

April 30, 2018

Mr. Neil Ray  
Colorado Alliance of Mineral and Royalty Owners  
7675 West 14<sup>th</sup> Avenue, Suite 106  
Lakewood, Colorado 80214

Dear Mr. Ray:

In accordance with your request, we have estimated future summary cash flows, both undiscounted and discounted at an annual rate of 10 percent, related to expected horizontal well results in the Wattenberg Field Area of Colorado, from both a working and royalty interest ownership position. The estimates are for ownership positions of (1) 100 percent working interest with 87.5 percent revenue interest, (2) 12.5 percent ( $1/8$ ) royalty interest, (3) 100 percent working interest with 80.0 percent revenue interest, and (4) 20.0 percent ( $1/5$ ) royalty interest. The estimates summarized in this letter cover a range of expected total oil and gas recoveries from undeveloped horizontal well locations in the Codell and Niobrara formations that are assumed to be section length (1.0 mile) with 4,000 feet of completed horizontal lateral. Horizontal well development demonstrated in the Wattenberg Field Area typically has ranged from 8 wells per section (80-acre spacing) to 24 wells per section (20-acre spacing). Summary cash flow estimates are shown below for a single well and potential full-section (640 acres) development groups of 8, 16, and 24 wells. These estimates have been prepared using the price and cost parameters discussed in subsequent paragraphs of this letter. The future cash flows, undiscounted and discounted, associated with each ownership position for the range of expected per-well recoveries over the lives of the wells, are:

Total Per-Well Recovery (MBOE)	Cash Flow Estimates for a Working Interest of 100% and Revenue Interest of 87.5% (M\$)							
	Single Well		8 Wells		16 Wells		24 Wells	
	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%
250	1,589.9	554.2	12,719.5	4,433.4	25,439.1	8,866.8	38,158.6	13,300.2
300	2,646.3	1,242.0	21,170.4	9,936.4	42,340.8	19,872.8	63,511.2	29,809.1
350	3,719.0	1,921.9	29,752.2	15,375.2	59,504.4	30,750.4	89,256.5	46,125.6
400	4,814.5	2,604.2	38,516.0	20,833.5	77,032.0	41,666.9	115,548.0	62,500.4
450	5,918.6	3,290.8	47,348.5	26,326.5	94,697.0	52,653.1	142,045.4	78,979.6
500	7,034.8	3,977.9	56,278.7	31,823.1	112,557.5	63,646.3	168,836.2	95,469.4

Total Per-Well Recovery (MBOE)	Cash Flow Estimates for a Royalty Interest of 12.5% (M\$)							
	Single Well		8 Wells		16 Wells		24 Wells	
	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%
250	944.0	634.1	7,552.2	5,072.7	15,104.4	10,145.3	22,656.5	15,218.0
300	1,131.4	742.6	9,051.2	5,941.0	18,102.5	11,881.9	27,153.7	17,822.9
350	1,318.1	849.3	10,544.5	6,794.5	21,089.0	13,589.0	31,633.6	20,383.6
400	1,505.7	955.9	12,045.6	7,646.8	24,091.3	15,293.7	36,136.9	22,940.5
450	1,693.1	1,063.0	13,544.5	8,503.8	27,089.0	17,007.6	40,633.4	25,511.4
500	1,879.8	1,169.8	15,038.0	9,358.5	30,076.0	18,717.1	45,114.0	28,075.6

Total Per-Well Recovery (MBOE)	Cash Flow Estimates for a Working Interest of 100% and Revenue Interest of 80.0% (M\$)							
	Single Well		8 Wells		16 Wells		24 Wells	
	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%
250	1,103.6	218.9	8,828.8	1,751.2	17,657.6	3,502.3	26,486.4	5,253.5
300	2,045.9	838.9	16,367.3	6,711.5	32,734.7	13,423.1	49,102.0	20,134.6
350	3,010.0	1,456.1	24,080.1	11,648.6	48,160.2	23,297.1	72,240.3	34,945.7
400	3,988.1	2,070.8	31,905.1	16,566.1	63,810.3	33,132.2	95,715.4	49,698.4
450	4,982.3	2,693.7	39,858.3	21,549.6	79,716.7	43,099.2	119,575.0	64,648.7
500	5,985.6	3,315.8	47,884.7	26,526.7	95,769.4	53,053.4	143,654.0	79,580.1

Total Per-Well Recovery (MBOE)	Cash Flow Estimates for a Royalty Interest of 20.0% (M\$)							
	Single Well		8 Wells		16 Wells		24 Wells	
	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%	Undiscounted	Disc. at 10%
250	1,513.1	1,024.7	12,105.1	8,197.5	24,210.2	16,395.0	36,315.3	24,592.4
300	1,811.1	1,197.9	14,488.7	9,583.5	28,977.4	19,167.0	43,466.1	28,750.5
350	2,110.6	1,369.3	16,884.9	10,954.4	33,769.7	21,908.7	50,654.6	32,863.1
400	2,409.6	1,539.0	19,276.6	12,312.2	38,553.2	24,624.5	57,829.7	36,936.7
450	2,708.6	1,710.7	21,668.5	13,685.5	43,336.9	27,371.0	65,005.4	41,056.4
500	3,007.0	1,881.5	24,056.0	15,052.4	48,112.0	30,104.8	72,168.0	45,157.2

Total per-well recoveries are expressed in thousands of barrels of oil equivalent (MBOE), determined using the ratio of 6 MCF of gas to 1 barrel of oil.

Cash flow is after deductions for our estimates of the owner's share of production taxes, ad valorem taxes, capital costs, abandonment costs, and operating expenses but before consideration of any income taxes. The cash flow has been discounted at an annual rate of 10 percent from April 1, 2018, which is shown to indicate the effect of time on the value of money. Cash flow presented in this report, whether discounted or undiscounted, should not be construed as being the fair market value.

Oil and natural gas liquids (NGL) prices are based on April 2, 2018, NYMEX West Texas Intermediate prices and are adjusted for quality, transportation fees, and market differentials. Gas prices are based on April 2, 2018, NYMEX Henry Hub prices and are adjusted for energy content, transportation fees, and market differentials. All prices, before adjustments, are shown in the following table:

Period Ending	Oil/NGL Price (\$/Barrel)	Gas Price (\$/MMBTU)
12-31-2018	61.88	2.806
12-31-2019	57.85	2.792
12-31-2020	54.49	2.778
12-31-2021	52.23	2.825
12-31-2022	50.98	2.876
12-31-2023	50.55	2.930
12-31-2024	50.73	2.986
12-31-2025	51.06	3.046
12-31-2026	51.47	3.107
12-31-2027	51.70	3.170
12-31-2028	51.70	3.238
12-31-2029	51.70	3.311
Thereafter	51.70	3.371

Our estimates include an oil price differential of -\$5.49 per barrel, a gas price differential of -\$0.175 per MCF, and an NGL ratio to oil price of 0.436. The average adjusted product prices are \$49.71 per barrel of oil, \$23.50 per barrel of NGL, and \$2.845 per MCF of gas. Other parameters used in our evaluation include a gas-oil ratio of 8,500 cubic feet of gas per barrel of oil, a gas shrinkage factor of 0.707, and an NGL yield of 62.0 barrels per million cubic feet of gas.

Operating costs used in the estimates include \$5,378 per well per month, a variable water operating cost of \$2.00 per barrel, and a water disposal fee of \$0.70 per barrel. These costs are based on our understanding of operating costs in the area and are not escalated for inflation.

The capital costs and abandonment costs used in the estimates (for 1.0-mile laterals) are \$3.0 million and \$71,000 per well, respectively. These costs are based on actual costs from recent activity and are not escalated for inflation.

The values shown in this letter are estimates only and should not be construed as exact quantities. Estimates of total oil and gas recovery may increase or decrease as a result of market conditions, future operations, changes in regulations, or actual reservoir performance. In addition to the primary economic assumptions discussed herein,

our estimates are based on certain assumptions including, but not limited to, that the wells will be operated in a prudent manner, that no governmental regulations or controls will be put in place that would impact the ability of the interest owner to recover the estimated volumes, and that our projections of future production will prove consistent with actual performance. If the volumes are recovered, the cash flows therefrom and the costs related thereto could be more or less than the estimated amounts. Because of governmental policies and uncertainties of supply and demand, the sales rates, prices received for the volumes, and costs incurred in recovering such volumes may vary from assumptions made while preparing these estimates.

For the purposes of this report, we used technical and economic data including, but not limited to, geologic and production maps, analogous historical price and cost information, and property ownership interests. The volumes in this letter have been estimated using deterministic methods; these estimates have been prepared in accordance with generally accepted petroleum engineering and evaluation principles set forth in the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers (SPE Standards). As in all aspects of oil and gas evaluation, there are uncertainties inherent in the interpretation of engineering and geoscience data; therefore, our conclusions necessarily represent only informed professional judgment.

The data used in our estimates were obtained from Colorado Alliance of Mineral and Royalty Owners, various operators, public data sources, and the nonconfidential files of Netherland, Sewell & Associates, Inc. and were accepted as accurate. Supporting work data are on file in our office. The technical person primarily responsible for preparing the estimates presented herein meets the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the SPE Standards. We are independent petroleum engineers, geologists, geophysicists, and petrophysicists; we do not own an interest in these properties nor are we employed on a contingent basis.

Sincerely,

**NETHERLAND, SEWELL & ASSOCIATES, INC.**  
Texas Registered Engineering Firm F-2699

/s/ C.H. (Scott) Rees III  
By: C.H. (Scott) Rees III, P.E.  
Chairman and Chief Executive Officer

/s/ Randolph K. Green  
By: Randolph K. Green, P.E. 72951  
Senior Vice President

Date Signed: April 30, 2018

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