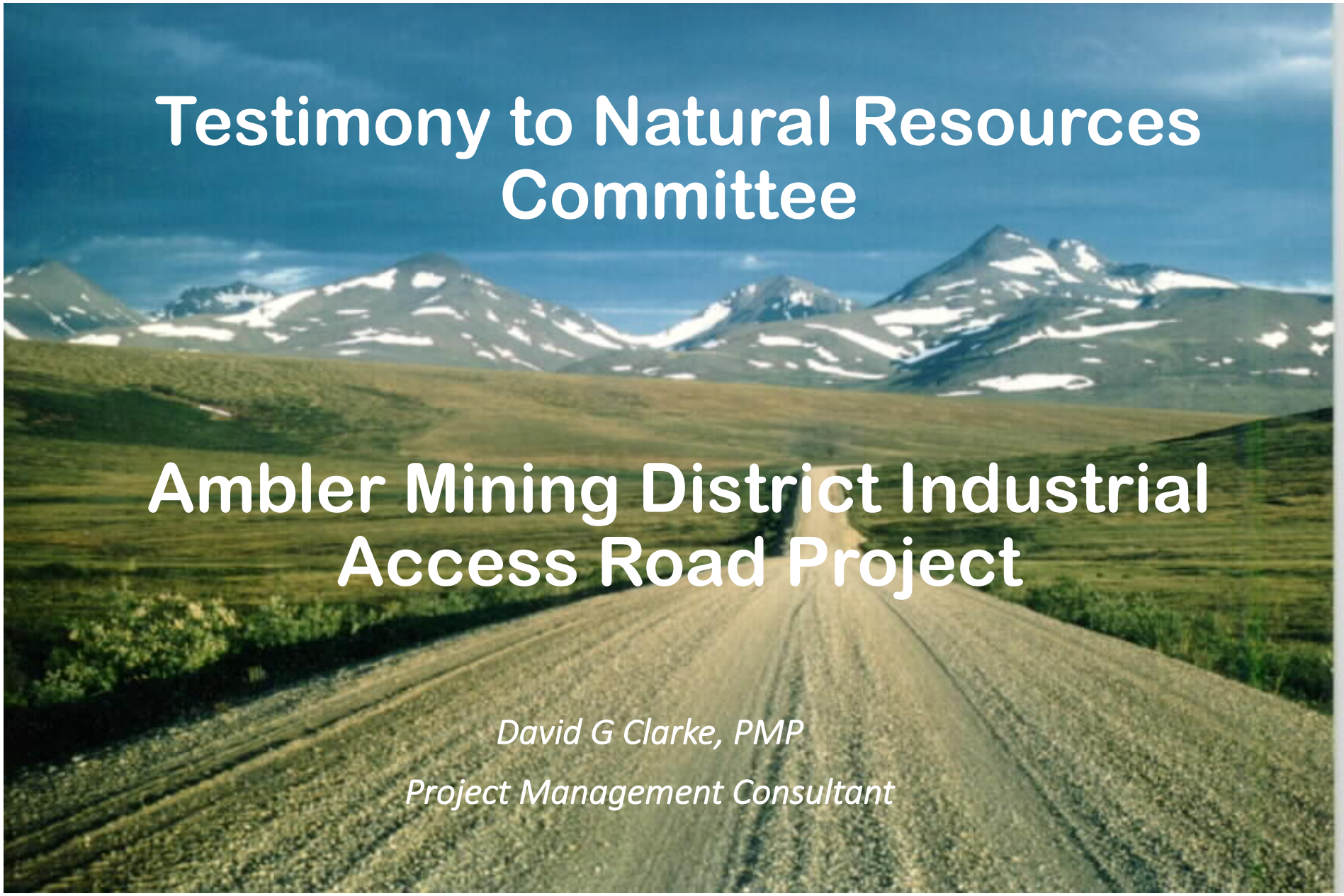


# Testimony to Natural Resources Committee

# Ambler Mining District Industrial Access Road Project

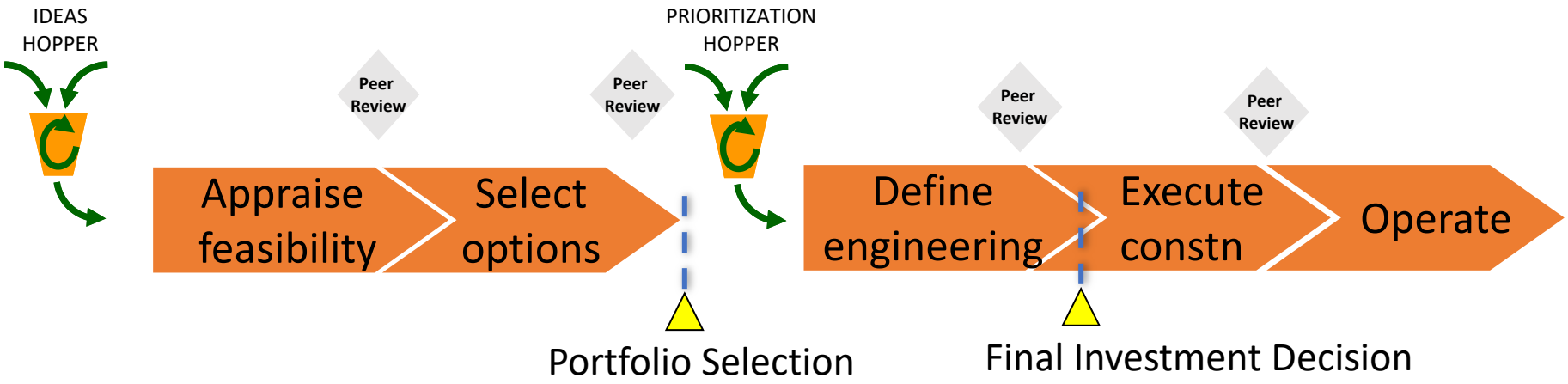
*David G Clarke, PMP*

*Project Management Consultant*

# Findings on the Ambler Road Project

1. Reward must be commensurate with risk and the Ambler road project is currently wildly skewed in favor of the mining companies to the detriment of the State of Alaska.
2. If the Ambler Mining District is economically viable, the mining companies should be willing to collectively enter into a Joint Venture with the State to fund the Road Project.
3. If the Mining companies are unwilling to put some of their own money at risk in the Ambler Road Project, then this should be a **huge red flag** and the State should abandon the project.
4. If the project is restructured to fairly share the risk and reward between the State and the mining companies then it could be a win-win for everyone.
5. The Ambler road project as currently configured plays the **age-old game of privatizing profits while socializing costs.**

# Typical Stage Gate Process



# 4 reasons why the Ambler Road Project would not pass a rigorous stage gate review

1. 100% of the project risk of cost overruns is borne by AIDEA and 0% by the mining companies, who ultimately benefit from the road.
2. The reported NPV of $85-90M is calculated assuming a discount rate of just 3.9%. The project will be considerably underwater at a more normal risk adjusted discount rate of 8-10%.
3. Revenue from the project is solely from tolls which are dependent on 4 mines that may be developed in the Ambler District.
4. The minerals on which the project will rely for tolls are largely classified as indicated (*what you may have*) or inferred (*what you guess you have*) resources, rather than proven reserves (*economically mineable*).

**In summary the potential reward for success on the Ambler Road Project is not commensurate with the project's high risk.**

# Advantages of forming a Joint Venture Company to build and operate the Ambler Road

1. The project risks of cost overruns and/or revenue shortfalls would be more equitably split between AIDEA and the mining companies.
2. There would be greater scrutiny of the road cost estimate by the mining companies, who would now be putting their own capital at risk. There is always a tendency to low ball the cost estimate to get a project approved and worry about the consequences later.
3. The best people to determine the **true** viability of the various mines are the mining companies. If they are not prepared to put some of their own money at risk in the road, then this should be a **huge red flag** and the State should abandon the project. Remember Rule #1
4. Greater chance that the road development and at least one anchor mine will take place concurrently as the mining companies will not want to tie up capital in a road that may not generate any revenue.
5. Reduces the risk that resource development does not take place at all, as was the case for the Umiat road project and the Point MacKenzie rail spur.

# Corporate Presentation
# March 2018

## Advancing the Ambler Mining District in Alaska by Forming Strong Partnerships

# Arctic PFS – Inputs & Economic Results

| | 2013 PEA | 2018 PFS | % Change |
|---|---|---|---|
| Mine Life | 12 years | 12 years | - |
| Mill Capacity | 10,000 t/d | 10,000 t/d | - |
| Average Annual Production | 125M lbs Cu<br>152M lbs Zn<br>24M lbs Pb<br>2.5M oz Ag<br>29,000 oz Au | 159M lbs Cu<br>199M lbs Zn<br>33M lbs Pb<br>3.3M oz Ag<br>30,600 oz Au | 27%<br>31%<br>38%<br>32%<br>6% |
| Base Case Metal Prices | $2.90/b Cu<br>$0.85/lb Zn<br>$0.90/lb Pb<br>$22.70/oz Ag<br>$1,300/oz Au | $3.00/b Cu<br>$1.10/lb Zn<br>$1.00/lb Pb<br>$18.00/oz Ag<br>$1,300/oz Au | 3%<br>29%<br>11%<br>-21%<br>0% |
| **Pre-Tax NPV ($ million) at 8%** | **927.7** | **1,935.2** | **109%** |
| **After-Tax NPV ($ million) at 8%** | **537.2** | **1,412.7** | **163%** |
| **Cash Costs, Net of By-product Credits ($/lb Cu payable)** | **0.62** | **0.15** | **-75%** |
| **All-in Cost ($/lb of Cu payable)** | **1.26** | **0.63** | **-50%** |
| Cash Costs, Net of By-product (Au, Ag, Cu, Pb) Credits ($/lb Zn payable) | -2.01 | -2.63 | 31% |
| **Capital Intensity Ratio ($ initial capital / tonne of copper equivalent)** | **6,995** | **6,203** | **-11%** |
| IRR (%) | 22.8 | 38.0 | 67% |
| **Payback Period – Pre-Tax (years)** | **4.6** | **1.9** | **-58%** |

# Extract from AIDEA website

**7.6.6 AIDEA Toll Payments**

It is necessary for AIDEA to collect sufficient toll payments to recover the cost of AMDIAR construction, operation, and maintenance and the cost of their debt financing. Total AMDIAR construction costs are estimated to be between $304.9 and $346.5 million in 2014 dollars (see Table 6-1) and between $280 and $380 million in 2017 dollars, while total operating and maintenance costs are estimated to be $270 million over the life of AMDIAR, or a total of between $574.9 and $616.5 million (in 2014 dollars). Assuming the current municipal bond yield of 2.75 percent on 30- year municipal bonds, the total cost of these funds to AIDEA would be $270.0 to $289.5 million. Therefore, the total cost of construction, operation, and maintenance, and the cost of funds for AIDEA, would be between $844.9 and $906.0 million over the 30-year life of AMDIAR. It is anticipated that a 4.0 percent loan on the project's construction would be sufficient to account for the yield on a 30-year municipal bond. Assuming a 4.0 percent loan with a 30-year term, AIDEA would receive between $413.2 and $443.0 million in interest from road users over a 30-year period. In addition to this interest, road users would also repay AIDEA for the construction, operation, and maintenance of AMDIAR as described above ($574.9 to $616.5 million). Consequently, this analysis estimates that AIDEA would collect between $988.1 million and $1.1 billion of toll payments over the 30-year life of AMDIAR. In consideration of AIDEA's expenditures and gross revenue from expected tolls, the total net revenue of AMDIAR is between $143.2 and $153.5 million over the 30-year life of AMDIAR and the project exhibits a net present value of $84.3 to $90.4 million assuming a discount rate of 3.9 percent.

# Project Comparison
# AIDEA's Ambler Road and Trilogy's Arctic Mine

| | AIDEA Ambler Road | Trilogy Arctic Mine |
|---|---|---|
| Initial Capital | $380 million | $780 million |
| Risk of road cost overruns | 100% AIDEA | 0% Trilogy |
| Risk of shortfall in road toll revenue | 100% AIDEA | 0% Trilogy |
| Project Internal Rate of Return | Estimated at 4-5% | 38% |
| Payback | 30+ years (if ever) | 1.9 years |
| Net Present Value (after tax) | $84 to $90 million @3.9%<br>**Negative @ 8%** | $1,413 million @8% |

**It is very clear from this table that the relative risks/rewards of the 2 projects are wildly skewed in favor of the mining company to the detriment of the State of Alaska**

# Conclusions on the Ambler Road Project

- Reward must be commensurate with risk and the Ambler road project is currently wildly skewed in favor of the mining companies to the detriment of the State of Alaska.
- If the Ambler Mining District is economically viable, the mining companies should be willing to collectively enter into a joint venture with the State to fund the Road Project.
- If the Mining companies are unwilling to put some of their own money at risk in the Road Project, then this should be a **huge red flag** and the State should abandon the project.
- If the project is restructured to fairly share the risk and reward between the State and the mining companies then it could be a win-win for everyone.
- The Ambler road project as currently configured plays the **age-old game of privatizing profits while socializing costs.**


Any questions?