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VALUE

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**RE: CSA 43-101 CONSULTATION COMMENTS**

To whom it may concern:

The following are comments from JDS Energy & Mining Inc. (JDS) in response to CSA's 43-101 Consultation paper dated April 14, 2022. JDS comments by Question number are listed below:

***4. Paragraph 4.2(5)(a) of NI 43-101 permits an issuer to delay up to 45 days...***

The length of time should remain the same. Disclosing parties should be allowed to release results and then follow-up with documentation (the Technical Report). Timing can be crucial to resource companies so the 45 days should remain to allow flexibility.

***5. a) Can the investor protection function of the current personal inspection requirement...***

Actual boots on the ground are very important in many ways as so much peripheral information is gained just by experiencing the local environment. Access logistics, local attitudes, accommodation availability/quality, availability of services and goods, etc. etc. How does a geologist gather samples remotely for verification assays? Remote inspections completely go against the goal of 43-101, in our opinion.

***7. How can we improve the disclosure of data verification procedures in Item 12 of the Form...***

This is a problem area for the QP. How does a metallurgical QP verify QA/QC measures conducted by a lab? This will almost preclude the use of "old" metallurgical test results even if conducted and documented by an accredited lab with proper QA/QC. This puts the QP in an almost impossible position.

***8. Given that the current personal inspection is integral to the data verification, should we...***

Yes. This is one example of duplication in the form. Similarly, ownership, should be discussed once and probably deserves its own major heading rather than included multiple times throughout the report.



**11. Should we consider modifying the definition of preliminary economic assessment to enhance the study's precision?...**

We think you mean accuracy, not precision. The PEA is intended, in our opinion, to give an indication of whether a project has enough economic potential to continue. We think there is adequate cautionary language in this regard in PEA's. Investors have to be smart enough to understand those warnings.

**12. Does the current cautionary statement disclosure required by subsection 2.3(3) of NI 43-101 adequately inform investors...**

Yes, it is very clear and doesn't need to change. It's a bit like cigarette packaging warnings, you can say "SMOKING WILL KILL YOU" and people will only half believe it and ignore it if they chose. On the cover of every PEA you can say "IT IS VERY UNLIKELY THAT THIS PROJECT WILL EVER BE A PROFITABLE MINE" and people will still invest, in spite of the statement being true.

**14. Should we preclude the disclosure of preliminary economic assessments on a mineral project if...**

No. There are often viable options for projects being big and lower grade or small and higher grade. It may be important to the investor to know that there are alternatives depending on whether they are chasing IRR or NPV or mine life or low CAPEX or quick payback or any number of other criteria they desire.

**15. Should NI 43-101 prohibit including by-products in cash flow models used for the economic...**

Yes, by-products without sufficient info to have them included in a resource should not be allowed to contribute to project economics.

**16. Is there anything missing or unclear in the current qualified person definition?...**

It's clear in our opinion.

**17. Should paragraph (a) of the qualified person definition be broadened beyond engineers...**

Yes, definitely. For example for environmental and reclamation sections, why can't a Registered Forestry professional or Biologist or some other non-geology/engineering be a QP for these sections? Why can't a lawyer not be a QP for the legal status of a property or ownership agreements or existing contract descriptions or potential impact of existing litigation? The QP has to completely step outside their area of expertise to accept responsibility for these items. We currently have the situation by which regulators will state "you are a professional engineer, but I don't accept that your experience is adequate to be a QP." Why is the reverse statement not also allowed – "you are an expert in your field and the fact that you aren't a professional engineer doesn't preclude that."

**18. Should the test for independence in section 1.5 of NI 43-101 be clarified?...**

It's clear.

**19. Should directors and officers be disqualified from authoring any technical reports,...**

No, not where independence is not required. This would be a heavy financial burden on junior operators.

**20. Should we consider adopting a definition for a "current personal inspection"?...**

No. the needs and purpose are clear.

**21. Should the qualified person accepting responsibility for the mineral resource estimate in...**

Yes, the information and checks for the mineral resource estimate can only properly be done by the resource QP. This is the core of the purpose of NI 43-101.

**22. In a technical report for an advanced property, should each qualified person be accepting responsibility...**

Maybe. It depends on the experience and knowledge of the QP. Without a doubt, the QP signing off on the reserves should definitely do a site visit but in some cases that same person (usually a mining engineer) would also have adequate knowledge of infrastructure to do the site visit for that topic. Having the Recovery Methods Section QP do a site visit is often not worthwhile as, depending on the site, there is often not a lot to see, unless it is a brownfields site.

**25. Should Item 14: Mineral Resource Estimates of the Form require specific disclosure...**

Absolutely not. This aspect has pushed resource geologists to make a determination on the economic viability of a deposit, for which they are not qualified. Their job is to tell a mining engineer what is in the ground, not how or if it can be mined. We have seen this fail in both directions: 1) an entire deposit passed the REEE "litmus test" only to be determined completely un-mineable by the engineers and 2) lenses that were determined to be "too thin" to be mineable in the REEE that were found to be economic by the engineer but were no longer in the resource. The REEE is akin to having a family doctor decide whether or not to book a major surgery for his patient.

**26. b) Should the qualified person responsible for the mineral resource estimate be required...**

This industry is going to have very few resource estimation geologists over the next ten years. Most of the best are retiring. Some are retiring early because of the strain and burden NI 43-101 is putting on them. Others are continuing to work but refusing to sign off on reports because of the legal entanglements that have been imposed. Without offering a solution, the industry is going to have to wrestle with this very real problem. One minor solution will be to allow some reliance to be placed on the work of prior QPs rather than make the current QP solely responsible for all data. When data has been correctly collected and verified, that should be a once and forever condition until proven otherwise rather than treat the data field as a blank canvas to be repopulated every time the project is updated.

**27. How can we enhance project specific risk disclosure for mining projects...**

QPs don't have crystal balls. This is "boilerplate" because the QP cannot predict the outbreak of war, changing of a political regime, extension of park boundaries, reorganization of government agencies, natural disasters, etc. etc. etc. How many studies stated that a worldwide pandemic impact a project pre-2020? None. Now they all discuss how covid could impact operations.

**28. Do you think the current environmental disclosure requirements under Items 4 and 20 of the...**

Yes.

**29. Do you think the current social disclosure requirements under Items 4 and 20...**

Yes, but rather than discuss Social and Community Impact there could be a guidance on description of specific communications, relations and agreements with the impacted Indigenous groups.

**31. What specific disclosures should be mandatory in a technical report in order for investors...**

As per answer to question 29.

**34. Are the current disclosure requirements for capital and operating costs estimates in Item 21...**

The description of the requirement is extremely light and is the least detailed of any of the Items. Things that could be included are:

- Description of basis of estimate for each major package - i.e. how are the costs built up? (detail of material take-offs? number and type of bids?, reference projects?, past experience?, local labour rates and efficiencies? etc. etc.)
- Description of Work Breakdown Structure (for PFS and FS only) or other estimation methods
- Description of contingency and how much engineering has gone into each component. Soils Geotech is, for example is a known critical element of many projects as almost every project blows their earthworks budget and some, like Rainy River, almost to the point of project failure.

More thought needs to be given to this with input from people that actually do detailed cost estimation.

***35. Should the Form be more prescriptive with respect to the disclosure of the cost estimates,...***

We're leery of thinking that complying with AACE will solve the problem as it is just a generic guide and each project will not fit into its system.

***36. Is the disclosure requirement for risks specific to the capital and operating cost assumptions...***

It is adequate and is just followed in too much detail at times. Item 21 should be split into two sections rather than combine two very different cost types.

***37. Are there better ways for Item 22 of the Form to require presentation of an economic analysis...***

By far the biggest impacts and unknowns on all mining projects are commodity prices, exchange rates. Better guidance on these two items would be very helpful and keep studies comparable and realistic. Honestly, most QPs struggle with estimating metal price and exchange rates, with clients always looking for the best economic outcomes and the QP having ABSOLUTELY NO knowledge of what will happen in the future – no one does, in spite of what they might say. All the QP knows is that whatever prices and rates they chose, they will likely be wrong. Looking at the past is not an indication of what will happen in the future but somehow people are comforted by it. There needs to be better guidance by the CIM, security commissions or some authority on metal prices and exchange rates to use. What that guidance should look like is difficult especially for projects that might already be operating (logically using current prices/rates) vs. a project that might be built in 5 to 10 years.

A report should always be allowed to include today's spot price as a point of reference. Generally wages and commodity prices are current, but metal prices are lower than current. In reality when one trends up, they both do and vice versa. The base case economics continue to use future pricing, but this point of reference is also helpful and gives the investor a perspective on opportunity, not just conservatism.

Respectfully,

**JDS Energy & Mining Inc.**

On behalf of Mike Makarenko, P. Eng., Gord Doerksen, P. Eng., and Richard Goodwin, P. Eng.