<u>Testimony to Natural Resources Committee</u>
<u>Ambler Mining District Industrial Access Road Project</u>

Mr. Chairman, members of the committee, for the record my name is David Clarke. I am a private citizen and I appreciate the opportunity to provide comments to the House Resources Committee on the Ambler Mining District Industrial Access Road Project.

- I am a Project Management Professional with 38 years of oil & gas industry experience, working on major capital projects around the world, including 11 years here in Alaska.
- I am supportive of resource development in Alaska, including the Ambler Road project, but I am strongly against high risk, low reward projects that are likely to destroy value for the State.
- I think that the State, like all successful private companies, should always adhere to Warren Buffett's 2 Rules of Investing:
    - Rule # 1: Never lose money;
    - Rule # 2: Never forget rule #1.

I have reviewed the Ambler Road project from a Project Management perspective and my findings are as follows: (Slide #2)

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 Ambler 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.**

Let me explain the basis for these findings:

Firstly, I'll talk about the many shortcomings that I see in the current Ambler road project and then share with you my suggestions on how it could be restructured to more fairly share the risk/reward balance between the State (AIDEA) and the mining companies.

In the private sector, where I have reviewed large-scale multi-billion-dollar projects for over 15 years, companies frequently have more potential projects that they would like to progress than they have funds (or resources) to complete. A situation not unlike the one that the State of Alaska now finds itself. Successful companies have adopted a rigorous "stage gate process" (slide #3) in which funding is released in stages as more detailed information becomes available. To get through each stage gate, the project team must provide a rigorous justification to peers and stakeholders showing that the project adds value and is a competitive use of the available funds.

It is very important that the review team for a project decision is made up of multiple relevant subject matter experts who are independent, i.e. they do not have a stake in the project outcome, otherwise bias can creep in.

Given what I know about the Ambler Road project it would not pass a rigorous and independent stage gate review for the following 4 reasons: (slide #4)

1. 100% of the project risk of cost overruns is borne by AIDEA and none 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% and hence the project will be considerably underwater or negative at a more normal risk adjusted discount rate of 8-10%. AIDEA plans to finance the project with municipal bonds at an interest rate of around 2.75%. I assume the reason the rate is so low, for such a high-risk project, is that these are general obligation bonds and that the State (you and I) are guaranteeing any revenue shortfall.
3. Revenue from the project is solely from tolls which are dependent on 4 mines that may be developed in the Ambler District: Trilogy's Arctic and Bornite mines; Teck Resource's Smucker mine and the Sun mine whose former owner went bankrupt.
4. The minerals on which the Ambler Road project will rely for tolls are largely classified as indicated or inferred resources, or in the best case probable reserves rather than proven reserves (economically mineable). No exploration work is currently ongoing at either Sun or Smucker. Consequently, there is a high risk that some or all of the mines may prove uneconomic and not developed.

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

I'd like to share with you the work that I did on a project in the eastern Gulf of Mexico (GOM) that may be analogous to Ambler and provide some insights. I appraised a relatively small gas resource that was in a very remote region with no infrastructure – not unlike Ambler. The prospect was hopelessly uneconomic, it just couldn't support the large costs to build out the infrastructure necessary to get the product to market.

Given that there were similarly challenged resources in the region, we met with the other field owners and it was apparent that the only way to develop the resources in this region was to join forces and share the costs of building out the infrastructure. To do this we formed a Joint Venture company to build, own and then operate the infrastructure. In hindsight, it never occurred to us to ask the State of Louisiana to build the infrastructure for us. Key to success was developing all 3 fields and the infrastructure to access the resources concurrently. So, in this GOM project the resource developers took 100% of the infrastructure project risk and the State of Louisiana did not take any risk, but instead benefitted from royalties and corporate taxes.

Another analogue here in Alaska would be the TAPS which was financed, built and operated by a JV company, Alyeska, comprised largely, but not exclusively, of the resource developers. So, with Alyeska and Ambler you have 2 ends of a spectrum from 0% to 100% state ownership in the infrastructure necessary to get resources to market.

I would suggest that a similar Joint Venture company should be explored to build and operate the Ambler Road with the principle mining companies and AIDEA as partners.

This Joint Venture arrangement has a number of significant benefits over the current Ambler Road structure: (Slide #5)

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. It also 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.

The track record of State sponsored infrastructure projects to support resource developments is not good. The State spent some $35M on studying a road to the Umiat Oil field, before the developer Linc. Energy went bankrupt. Also, the State spent $184 million on the partially completed Pt MacKenzie rail extension based on very optimistic projections of coal, ore, cement, and woodchip developments which are still to materialize.

When you compare the published projected economics of the Ambler Road and the Arctic mine there is a huge disparity between the risks and rewards experienced by AIDEA and Trilogy.
I reviewed this very recent corporate presentation by Trilogy on Advancing the Ambler Mining District (Slide #6). This is Slide 27 from the presentation on the inputs and economic results of the Arctic Mine Preliminary Feasibility Study. I've put a star next to the 3 key economic results (NPV, IRR and payback) for the Arctic Mine. These are the corresponding numbers from AIDEA's website on the toll payments. (Slide #8)

I recognize that Trilogy may be guilty of an optimism bias while presenting the Arctic mine results. Nevertheless, if we take them at their word this is how the economics of the AIDEA's Ambler Road and Trilogy's Arctic Mine compare: (Slide #9)

	AIDEA Ambler Road	**Trilogy Arctic Mine**
Initial capital expenditure	$380 million	$780 million
Ambler road cost overruns	100% AIDEA	0% Trilogy
Risk of shortfall in toll revenue	100% AIDEA	0% Trilogy
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% **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 companies to the detriment of the State of Alaska. In fact, AIDEA's Ambler road deal is by far the worst deal that I've ever seen!

Based on Trilogy's economic projections the Arctic Mine could easily finance 100% of the road construction; payback would increase from just under 2 to about 3 years which is still stellar; NPV would decrease a little as trading upfront capital for operating tolls, but I'd estimate it would still be well north of $1 billion.

To conclude: (Slide #10)

- Reward must be commensurate with risk and on the Ambler Road project it 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.

Happy to take any questions. Thank- you (Slide #11)

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