Investor Presentation

August 2013

Company Overview

- Founded in 1953
- TSX and NYSE listings: “NOA”
- Current share price: $5.00
- 52 week high/low: $5.32/$2.38
- Market capitalization: $181 million
- Shares outstanding: 36 million
- Average daily share volume: 71,891

Mining

Heavy Construction

* Data from NYSE in USD as at July 31, 2013

Restructuring Initiatives

Fleet Rationalization

- $46.8 million in capital leases refinanced
- $23.6 million expected annual EBITDA benefit
- $6.0 million net cash savings in annual lease payments
- $10.2 million of net sale proceeds applied to term facility

Pipeline Divestiture

- $16.3 million of proceeds
- $15.4 million applied to term B facility
- ~$30 million working capital recovery

Piling Divestiture[1]

- $227.5 million of proceeds (net $210 million)
- Up to $92.5 million in contingent proceeds over three years based on EBITDA performance
- $150 million redemption of Series 1 Debentures at 104.563
- $16.3 million Term A Facility repayment by July 31, 2013

1. See appendix for full payment terms details

Stronger, Better Focused

NAEP is now a pure-play heavy construction and mining (HC&M) focused contractor

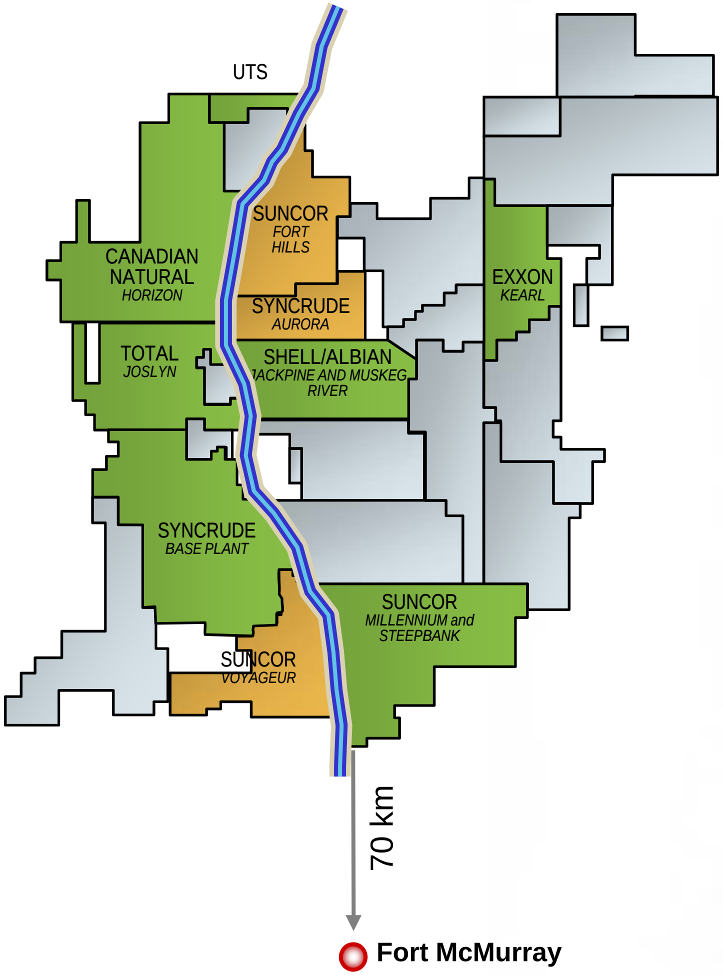
- Simplified business can better target productivity and cost efficiencies
- Efficient, productive equipment fleet
- Improved financial strength and capacity represent competitive advantage
- Positioned to deliver superior value to customers and shareholders

Significant Heavy Construction & Mining Contractor in Oil Sands

- Expertise
  - 30+ years in Northern Alberta's harsh operating environment
  - Knowledge to come up with best solutions for customers
- Broad Service Offering
  - Unique suite of services across project lifecycle
- Operational Flexibility
  - Unrivalled equipment fleet
  - Active on every site
- Long-Term Customer Relationships
  - Reliability; on-time delivery
  - Strong safety culture

Active with Every Oil Sands Client

NORTH AMERICAN ENERGY PARTNERS INC.



Current or recent NOA job site
Providing estimates

Key Customer Contracts

TOTAL	- 2-year initial site development contract - Significant earthworks still to be awarded by the client
	- 3-year master services agreement, with 1-year extension
Syncrude	- 4-year master services agreement covering mining services & construction
SUNCOR ENERGY	- 5-year master services agreement covering mining services & construction
Canadian Natural	- Year 8 of 10-year overburden removal contract
ExxonMobil	- 5-year master services agreement covering civil mine support services

First On, Last Off

Project Development Phase (3-4 years)

- Initial mine site development, project site development, airstrips, piping

Build Relationship

Explore and Design

Major Projects

Initial Development and Secondary Upgrades / Expansions

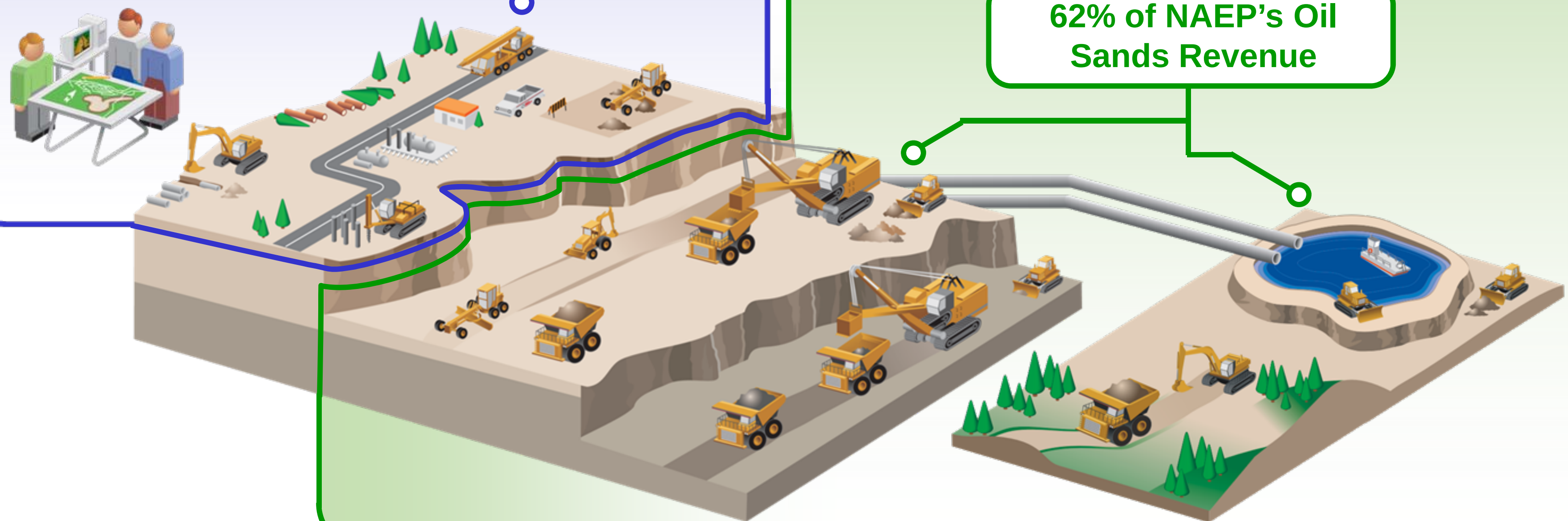
Ongoing Operations Phase (30-40 years)

- Overburden removal, mine infrastructure development, reclamation, tailing ponds remediation, equipment and labour supply

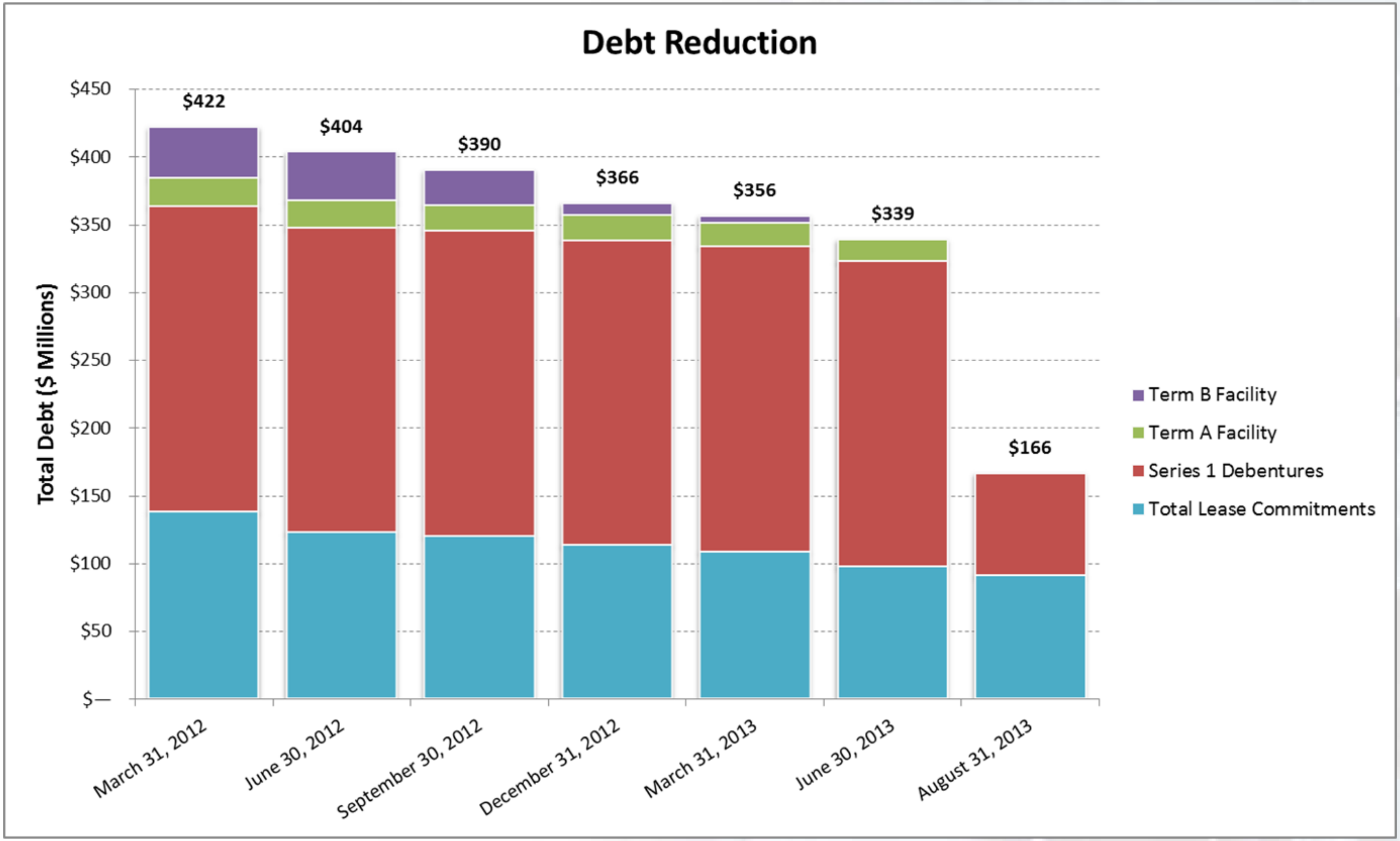
Operations Support Services

Operation / Ongoing Services

62% of NAEP's Oil Sands Revenue

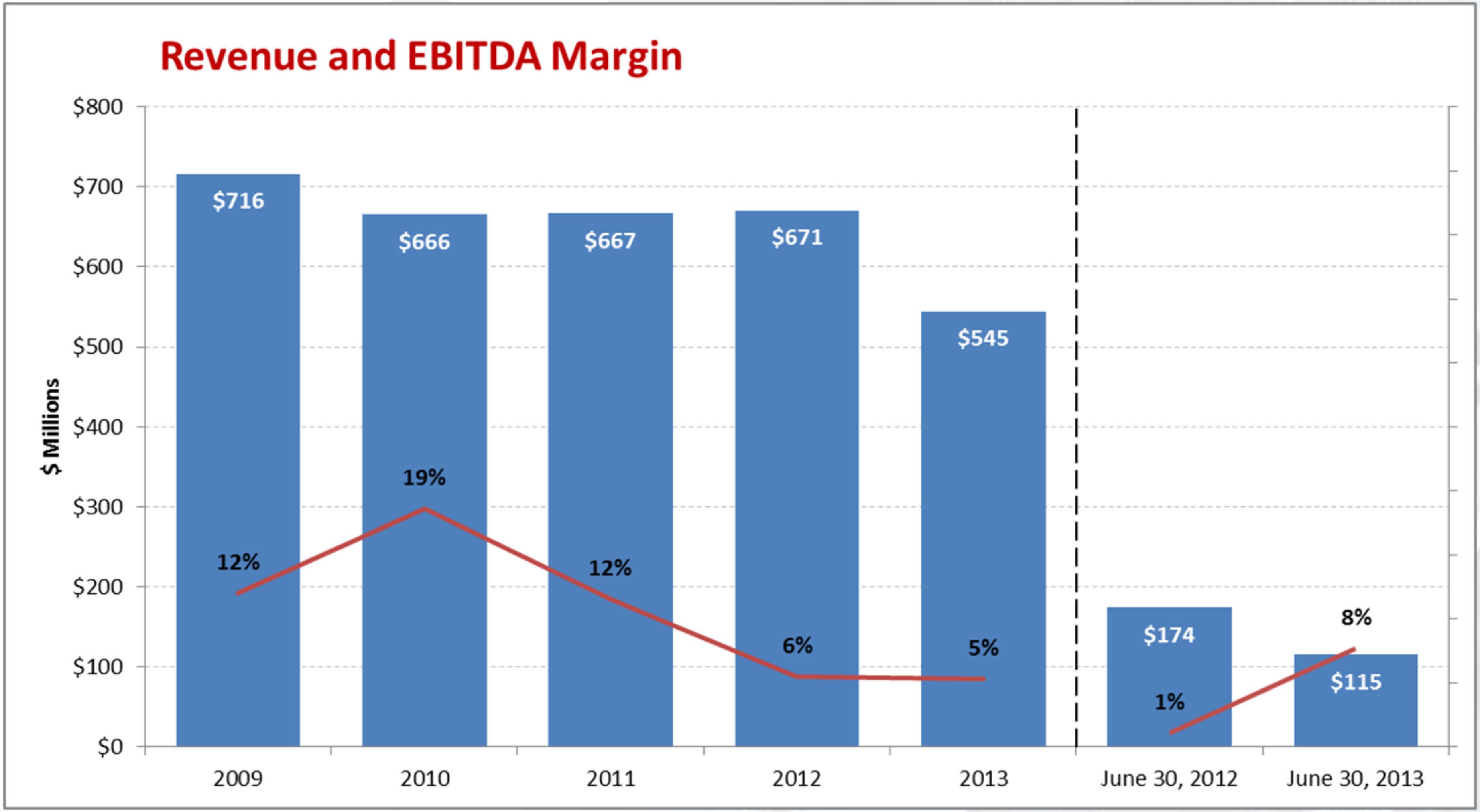


Debt Reduction



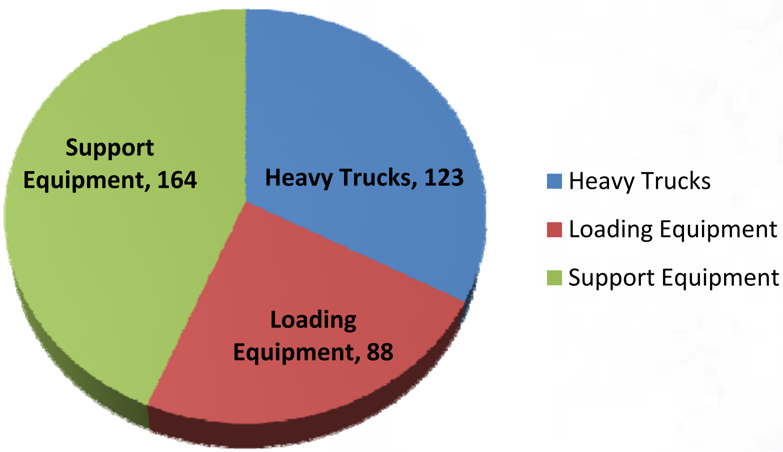
*Total lease commitments includes operating lease commitments and capital leases (including interest)

HC&M – Five Year Financial History

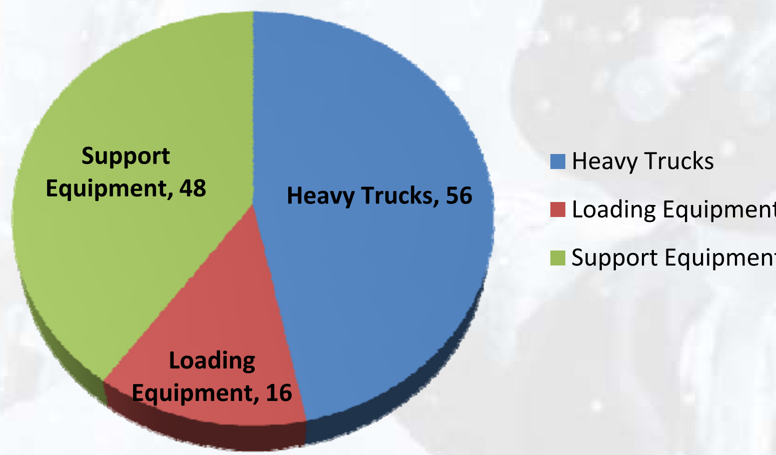


HC&M – Heavy Equipment Fleet

Owned Equipment



Leased Equipment



Outlook

- Increase in operations support services to help offset potential reduction in construction services demand
  - Ramp up at Kearl under new five-year agreement
  - Continued support of production efforts at Horizon, Base Mine, Millennium and Steepbank
- Pursuing new heavy civil construction contracts
  - New Canadian oil sands projects
  - Other resource industry opportunities
  - Joslyn and Fort Hills announcements anticipated in the fall
- Continued focus on delivering consistent financial and operating performance

Strategic Focus

- Pursue operational excellence in safety, productivity, customer satisfaction
- Continued strengthening of balance sheet
  - Debt reduction, fleet rationalization and cash-flow improvement
- Gain first onsite advantage on new oil sands and resource mining sites

THANK YOU

NORTH AMERICAN
ENERGY PARTNERS INC.

APPENDIX

Piling Asset Sale Payment Terms

1. $227.5 million cash paid at closing (less approximately $5.8 million in outstanding capital lease obligations, plus or minus customary working capital adjustments). In addition, we may receive up to $92.5 million in additional proceeds, contingent on the Purchaser achieving prescribed profitability thresholds from the assets and liabilities sold;

2. A maximum of $30 million cash paid no later than September 30, 2014, with the full amount being paid in the event that the business earns annualized Consolidated EBITDA ("First Year Consolidated EBITDA") of $45 million or more in the period from closing to June 30, 2014. The amount payable will be $2 for every $1 that First Year Consolidated EBITDA is greater than $30 million (with the maximum payment of $30 million where First Year Consolidated EBITDA is $45 million or greater);

3. A maximum of $27.5 million cash paid no later than September 30, 2015, with the full amount being paid in the event that the business earns Consolidated EBITDA ("Second Year Consolidated EBITDA") of $45 million or more in the period from July 1, 2014 to June 30, 2015. The amount payable will be $1.833 for every $1 that Second Year Consolidated EBITDA is greater than $30 million (with the maximum payment of $27.5 million where Second Year Consolidated EBITDA is $45 million or greater);

4. Contingent consideration to a maximum of $35 million, equal to $0.5 for every $1 by which cumulative Consolidated EBITDA in the period from closing to June 30, 2016 exceeds $135 million (with the maximum payment of $35 million where Consolidated EBITDA is $205 million or greater), calculated and paid as follows:

    1. no later than September 30, 2014, the purchaser will pay the vendor an amount equal to $0.375 for every $1 by which First Year Consolidated EBITDA exceeds $45 million.

    2. no later than September 30, 2015, the purchaser will pay the vendor an amount equal to $0.375 for every $1 by which the aggregate of First Year Consolidated EBITDA and Second Year Consolidated EBITDA exceeds $90 million, less any monies paid to the vendor under (a) above; and

    3. no later than September 30, 2016, the purchaser will pay the vendor an amount equal to $0.5 for every $1 by which the aggregate of First Year Consolidated EBITDA, Second Year Consolidated EBITDA and Consolidated EBITDA for the period from July 1, 2015 to June 30, 2016 exceeds $135 million, less any monies paid to the vendor under (a) and (b) above.

HC&M – Heavy Equipment Fleet

Category	Capacity Range	Horsepower Range	Number Owned	Number Leased	Number Rented	TOTAL
Articulating trucks	30 to 40 tons	305 - 406	19	10	1	**30**
Mining trucks	40 to 330 tons	476 - 2,700	104	46	1	**151**
Shovels	35-80 cubic yards	2,600 - 3,760	4	2	—	**6**
Excavators	1 to 29 cubic yards	90 - 1,944	84	14	6	**104**
Dozers	20,741 lbs to 230,100 lbs	96 - 850	71	38	3	**112**
Graders	14 to 24 feet	150 - 500	17	8	1	**26**
Loaders	1.5 to 16 cubic yards	110 - 690	50	2	5	**57**
Packers	14,175 to 68,796 lbs	216 - 315	6	—	2	**8**
Articulating Water Trucks	8,000 gallon	406	3	—	1	**4**
Scraper Water Wagons	10,000 gallon	462	2	—	1	**3**
Float Trucks	250 tons	703	4	—	—	**4**
Heavy Oil Recovery Barge	30,000 US gal per hour	125	9	—	—	**9**
Tractors	43,000 lbs	460	2	—	—	**2**
Total			**375**	**120**	**21**	**516**

Heavy Equipment (including capital lease equipment)

Cost	$377.6 million
Net Book Value	$245.8 million