206.142

Polling Question

You sell unprocessed gas at arm’s length at the wellhead and your contract provides that you are paid on a percentage of the purchaser’s proceeds for your NGLs and on an index for the residue gas recovered from your volume. How do you value your production?

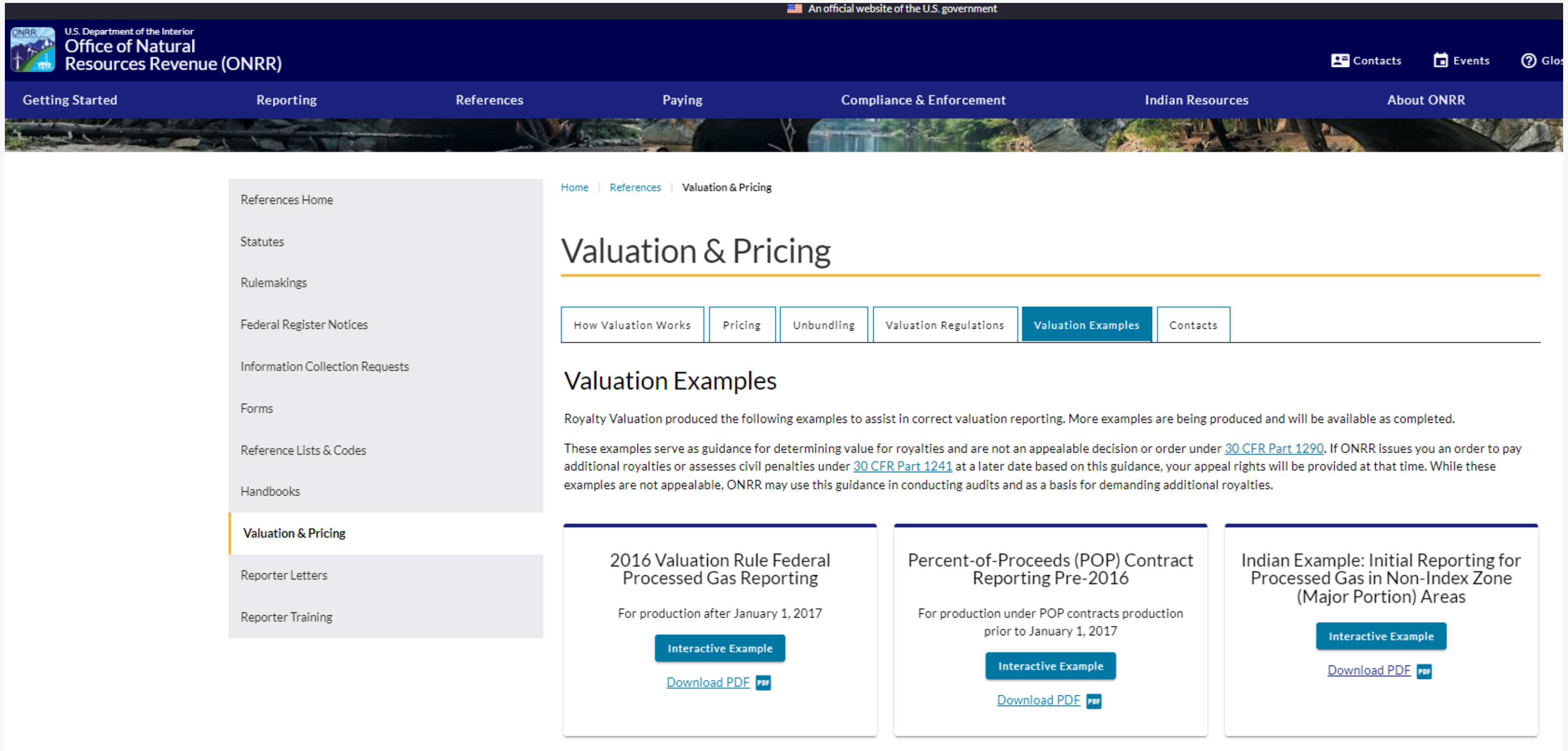
A. Use the OGOR volume and the residue gas price.
B. Use the index-based option.
C. Report 03, 07, 15, and 05, and value based on gross proceeds.

Processed Gas Valuation & Reporting

- Pipeline fuel
- Condensate (drip and scrubber)
- No netting of fees, including NGL T&F
- Full volumes and values
- Report all royalty-bearing products
- Allocation of transportation allowances to all products, including non-royalty-bearing ones
- Unbundle costs
- Disallowed plant fuel
- Allowance limits

Processed Gas Valuation Example

https://www.onrr.gov/references/valuation/processed-gas-example



Index-Based Option Overview

- Can I use the index-based option for my gas sales?
  - I sell my gas at arm's length – No
  - I sell/transfer my gas to an affiliate who sells it at arm's length – Yes
  - I sell my gas to an affiliate who then sells my gas under multiple arm's-length contracts – Yes
- The index option must be used for two **consecutive** years after your election

Regs: 30 CFR §§ 1206.141 & 1206.142

Index-Based Option – Key Concepts

If you elect to use the index-based option to value your unprocessed gas, residue gas, or NGLs

- No unbundling required
- Report 2014 lines using OINX Sales Type Code
- The index you choose must be in an ONRR-approved publication
  - *Platts Inside FERC's Gas Market Report*
  - *Natural Gas Intelligence Bidweek Survey*
  - *Argus Natural Gas Americas*

Regs: 30 CFR §§ 1206.141(c) & 1206.142(d)

Agenda

- ONRR Royalty Equation
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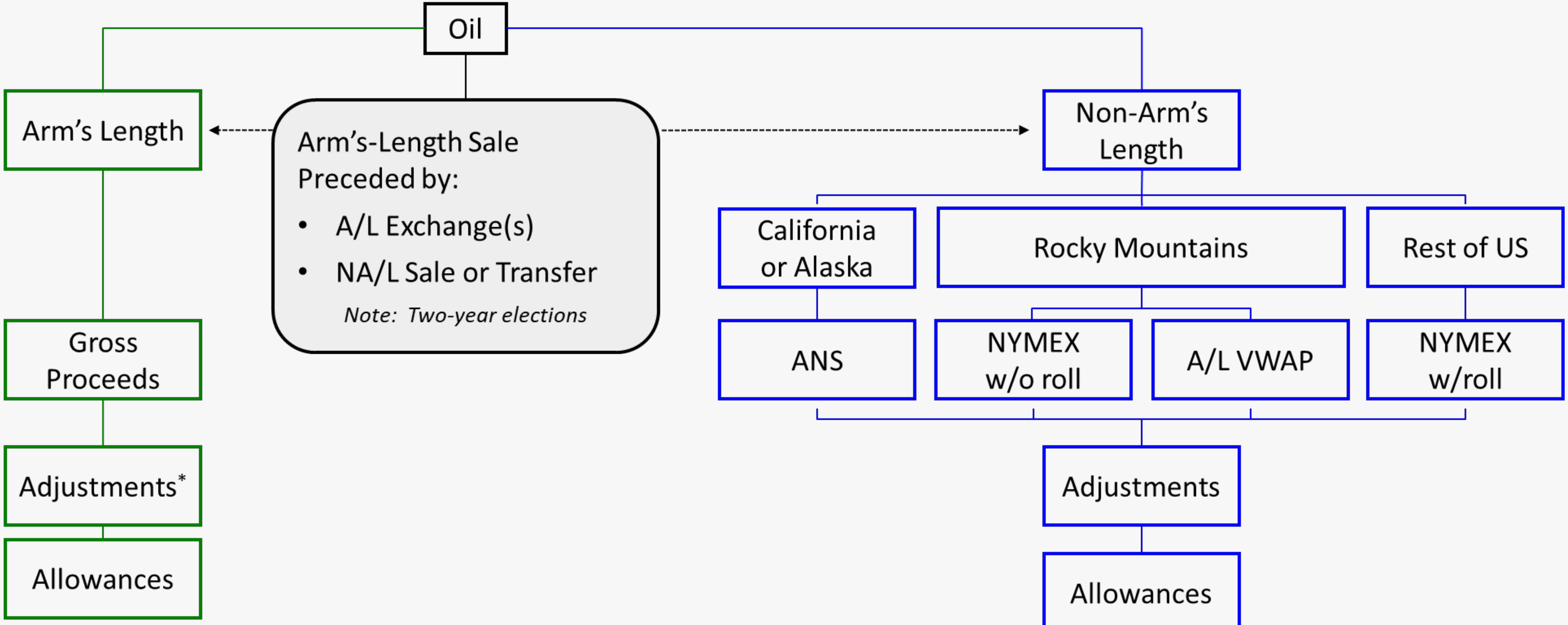
  - Value
  - Allowances
- Gas Valuation
- **Oil Valuation**

Federal Oil Valuation



Regs: 30 CFR §§ 1206.101 & 102

OIL VALUATION: ARM'S-LENGTH

Arm's Length ← Arm's-Length Sale Preceded by: → Non-Arm's Length

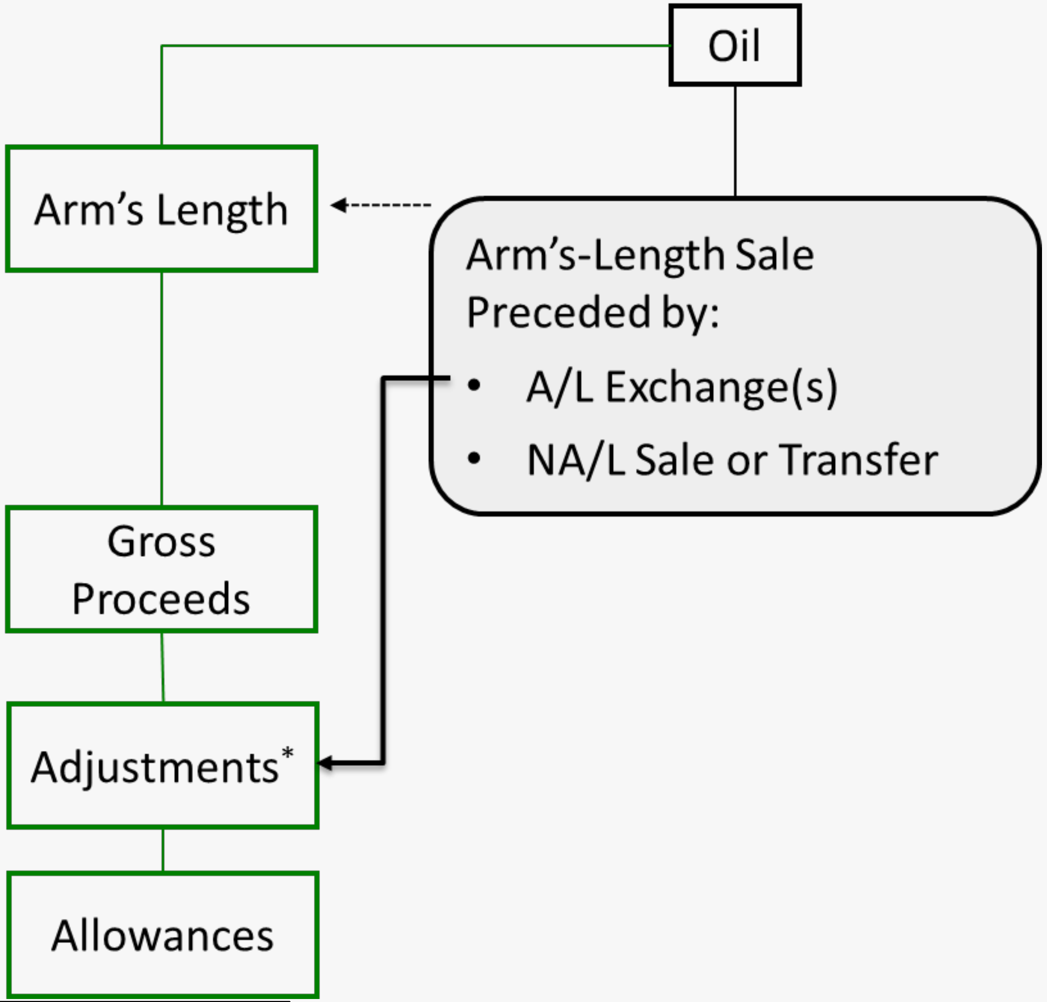
Arm's-Length Sale Preceded by:

- A/L Exchange(s)
- NA/L Sale or Transfer

Note: Two-year elections

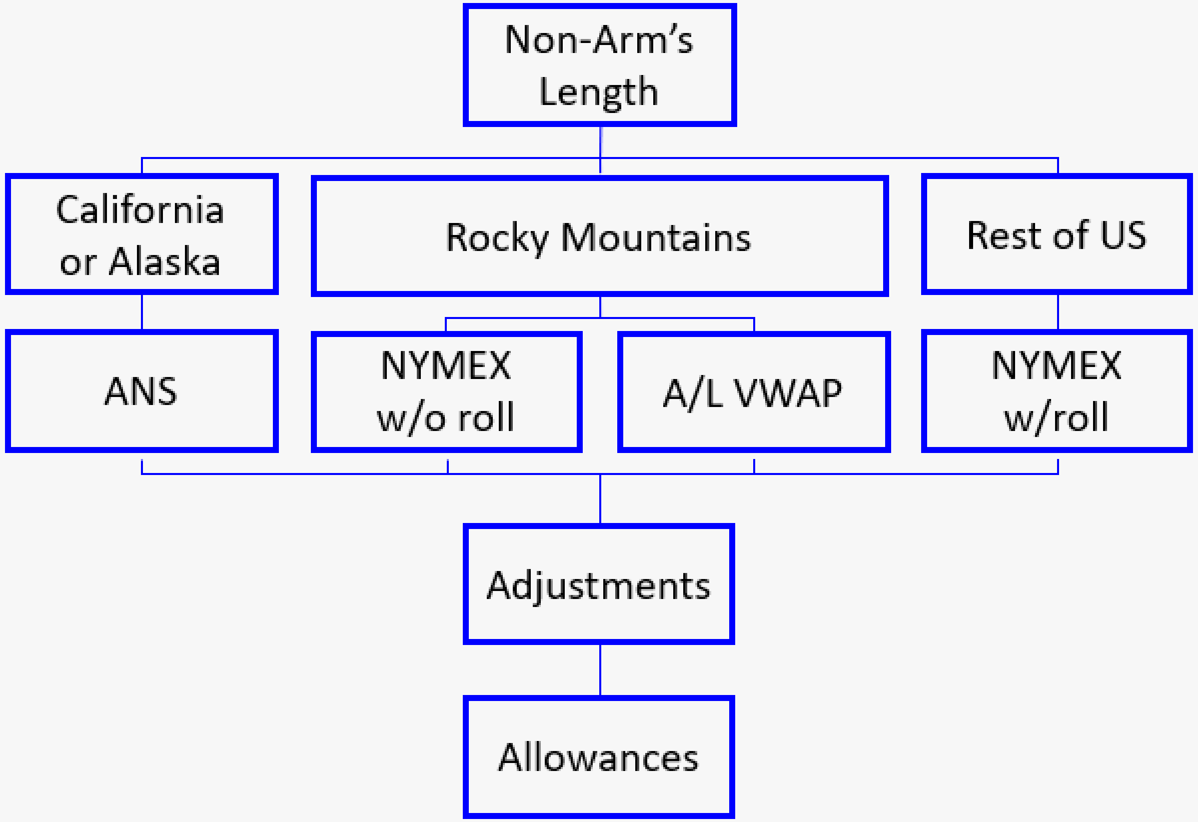
Regs: 30 CFR § 1206.101

OIL VALUATION: ARM'S-LENGTH



Regs: 30 CFR § 1206.101

Oil Valuation: Non-Arm's-Length



Region of Lease	Valuation Method(s)	Adjustments	Allowances
California or Alaska	Alaska North Slope (ANS)	Yes; Must	Yes; May
Rocky Mountains (MT, ND, SD, WY, CO*, & UT*)	Arm's-length sales/purchases, or… *Note: two-year election*	Yes (gravity only); Must	Yes
	NYMEX <u>without</u> the roll	Yes	Yes
Other, incl. OCS and SJB of CO & UT	NYMEX <u>with</u> the roll	Yes	Yes

Regs: 30 CFR §§ 1206.102 & 113

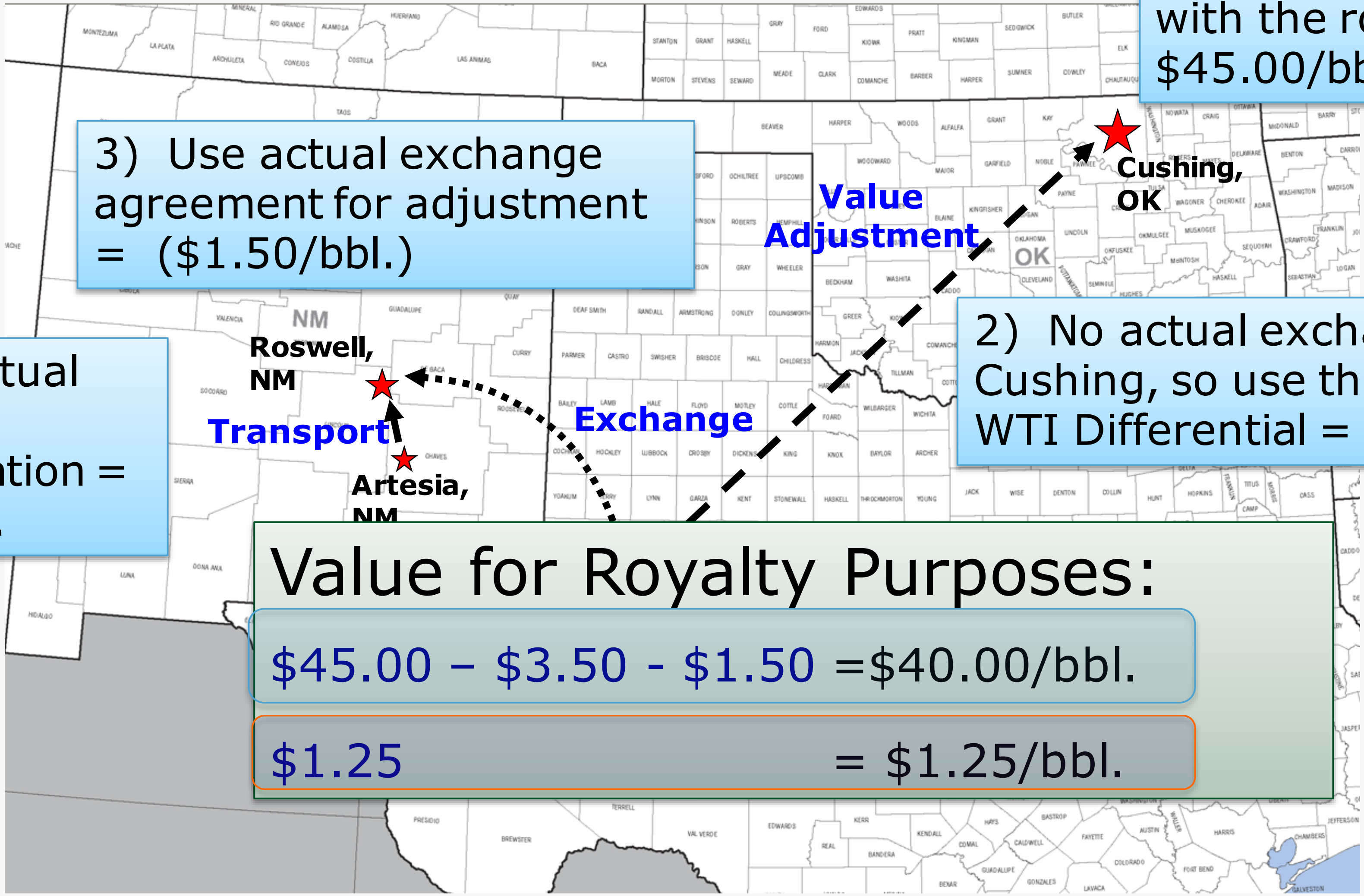
Oil Valuation Example

1) Use NYMEX with the roll = $45.00/bbl.

2) No actual exchange to Cushing, so use the published WTI Differential = ($3.50/bbl.)

3) Use actual exchange agreement for adjustment = ($1.50/bbl.)

4) Use actual costs of transportation = $1.25/bbl.



Value for Royalty Purposes:

$45.00 – $3.50 - $1.50 =$40.00/bbl.

$1.25 = $1.25/bbl.

Sales Type Codes

- Why do we use Sales Type Codes?
  - Audit and compliance
  - Economic analysis
  - Revenue data
- Relates to sales contract, NOT transportation or processing contract
- Multiple sales methods means multiple lines

Sales Type Codes

Sales Type Code	Sales Type Name	Description
ARMS	Arm’s length	Used when the first disposition of your federal oil or gas production is an arm's-length sale.
NARM	Non-arm’s length	Used when you value your federal oil or gas production based on your affiliate's gross proceeds under its arm's-length sale.
OINX	Index-Based Method	Use to report Federal oil production that is valued based on index regardless of contract type (POP, NARM, etc..)
AG(X)	Default Provision	If ONRR values your production using the default method, ONRR will assign you an “AG” sales type code.

Valuation Guidance

What: Non-binding, consistent answers to questions about the valuation statutes or regulations

Who: Royalty Valuation Guidance

When: Anytime!

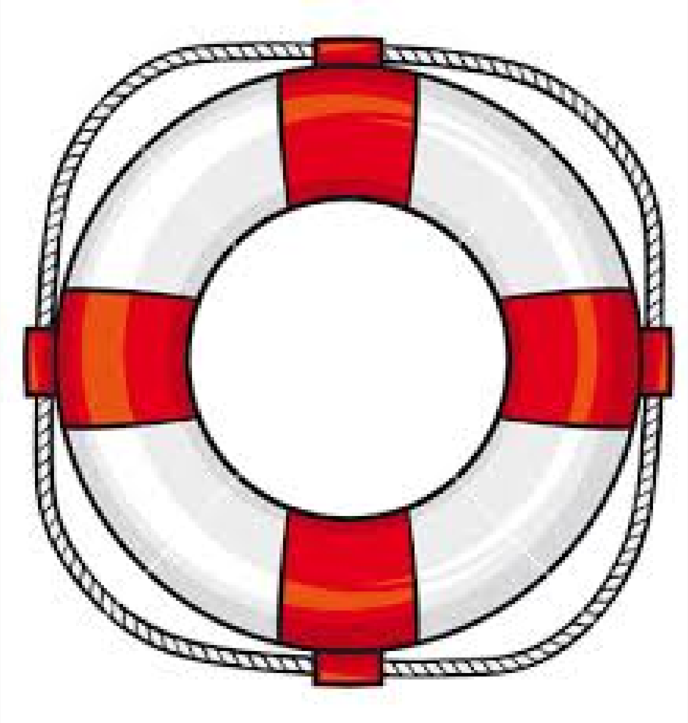
Where: royaltyvaluation@onrr.gov

How: Email (preferred), phone call, letter

Why: Timely and in-depth knowledge of regulations & policy; includes cites to case law & regulations; case specific

Regs: 30 CFR §§ 1206.108 & 148

Questions Anytime



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