To: Kara Moriarty, AOGA

From: Roger Marks

Date: February 7, 2020

Re: Modelling Assumptions

Kara – I am sending you a slide packet that has been revised from the one I presented on January 6. As you know, that presentation was assembled on fairly short notice.

That presentation was predicated on upstream costs of $27/bbl. There are various definitions of upstream costs depending on whether one is referring to deriving net income for calculating the tax, whether one is referring to taxable vs non-taxable barrels, or whether or not one includes the property tax as the upstream cost insofar as it is deductible for the tax (but is really part of government take). Upon reflection, I judged that a value of $24 is more appropriate. It is the cost over both taxable and non-taxable barrels, and excludes the property tax. This represents the divisible income which most appropriately can be used for competitive comparisons.

In addition, instead of using a straight 1/8 royalty, I fine-tuned the royalty amount to be consistent with the state forecast. I also added Colorado to the peer group list, and refined the cost estimates of some of the other peer jurisdictions.

The changes are not material, and the differences on the graphs are barely perceptible. Please contact me if you have any questions.

Best regards,

Roger Marks
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