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MONTANA BOARD OF OIL &  
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Attachment 1  
Publicly Available Trade Secret Justification

To demonstrate that the information for which confidentiality is sought constitutes trade secrets or confidential commercial information, you must respond to the following questions and provide the information specified and any supporting documentation (such as previous confidentiality determinations):

**1. To your knowledge, has the identity of the ingredient, its concentration, or both, as appropriate, been publicly disclosed:**

The active ingredient contained within ThinFrac MP for which confidentiality protection is sought has not been identified in hydraulic fracturing scale inhibitors in public documents. To my knowledge this ingredient has not been identified as being a constituent of this particular type of product in the FracFocus database or any other public disclosure forum by BJ Services or any other party.

**a. Pursuant to any federal or state law or regulation?**

BJ Services has not disclosed the ingredient identity for ThinFrac MP pursuant to any federal, state, or local law or regulation. There has been no regulatory submission of this products composition, in the context of its use in conjunction with ThinFrac MP. After reviewing all federal, state, or local submissions, to the best of our knowledge, there has been no disclosure of the underlying ingredient identity has not been previously disclosed pursuant to any federal, state, or local law or regulation. To the best of our knowledge the full chemical composition has not been previously disclosed via the FracFocus database by anyone else.

**b. In professional trade publications?**

BJ Services has not disclosed the ingredient identity for ThinFrac MP in any professional trade publication. BJ Services does not publicly disclose any chemical composition for any of its products in any trade publications or any publications.

**c. Through any other media or publications available to the public or your competing oil and gas operators, or service companies?**

BJ Services has not disclosed the ingredient identity for ThinFrac MP through any other media or publications available to the public or competitors. To the best of our knowledge, in the context of its use in conjunction with ThinFrac MP, there has not been any public disclosure of any chemical composition for any of its products through any other media or publications available to the public or competitors.

In order to make the above determinations, I used the CAS numbers of the ingredients to search the FracFocus database and reviewed multiple entries per page of results. As previously mentioned, the active ingredient was not found in association with a scale inhibitor product and was not found at all. A literature search using the CAS numbers and the terms "stimulation, and "friction reducer" separately and combined. No documents could be found that link the active ingredient to friction reducer products in oil and gas well stimulation treatments. I was not able to locate any documentation that mentions all ingredients together for anypurpose.

**2. To what extent is the identity of the ingredient, concentrations, or both, as appropriate, are known within the company? Please describe in detail how this information is housed in your company and what steps your employees, officers, agents, and directors take to prevent disclosure of the information to parties outside of your company.**

BJ Services maintains the composition information as confidential business information by providing limited internal access thereto and requiring employment of non-disclosure confidentiality agreements for anyone to whom the information is disclosed. Electronic copies of proprietary additive composition information are protected and maintained on a secure internal network, within a file structure to which access is again restricted to only the regulatory group. Information about the chemical composition of our products is maintained in limited-access secure database. Access to this information is granted strictly on a need-to-know basis if access is required for job function such as chemical regulatory compliance. Otherwise, only the product trade names and information included in the

SDS sheets and/or listed in the "Available to Public" non-confidential disclosure is available to employees.

3. **Has any other federal or state entity determined that the ingredient, concentrations, or both, as appropriate, is not entitled to protection from public disclosure? If so, provide a copy of the agency's determination, along with any explanation as to why the Board should not make a similar determination. Provide any other information concerning prior requests for confidentiality and/or regulatory body determinations you believe is relevant to the Board's determination.**

No other regulatory body, federal, state, tribal, or local, determined that the ingredient identity is not entitled to protection from public disclosure as trade secret or confidential commercial information. Instances in which the information may be known by outside parties are strictly limited to situations in which disclosure is required by law. These include disclosures in circumstances consistent with the OSHA hazard communication standard (in which case disclosure is required in order to address a medical emergency or other medical situation) or circumstances consistent with EPA reporting regulations (in which case disclosure is required in the event of an environmental release). There have been no regulatory disclosures required by law to date for this product.

4. **How is the identity of the ingredient, concentrations, or both, as appropriate, commercially valuable to the owner, operator, or service company? In answering this question, please describe why the ingredient, concentrations, or both, as appropriate, is not common knowledge in the industry, including any novel or unusual aspects of the ingredient in this application.**

The composition of any specialty, performance, and innovative products are of high value to BJ Services and to its competitors. Divulgence of the formulation provides a distinct advantage to competitors who offer similar products and services. Disclosure of the trade secret components of this product would cause loss of our competitive advantage that this product demonstrates and would allow other companies to take advantage of our substantial investment of money, corporate resources in innovation, testing, and product development without allowing or providing a mechanism to recuperate these costs, negatively impacting BJ Services' business.

BJ Services has invested considerable time, money, and effort in the research and development of subject fracture performance product component. Public disclosure of the composition of ThinFrac MP could damage the commercial advantage BJ Services realizes from maintaining confidentiality. The composition of the proprietary blend derives economic value from not being generally known and readily ascertainable by competitors who could garner economic value from the disclosure of the blend's chemical composition. Listing the specific active ingredient and by product would provide information about the identity and supplier of the active ingredient.

5. **Describe the ease or difficulty with which the complete composition of the fracturing fluid, including the ingredient identity, concentrations, or both, as appropriate, could be determined from public disclosure. Specifically, explain why use of the "systems approach" format would not adequately protect your proprietary interest.**

Public disclosure of the active ingredient identity for ThinFrac MP would provide a clear and direct path for competitors to understand and replicate our product. This ingredient is new and unique in well stimulation but including its identity and merely including it among a large list of chemicals under a "system approach" disclosure would provide our customer with a full chemical formulation. Although the systems approach is a useful tool in safeguarding proprietary information, including components in Attachment 4 of this document eliminates the benefit of that style of disclosure by disclosing ingredients in a time when the frac fluids used are leaner and more efficient with less chemicals being used in the frac fluid. With fewer chemicals it is significantly easier to identify chemical compositions. For this reason, the ingredients used merits treatment as a trade secret.

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Redacted Composition of ThinFrac MP

Component	CASRN	Wt%	Proprietary
Water	7732-18-5	30-60%	
Inorganic Acid	[REDACTED]	30-60%	TRADE SECRET
Hydrotreated Light Distillate (petroleum)	64742-47-8	10-30%	
Alcohols	[REDACTED]	1-5%	TRADE SECRET
Sodium Chloride	7647-14-5	1-5%	
Ester	[REDACTED]	1-5%	TRADE SECRET
Ester	[REDACTED]	1-5%	TRADE SECRET
Acrylamide	79-06-1	<0.1%	
Sodium Sulfate	7757-82-6	<0.1%	
Tetrasodium EDTA	64-02-8	<0.1%	
4-Methoxyphenol	150-76-5	<0.1%	
Potassium Acetate	127-08-2	<0.1%	
Cupric Sulphate	7758-98-7	<0.1%	
Acetic Acid	64-19-7	<0.1%	