Cliffs HBI Opportunity

*Project Overview*

January 2018
FORWARD-LOOKING STATEMENTS

This presentation contains statements that constitute "forward-looking statements" within the meaning of the federal securities laws. As a general matter, forward-looking statements relate to anticipated trends and expectations rather than historical matters. Forward-looking statements are subject to uncertainties and factors relating to Cliffs’ operations and business environment that are difficult to predict and may be beyond our control. Such uncertainties and factors may cause actual results to differ materially from those expressed or implied by the forward-looking statements. These statements speak only as of the date of this presentation, and we undertake no ongoing obligation, other than that imposed by law, to update these statements. Uncertainties and risk factors that could affect Cliffs’ future performance and cause results to differ from the forward-looking statements in this presentation include, but are not limited to: uncertainty and weaknesses in global economic conditions, including downward pressure on prices caused by oversupply or imported products, the impact of any reduced barriers to trade, the outcomes of recently filed and forthcoming trade cases, reduced market demand and any change to the economic growth rate in China; continued volatility of iron ore and steel prices and other trends, including the supply approach of the major iron ore producers, affecting our financial condition, results of operations or future prospects, specifically the impact of price-adjustment factors on our sales contracts; our level of indebtedness could limit cash flow available to fund working capital, capital expenditures, acquisitions and other general corporate purposes or ongoing needs of our business; availability of capital and our ability to maintain adequate liquidity; our ability to successfully conclude the CCAA process in a manner that minimizes cash outflows and associated liabilities; the impact of our customers reducing their steel production due to increased market share of steel produced using other methods or lighter-weight steel alternatives; uncertainty relating to restructurings in the steel industry and/or affecting the steel industry; the outcome of any contractual disputes with our customers, joint venture partners or significant energy, material or service providers or any other litigation or arbitration; the ability of our customers and joint venture partners to meet their obligations to us on a timely basis or at all; problems or uncertainties with productivity, tons mined, transportation, mine-closure obligations, environmental liabilities, employee-benefit costs and other risks of the mining industry; our ability to reach agreement with our customers regarding any modifications to sales contract provisions, renewals or new arrangements; our actual levels of capital spending; our ability to successfully diversify our product mix and add new customers beyond our traditional blast furnace clientele; our actual economic iron ore reserves or reductions in current mineral estimates, including whether any mineralized material qualifies as a reserve; our ability to cost-effectively achieve planned production rates or levels including, at our HBI production plant; our ability to successfully identify and consummate any strategic investments or development projects, including our HBI production plant; our ability to obtain the investments necessary for our HBI production plant; changes in sales volume or mix; events or circumstances that could impair or adversely impact the viability of a mine and the carrying value of associated assets, as well as any resulting impairment charges; our ability to maintain appropriate relations with unions and employees; impacts of existing and increasing governmental regulation and related costs and liabilities, including failure to receive or maintain required operating and environmental permits, approvals, modifications or other authorization of, or from, any governmental or regulatory entity and costs related to implementing improvements to ensure compliance with regulatory changes; uncertainties associated with natural disasters, weather conditions, unanticipated geological conditions, supply or price of energy, equipment failures and other unexpected events; adverse changes in currency values, currency exchange rates, interest rates and tax laws; risks related to international operations; and the potential existence of significant deficiencies or material weakness in our internal control over financial reporting.
CLEVELAND-CLIFFS OVERVIEW

- Headquartered in Cleveland, Ohio, Cleveland-Cliffs Inc. (Cliffs) has been a major supplier of raw materials to the North American steel industry for 171 years.
- Cliffs is the oldest metals and mining company currently listed on the New York Stock Exchange.
- Today, Cliffs is a leading iron ore company and the largest producer of iron ore pellets in North America.
- Cliffs operates four active iron ore mines located in Michigan’s Upper Peninsula and on the Iron Range of Northeastern Minnesota with a combined annual production capacity of 26 million long tons.
- Iron ore mines owned and managed by Cliffs accounted for approximately 55 percent of total U.S. iron ore pellet production capacity in 2016.
- Cliffs employs approximately 3,000 individuals globally.
- Cliffs operates under stable contracts thanks to its long-term partnerships with North American steelmakers serving the growing end-markets for steel.

Cliffs’ U.S. Footprint
2016 Key Financial Highlights

- **$2.1 billion** – Full-Year Consolidated Revenues
- **$199 million** – Full-Year Adjusted Net Income
- **$374 million** – Full-Year Adjusted EBITDA

A Great Lakes freighter loads blast furnace iron ore pellets at Cliffs' Northshore Mining Co. operation (Silver Bay, MN)
Cliffs HBI Opportunity

What is HBI?
## HOW IS STEEL MADE? TWO MAIN PRODUCTION ROUTES

<table>
<thead>
<tr>
<th>BF Route</th>
<th>EAF Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron ore pellets + Limestone + Coke (Coal)</td>
<td>DR-Grade Iron ore pellets</td>
</tr>
<tr>
<td>Blast Furnace (BF)</td>
<td>Direct Reduction</td>
</tr>
<tr>
<td>Basic Oxygen Furnace (BOF)</td>
<td>This is what Cliffs is building in Toledo to produce HBI</td>
</tr>
</tbody>
</table>

This is what Cliffs currently supplies pellets to.
HOW IS STEEL MADE IN THE US?

BF Route (~37% of steel production in the US)
- Iron ore is mined and made into pellets
  - Other ingredients include limestone and coke (coal)
- Hot metal from BF is sent to the Basic Oxygen Furnace
- Liquid steel from the BOF is sent to the steel caster where steelmaking process is finalized

EAF Route (~63% of steel production in the US)
- Alternative 1: Using scrap
  - Metal scrap fed directly to the Electric Arc Furnace
- Alternative 2: Using alternative iron units (AIUs)
  - Although EAFs most commonly use steel scrap, they can also add Pig Iron, DRI and HBI which ultimately leads to higher quality steel
  - Convert iron ore pellets into DRI/HBI
- Liquid steel from the EAF is sent to the steel caster where steelmaking process is finalized
- Over the last few decades, EAFs continue to gain market share in the United States

BF vs. EAF Steel Production Method in the US

<table>
<thead>
<tr>
<th>Year</th>
<th>BF Route</th>
<th>EAF Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>BF 63%</td>
<td>EAF 37%</td>
</tr>
<tr>
<td>2000</td>
<td>BF 55%</td>
<td>EAF 45%</td>
</tr>
<tr>
<td>2010</td>
<td>BF 39%</td>
<td>EAF 61%</td>
</tr>
<tr>
<td>Today</td>
<td>BF 37%</td>
<td>EAF 63%</td>
</tr>
</tbody>
</table>
# ALTERNATIVE IRON UNITS USED IN EAF STEELMAKING

## Key Points

- ~6.5 million metric tons of Alternative Iron Units (AIUs) are already imported into the US annually (primarily in the form of Pig Iron)
  - ~3 million of those 6.5 million metric tons go to the Great Lakes region EAFs
- Cliffs will have the opportunity to displace some of those imports with its 1.6 million HBI capacity in Toledo
- Additional demand could come from EAFs who don’t currently import AIUs but would welcome the supply of locally sourced HBI

## AIU Specifications

<table>
<thead>
<tr>
<th>AIU</th>
<th>Specifications</th>
<th>Attributes</th>
</tr>
</thead>
</table>
| Hot Briquetted Iron (HBI) | >90% Fe content  
30 x 50 x 110 mm in size  
Essentially hot DRI compressed into pillow-shaped briquettes | Can be stored outside and shipped long distances (no pyrophoric concerns)  
No modification of EAF material handling / delivery systems required  
Natural gas based (cleaner than coal/coke) |
| Pig Iron | 92-95% Fe content  
150 x 75 x 85 mm in size | Casted hot metal from a blast furnace  
Environmentally unfriendly production  
Sourced from unreliable producers from Russia, Ukraine, Venezuela, and Brazil |
| Cold Direct Reduced Iron (CDRI) | >90% Fe content | Low-silica grade iron ore reduced with coal or natural gas  
Requires strict guidelines for shipping due to pyrophoric characteristics (combustible) |
| Hot Direct Reduced Iron (HDRI) | >90% Fe content | Only produced on-site, where the DRI furnace is in close proximity to the steelmaking furnace |
Cliffs HBI Opportunity

Cliffs Investment Rationale
CLIFFS HBI PROJECT AT THE PORT OF TOLEDO

Cliffs is in the unique position of having access to both high quality iron units and low-cost natural gas

INVESTMENT
• 1.6 mtpa Midrex plant
• $700 million of capital raised
• $30 million incentive package offered by State of Ohio and local partners

WORKFORCE
• 130 permanent jobs
• 1,200 employed during construction

TIMELINE
• Major Equipment Orders Q1 2018
• Break ground in early 2018
• Production beginning in mid-2020

✓ Proximity to future customers
✓ Accessible and affordable natural gas
✓ Access to multiple rail providers
✓ State and Local support of project
✓ Skilled local workforce for Construction and Operations
✓ Brownfield Redevelopment
✓ Existing Bulk Material Dock
✓ Located on Heavy Haul Truck Route
✓ Proximity to Electrical Power infrastructure
THE CLIFFS ADVANTAGE: PROXIMITY TO FUTURE CUSTOMERS

Cliffs vs. Imports

**Nearby, convenient, streamlined access to future EAF customer base (just like its BF customers)**

- **Substantial logistical cost disadvantage**

- Importing Pig Iron / HBI into the Great Lakes comes with a high freight penalty

- Imported Pig Iron and HBI comes from unreliable sources located in Russia, Ukraine, Venezuela, and Brazil

Cliffs Mines
Great Lakes Electric Arc Furnaces
Cliffs HBI Location
### CLIFFS FAVORABLE ECONOMICS – SITING CONSIDERATIONS

#### Low-Cost Production

<table>
<thead>
<tr>
<th>Cost Input</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Oxide</td>
<td>Unique access to Cliffs’ own low-silica pellets</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>Toledo Plant located &lt;2 miles from major pipeline</td>
</tr>
<tr>
<td>Labor</td>
<td>Skilled and plentiful local workforce</td>
</tr>
<tr>
<td>Other</td>
<td>Electric power, maintenance and material handling</td>
</tr>
</tbody>
</table>

3 major cost inputs

#### Strong Commercial Advantage

<table>
<thead>
<tr>
<th>Consideration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Close proximity to over 20 EAFs in the Great Lakes region</td>
</tr>
<tr>
<td>Alternatives</td>
<td>Primary alternative is imported Pig Iron</td>
</tr>
<tr>
<td>Methodology</td>
<td>Product premium based on reliability, quality, consistency and value-in-use</td>
</tr>
</tbody>
</table>
Cliffs HBI Opportunity

Transportation Logistics
CLIFF HBI – TRANSPORTATION LOGISTICS

- Inbound DR-Grade Iron Ore Pellets
  - ~2.5 million tons – raw material input
  - Shipped on Great Lakes freighters - ~100 “AAA-class” vessels per-year
  - Pellets will be discharged at the Midwest Terminals dock and conveyed via covered, elevated conveyer

- Outbound HBI shipments
  - 1.6 million-ton capacity HBI module
  - HBI to be shipped via rail and truck
  - Primary rail carrier: Norfolk Southern; CSX line nearby
  - Rail loop to be constructed on-site to facilitate railcar loading
  - Access to heavy-haul route
  - Optionality to ship by truck to nearby steel mills (e.g., North Star BlueScope - Delta, OH and Steel Dynamics Inc. - Butler, IN)
  - Ultimate shipping methods will be determined by customer mix and transportation rates
CLIFF HBI – TRANSPORTATION LOGISTICS

- Plant and construction equipment
  - Equipment to be transported by truck, rail and vessel
  - Construction cranes – 450+ feet in height

- Road improvements
  - Installation of roundabouts at intersections of Tiffin and Millard and Front and Millard
  - Roundabout projects managed by the City of Toledo (funded through local sources and State of Ohio grant monies)
  - Construction of roundabouts slated to begin late 2018
Questions?