NextSource Materials Releases New Feasibility Study Incorporating Phased Buildout in Preparation of Mine Financing

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HIGHLIGHTS:

- The 2019 Feasibility Study (“FS”) outlines a phased development approach with Phase 1 producing 17,000 tonnes per annum (“tpa”) over the first two years of production and Phase 2 producing a total of 45,000 tpa by year 3.
- Over the modelled life of mine (30 years), the production plants will have a pre-tax internal rate of return (“IRR”) of 43.1%, and a post-tax IRR of 36.2%. The pre-tax Net Present Value (“NPV”) at 8% discount rate will be US$237.1M, and the post-tax NPV will be US$184.3M.
- The capital mine cost (“CAPEX”) for Phase 1 will be US$21.0M with Phase 2 CAPEX being an additional US$39.1M, for a total project cost of US$60.1M.
- Both phases will utilize the Company’s unique, fully modular build approach, which greatly reduces build time and associated costs in relation to conventional mine construction.

TORONTO, Sept. 27, 2019 -- Nextsource Materials Inc. (TSX:NEXT) (OTCQB:NSRCF) (“NextSource” or “the Company”), is pleased to report the results of its 2019 Feasibility Study for its 100%-owned Molo Graphite Project in southern Madagascar. The FS takes into account updated mine capital equipment and mining costs, as well as current 12-month rolling flake graphite pricing on a FOB China basis, supplied by UK-based battery mineral commodities research firm, Benchmark Minerals Intelligence.

The FS was based on a Front End Engineering and Design study (“FEED”), and subsequent Detailed Engineering studies. The FS incorporates the procurement of all mining equipment, off-site modular fabrication and assembly, factory acceptance testing, module disassembly, shipping, plant infrastructure construction, onsite module re-assembly, commissioning, project contingencies and working capital. All capital and operating costs expressed for Phase 1 are considered to be accurate to +/- 10%, and accurate to +/- 12.5% for Phase 2.

In order to ensure that the Company maintains a first-mover competitive advantage over the competition and to appropriately plan for future market demand, the FS was designed to provide a flexible mine development approach that comprises a unique, all-modular build solution yielding optimal cashflow and return metrics with suitable flexibility to enable a rapid response to the anticipated market demand for graphite.

As previously reported to the market, the Company has an off-take agreement in place with a prominent Japanese trader, whom is a major supplier of flake graphite to Japan’s largest battery processor and manufacturer of graphite anode material in lithium ion batteries (“LiB”) for electric vehicle applications. NextSource is currently in the process of formalizing an additional sales agreement with a leading European trader. As such, the FS was undertaken to include two phases in order to account for off-takers’ demand for NextSource’s SuperFlake® graphite concentrate.

PHASE 1: Production of 17,000 tpa

- The first phase of production will consist of a fully operational and sustainable graphite mine with a permanent processing plant capable of processing 240,000 tpa of ore and producing approximately 17,000 tpa of high-quality SuperFlake™ graphite concentrate.

- The updated build cost of the fully modular process plant marginally increased from the US$18.4 million reported in the 2017 FS to US$21.0M due to equipment cost inflation.

PHASE 2: Production Expansion to 45,000 tpa in Year 3

- Phase 2 incorporates the processing of 240,000 tpa of ore (producing 17,000 tpa of SuperFlake® concentrate) for the first two years of operation and then ramping up to 720,000 tpa of processed ore in the third year to accommodate additional sales, resulting in a total of 45,000 tpa of SuperFlake® concentrate being produced for a mine life of 30 years.
- The costing for Phase 2 is based on the addition of two modules of the beneficiation plant with a proportional increase in mining and infrastructure costs.
- The capital mine cost for Phase 2 (with contingency) will be US$39.1M, for a total project cost (Phase 1 and Phase 2 with contingency) of US$60.1M.

FS RESULTS SUMMARY

- The Phase 1 production plan of 17,000 tpa of finished SuperFlake® concentrate for the first two years of production followed by a ramp-up to Phase 2 production of 45,000 tpa yields the following financial metrics.

Description	*Phase 1 and 2*	
	Pre-Tax	*Post-Tax*
Post-tax: NPV (8% Discount Cash Flow)(1)(2)	$237.1m	$184.3m
Post-tax: IRR (1)(2)	43.1%	36.2%
Payback (2)	3.4 years	3.8 years
Capital cost ("CAPEX")	$60,082,340	
Owners Contingency	$6,670,430	
On-site Operating Costs ("OPEX") per tonne of concentrate, (year 3 onward)	Mining $82.69	
On-site Operating Costs ("OPEX") per tonne of concentrate, (year 3 onward)	Processing $270.27	
Transportation per tonne of concentrate (from mine site to Madagascar Port year 3 onward)	$133.01	
Average annual production of concentrate	45,136 tonne	
Life of Mine ("LOM")	30 years	
Graphite concentrate sale price (US$/tonne at Start Up - 2017)	$1,208	
Average Head Grade	7.1%	
Average ore mined per annum over Life of Mine	720,000 tonne	
Average stripping ratio	0.53:1	
Average carbon recovery	88.30%	

(1) *Assumes Project is financed with 100% equity. Unless otherwise noted, all monetary figures presented throughout this press release are expressed in US dollars (USD).*

(2) *CAPEX includes process equipment, civil & infrastructure, mining, buildings, electrical infrastructure, project & construction services.* Values shown are based on real graphite sales pricing

CAPEX Summary

Capital Cost Breakdown	*Phase 1 (240ktpa)*
Process Equipment	$25,438,607
Civil & Infrastructure	$2,603,072
Tailings	$0.00
Mining	$2,973,141
Buildings	$1,856,629
Electrical Infrastructure	$328,802

Project Services/EPCM	[illegible]
Construction Services	[illegible]
Indirect Costs	[illegible]
Environmental & Permitting costs	[illegible]
Owner's Costs	[illegible]
Sub-total	[illegible]
Contingency (10%/12.5%)	[illegible]
3 Months Working Capital	[illegible]
CAPEX TOTAL	[illegible]
Sustaining CAPEX over Life of Mine	$3,300,000

OPEX Summary

- Discussions with off takers have indicated their preference is to purchase Molo graphite concentrate at the local Madagascar port at freight on board (FOB) China prices. As such, FS Operating costs (“OPEX”) include the all-in FOB cost to ship Molo SuperFlake® concentrate to the local port of Fort Dauphin.

Category	Phase 1	Phase 2
	Operating cost	
Mining (US$/T)	102.81	65.34
Processing (US$/T)	265.82	265.82
Trucking to local port / Ft. Dauphin (US$/T)	133.01	133.01
General and Administration (US$/T)	64.29	50.00
TOTAL	$565.93	$514.17

Craig Scherba, P.Geo., President and CEO of NextSource commented,

“Our Feasibility Study will greatly assist us in our current discussions with mine financiers, and reconfirms to the market the economic viability of the Molo project under current market conditions. Our all-modular build strategy has low capital and operating costs, and a rapid build time. With our phased build-out, this will allow our graphite to be easily absorbed into the current market while maintaining NextSource’s flexibility and competitive advantage to quickly penetrate the market and generate revenue, establish strong relationships with as many key buyers as possible, and verify our product for highly technical markets with production-run material.”

PROVEN AND PROBABLE MINERAL RESERVES [(1)]

The Mineral Reserves and Mineral Resources did not change as a result of the FS. As disclosed in the Company’s 2015 Molo FS, the following are the proven and probable mineral reserves.

Category	Tonnage	C Grade (%)
Proven	14,170,000	7.00
Probable	8,367,000	7.04
Proven and Probable	22,437,000	7.02

(1) Proven reserves are reported as the Measured Resources inside the designed open pit and above the grade cut off of 4.5% C. Similarly, the Probable Reserves are reported as the Indicated Resources inside the designed open pit and above the grade cut-off of 4.5% C. Mineral Reserves are effective as of August 14, 2014.

MINERAL RESOURCES

The Molo project hosts the following mineral resources:

- Measured mineral resource of 23.62 MT grading 6.32% C.

- Indicated mineral resource of 76.75 MT grading 6.25% C.
- Inferred mineral resource of 40.91 MT at 5.78% C.

Effective date of the Mineral Resource tabulation is August 14, 2014. The Mineral Resources are classified according to the Canadian Institute of Mining definitions. A cut-off grade of 4% C was used for the “higher grade” zones and 2% C for the “lower grade” zones. Please note that while the ‘high’ grade resource occurs within the ‘low’ grade resource, each was estimated and reported separately. A relative density of 2.36 tonnes per cubic metre was assigned to the mineralized zones for the resource estimation. The resource remains open along strike and to depth. The Mineral Resources are inclusive of the Mineral Reserves above. Mineral Resources reported herein include Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Classification	Material Type	Tonnes	Grade - C%	Graphite - T
Measured	"Low Grade"	13 048 373	4.64	605 082
Measured	"High Grade"	10 573 137	8.4	887 835
Total Measured		23 621 510	6.32	1 492 916
Indicated	"Low Grade"	39 539 403	4.73	1 871 075
Indicated	"High Grade"	37 206 550	7.86	2 925 266
Total Indicated		76 745 953	6.25	4 796 341
Measured + Indicated	"Low Grade"	52 587 776	4.71	2 476 157
Measured + Indicated	"High Grade"	47 779 687	7.98	3 813 101
Total Measured + Indicated		100 367 464	6.27	6 289 257
Inferred	"Low Grade"	24 233 267	4.46	1 080 677
Inferred	"High Grade"	16 681 453	7.70	1 285 039
Total Inferred		40 914 721	5.78	2 365 716

C% = carbon percentage; Graphite – T = Tonnes of graphite

(1) Mineral Resources are classified according to the Canadian Institute of Mining definitions.

(2) Mineral Resources are reported Inclusive of Mineral Reserves.

(3) “Low Grade” Resources are stated at a cut-off grade of 2% C.

(4) “High grade” Resources are stated at a cut-off grade of 4% C.

(5) Eastern and Western high-grade assays are capped at 15% C.

(6) A relative density of 2.36 tonnes per cubic metre (t/m3) was assigned to the mineralised zones for the resource tonnage estimation.

METALLURGY & PRICING

The FS is based on a full suite of metallurgical test work performed by SGS Canada Metallurgical Services Inc. in Lakefield, Ontario, Canada. These tests included lab and bench scale process development work, a bulk sample/pilot plant program, and metallurgical variability testing. The overall graphitic carbon recovery into the final concentrate is 88.3%.

Metallurgical Data – Flake Size Distribution and Product Grade

Product Size	% Distribution	Product Grade (% Carbon)
+48 mesh (jumbo flake)	23.6	96.9
+65 mesh (coarse flake)	14.6	97.1
+80 mesh (large flake)	8.2	97.0
+100 mesh (medium flake)	6.9	97.2
+150 mesh (medium flake)	15.5	97.3
+200 mesh (small flake)	10.1	98.1
-200 mesh (fine flake)	21.1	97.5

Pricing Matrix - Flake Size Distribution Grouping and Product Grade

Product Size	% Distribution	Product Grade (% Carbon)
>50 mesh	23.6	96.9
-50 to +80 mesh	22.7	97.1
-80 to +100 mesh	6.9	97.2
-100 mesh	46.8	97.6

The selling price used in the FS is the volume weighted average sales price for the various flake sizes and grades of SuperFlake™ graphite concentrate that are expected to be produced from the Molo deposit. This price is based on 12-month rolling graphite prices provided by UK-based Benchmark Minerals Intelligence who are recognized as leaders in providing independent and unbiased market research, pricing trends and demand and supply analysis for the natural flake graphite market.

No pricing premium for valued-added applications was applied on any sales. Furthermore, no financial or operational calculations and/or scenarios in the FS financial model with regards to downstream value-added processing of SuperFlake™ graphite concentrate were included. This includes purification, spherodization coating for battery-grade graphite and thermal expansion for specialty graphite applications, such as foils.

SOCIAL RESPONSIBILITY & ENVIRONMENT

All environmental and social responsibility information for the Molo Project has been completed to Equator Principles, which are the standards adopted by the majority of international commercial banks, as well as the International Finance Corporation’s (IFC) Performance Standards. They are the highest environmental and social standards in the world. These standards have been incorporated into the design of the Molo Project’s facilities and operations given NextSources’ commitment to follow international best practices. There is a global consumer shift to take social responsibility into account when developing projects and NextSource has worked hard to ensure that it met this requirement.

TECHNICAL REPORT FILING

This FS technical report has been filed under the Company’s profile and on SEDAR at www.sedar.com, and will be posted on NextSource’s website at www.nextsourcematerials.com

Please see “Molo Feasibility Study, National Instrument 43-101 Technical Report on the Molo Graphite Project located near the village of Fotadrevo in the Province of Toliara, Madagascar Prepared by Erudite Strategies (Pty) Ltd” dated May 31, 2019 for certain other details and assumptions relating to the above mineral resource and reserve estimates and data verification procedures.

BOARD of DIRECTORS

The Company announces the resignation of Mr. Quentin Yarie as a director of the Company, effective September 27, 2019. With NextSource now solely focused on mine development, Mr. Yarie will be concentrating more of his time on exploration-based projects and to explore other opportunities.

“On behalf of the board of directors and the management team, I would like to thank Mr. Yarie for his contribution to the Company and wish him well in his future endeavours”, said Craig Scherba, President and CEO of NextSource.

QUALIFIED PERSONS

The FS was prepared in accordance with National Instrument 43-101 standards by Mr. Johann de Bruin, Pr. Eng. Mr. de Bruin is the Qualified Person who verified the technical data using industry acceptable standards and signed off on the relevant sections in the 43-101 report to be filed on SEDAR.

Mr. Craig Scherba, P.Geo., President and CEO of NextSource, is the qualified person who reviewed and

approved the technical information provided in this press release.

ABOUT NEXTSOURCE MATERIALS INC.

Nextsource Materials Inc. is a mine development company based in Toronto, Canada, that is developing its 100%-owned Molo Graphite Project in southern Madagascar. The Molo Graphite Project is a fully permitted, feasibility-stage project high quality flake graphite deposit.

To learn more, please visit the Company’s website at www.nextsourcematerials.com or email investor relations at info@nextsourcematerials.com

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Safe Harbour: This press release contains statements that may constitute “forward-looking statements” within the meaning of applicable Canadian and United States securities legislation. Readers are cautioned not to place undue reliance on such forward-looking statements. Forward-looking statements in this release relate to the results of the Feasibility Study, funding of the development of the Molo Project, implementation and commencement of the build-out of the Molo Project, commencement of production at the Molo Project, commencement of procurement for mine infrastructure, the procurement of equipment to construct a mine, value engineering, any and all product test results and product analysis, and the permit application. These are based on current expectations, estimates and assumptions that involve a number of risks, which could cause actual results to vary and in some instances to differ materially from those anticipated by the Company and described in the forward-looking statements contained in this press release. No assurance can be given that any of the events anticipated by the forward-looking statements will transpire or occur or, if any of them do so, what benefits the Company will derive there from. The forward-looking statements contained in this news release are made as at the date of this news release and the Company does not undertake any obligation to update publicly or to revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by applicable securities laws.