



Athabasca Minerals Inc. Receives Favourable NI 43-101 Technical Report in Support of its Duvernay Premium Domestic Sand Project

September 10, 2019 EDMONTON, ALBERTA. Athabasca Minerals Inc. (“AMI” or the “Corporation”) (TSX Venture: ABM) is pleased to announce the completion of a Technical Report prepared in accordance with the requirements of National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) for the White Rabbit Property associated with AMI’s Duvernay Premium Domestic Sand Project (“Duvernay Project”).

AMI’s Duvernay Project encompasses 356 hectares (878 acres) of largely contiguous, and privately-owned, properties. The underlying sand deposit was delineated based on 49 drill holes, using a rotary auger rig, and the retrieval of over 200 stratum samples which were subject to a comprehensive lab testing program. The sand samples were tested to assess suitability for use as a hydraulic fracturing proppant, as conducted by AGAT Laboratories, Ltd. (“AGAT”), Stim-Lab, Inc. (“Stim-Lab”), Loring Laboratories, Ltd. (“Loring”) and Turnkey Processing Solutions Sand Laboratory (“TPS”).

The Technical Report establishes that AMI’s Duvernay Project contains a sand resource of:

- fine-to-coarse grain sands with pay thickness from 0.4 meters to 21.6 meters;
- 24.7 million metric tonnes (MT) measured resource, with an additional 5.6 million MT indicated resource, and a further 4.9 million MT inferred resource.

A breakdown of measured, indicated and inferred resources by mesh size is as follows:

Category	Mineral Resources				
	20 / 40 Mesh	40 / 70 Mesh	70 / 140 Mesh	140 / 170 Mesh	Total (Combined)
Measured Resource – million MT	3.4	11.2	9.0	1.1	24.7
Indicated Resource – million MT	0.6	2.5	2.2	0.3	5.6
Measured & Indicated – million MT	4.0	13.7	11.2	1.4	30.3
<i>Measured & Indicated (%)</i>	<i>13.2%</i>	<i>45.2%</i>	<i>37.0%</i>	<i>4.6%</i>	
Inferred Resource – million MT	0.5	2.1	2	0.3	4.9

The Technical Report was prepared by Mr. William A. Turner, MSc. P.Geol, and Mr. A.C. (Chris) Hunter, P. Geo., of Stantec Consulting Ltd., in Calgary, Alberta; both of whom meet the requirements of qualified persons under NI 43-101 definitions. Mr. Turner and Mr. Hunter, as independent consultants contracted by the Corporation, are the Qualified Persons responsible for the above noted technical content of this release and have reviewed and approved it accordingly. A full copy of the Technical Report is expected to be made available on SEDAR and the Corporation’s website within 45 days.

AMI’s Duvernay premium domestic sand is comprised of ‘40/70’ and ‘70/140’ mesh fractions of 45.2% and 37% respectively for combined 82.2% of the highest demand proppant grades used in well completions in the Duvernay formation. Sand properties compare favorably in quality to Tier-1 ‘Northern White’ sand imported from the United States which is dominant in the Western Canadian market.

A comparison of AMI’s Duvernay premium sand by crush resistance and mesh fraction size to that of Northern White imported sand is shown below:

Category	Mineral Resource – Mesh Size				
	20 / 40 Mesh	30 / 50 Mesh	40 / 70 Mesh	70 / 140 Mesh	50 / 140 Mesh
Crush Resistant Tests	26	54	70	67	2
AMI Duvernay – Premium Domestic Crush Resistance (Average K-Value)	5K	6K	7K	9K	9K
Wisconsin ‘Northern White’ Average Crush Resistance (K-Value range)	~4-7K	~6-8K	~7-10K	~9-10K	~9-12K

The Corporation’s Management is pleased with the large volume of premium domestic sand found in-place with over 30.3 million tonnes of measured and indicated resource. Furthermore, the volume of premium domestic sand could have additional upside given that several bore holes in the delineation program remained in sand for the full depth of drilling, without intersecting bedrock or any other underlying formation.

The favourable results from the NI 43-101 bolsters the Corporation’s conviction to progress development of its Duvernay Project, and introduce premium domestic sand as a value-added alternative to imported Tier-1 American sand. In anticipation of these positive results, AMI has completed front-end engineering of the sand processing facility, as prepared by a highly experienced and reputable design-build contractor, and has engaged environmental consultants to prepare the regulatory applications for submission in the coming weeks. The Corporation is budgeting to construct a safe, efficient, technically-advanced facility capable of year-round operations, that balances capital cost with design standard, plant capacity and asset life.

The Corporation advises that it is not basing its production decision on a feasibility study of mineral reserves demonstrating economic and technical viability, and as a result there is increased uncertainty and there are multiple technical and economic risks associated with this production decision. These risks, among others, include areas that are analyzed in more detail in a feasibility study, such as applying economic analysis to reserves, and other specialized studies in areas such as mining and recovery methods, market analysis, and environmental and community impacts.

Chief Executive Officer, Robert Beekhuizen, states: “We are extremely excited about the quality and size of this deposit. It confirms the availability of local premium domestic sand capable of displacing imported Wisconsin ‘Northern White’ sand transported some 2400 kilometres into Western Canada. AMI’s Duvernay Project has excellent fundamentals and is strategically well-situated for commercial development. It can easily access adjacent and nearby infrastructure, including paved roads, natural gas, water, and power lines in close proximity, with access to a skilled construction workforce in the area. The Duvernay Project also offers security of delivery with uninterrupted trucking that shortens the logistics supply chain to about one-tenth the distance to wellsite locations compared to Wisconsin sand sources. We look forward to developing a robust project that generates economic opportunities in terms of jobs, local benefits, and royalties for the Province of Alberta.”



AMI is addressing partnering, financing and offtake strategies that aim to keep project development on pace for product delivery in first-half 2021.

The Corporation is also planning further delineation drilling in Q4-2019 for its proposed Montney in-Basin Premium Sand Project. The project resource encompasses a large geographic area (some 150,00 hectares) straddling the Alberta-BC border. Additional drilling permit applications have been submitted with approvals expected in the coming weeks. A NI 43-101 Report will similarly follow thereafter.

About Athabasca Minerals

The Corporation is an integrated group of aggregates companies involved in resource development, aggregates marketing and midstream supply-logistics solutions. Business activities include aggregate production, pit management services, sales from corporate-owned and third-party pits, acquisitions of sand and gravel operations, and new venture development. Athabasca Minerals is the parent company of Aggregates Marketing Inc. – a midstream technology-based business providing integrated supply and transportation solutions for industrial and construction markets. It is also the parent company of AMI Silica Inc. – a subsidiary positioning to become a leading supplier of premium domestic in-basin sand with regional deposits in Alberta and NE British Columbia. It is the joint venture owner of the Montney In-Basin and Duvernay Basin Frac Sand Projects. Additionally, the Corporation has industrial mineral leases, such as those supporting the Richardson Quarry Project, that are strategically positioned for future development in industrial regions of high potential aggregates demand.

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