Strategic Resources Announces Mustavaara PEA; €190M After-tax NPV (8%) with a 20 Year Mine Life

VANCOUVER, BC, May 4, 2021 /CNW/ - **Strategic Resources Inc.** (TSXV: SR) (the "Company" or "Strategic") is pleased to announce it has received positive results from the Preliminary Economic Assessment (the "PEA"), prepared in accordance with National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101"), for its 100%-owned Mustavaara Project ("Mustavaara" or the "Project"). The PEA outlines a long-life economic project in current market conditions.

Scott Hicks, CEO and Director, commented: "I am extremely pleased that we have demonstrated the ability for this brownfield project to come back into production in the future. Management will now turn its focus to engaging with Finnish authorities on the existing permits held by the previous owner that require transferring and extension, key environmental monitoring work and evaluating moving to a pre-feasibility study."

Preliminary Economic Assessment Summary

The PEA, initiated in late 2020, was produced by a team of independent consultants that possess extensive expertise in their respective fields. Further details on the contributors can be found in the Qualified Persons section of this news release.

All amounts are in Euros unless otherwise specified. Base case economics were calculated using a ferrovanadium ("FeV80") price of US$32.00 per kilogram and pig iron price of US$450 per tonne. An exchange rate of EUR:USD of 1.18 was used. The effective date of the PEA is May 4, 2021 and a technical report relating to the PEA will be filed on SEDAR within 45 days of this news release.

The PEA's highlights include the following estimates:

- Life of mine ("LOM") average annual production of 4.6 kt of FeV80
- LOM average annual co-product production of 329 kt of pig iron
- 20.25-year mine life
- 10,400 tpd processing operation over the life of mine
- After-tax NPV (8%) and IRR of €190 million and 12.2%
- Average all-in sustaining co-product cash costs of €15.2 /kg FeV80 and €210.7/t pig iron
- LOM revenue mix of 46.7 % FeV80, 50.8 % pig iron and 2.6 % other by-products
- Initial capital costs of €597 million
- Life of mine sustaining capital and closure costs of €94 million

The PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that the PEA will be realized.

Next Steps and Recommendations

The PEA report recommends advancing to a pre-feasibility study on the Project, which would require approximately €1.4M euros and include additional hydrological, comminution, metallurgical and engineering work. Prior to commencing such work, Strategic will engage with local authorities on the existing permits held by the previous owner and assess key environmental monitoring programs.

Table 1: Summary of Mustavaara Economic Results by FeV80 and Pig Iron Price

Percentage of Base Case Prices	**80%**	**100%**	**120%**
FeV80 (US$ per kg)	US$25.60	**US$32.00**	US$38.40
Pig Iron (US$ per tonne)	US$360	**US$450**	US$540
Pre-Tax NPV (8%) (€M)	**€ (88)**	**€286**	**€661**
Pre-Tax IRR	5.8%	**13.9%**	20.2%
Post-Tax NPV (8%) (€M)	**€ (115)**	**€190**	**€491**
Post-Tax IRR	5.0%	**12.2%**	17.9%

Table 2: Mustavaara Life of Mine Capital Expenditure Estimate Breakdown

Initial Capital (€M)	
Mine and Beneficiation Plant	€109M
Infrastructure and Utilities	€43M
Smelting Plant	€321M
Indirect Costs	€69M
Sub Total	**€542M**
Contingency (10%) (1)	€54M
Total Initial Capital	**€597M**
Sustaining Capital and Closure Costs (€M)	
Life of Mine Sustaining Capital	€71M
Average Annual Life of Mine Sustaining Capital	€4M
Closure Costs (2)	€23M

Note: Totals may not add up due to rounding.
(1) The contingency allowance was added as a flat percentage on top of base cost. Percentage is based on assessed uncertainty in the cost areas.
(2) A closure deposit (including VAT) of €1M is paid annually to the Finnish government. After closure is completed the deposit is refunded.

Table 3: Summary of Mustavaara Operating Cost Estimates and Cash Costs

Average Operating Costs	**Years 1-20**
Mining Costs per Tonne Material Moved	2.2 €/t
Mining Costs per Tonne of Processed Material	6.0 €/t
Costs Per Concentrate Tonne to Smelter	**87.7 €/t**
Mining Costs	37.9 €/t
Beneficiation Costs	24.2 €/t
Logistics & Admin Costs	25.5 €/t
Smelting Cost Per Tonne Concentrate	**190.6 €/t**
Average Cash Costs [Per unit of production, not nominal]	**Years 1-20**
Co-product Cash Cost FeV80 (€/kg)	**14.6 €/kg**
Operating Costs	15.3 €/kg
0.15% Extraction Royalty	0.006 €/kg
By-product Credits	-0.7 €/kg
Co-product Cash Cost Pig Iron (€/t)	**203.6 €/t**
Operating Costs	213.3 €/t

0.15% Extraction Royalty	0.09 €/t
By-product Credits	-9.8 €/t
All-in Sustaining Cash Cost FeV80 (€/kg)	**15.2 €/kg**
Co-Product Cash Costs	14.6 €/kg
Sustaining Capex Cost	0.4 €/kg
Closure Cost	0.1 €/kg
All-in Sustaining Cash Cost Pig Iron (€/t)	**210.7 €/t**
Co-Product Cash Costs	203.6 €/t
Sustaining Capex Cost	5.3 €/t
Closure Cost	1.7 €/t

Note: Totals may not add up due to rounding. Operating costs, royalties, and by-product allocation 50%/50% to FeV80 and Pig Iron products.
Cash Cost: (Operating costs including transportation and refining costs + Royalties – By-product credits) / Payable Product.
All-in Sustaining Cash Cost: Adds sustaining capital and closure costs to the Co-product Cash Costs.

Table 4: Estimate of Mineral Resource – Mustavaara Deposit (11.0% Magnetite Cut-off Grade)

Resource Class	Million Tonnes	Average Grade				Contained Metal		
		Magnetite (%)	VinMC[8] (%)	Ti[9] (%)	Fe[9] (%)	VinMC[8] (kt)	Ti[9] (kt)	Fe[9] (kt)
Measured	64.0	15.41	0.91	3.75	63.3	90	370	6,244
Indicated	39.7	15.27	0.88	3.53	62.8	53	214	3,805
Total M&I	103.7	15.36	0.90	3.67	63.1	143	584	10,049
Inferred	42.2	15.11	0.92	3.75	62.3	59	239	3,971

Note: Totals may not add up due to rounding.

The NI 43-101 mineral resource estimate summary above is calculated using the base case cut-off grade of 11.0 percent magnetite. The estimate is based on a total of 9,911 metres of diamond drilling in 73 holes. None of these holes were drilled by Strategic, but historic core, rejects and pulps have been reanalyzed and the historic database has been validated. The mineral resources are estimated using a three-dimensional block model with a nominal block size of 20 X 20 X 12.5 metres. Grade estimates for magnetite, vanadium, titanium and iron are based on geology, drill hole spacing and geostatistical analysis of drill hole sample data. The grade models have been validated using a combination of visual and statistical methods. Blocks in the model are estimated using five or more composite drill hole samples within a maximum average distance of 50m, 100m and 200m for the measured, indicated and inferred mineral resource categories respectively.

Mineral Resource Notes and Assumptions

(1) The mineral resource estimate has an effective date of September 14, 2020. (2) Mineral resources do not have demonstrated economic viability. (3) The mineral resources in this estimate were calculated with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions. (4) Metal prices used: Pig Iron, US$350.00 per tonne and Ferrovanadium, US$30.00 per kilogram. (5) Base case cut-off grade for the estimate of the mineral resources is 11.0% magnetite. (6) It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated or measured mineral resources with continued exploration. (7) Strategic is not aware of any legal, political, environmental, or other risks that could materially affect the potential development of the mineral resources. (8) A 30-gram charge of agitated sample pulp "suspended" in water is separated magnetically as it passes through a rotating, inclined glass tube. The applied magnetic field causes magnetic minerals to stick to the tube walls. The weight percent of vanadium retained in the magnetic fraction is reported as VinMC (Vanadium in Magnetic Concentrate) and can be correlated with magnetically recovered vanadium grades in large scale magnetic separation plants. This work has indicated that the magnetite content could be upgraded by a factor of six. (9) Ti (titanium) and Fe (iron) grades and contained metal values are stated in recovered magnetite concentrate post upgrading.

Mining and Processing Facility

The PEA contemplates large-scale open pit mining using a 100% owner operated equipment fleet. Mine production and mill feed schedules were estimated from the phase resource tabulations using a declining cut-off grade strategy to maximize net present value for a processing rate of 10.4 ktpd. Pit limiting floating cone shells used to develop the mine plan were based on US$25.50/kg FeV80 price and US$340/t pig iron prices.

The ferrovanadium production process consists of a concentrator plant at the Mustavaara site and smelter / hydrometallurgical plants in Raahe. The concentrator plant process is based on crushing, two-stage grinding and multi-stage magnetic separation to produce iron/vanadium concentrate. The concentrate would then be transported approximately 250 km to Raahe using trucks.

Direct smelting and selective oxidation are used to bring vanadium to a suitable form (vanadium slag) to act as a feed material to the roast-leach process. Pig iron is produced as a co-product of the smelting process. A roast-leach process is used to produce vanadium pentoxide (V2O5) from vanadium slag. Vanadium pentoxide is then fed into an aluminothermic reduction to produce the final product, ferrovanadium (FeV80). Possible by-products include sodium sulphate, TiO2 slag and Ca-Al Slag.

Table 5: Mined and Processed Material Summary

		Grade in Concentrate (%)		Contained Metal in Concentrate	
Material Type	Tonnes (Mt)	Vanadium	Iron	Vanadium (kt)	Iron (kt)
Total Processed	64.6	0.92%	63.4%	82.2	5,676
Waste Material	107.7				
Total Mined	172.3				
Strip Ratio	1.7				

Table 6: Processing Schedule

	Years 1-10	Years 11-20	Years 1-20
Avg. Processed Tonnes (Mt/a)	3.12	3.25	3.19
Avg. Vanadium Grade in Con. (%)	0.92%	0.92%	0.92%
Avg. Fe Grade in Con. (%)	63.8%	63.0%	63.4%

Table 7: Metallurgical Recoveries Summary

Process Recoveries	
Recovery of Magnetite to Concentrate	98.0%
Vanadium Recovery from Concentrate to V2O5	80.2%
Vanadium Recovery from Concentrate to FeV80	79.0%
Iron recovery from Concentrate to Pig Iron	94.5%

Tailings and Waste Rock Storage Facilities

The planned waste rock storage facility is located to the east of the open pit, partly at the north-east slope of the Mustavaara hill. The area was partly

used for waste rock deposition during the previous mining operation. Due to the historic mining at Mustavaara, there is an existing tailings storage facility. The new deposition is planned on top of the existing deposition area.

Power Infrastructure and Water Requirements at the Mine Site

The total installed power of the concentration process main equipment has been estimated at 11.5 MW and total peak power including all processes is estimated at 18 MVA for 505,000 t/a concentrate production. The required electric power will be provided through connection to the local 110 kV power grid. The new 110 kV power line covers a distance of approximately 32 km and will be built to connect the mine site to an existing switchyard at the Posio municipality area. The power line route will follow the same path that was used during the former mining operations at Mustavaara. Water for processing would come from a raw water basin and from the Sirniönlampi lake.

Raahe Smelter Site

The proposed Raahe smelter site would be located at the Port of Raahe next to the SSAB steel plant. Both the regional and detailed land use planning processes for the smelter were completed in 2017. The surrounding infrastructure includes a harbor, railway line and the 110kV national grid. The area has a long history of steelmaking, which has created an extensive network of industrial services to Raahe.

Employment and Corporate Social Responsibility

During the construction period, 150-200 full-time employees are anticipated to be hired, which does not include outside contractors. The onsite construction workforce is estimated to vary during the construction period between 500 and 700 depending on the specific work being performed at the time. Over the 20-year mine life it is expected that the Project will employ 200 to 300 people.

Strategic is committed to earning and maintaining a robust social license to continue its Mustavaara mineral exploration and mine development operations in Finland. The Project has been designed to meet Finnish environmental regulations, international mining industry best management practices and appropriate international lending institution guidelines. As such, significant human and financial resources have been factored into the PEA to meet environmental obligations and social commitments.

Taxes Applied in the Economic Model

The PEA incorporates a 0.15% extraction royalty, a 20% Corporate Tax and several other local and municipal taxes. The total life of mine payments resulting from the royalty and taxes are €298M under the assumed commodity prices.

Qualified Persons

The scientific and technical information contained in this news release pertaining to the Project has been reviewed, verified and approved by the following Qualified Persons as defined by NI 43-101: Ville-Matti Seppä, EurGeol, (Mineral resources, process and Economic analysis) of AFRY Finland Oy, Eemeli Rantala, P.Geo (Environment) of AFRY Sweden Ab and Pekka Lovén, MAusIMM (Mine design) of PL Mineral Resources Services. All the Qualified Persons are independent of Strategic Resources Inc.

About Strategic Resources

Strategic Resources Inc. (TSXV:SR) is a Vancouver, Canada based mineral exploration and development company that is focused on vanadium projects in Finland and Peru. The Company is primarily focused on its flagship Mustavaara vanadium-iron-titanium project in Finland. The Company continues to evaluate new opportunities that are related to the electrification of the economy.

Further details are available on the Company's website at https://strategic-res.com/.

To follow future news releases, please sign up at https://strategic-res.com/contact/.

STRATEGIC RESOURCES INC.

Signed: ***"Scott Hicks"***

Scott Hicks, CEO

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this news release.

Cautionary Note Regarding Forward-Looking Information

Certain statements and information herein, including all statements that are not historical facts, contain forward-looking statements and forward-looking information within the meaning of applicable securities laws. Such forward-looking statements or information include but are not limited to statements or information with respect to the mined and processed material estimates for the Project; the internal rate of return of the Project; the annual production of the Project; the net present value of the Project; the life of mine of the Project; the capital costs, operating costs and other costs and payments estimated for the Project and the proposed infrastructure for the Project (including how, when, where and by whom such infrastructure will be constructed or developed); projected metallurgical recoveries; the proposed level of employment at the Project; whether the Company will move the Project to a Pre-Feasibility stage; that the majority of inferred mineral resources could be upgraded to indicated or measured mineral resources with continued exploration; that the vanadium-iron concentrate that makes up the majority of the Project revenue will be trucked to Raahe and be processed into ferrovanadium and pig iron. Often, but not always, forward-looking statements or information can be identified by the use of words such as "will" or "projected" or variations of those words or statements that certain actions, events or results "will", "could", "are proposed to", "are planned to", "are expected to" or "are anticipated to" be taken, occur or be achieved.

With respect to forward-looking statements and information contained herein, the Company has made numerous assumptions including among other things, assumptions about general business and economic conditions, the prices of vanadium and pig iron, and anticipated costs and expenditures. The foregoing list of assumptions is not exhaustive.

Although management of the Company believes that the assumptions made and the expectations represented by such statements or information are reasonable, there can be no assurance that a forward-looking statement or information herein will prove to be accurate. Forward-looking statements and information by their nature are based on assumptions and involve known and unknown risks, uncertainties and other factors which may cause the Company's actual results, performance or achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. These factors include, but are not limited to: risks associated with the business of the Company; business and economic conditions in the mining industry generally; the supply and demand for labour and other project inputs; changes in commodity prices; changes in interest and currency exchange rates; risks relating to inaccurate geological and engineering assumptions (including with respect to the tonnage, grade and recoverability of reserves and resources); risks relating to unanticipated operational

difficulties (including failure of equipment or processes to operate in accordance with specifications or expectations, cost escalation, unavailability of materials and equipment, government action or delays in the receipt of government approvals, industrial disturbances or other job action, and unanticipated events related to health, safety and environmental matters); risks relating to adverse weather conditions; political risk and social unrest; changes in general economic conditions or conditions in the financial markets; and other risk factors as detailed from time to time in the Company's continuous disclosure documents filed with Canadian securities administrators. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

View original content to download multimedia:
http://www.prnewswire.com/news-releases/strategic-resources-announces-mustavaara-pea-190m-after-tax-npv-8-with-a-20-year-mine-life-301282824.html

SOURCE Strategic Resources Inc.

View original content to download multimedia: http://www.newswire.ca/en/releases/archive/May2021/04/c9026.html

%SEDAR: 00021914E

For further information: Scott Hicks, info@strategic-res.com, T: +1 604 646 1890

CO: Strategic Resources Inc.

CNW 07:00e 04-MAY-21