

Alberta's Modernized Royalty Framework



CAPPA

Canadian Association of
Petroleum Production Accounting

Preamble

- ▶ Following the January 29, 2016 Alberta Royalty Review Report, the Alberta Department of Energy released on April 21, 2016 a number of new measures which will impact gas and conventional oil royalty administration effective January 1, 2017. Although additional details are expected to be released by the end of May, CAPP is providing members with a summary of the information to date.
- ▶ The following is a compilation of publicly available information on the outcome of the Royalty Review into this easy-to-read and understand presentation.
- ▶ If you have questions please forward them to Sheila McFadyen, CEO at smcfadyen@cappa.org

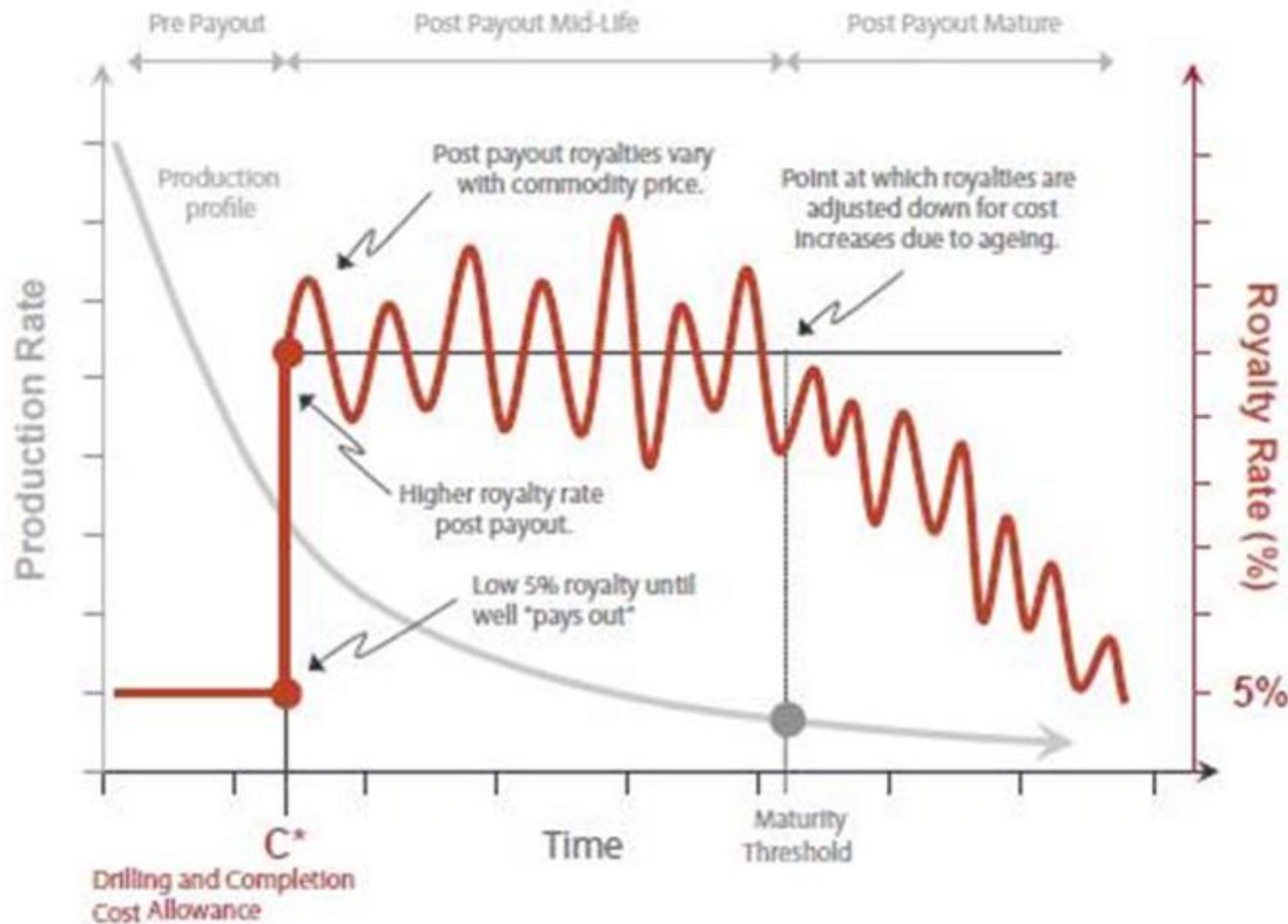
AB Modernized Royalty Framework



- Conventional oil and natural gas wells
- Excludes oil sands project wells at this point
- Revenue minus cost across all hydrocarbons
- Applies to wells drilled after January 1, 2017
 - Parallel system of existing ARF and MRF
- Only price factor on R%, not volume sensitive until past “Maturity Threshold” (then reducing effect)
- Benefit greater at current and lower prices
- NGDDP, new well, shale and Hz royalty credits programs are terminated

ILLUSTRATION OF THE MODERNIZED ROYALTY FRAMEWORK

Royalty Rates Structure Over the Life Cycle of a Well



Three Royalty Phases

1. Drilling and Completion Cost Allowance (C^*)
2. Post Payout
3. Maturity Threshold

*Source: Government of Alberta

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- 1. Drilling and Completion Cost Allowance (C*)**
 - a. Same for all wells – not owner or area specific
 - b. D&C costs derived from 2012-2015 cost data
 - c. TVD, TLL and Total Proppant Placed (TPP) *new*
 - d. Two formulas to reflect $TVD > 2,000m$ and $TVD \leq 2,000m$
 - i. higher C* for deeper/more complex wells
 - e. 5% royalty rate until C* reaches payout
 - f. Revenue based on Volumes multiplied by Alberta Par Price
 - i. Conventional Oil – produced volumes
 - ii. Natural Gas and by products – allocated volumes

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C* Calculation For A Well with a Depth \leq 2,000m

▶ Example Data:

▶ **TVD** = 700 m

▶ **TLL** = 1,400 m

▶ **TPP** = 0 Tonnes

▶ $C^*(\$)$ = $1,170 * (\mathbf{TVD} - 249) + 800 * \mathbf{TLL} + 0.6 * \mathbf{TVD} * \mathbf{TPP}$

▶ C^* = \$1,647,670.00

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C* Calculation For A Well with a Depth > 2,000m

▶ Example Data:

▶ TVD = 2,100 m

▶ TLL = 1,600 m

▶ TPP = 1,600 Tonnes

▶ $C^*(\$) = 1,170*(TVD-249) + 3,120(TVD-2,000) + 800*TLL + 0.6*TVD*TPP$

▶ $C^* = \$5,773,670.00$

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2. Post Payout

- a. Reached after cumulative revenue $> C^*$ amount
- b. Monthly Prod > 40 boepd (194 m³)
- c. Product specific rates and price effect
- d. $R\% = \text{Price Component (Rp)} + \text{Quantity (Rq)}$
- e. $Rq = 0$ in post payout period until maturity phase
- f. Royalty rates range from 5% min to 40% max depending on product

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3. Maturity Threshold (MT) Criteria

a. Volume sensitive

- a. Kicks in only after Payout is reached, and;
- b. Monthly well volume is < 40 boepd or 194 m3
- c. R% will revert back to “Post Payout” rates in months where production exceeds the Maturity Threshold

b. $R\% = \text{Price Component } (R_p) \times \text{Quantity } (R_q)$

c. R_q adjusts total R% downward (min R% in maturity phase is 5%)

NOTE: Gas MT and R_q adjustments will be finalized by May 31, 2016

Conventional Oil, C5+ and Field Condensate Royalty Chart

		Par Price		\$/m3	\$200	\$252	\$300	\$350	\$409	\$450	\$500	\$550	\$600	\$650	\$700	\$724	\$800	\$750	\$800	\$1,100	
				\$/bbl	\$32	\$40	\$48	\$56	\$65	\$72	\$79	\$87	\$95	\$103	\$111	\$115	\$127	\$119	\$127	\$175	
				rp	10%	10%	13%	17%	21%	23%	25%	27%	29%	31%	33%	33%	35%	34%	35%	40%	
		Monthly Vol.			Combined Royalty Rate																
Maturity	m3	boepd	rq	R%																	
	50	10	-19%	5%	5%	5%	5%	5%	5%	5%	5%	7%	9%	11%	13%	14%	16%	15%	16%	21%	
	100	21	-13%	5%	5%	5%	5%	8%	10%	12%	14%	16%	18%	20%	21%	22%	21%	22%	27%		
	110	23	-11%	5%	5%	5%	6%	10%	11%	13%	15%	17%	19%	21%	22%	24%	23%	24%	29%		
	120	25	-10%	5%	5%	5%	7%	11%	13%	15%	17%	19%	21%	23%	23%	25%	24%	25%	30%		
	130	27	-9%	5%	5%	5%	8%	13%	14%	16%	18%	20%	22%	24%	25%	26%	25%	26%	31%		
	140	29	-7%	5%	5%	6%	10%	14%	15%	17%	19%	21%	23%	25%	26%	28%	27%	28%	33%		
	150	31	-6%	5%	5%	7%	11%	15%	17%	19%	21%	23%	25%	27%	28%	29%	28%	29%	34%		
	160	34	-5%	5%	5%	9%	12%	17%	18%	20%	22%	24%	26%	28%	29%	30%	29%	30%	35%		
	170	36	-3%	7%	7%	10%	14%	18%	20%	21%	23%	25%	27%	29%	30%	32%	31%	32%	37%		
180	38	-2%	8%	8%	12%	15%	19%	21%	23%	25%	27%	29%	31%	32%	33%	32%	33%	38%			
	194	41	0%	10%	10%	13%	17%	21%	23%	25%	27%	29%	31%	33%	33%	35%	34%	35%	40%		
	200	42	0%	10%	10%	13%	17%	21%	23%	25%	27%	29%	31%	33%	33%	35%	34%	35%	40%		
	250	52	0%	10%	10%	13%	17%	21%	23%	25%	27%	29%	31%	33%	33%	35%	34%	35%	40%		
	300	63	0%	10%	10%	13%	17%	21%	23%	25%	27%	29%	31%	33%	33%	35%	34%	35%	40%		

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	ARF Rates (for wells Spud before Jan 1, 2017)	MRF Post-C* Royalty Rate (for wells spud after Dec 31, 2016)
Gas	5% to 36% Sensitive to: price, productivity, depth and acidity	5% to 36% (price sensitive only) 5% when <\$2.40/GJ 36% when > \$11.85/GJ
C3	30%	10% < X < 36% between \$88.10 and \$297.25 per m3
C4	30%	10% < X < 36% between \$176.19 and \$591.85 per m3
C5+	40%	10% < X < 40% between \$251.70 and \$1,051.64 per m3
Field Condensate	5% to 40% Sensitive to price and productivity	10% < X < 40% between \$251.70 and \$1,051.64 per m3
Conventional Oil	0% to 40% Sensitive to price and productivity	10% < X < 40% between \$251.70 and \$1,051.64 per m3
Sulphur	16.6667	Unchanged (not addressed in MRF)

► ARF base royalty rates do not reflect royalty reduction programs.

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Next Steps

- ▶ GAS – Maturity Threshold (MT) and Rq adjustments by May 31
- ▶ More detailed rules (May/June) – ie. oil sands NPR wells
- ▶ Industry training sessions (Fall/Winter)
- ▶ New Framework Effective January 1, 2017
- ▶ Royalty rates for all wells spud pre-2017 in effect until 2027 (10 years)

Expect more details on:

- ▶ EOR, re-fracture/re-complete and higher risk wells.
- ▶ Anticipated new look of the Crown Invoice